

MAY 17, 2013

RESULTS OF GROUNDWATER MONITORING AND
GROUNDWATER EXTRACTION AND TREATMENT PILOT
TESTING

2012/2013 ANNUAL REPORT

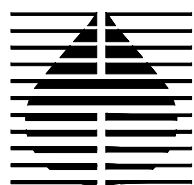
RAYTHEON COMPANY

(FORMER HUGHES AIRCRAFT COMPANY FACILITY)

1901 WEST MALVERN AVENUE

FULLERTON, CALIFORNIA

PREPARED FOR:
RAYTHEON COMPANY



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HYDROGEOLOGY • ENGINEERING



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May 17, 2013

VIA FEDERAL EXPRESS – STANDARD

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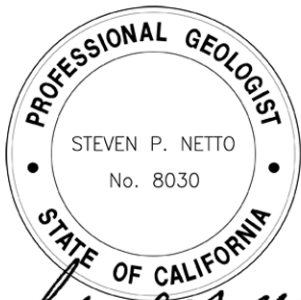
Re: Transmittal of Results of Groundwater Monitoring and Groundwater Extraction and Treatment Pilot Testing, 2012/2013 Annual Report, Raytheon Company, (Former Hughes Aircraft Company), 1901 West Malvern Avenue, Fullerton, California

Dear Mr. Jeffers:

Enclosed is one hard copy with a compact disc that contains a copy of the above-referenced report. If you have any questions or require further information, please contact us at 858-455-6500.

Sincerely,

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ACRONYMS AND ABBREVIATIONS

1,1-DCA	1,1-Dichloroethane
1,1-DCE	1,1-Dichloroethylene
1,1,2-TCA	1,1,2-Trichloroethane
AGAWP	Additional Groundwater Assessment Work Plan
ATL	Advanced Technology Laboratories, Inc., Signal Hill, California
cis-1,2-DCE	cis-1,2-Dichloroethylene
CM	Conceptual Model
CMS	Corrective Measures Study
COPCs	Compounds of potential concern
DTSC	California Environmental Protection Agency, Department of Toxic Substances Control
DWR	California Department of Water Resources
EPA	United States Environmental Protection Agency
GETS	Groundwater Extraction and Treatment System
GMP	Groundwater Monitoring Program
GMWP/SAP	Groundwater Monitoring Work Plan and Sampling and Analysis Plan
gpm	Gallons per minute
H+A	Hargis + Associates, Inc.
HiPOx	Ozone and hydrogen peroxide
LAS	Lower Aquifer System
MAS	Middle Aquifer System
MCL(s)	Maximum Contaminant Level(s)
msl	Mean sea level
OCGB	Orange County Groundwater Basin
PCE	Tetrachloroethylene
QA/QC	Quality assurance/quality control
RCRA	Resource Conservation and Recovery Act
RFI	RCRA Facility Investigation
SIM	Selective ion monitoring
the Site	former Raytheon Company facility located at 1901 West Malvern Avenue, Fullerton, California
TCE	Trichloroethylene
TCFM	Trichlorofluoromethane
UAS	Upper Aquifer System
ug/l	Micrograms per liter
VOC(s)	Volatile organic compound(s)

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1.0 INTRODUCTION

This report presents the results of groundwater monitoring and groundwater treatment pilot testing conducted during the second quarter 2012 through the first quarter 2013 at the former Raytheon Company (formerly Hughes Aircraft Company) facility located at 1901 West Malvern Avenue, Fullerton, California (the Site) (Figure 1). Previous investigations at the Site were conducted as part of the Resource Conservation and Recovery Act (RCRA) Facility Investigation (RFI) under the direction of the California Environmental Protection Agency, Department of Toxic Substances Control (DTSC) (Hargis + Associates, Inc. [H+A], 1998). Periodic groundwater monitoring and additional groundwater assessment have been conducted since completion of the RFI to support a Corrective Measures Study (CMS) for the Site under continuing direction of the DTSC (H+A, 2003a, 2003b, 2003c, 2003d, 2004a, 2004b, 2005a, 2008b, 2009b, 2010a, 2010c, 2011a, 2011c, 2011e, and 2013b). As part of the CMS, an extended groundwater extraction and treatment pilot test began operation in July 2008 (H+A, 2005b, 2009c, 2011d, and 2013c).

Groundwater monitoring consists of measuring groundwater levels and collecting groundwater samples from monitor wells and piezometers at the Site (Figure 2). Quarterly water level measurements and groundwater samples were collected during this annual reporting period in May 2012, August 2012, November 2012, and February 2013 from accessible monitor wells and piezometers in general accordance with the Groundwater Monitoring Work Plan and Sampling and Analysis Plan (GMWP/SAP), and subsequent addenda except if noted herein (Section 2.1) (Tables 1 and 2) (H+A, 2003c, 2011a, and 2011e).

A summary of regional and local hydrogeologic conditions in the area and at the Site are presented in the following sections. Regional and local hydrogeologic conditions are described in greater detail in previously submitted well construction reports (H+A, 2005c, 2009a, 2010d, and 2011b).

1.1 REGIONAL HYDROGEOLOGIC FRAMEWORK

The Site is located within the Orange County Groundwater Basin (OCGB). Aquifers in the OCGB have been divided into three separate systems called the upper, middle, and lower regional groundwater systems (California Department of Water Resources [DWR], 1967).

The Upper Aquifer System (UAS) is located within the OCGB to the south of Malvern Avenue. The UAS in this area includes stream terrace and older alluvial deposits as well as the La Habra/Lakewood formation. It is believed that coarse-grained facies in the La Habra/Lakewood formation, corresponding to the upper aquifer, pinch out south of the Coyote Hills or are folded and unconformably truncated near the southern boundary of the Site (H+A, 2005c, 2009a, 2010d, and 2011b).

The Middle Aquifer System (MAS) underlies the UAS to the south of Malvern Avenue and extends to approximately -1,500 feet mean sea level (msl) in this area. The MAS is believed to include the Coyote Hills formation and the San Pedro formation and may include portions of the La Habra formation incised as channels into the underlying Coyote Hills formation.

The Lower Aquifer System (LAS) underlies the MAS and extends to the base of the freshwater zone. The LAS is believed to include portions of the Fernando group of Pliocene age. The base of the freshwater zone in the vicinity of the Site is estimated to be approximately -300 feet msl just north of the Site and -3,000 feet msl south of the Site in the OCGB (DWR, 1967). The base of the freshwater zone immediately beneath the Site has not been established.

Groundwater production in the OCGB is primarily from the lower portion of the UAS and the upper portion of the MAS between approximately -250 feet msl and -1,000 feet msl (DWR, 1967).

1.2 SITE HYDROGEOLOGY

Site hydrostratigraphic units consist of strata having similar hydraulic properties and lithologic characteristics, which have been correlated across the Site. The soils encountered at the Site are generally interbedded sand, silty to clayey sand, sandy silt, and sandy clay, with local gravel layers (H+A, 1998). Evaluation of strata on a relatively small scale, on the order of inches to a foot or two, indicate that soil types encountered in the subsurface are typically very discontinuous, precluding detailed correlation between boreholes. However, some larger-scale correlations have been made at the Site and vicinity as described below.

The groundwater conceptual model (CM) for the Site was refined after completion of additional groundwater assessment activities in 2004 and confirmed and further refined during the 2008 through 2012 well construction activities. Specific results of prior additional assessment activities were documented after discrete phases of work in several well construction and groundwater sampling reports (H+A, 2005c, 2009a, 2010d, 2011b, 2012a, and 2013 In Press). The following provides a general overview based on the RFI and well construction reports for the Site.

Two localized perched zones were identified under portions of the Site during the course of the RFI (H+A, 1998). Perched zones were identified based on the occurrence and behavior of groundwater, and are not clearly expressed lithologically. The perched zones do not represent a usable source of groundwater due to the limited area over which they occur and the small quantities of water flowing through these zones.

The regional groundwater system beneath the Site occurs in sand, silt, and clay (H+A, 1998). The upper portion of the regional groundwater system is heterogeneous as indicated by the differences in the lithology encountered during the construction of the groundwater monitor wells. The hydraulic conductivity of these sediments was estimated to range from approximately 0.1 foot per day to approximately 100 feet per day (H+A, 2008b). Wells completed in lithologic intervals with varying degrees of hydraulic communication with each other and with aquifer units in the OCGB respond differently to changes in regional water levels. Those in good communication respond rapidly to regional changes, while those in finer-grained

or isolated lithologic units exhibit a dampened and delayed response to regional water level changes. This differential response may also appear as a temporary reversal of the vertical hydraulic gradients in the vicinity of paired monitor well groupings. Such reversals tend to be repeated, representing a seasonally-linked pattern of gradient reversals, from downwards during periods of expected high basin-wide groundwater extraction to upwards during the shorter winter season (Figures 3 through 8) (H+A, 2005c). These differential responses facilitated the identification and correlation of several hydrogeologic units across the Site, designated with increasing depth they include: Unit A, the finer-grained intervening Unit AB, Unit B (the “Target Zone”), the finer-grained intervening Unit BC, Unit C, and Unit D.

The hydrogeology in the southern portion of the Site is heterogeneous and is interpreted to include a structural fold based on regional subsurface studies and on an evaluation of Site lithology, geophysical, water level, and water quality trends (H+A, 2005c, 2009a, 2010d, and 2011b). A groundwater CM was developed as part of the RFI and was subsequently refined to incorporate this structural feature following subsequent phases of additional subsurface exploration, such as exploratory borings and deep monitor well installations. The groundwater CM is intended to be descriptive of conditions observed in the subsurface, as well as, predictive of geologic and hydrogeologic conditions likely to be encountered in the course of any additional subsurface work. The groundwater CM is intended to describe conditions at both the regional scale and at the smaller, Site-specific scale. It is expected that the groundwater CM will continue to be refined with time as it is continuously tested against additional new groundwater monitoring data and other new data that may become available. The groundwater CM has been refined based on available groundwater monitoring data to date, and the primary geologic/hydrogeologic structural feature at and in the vicinity of the Site is described in the following paragraph.

Strata underlying the southern flank of the Coyote Hills are believed to dip gently southward to the north of the Site, and are well documented to be nearly horizontal in the OCGB south of the Site (DWR, 1967). The southern boundary of the Coyote Hills exhibits a monoclinical fold below the surficial terrace deposits, resulting in local southward dip of approximately 42 degrees between exploratory boring EB-1 and monitor well MW-31 (Figures 9 through 11) (H+A, 2010d).

2.0 GROUNDWATER MONITORING

Groundwater monitoring was conducted in general accordance with the DTSC-approved GMWP/SAP and subsequent addenda (DTSC, 2003 and 2011; H+A, 2003c, 2011a, and 2011e). Groundwater monitoring included quarterly water level measurements in all Site monitor wells, piezometers, and extraction wells (Figure 12). Water levels were measured on May 7, 2012, August 6, 2012, November 5, 2012, and February 4, 2013, during this annual reporting period (Table 3). Groundwater samples were collected from piezometers and monitor wells according to the analytical schedule detailed in the GMWP/SAP (H+A, 2003c, 2011a, and 2011e), as updated (Table 1). Additional groundwater monitoring was conducted as part of routine operation and monitoring of the pilot Groundwater Extraction and Treatment System (GETS) (Section 3.0).

2.1 WELL ACCESSIBILITY AND STATUS

All existing wells and piezometers at the Site were accessible during the groundwater monitoring events (Table 1). Several wells and piezometers that were installed prior to and during the RFI, and as part of earlier Site remediation activities, were previously decommissioned during property redevelopment at the Site in the early 2000s (H+A, 2002 and 2004c), and do not appear in the data tabulations compiled for this report (Tables 2 through 5).

2.1.1 Wells Installed Since Approval of the Sampling and Analysis Plan

In accordance with the Additional Groundwater Assessment Work Plan (AGAWP) Addendum 4, two monitor wells, MW-36 and MW-37, were installed and sampled in 2012 to assess the depth of the Target Zone, and distribution of volatile organic compounds (VOCs) and 1,4-dioxane in the Target Zone west of the Site (H+A, 2011c). In accordance with the GMWP/SAP Addendum No. 1, monitor wells MW-36 and MW-37 have been incorporated into the quarterly groundwater monitoring program at the Site (Tables 1 and 2; Figure 2) (DTSC, 2011; H+A, 2011a and 2011e).

2.2 GROUNDWATER LEVELS

Depth to groundwater was measured in all monitor wells, piezometers, and extraction wells. Water level elevations were calculated by subtracting the measured depth to water in each well from its surveyed reference point elevation (Table 3). Groundwater level elevations have been plotted for the northern perched zone and the regional groundwater system (Figure 12). Water level elevations in Unit B wells have been contoured (Figures 13A through 13D).

2.2.1 Perched Zone Water Levels

A hydrograph presenting historical water level data for the perched zone has been prepared (Figure 14). Water levels in the upgradient (northern) portion of the perched zone were depressed during operation of the voluntary dual-phase extraction system, but gradually recovered in 2000 and 2001 (represented by former piezometers P-02D and P-04 on Figure 14) (H+A, 2000). Since then, water levels in the northern portion of the perched zone have remained relatively stable. The water level elevation in piezometer P-09, which is located in the northern portion of the perched zone, has been stable between about 60 feet msl and 65 feet msl, fluctuating within a range of less than about 2.5 feet over its period of record since installation in mid-2003. Water levels across most of the perched zone do not appear to consistently reflect the seasonal fluctuations observed in regional groundwater system monitor wells at the Site (Section 2.2.2), indicating that the perched zone is not in direct hydraulic communication with the regional groundwater system.

Water level trends observed in the southernmost perched zone piezometer, P-07, suggest that the perched zone merges with the regional groundwater system in this area. Water level increases were observed in piezometer P-07 between December 2005 and June 2006, followed by a decline to dry conditions by September 2007 (Figure 14). Regional water levels reached historical highs within this same period in mid-2006 and began a continual decline during the last three quarters of 2007. The water level elevation in piezometer P-07 has been relatively stable and slowly increasing since December 2007 while the regional groundwater system continued to decline to historical lows in late 2008. The water level elevation in

piezometer P-07 decreased by approximately 0.5 foot between February 2012 and February 2013. Trends observed in piezometer P-07 suggest that this piezometer responds to regional water level increases above a certain threshold near approximately 30 feet msl, but does not exhibit a direct hydraulic connection with the regional groundwater system under typical conditions at the Site, where regional groundwater levels are depressed by production well pumping in the OCGB and are lower than 30 feet msl at the Site.

2.2.2 Regional Groundwater System Water Levels

Water level elevations decreased in 32 measured monitor wells and increased in 5 measured monitor and extraction wells between February 2012 and February 2013 (Table 3; Figures 3 through 8) (H+A, 2012b). Measured increases ranged from approximately 0.2 foot at monitor well MW-08 to as much as 12 feet at extraction well MW-21. The observed water level increase at extraction well MW-21 was related to placing this well back on stand-by status at the conclusion of the synthetic media field pilot testing during which MW-21 was temporarily operated (Section 3). Measured water level decreases ranged from approximately 1.8 feet at monitor well MW-26A to approximately 11.5 feet at monitor well MW-25. The highest water level elevation observed in wells at the Site in February 2013 was at monitor well MW-20, at an elevation of approximately 31.0 feet above msl. The lowest static water level elevation observed in monitor wells at the Site in February 2013 was at monitor well MW-36, at an elevation of approximately 2.1 feet above msl (Table 3; Figure 12).

Hydrographs have been prepared based on water levels measured manually during the period from January 1997 through February 2013, and on data collected automatically using pressure transducer/data-loggers in select wells during the period from November 1999 through March 2000 and January 2002 through February 2013 (Figures 3 through 8). Historical water level data from the regional groundwater system indicate an overall decline in regional groundwater levels from early 1997 through late 2002. Water levels began to recover in early 2003; following a record rainfall during the 2004-2005 season, and water level elevations in regional groundwater monitor wells at the Site reached historical highs by about the spring of 2006. Water levels then rapidly declined to historical lows by November to December 2008. Water levels in most wells have recovered from the historical lows of late 2008. Water level elevations in the regional groundwater system have generally fluctuated seasonally due to variations in

groundwater production and recharge in the groundwater basin and, to a lesser extent, cyclical groundwater extraction from regional production wells in the vicinity that are unrelated to the Site (Figures 3 through 8) (H+A, 2005c, 2009a, 2010d, and 2011c).

Six monitor well clusters/nests are completed in the regional groundwater system, where water levels are monitored at several different vertical intervals to characterize vertical hydraulic gradients between successively deeper hydrogeologic units (EW-01/MW-16/MW-21/MW-24/MW-25, for convenience designated the “Footbridge cluster,” MW-23/MW-26A/MW-26B/MW-26C, for convenience designated the “Starbuck cluster”, MW-30A/MW-30B, designated the MW-30 nest, MW-32A/MW-32B/MW-32C, designated the MW-32 nest, MW-34A/MW-34B/MW-34C, designated the MW-34 cluster, and MW-35A/MW-35B/MW-35C, designated the MW-35 nest) (Table 2; Figures 12 and 15 through 20). The following provides a summary of vertical hydraulic gradients based on the February 2013 water level measurements at these well clusters/nests (Table 3).

- At the Footbridge cluster, the water level elevation in monitor well MW-24 was higher than the water level elevations in the other wells in that cluster. A downward vertical hydraulic gradient was observed between monitor wells MW-24 and MW-25. An upward gradient was observed between extraction wells EW-01 and MW-21, and between extraction well MW-21 and monitor MW-24 (Figure 15) (H+A, 2012b).
- At the Starbuck cluster, the water level elevation in monitor well MW-23 was higher than the water level elevations in the other wells in that cluster. Downward vertical gradients were observed between monitor wells MW-26A and MW-23, as well as monitor wells MW-26A and MW-26B, and monitor wells MW-26B and MW-26C (Figure 16) (H+A, 2012b).
- At the MW-32 nest, the water level elevation in monitor well MW-32C was higher than the water level elevations in the other wells in that nest. Upward vertical gradients were observed between monitor wells MW-32A and MW-32B, as well as monitor wells MW-32B and MW-32C (Figure 17) (H+A, 2012b).

- At the MW-30 nest, the water level elevation in monitor well MW-30B was higher than the water level elevation in monitor well MW-30A, indicating an upward vertical gradient (Figure 18) (H+A, 2012b).
- At the MW-34 cluster, the water level elevation in monitor well MW-34A was higher than the water level elevations in the other wells in that cluster. Downward vertical gradients were observed between monitor wells MW-34A and MW-34B, and an upward vertical gradient was observed between monitor wells MW-34B and MW-34C (Figure 19) (H+A, 2012b).
- At the MW-35 nest, the water level elevation in monitor well MW-35A was higher than the water level elevations in the other wells in that nest. Downward vertical gradients were observed between monitor wells MW-35A and MW-35B, as well as monitor wells MW-35B and MW-35C (Figure 20) (H+A, 2012b).

Occasional seasonal gradient reversals appear to reflect the variable extent of hydraulic communication between Site wells and the regional MAS of the OCGB (Figures 3 through 8). Water level data obtained from the six monitor well nests/clusters indicate that some wells (e.g., EW-01, MW-23, and MW-26C) are highly responsive to piezometric changes in the basin, whether resulting from regional or seasonal fluctuations or from local production well pumping in the northern portion of Fullerton. Other wells (e.g., MW-16, MW-21, and MW-25) appear to be in partial communication with the regional aquifer, exhibiting a dampened and delayed response to changes in the regional system or becoming seasonally isolated from the regional system. Finally, some wells (e.g., MW-24, MW-26A, and MW-26B) appear to be relatively isolated from the regional groundwater system, exhibiting relatively low amplitude and gradual seasonal variation, with high water levels typically in the late spring months and low levels in the early fall (Figures 15 and 16).

2.3 CHEMICAL QUALITY OF GROUNDWATER

Two perched zone piezometers, 31 regional groundwater monitor wells, and 3 extraction wells were sampled in February 2013 (Table 1). All groundwater samples collected during the February 2013 monitoring event were analyzed for VOCs using U.S. Environmental Protection

Agency (EPA) Method 8260B. Groundwater samples collected from select piezometers, monitor wells, and extraction wells were also analyzed for 1,4-dioxane using modified EPA Method 8270 in accordance with the groundwater sampling schedule (Table 1). Selective ion monitoring (SIM) was used by the primary laboratory for analysis of 1,4-dioxane to provide lower detection and reporting limits (EPA Method 8270 SIM). Lower reporting limits for 1,4-dioxane resulted in historical low concentrations detected at several wells and a historical high, at a relatively low concentration, at one well as described in the following sections.

Original and duplicate groundwater samples were analyzed by Advanced Technology Laboratories, Inc., Signal Hill, California (ATL) (Appendix A). Laboratory split groundwater samples were analyzed by Calscience, Garden Grove, California (Appendix A). Chain-of-custody documentation was enclosed with each sample shipment. Results of groundwater sample VOC and 1,4-dioxane analyses have been summarized (Tables 4 and 5).

Prior to groundwater sample collection, each monitor well was purged until three casing or screen volumes were evacuated from the well, or the slow-well protocol was followed for removal of at least one casing or screen volume, as appropriate (H+A, 2003c and 2008b). One screen volume is defined as the volume of water inside the screened-interval of the well, and is typically used as the unit purge volume for wells where the submersible purge/sample pump is set near the top or within the screen interval and there is relatively low water level drawdown during purging. At deeper wells where the top of the screened interval is below the maximum submergence capacity of the pump, pumps are generally set near their maximum submergence level, and a unit purge volume is then taken as the volume of water inside the screened interval plus the volume of water inside the blank well casing below the pump. Groundwater samples were collected from the extraction wellhead(s) during operation of the pilot GETS. Extraction wells EW-01 and MW-21 were turned on temporarily for purging and sampling in February 2013, as current operation of the pilot GETS involves extraction from extraction well EW-02 only. Field parameters, including pH, specific conductance, dissolved oxygen, turbidity, and temperature, were monitored during well purging. Groundwater sampling field forms are provided (Appendix B).

Quality assurance/quality control (QA/QC) samples collected in February 2013 consisted of trip blanks, equipment rinsate blanks, field duplicates, and laboratory split samples. Trip blanks and

the water used to collect the equipment rinsate blanks were provided by ATL. Field duplicate and/or laboratory split samples were collected for analysis of VOCs and 1,4-dioxane from monitor wells MW-29, MW-30B, MW-32B, MW-34B, MW-36, and MW-37 in February 2013 (Table 4). Equipment rinsate blanks were collected at the rate of one per day when non-dedicated purging or sampling equipment was used.

The following sections describe the analytical results for VOC and 1,4-dioxane analyses of groundwater samples collected during the February 2013 groundwater monitoring event. Results from quarterly groundwater monitoring rounds conducted in May 2012, August 2012, and November 2012 were previously submitted as quarterly data submittals (H+A, 2012d, 2012f, and 2013a).

2.3.1 Perched Water Zone

Two perched zone piezometers, P-07 and P-09, were sampled during the February 2013 groundwater monitoring event (Tables 4 and 5; Figure 21). The groundwater samples collected from perched zone piezometers P-07 and P-09 were analyzed for VOCs and 1,4-dioxane. VOCs detected in the groundwater samples collected from piezometer P-07 in February 2013 include 1,1-dichloroethylene (1,1-DCE), 1,1-dichloroethane (1,1-DCA), 1,1,2-trichloroethane (1,1,2,-TCA), tetrachloroethylene (PCE), trichloroethylene (TCE), and trichlorofluoromethane (TCFM). All concentrations were within their respective historical ranges for this piezometer. 1,4-Dioxane was detected in the groundwater sample collected from piezometer P-07 at a concentration of 1,900 micrograms per liter (ug/l), within its historical range. 1,1-DCE was the only VOC detected in the groundwater sample collected from piezometer P-09 in February 2013, at a concentration of 5.2 ug/l, within its historical range. 1,4-Dioxane was not detected at piezometer P-09 in February 2013 at a reporting limit of 0.20 ug/l, a historical low result for this piezometer (Table 4).

2.3.2 Regional Groundwater System

Twenty-eight monitor wells and three extraction wells were sampled in February 2013 (Tables 1, 4, and 5; Figure 21). Samples collected from all regional groundwater system monitor and

extraction wells were analyzed for VOCs. Groundwater samples collected from select monitor and extraction wells were also analyzed for 1,4-dioxane in accordance with the Groundwater Monitoring Program (GMP).

2.3.2.1 Volatile Organic Compounds in Regional Groundwater System Monitor and Extraction Wells

1,1-DCE was the principal VOC detected in groundwater samples collected from regional groundwater system monitor wells at the Site. The additional VOCs 1,1,2-TCA, 1,1-DCA, chloroform, cis-1,2-dichloroethylene (cis-1,2-DCE), PCE, toluene, TCE, and TCFM were detected at relatively low concentrations in groundwater samples collected in February 2013 (Table 4). The concentrations of 1,1-DCE have decreased significantly from the June 2008 historical highs of 4,900 ug/l in extraction well MW-21 and approximately 1,600 ug/l in extraction well EW-01 since operation of the pilot GETS started in July 2008. 1,1-DCE was detected in groundwater samples collected from monitor well MW-26C beginning in December 2007 through December 2009. The concentration of 1,1-DCE at monitor well MW-26C generally declined since December 2007, with no detection of 1,1-DCE in recent samples at a reporting limit of 0.5 ug/l in March 2010 through February 2013.

Historical concentration ranges were evaluated for May 2012 through February 2013. VOC concentrations were generally within their respective historical ranges with the following exceptions. In August 2012 historical high concentrations of 1,1-DCE were detected in the groundwater samples collected from monitor wells MW-32B and MW-34B at concentrations of 120 ug/l and 1,100 ug/l, respectively. In November 2012 an historical high TCE concentration of 66 ug/l was detected in the groundwater sample collected from monitor well MW-32B. In January 2013 an historical high 1,1-DCE concentration of 140 ug/l was detected in monitor well MW-36. In February 2013, historical high concentrations of TCE were detected in the groundwater samples collected from monitor wells MW-29, MW-30B, and MW-31, at 8.3 ug/l, 96 ug/l, and 21 ug/l, respectively (Table 4). An historical high TCFM concentration of 1.9 ug/l was detected in the groundwater sample collected from monitor well MW-29.

2.3.2.2 1,4-Dioxane in Regional Groundwater System Monitor and Extraction Wells

In February 2013, 1,4-dioxane was detected in groundwater samples collected from regional groundwater system monitor wells MW-08, MW-16, MW-29, MW-31, MW-32B, MW-34B, and MW-36 and from extraction wells EW-01, EW-02, and MW-21. For May 2012 through February 2013, historical high concentrations of 1,4-dioxane were detected in the groundwater samples collected from monitor wells MW-32B, MW-34B, and MW-36, at 3.4 ug/l, 250 ug/l, and 2.8 ug/l, respectively. The 1,4-dioxane concentration of 10 ug/l in the groundwater sample collected from extraction well EW-02 represents an historic low. 1,4-Dioxane was not detected in the groundwater sample collected from monitor well MW-22, at a reporting limit of 0.20 ug/l, also representing an historic low.

2.3.2.3 Groundwater Quality in Site Hydrostratigraphic Zones

The following describes 1,1-DCE and 1,4-dioxane detected at the Site in February 2013 within the framework of the Site groundwater CM hydrostratigraphic zones (Tables 1 and 4; Figures 9 through 11 and 21).

- Three of seven monitor wells screened in Unit A (MW-18, MW-34A, and MW-35B) were sampled for VOCs in February 2013. 1,1-DCE was not detected in groundwater samples collected from any of the three Unit A monitor wells sampled in February 2013. All three monitor wells sampled for VOCs were also sampled for 1,4-dioxane (MW-18, MW-34A, and MW-35B). 1,4-Dioxane was not detected in groundwater samples collected from these Unit A monitor wells.
- Three of five monitor wells screened in Unit AB (MW-13, MW-15, and MW-32A) were sampled for VOCs in February 2013. 1,1-DCE was not detected in groundwater samples collected from any of the three Unit AB monitor wells sampled in February 2013. Two of the three monitor wells sampled for VOCs were also sampled for 1,4-dioxane (MW-13 and MW-32A). 1,4-Dioxane was not detected in groundwater samples collected from these two Unit AB monitor wells.

- All 13 monitor wells (MW-16, MW-26C, MW-27, MW-28, MW-29, MW-30A, MW-31, MW-32B, MW-33, MW-34B, MW-35C, MW-36, and MW-37) and two extraction wells (EW-01 and EW-02) screened in Unit B (Target Zone) were sampled for VOCs and 1,4-dioxane in February 2013. Note, monitor well MW-37 may be screened in a deeper hydrostratigraphic unit, but for the purposes of this report the results are presented with Unit B. Water quality hydrographs depicting the concentrations of 1,1-DCE, TCE, and 1,4-dioxane in groundwater samples collected through February 2013 have been prepared (Appendix C). Comparison of the historical concentrations of these compounds in on-Site wells generally indicates stable or declining concentration trends with seasonal variability. Off-site monitor wells have a shorter monitoring history than On-Site monitor wells. In general, off-site monitor well MW-34B exhibits relatively large seasonal variations in VOC and 1,4-dioxane concentrations. In addition, the relative concentrations of 1,4-dioxane as compared to 1,1-DCE in groundwater samples collected from monitor wells along Malvern Avenue tend to be lower than on-Site monitor wells and monitor well MW-34B. TCE is also detected in monitor wells along Malvern Avenue, but at generally lower concentrations than 1,1-DCE. Additional off-site Unit B groundwater monitor wells have been proposed to assess the distribution of VOCs and 1,4-dioxane (H+A, 2013b).
- Three monitor wells (MW-08, MW-30B, and MW-34C) and one extraction well (MW-21) screened in Unit BC were sampled for VOCs and 1,4-dioxane in February 2013. 1,1-DCE was detected in extraction well MW-21 and monitor wells MW-30B and MW-08 (Table 4). TCE was also detected in monitor wells MW-30B and MW-08 and extraction well MW-21 in February 2013, but at lower concentrations. 1,4-Dioxane was detected in samples collected from extraction well MW-21 and monitor well MW-08, but not monitor well MW-30B. The concentrations of 1,1-DCE and 1,4-dioxane at extraction well MW-21 had declined during the operation of the initial pilot GETS program, June 2008 through 2009, and have been more variable since the conclusion of that initial phase of pilot testing when extraction well MW-21 was routinely operated (Table 4).
- All three monitor wells screened in Unit C (MW-09, MW-24, and MW-32C) were sampled for VOCs and 1,4-dioxane in February 2013. VOCs and 1,4-dioxane were not detected in groundwater samples collected from Unit C monitor wells.

- Two of three monitor wells screened in Unit D (MW-06 and MW-20) were sampled for VOCs in February 2013. 1,1-DCE was not detected in groundwater samples collected from Unit D monitor wells. 1,4-Dioxane was not detected in the groundwater sample collected from monitor well MW-20 in February 2013.

VOC and 1,4-dioxane concentrations will continue to be monitored to evaluate vertical and lateral distribution and to assess trends within and across the Site hydrostratigraphic zones.

2.3.2.4 Groundwater Quality in City of Fullerton Airport Well 9

The City of Fullerton operates a municipal water supply well, designated F-AIRP, which is located on the north side of Fullerton Municipal Airport (Figure 22). F-AIRP is located approximately 4,000 feet to the southwest of the southwest boundary of the Site and approximately 1,500 feet to the southwest of monitor well MW-33. Based on water quality results received from the Orange County Water District in January 2013, 1,1-DCE was detected for the first time in August 2002 at a concentration of 0.6 ug/l. Since 2002, 1,1-DCE has periodically been detected in F-AIRP with a maximum concentration of 2.1 ug/l in November 2008. In 2012, 1,1-DCE was detected at low levels in F-AIRP with a maximum detection of 1.7 ug/l in February 2012. All detections of 1,1-DCE in production well F-AIRP have been below the California maximum contamination level (MCL) of 1,1-DCE in drinking water of 6 ug/l (Figure 23). TCE and 1,4-dioxane have not been detected in F-AIRP.

2.3.2.5 Inorganic Constituents

In January 2013, groundwater samples were collected from nine regional groundwater zone monitor wells for analysis of general minerals, common ions, and other inorganic constituents (Table 6; Figures 24 and 25). Wells sampled for inorganic constituents in January 2013 included existing wells and newly constructed wells, which had not been previously sampled for general inorganic chemistry (H+A, 2005c). Results from inorganic sampling in January 2013 are discussed below.

Select monitor wells screened in the Unit B and deeper zones were sampled in January 2013 in an effort to assess whether newly constructed monitor well MW-37 was screened within Unit B or a different unit. Water level elevations at monitor well MW-37 are about 10 to 20 feet higher than nearby Unit B monitor wells (Table 3). The results of groundwater sample analysis for common ions were evaluated using trilinear Piper diagrams and Stiff diagrams to characterize water quality type and to identify trends that might occur laterally or vertically within the hydrostratigraphic units underlying the Site (Figure 24 and 25). Most groundwater sampled fell in the central portion of the trilinear diagram, indicating that a dominant ionic type is not evident in the Site groundwater. The inorganic data was generally inconclusive and did not provide an indication as to whether monitor well MW-37 was screened within Unit B. However, Unit C zone monitor wells did appear to have a unique signature compared to samples collected from other zones (Figure 25).

2.3.3 Quality Assurance/Quality Control

QA/QC samples, including field duplicates, laboratory split samples, equipment rinsate blanks and trip blanks, were collected and analyzed for VOCs during the February 2013 monitoring event (Appendix A). In addition, field duplicates and laboratory split samples were collected and analyzed for 1,4-dioxane in February 2013. The relative percent difference was calculated between the results of each field duplicate and each laboratory split sample with its corresponding original sample. Data quality assessment results for the May, August, and November 2012 groundwater monitoring events were previously reported in their respective groundwater monitoring data submittals (H+A, 2012c, 2012d, and 2013a). The data quality assessment for February 2013 indicated that all QA/QC results for groundwater samples are within acceptable criteria.

VOCs and 1,4-dioxane were not detected in the trip, method, or equipment rinsate blanks analyzed with groundwater samples collected during the February 2013 groundwater monitoring event (Table 4; Appendix A).

In addition QA/QC trip blanks were collected as part of the monthly and quarterly GETS sampling events in accordance with the GETS monitoring sampling schedule (Table 7). There

were no detections of analytes sampled for the GETS quarterly and monthly monitoring in the trip or method blanks, with the following exception:

- Iron was detected at a concentration of 0.61 milligrams per liter in a method blank analyzed by ATL on March 14, 2012. Iron was not detected in any associated samples and, therefore, no data was qualified (Table 7).

2.3.4 Adequacy of and Proposed Optimization to the Groundwater Monitoring Program

In accordance with Amendment A of Addendum No. 1 to the GMWP/SAP, the existing GMP was reviewed for adequacy based on results collected during the past four quarters of sampling. Adequacy of the groundwater monitoring program can be evaluated both in terms of appropriate frequencies of sampling and analytical schedules for monitoring temporal changes at existing wells, and in terms of delineation of the Site-derived contaminants in groundwater for completeness of the groundwater assessment, i.e. whether additional well(s) are needed to provide delineation.

Completeness of assessment is evaluated after each new phase of monitor well installations and then confirmed during on-going groundwater monitoring. Three additional monitor wells have been proposed based largely on results from the most recent phase of well installations (monitor wells MW-36 and MW-37) and ongoing monitoring (H+A, 2013b). One new monitor well is proposed near monitor well MW-37, screened at a shallower zone near the water table; one new monitor well is proposed west of monitor well MW-36; and one new monitor well is proposed to evaluate the Unit B near the southeastern portion of the Site.

Frequency of sampling and analytical schedules were considered based on results of monitoring at existing wells. VOC and/or 1,4-dioxane concentrations did not increase above historical high concentrations for two consecutive monitoring events (Tables 1 and 4) (H+A, 2012b). Based on this review, no increase in sampling frequency is indicated for any of the monitor wells at the Site.

The following optimization of the groundwater monitoring program is proposed based on results of groundwater monitoring over the last several quarters:

- Monitor wells MW-35A (screened in coarse-grained zone above Unit A) and MW-35B (Unit A) are located in hydrostratigraphic zones above Unit B that have limited hydraulic communication with the deeper units. Continued collection of high-frequency water quality data from these wells is no longer warranted as, over time, it has been demonstrated that Site-related contaminants are not present in these apparently isolated zones. These wells have been monitoring quarterly for more than 8 quarters since their installations. Their monitoring periods are proposed to be reduced from quarterly to bi-annually (even years).
- Monitor well MW-35B is screened in the Unit B to the southwest of the Site and provides lateral delineation of the VOCs and 1,4-dioxane detected in groundwater monitor wells to the north and northwest of this location. Site-related contaminants have not been detected in monitor well MW-35C for more than 8 quarters of sampling since installation. Monitor well MW-35B monitoring period is proposed to be reduced from quarterly to semi-annually.
- Unit A monitor well MW-34A and Unit BC monitor well MW-34C are screened above and below, respectively, the Unit B, and provide vertical delineation of VOCs and 1,4-dioxane detected in the Unit B at this location (monitor well MW-34B). Unit A monitor well MW-34A and Unit BC monitor well MW-34C water quality results have been consistently non-detect during their monitoring periods for more than 8 quarters since installations. The monitoring periods for monitor wells MW-34A and MW-34C are proposed to be reduced from quarterly to semi-annually. The monitoring period for monitor well MW-34B will remain quarterly.

3.0 GROUNDWATER EXTRACTION AND TREATMENT PILOT STUDY

This section summarizes the pilot GETS operation within the three-month period of monitoring conducted during the first quarter of 2013. The pilot GETS consists of three groundwater extraction wells, the treatment system, and the disposal system; however, the current phase of pilot testing is operating using one extraction well, EW-02. The treatment system processes extracted groundwater through an advanced oxidation unit that utilizes ozone and hydrogen peroxide (HiPOx), followed by a granular activated carbon polish prior to disposal to the sanitary sewer. A graphical representation of the system operational time in relation to water level measurements at current extraction well EW-02 and the previously utilized extraction wells MW-21 and EW-01 has been provided (Figure 26).

3.1 SYSTEM OPERATION

Initial startup of the pilot GETS took place on Tuesday, July 8, 2008. From July 2008 through November 2009, the pilot GETS was operated with extraction wells EW-01 and MW-21 operating at approximately 10 gallons per minute (gpm) each. Pilot GETS expansion took place between November 2009 and March 2010 in order to incorporate recently installed extraction well EW-02 into the extraction well network. The system flowrate was also increased from 20 gpm to 50 gpm; 50 gpm is the maximum flowrate of the sewer discharge. Beginning in March 2010, the pilot GETS was operated at 50 gpm, entirely from extraction well EW-02. During December 2011, a synthetic media pilot test was started. The purpose of the synthetic media pilot test was to evaluate the efficacy of treating water collected from extraction well MW-21 using a synthetic media for contaminant removal. In order to conduct the synthetic media pilot test, extraction wells EW-02 and MW-21 were operated at approximately 40 gpm and 10 gpm, respectively. The synthetic media pilot test was completed on March 9, 2012, and operation of the pilot GETS was restored to 50 gpm, entirely from extraction well EW-02. Extraction wells EW-01 and MW-21 are on standby for the current phase of pilot testing, but may be used for future phases of pilot testing or as part of a full scale pump-and-treat system.

During the first quarter 2013, the pilot GETS was operational approximately 93 percent of the available runtime and approximately 5,476,605 gallons of groundwater were treated and discharged to the sanitary sewer (Table 9). No significant downtime occurred during the first quarter of 2013, all downtime was associated with routine operations and maintenance activities, and flooding of the EW-02 well vault due to rain events during the quarter. The average monthly discharge flowrate to the sanitary sewer during December 2012 through February 2013 was approximately 42.3 gpm. Since startup of the pilot GETS, approximately 69,054,296 gallons of groundwater have been treated at an average flowrate of 28.1 gpm through the end of February 2013 (Table 9).

3.2 WATER QUALITY PERFORMANCE MONITORING

Current monthly and quarterly pilot GETS monitoring activities include collecting samples from extraction well EW-02 in addition to collecting samples at treatment system sampling ports: Extraction Well EW-02, Influent, Post Particulate Filter, Post HiPOx Oxidation, Carbon Breakthrough, and Carbon Effluent (Tables 7 and 8; Figure 27). Samples collected during these activities were sent to ATL. Analytical results of the treatment system samples have been summarized (Table 8; Appendix A).

The pilot GETS continues to remove VOCs and 1,4-dioxane from extracted groundwater. The HiPOx advanced oxidation and carbon adsorption treatment units effectively removed VOCs from extracted groundwater. Breakthrough of low-level detections of VOCs was not observed in the first quarter 2013 monitoring samples with the exception of detections of 1,1-dichloroethane with concentrations ranging from 0.53 to 0.56 ug/l, which are just above the laboratory reporting limit, but below the pilot GETS permitted sewer discharge limit (Table 8). The effluent sample collected from the HiPOx advanced oxidation treatment unit contained low-level detections of bromate, a secondary by-product, during operations in the first quarter 2013. Carbon adsorption does not effectively remove this compound; however, this compound was detected at concentrations below the pilot GETS permitted sewer discharge limit. The operation of the advanced oxidation system continues to be optimized in an attempt to minimize the formation of bromate (Figure 28).

During the first quarter of 2013, the pilot GETS removed approximately 2.02 pounds of VOCs and 0.80 pounds of 1,4-dioxane from extracted groundwater. Since startup of the pilot GETS in July 2008, approximately 116.4 pounds of VOCs and 20.36 pounds of 1,4-dioxane have been removed from groundwater through February 2013 (Figure 29).

3.3 WATER LEVEL PERFORMANCE MONITORING

The capture zone from extraction of groundwater at extraction well EW-02 during operation of the pilot GETS can be evaluated based on hydraulic properties of Unit B and from water level contours.

The width of the capture zone can be estimated based on the average extraction rate at extraction well EW-02 and an estimate of the rate of groundwater flow through a portion of Unit B as previously described in the technical memorandum regarding hydraulic testing and preliminary capture zone analysis for extraction well EW-02 (H+A, 2010b). One of the hydraulic parameters used to estimate rate of flow through Unit B is transmissivity, which generally does not change in the vicinity of extraction well EW-02. The average pumping rate and/or the hydraulic gradients do, however, vary. As a result, there will be some variation in estimated capture width as the variables change. To assess this, average extraction rates and hydraulic gradients were calculated on a quarterly basis for the following time periods: March to May 2012; June to August 2012; September to November 2012; and December 2012 to February 2013. The following table summarizes the estimated width of the capture zone during these time frames:

Time Period	Average Pumping Rate (gpm)	Hydraulic gradient ^(a)	Range in Transmissivity (square feet per day) (H+A, 2010b)	Range in Capture Width (feet)
March to May 2012	38	0.0033	2,400 – 5,400	410 – 930
June to August 2012	42	0.0056	2,400 – 5,400	260 – 600
September to November 2012	37	0.0043	2,400 – 5,400	300 – 680
December 2012 to February 2013	43	0.0039	2,400 – 5,400	390 – 870

(a) Based on water levels measured at monitor well MW-28 and extraction well EW-01 at end of time period.

The above calculations provide a rough estimate of the width of the capture zone. From a simplistic estimate, approximately one half of the width would be north of EW-02 and the balance to the south of EW-02. Given the complexity of Unit B, this is meant to provide a rough approximation of capture zone. Capture zone can also be evaluated using the quarterly water level contour maps (Figures 13A to 13D). The width of the capture zone in May 2012, August 2012, November 2012, and February 2013 varies with seasonal changes in hydraulic gradient and flow direction. In general, the extraction well EW-02 capture zone at an average flowrate of approximately 42 gpm does not appear to capture groundwater in Unit B along the southwestern portion of the Site in the vicinity of monitor well MW-31. In addition, the capture zone does not appear to encompass the area near monitor well MW-29. As indicated in the recently prepared pilot test addendum, monitor well MW-29 is proposed to be connected to the existing treatment system to enhance capture in this area.

The current pilot GETS extraction rate of approximately 50 gpm for extraction well EW-02 is not the maximum extraction rate the well will sustain, but rather, is limited to the treatment capacity of the pilot GETS, and the current maximum allowable flowrate for discharge of treated groundwater to the sewer pursuant to the Orange County Sanitation District sewer discharge permit. Therefore, the observed capture zone under pilot GETS operation is somewhat arbitrary in that it is not prescribed with a particular performance goal to be measured against, but can be useful for observing the effects of changing seasonal groundwater flow directions and gradients.

4.0 DISCUSSION

Perched zone water levels have remained relatively stable over the past five years (Figure 14). Water quality data obtained from the perched zone indicate that the perched zone remediation system that operated from about late 1998 to 2000 was effective at reducing concentrations of VOCs, particularly 1,1-DCE, in perched zone water (H+A, 2000). VOC concentrations in the perched zone have apparently stabilized after a long-term decline. 1,4-Dioxane concentrations remain relatively stable in perched zone water (Table 4).

Regional groundwater system water level data obtained in February 2013 indicate a continuation of typical seasonal variations superimposed on long-term trends. The water level declines observed between mid-2006 and December 2008 represent the most rapid overall decline observed during the period of monitoring, with water levels decreasing from historical highs to historical lows in all Site regional groundwater system monitor and extraction wells, by as much as 70 feet in wells completed in Unit B (Figures 3 through 8). Water level elevations in Site monitor wells have since exhibited recovery and seasonal trend variation.

The following conclusions have been formulated regarding the regional groundwater system based on previous investigations and recent monitoring conducted at the Site. The operations formerly conducted at the Site have impacted two areas of the regional groundwater system.

The first area starts where the perched zone merges with the regional groundwater system near monitor well MW-16 (Figures 2 and 9) and appears to extend to the west/southwest in Unit B. The compounds of potential concern (COPCs) are limited to VOCs, principally 1,1-DCE, and 1,4-dioxane.

- The following provides a general discussion of water quality near the location of where the perched zone merges with the regional groundwater system.
 - Historically, the regional groundwater level at monitor well MW-16 has been and continues to be lower than the water level at the toe of the perched zone

in piezometer P-07, except for a brief period in the mid-2000s (Figures 5, 9, and 14).

- VOC concentrations at monitor well MW-16 have been variable, and in February 2013, concentrations remained within the historical ranges for this well (Tables 4 and 5).
- VOC concentrations at extraction well EW-01, adjacent to and screened over a greater interval than monitor well MW-16, are variable, with the initial samples collected in June and September 2005 exhibiting similar concentrations of VOCs as detected in monitor well MW-16. Concentrations of 1,1-DCE in extraction well EW-01 were lower than those detected in monitor well MW-16 from December 2005 through September 2007. In December 2007, concentrations of all VOCs detected in extraction well EW-01 were equal to or higher than those detected in monitor well MW-16. The concentrations of 1,1-DCE and 1,4-dioxane detected in samples collected from extraction well EW-01 have declined since the startup of the pilot GETS in June 2008.
- VOC concentrations at extraction well MW-21, which is located adjacent to and screened deeper than monitor well MW-16 and extraction well EW-01, suggest that VOC concentrations are higher several tens of feet below the water table than at the water table in this vicinity. This may be a result of the greater effectiveness of the former perched zone remediation system near the water table, or it may represent remnant VOCs at depth in this slightly less transmissive or more isolated hydrostratigraphic zone. During the initial phase of the pilot GETS operations, from July 2008 through 2009, the concentration of 1,1-DCE declined in extraction well MW-21 from its historical high of 4,900 ug/l in June 2008 to its historical low of 200 ug/l in December 2009 (Table 4). The concentration of 1,4-dioxane also declined in extraction well MW-21 during the initial phase of the pilot GETS from 370 ug/l in June of 2008 to its historical low of 11 ug/l in December 2009 (Table 4). Since the conclusion of the pilots GETS operations, concentrations of VOCs and 1,4-dioxane have been variable in extraction well MW-21; in February 2013 1,1-DCE and 1,4-dioxane were detected at concentrations of 1,900 ug/l and 480 ug/l, respectively.

- 1,4-Dioxane was detected near the detection limit in two groundwater samples collected from monitor well MW-24 in March 2007 and December 2010. 1,4-Dioxane was not detected in the sample collected in February 2013. COPCs have not been otherwise detected in groundwater samples collected from this well. The March 2007 and December 2010 detections are considered anomalous. The general lack of COPCs detections in monitor well MW-24, which is located adjacent to and screened approximately 100 feet deeper than extraction well MW-21, demonstrates that the vertical extent of contamination in the vicinity of these wells is defined.
- The following provides a general discussion of water quality within Unit B downgradient of the location where the perched zone merges with the regional groundwater system.
 - In December 2007, the detections of VOCs and 1,4-dioxane at monitor well MW-26C represented the first confirmed historical detections of these analytes in this Unit B well (H+A, 2008a) (Figure 9). In monthly and quarterly monitoring samples collected during 2008, concentrations of 1,1-DCE and 1,4-dioxane detected in groundwater samples collected from monitor well MW-26C exhibited a generally declining trend from the concentrations detected in the December 2007 groundwater samples. The rapid change in water level elevations in these two wells, from historically high water level elevations in mid-2006 to historically low water level elevations observed in these wells since December 2007, and the accompanying historically high concentrations of VOCs and 1,4-dioxane detected in groundwater samples collected from these wells in December 2007, continue to suggest that Unit B is the primary transport zone.
 - Additional work to further characterize the hydrogeology and water quality of Unit B has been conducted since late 2007. Monitor wells MW-27, MW-28, MW-29, MW-30A, and MW-30B were installed in 2008, and monitor wells MW-31, MW-32 nest, and extraction well EW-02 were installed in 2009 to delineate the distribution of 1,1-DCE and 1,4-dioxane in Unit B on the southern portion of the Site, and increase groundwater capture and accomplish greater remediation of groundwater within the primary transport zone (H+A, 2008b, 2009b, 2009c, and 2010d). In July 2010, monitor

well MW-33 was installed to delineate the distribution of 1,1-DCE and 1,4-dioxane southwest of the Site (H+A, 2010d). In December 2010 through February 2011, the MW-34 cluster and MW-35 nest were installed to delineate the distribution of 1,1-DCE and 1,4-dioxane to the west and south of the Site, respectively (H+A, 2011b). In December 2011 through October 2012, additional monitor wells MW-36 and MW-37 were installed to further delineate the distribution of 1,1-DCE and 1,4-dioxane to the west and south of the Site, respectively (H+A, 2011c, 2012a, and 2012e). 1,1-DCE and/or 1,4-dioxane have been detected in groundwater samples collected from monitor wells MW-28, MW-29, MW-30A, MW-31, MW-32B, MW-33, MW-34B, MW-36, and extraction well EW-02 since their construction (Table 4) (H+A, 2012b). VOCs and 1,4-dioxane have historically not been detected in monitor well MW-27, defining the edge of groundwater impacts in that area within the primary transport zone. The work outlined in Addendum No. 2A of the AGAWP and Addendum No. 4A of the Groundwater Extraction and Treatment System Pilot Testing Corrective Measures Study Work Plan was completed and was summarized in the Well Construction and Groundwater Sampling Report Additional Groundwater Assessment Primary Transport Zone and Groundwater Extraction Treatment System Pilot Testing (H+A, 2009b, 2009c, and 2010d). The work outlined in Addendum No. 3 of the AGAWP was completed and was summarized in the Well Construction Report Additional Groundwater Assessment Primary Transport Zone and Groundwater Extraction Treatment System Pilot Testing (H+A, 2010c and 2011b). The work outlined in Addendum No. 4 of the AGAWP was completed and will be summarized in a well construction report (H+A, 2013 In Press). Three additional groundwater monitor wells are proposed: one near the southeastern portion of the Site to assess water quality and hydraulic properties in this area, and two west of the Site to further delineate the distribution of VOCs and 1,4-dioxane in groundwater. The new groundwater monitor wells, which were proposed in Addendum No. 5 of the AGWAP, are nearing commencement of construction activities pending access and permitting, and will be designated monitor wells MW-38 through MW-40 (H+A, 2013b).

The second area of impact is located away from the perched zone and exhibits sporadic detections of TCE, 1,1-DCE, and TCFM in the vicinity of monitor well MW-15; and 1,1-DCE, benzene, TCE, cis-1,2-DCE, and low concentrations of other VOCs and 1,4-dioxane at monitor well MW-08. Samples collected from monitor well MW-30B, installed in November 2008, exhibit similar proportions of TCE, 1,1-DCE, and cis-1,2-DCE as samples collected from monitor well MW-08, also screened in Unit BC (Figures 18 and 30).

- The following provides a general discussion of water quality near monitor wells MW-15 and MW-08.
 - Historically, VOC concentrations have generally remained near or below MCLs at monitor well MW-15. 1,1-DCE was not detected in groundwater samples collected from monitor well MW-15 in February 2013 (Table 4).
 - Concentrations of VOCs detected in monitor well MW-08 prior to March 2004 were generally near or below the drinking water MCLs for the respective compounds (H+A, 2004c). More recently, concentrations of 1,1-DCE and TCE detected in samples collected from monitor well MW-08 have exceeded their respective MCLs (Table 4). In June 2006, the detected concentrations of 1,1-DCE, 1,1-DCA, PCE, and 1,4-dioxane in groundwater samples collected from monitor well MW-08 represented historical high concentrations for this well (Figure 30). In February 2013, the VOCs 1,1-DCE, cis-1,2-DCE, and TCE were detected at concentrations within their respective historical ranges for monitor well MW-08. The concentrations of 1,1-DCE, cis-1,2-DCE, and TCE remain at or above California and/or Federal MCLs. 1,4-Dioxane was detected at a concentration of 1.1 ug/l in the groundwater sample collected from monitor well MW-08 in February 2013.
- The following provides a general discussion of water quality downgradient of monitor well MW-08.
 - The VOCs detected at monitor well MW-30B, TCE, 1,1-DCE, and cis-1,2-DCE, are similar to the VOCs detected at monitor well MW-08. In February 2013, the VOCs TCE, 1,1-DCE, toluene, and cis-1,2-DCE were detected in groundwater samples collected

from monitor well MW-30B at concentrations of 96 ug/l, 17 ug/l, 4.4 ug/l, and 4.6 ug/l, respectively. Both monitor wells MW-08 and MW-30B are screened in Unit BC near the western portion of the Site. 1,4-Dioxane was not detected at a reporting limit of 0.20 ug/l in the groundwater sample collected from monitor well MW-30B in February 2013. Monitor wells MW-08 and MW-30B are both completed hydrostratigraphically beneath Unit B; however, monitor well MW-30B is completed closer to Unit B and, based on vertical hydraulic gradients observed from water levels measured in the monitor wells completed below Unit B and those monitor wells completed within Unit B, it is expected that the compounds detected in groundwater collected from monitor well MW-30B will migrate stratigraphically upward and merge into Unit B groundwater in areas further downgradient. TCE has been detected in groundwater collected from Unit B monitor wells MW-31, MW-32B, and MW-33 near Malvern Avenue, which suggests that groundwater from the deeper zone is merging with that of Unit B.

5.0 STATUS OF CORRECTIVE MEASURE STUDY ACTIVITIES

Periodic groundwater monitoring and additional groundwater assessment have been conducted to support a CMS for the Site under continuing direction of the DTSC. As part of the CMS, multiple addenda of the AGAWP have been implemented at the Site. Monitor wells have been installed to more fully delineate the distribution of VOCs, principally 1,1-DCE and 1,4-dioxane, in the Target Zone (H+A, 2003b, 2008b, 2010c, 2011c, and 2013b). Results of the additional groundwater assessments completed through 2012 indicate that additional assessment is required, particularly to the west of the Site.

In February 2013 the AGAWP Addendum No. 5 was submitted to DTSC; additional groundwater assessment is proposed to assess the distribution of VOCs and 1,4-dioxane, geological structure and hydraulic properties at and to the west of the Site (H+A, 2013b). Three additional groundwater monitor wells, one near the southeast portion of the Site to assess water quality and hydraulic properties upgradient of the Site, and two west of the Site to further delineate the distribution of VOCs and 1,4-dioxane in Unit B, are nearing commencement of construction activities pending access and permitting (H+A, 2013b). These proposed monitor wells will be designated MW-38 through MW-40.

In February 2013 the GETS Pilot Testing CMS Workplan Addendum No. 6 was submitted to DTSC; this workplan addendum presents details regarding additional actions which are proposed in response to previously completed pilot testing activities (H+A, 2011d, 2012f, and 2013c). Additional pilot testing will consist of four activities, the first two of which would be conducted concurrently, as follows: 1) continued operation of the pilot test system with existing treatment equipment; 2) installation of an extraction well vault at monitor well MW-29 and construction of additional associated conveyance pipeline/controls, if accessible; 3) replacement of the existing APTwater, Inc. pilot test treatment equipment (ozone-peroxide) with Trojan UV, Inc. pilot test treatment equipment (ultraviolet light-peroxide); and 4) operation of the new pilot extraction well MW-29 with existing extraction well EW-02, and of the treatment system with new Trojan UV pilot test treatment equipment (H+A, 2013c).

An updated conceptual groundwater model through current and proposed well construction activities will be presented as the results become available. It is expected that the results of groundwater assessment, groundwater monitoring, and pilot testing will be incorporated into the CMS report after the groundwater assessment is complete.

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TABLE 1

GROUNDWATER MONITORING PROGRAM

WELL IDENTIFIER	HYDROGEOLOGIC ZONE	SAMPLED FEB 2013	SAMPLING FREQUENCY			
			QUARTERLY FEB, MAY, AUG, NOV	SEMIANNUAL FEBRUARY, AUGUST	ANNUAL FEBRUARY	BIENNIAL FEB (EVEN YEARS)
P-07	Perched	X			VOCs; 1,4-Dioxane	
P-09	Perched	X			VOCs; 1,4-Dioxane	
MW-35A	Other	X	VOCs; 1,4-Dioxane			
MW-17	A		PIEZOMETER - WATER LEVEL MEASUREMENT ONLY			
MW-18	A	X		VOCs; 1,4-Dioxane		
MW-19	A					VOCs
MW-22	A					VOCs; 1,4-Dioxane
MW-23	A					VOCs
MW-34A	A	X	VOCs; 1,4-Dioxane			
MW-35B	A	X	VOCs; 1,4-Dioxane			
MW-13	AB	X			VOCs; 1,4-Dioxane	
MW-15	AB	X		VOCs		
MW-26A	AB		PIEZOMETER - WATER LEVEL MEASUREMENT ONLY			
MW-26B	AB		PIEZOMETER - WATER LEVEL MEASUREMENT ONLY			
MW-32A	AB	X		VOCs; 1,4-Dioxane		
EW-01	B	X	VOCs; 1,4-Dioxane			
EW-02*	B	X	VOCs; 1,4-Dioxane			
MW-16	B	X		VOCs; 1,4-Dioxane		
MW-26C	B	X	VOCs; 1,4-Dioxane			
MW-27	B	X			VOCs; 1,4-Dioxane	
MW-28	B	X	VOCs; 1,4-Dioxane			
MW-29	B	X	VOCs; 1,4-Dioxane			
MW-30A	B	X	VOCs; 1,4-Dioxane			
MW-31	B	X	VOCs; 1,4-Dioxane			
MW-32B	B	X	VOCs; 1,4-Dioxane			
MW-33	B	X	VOCs; 1,4-Dioxane			
MW-34B	B	X	VOCs; 1,4-Dioxane			
MW-35C	B	X	VOCs; 1,4-Dioxane			
MW-36	B	X	VOCs; 1,4-Dioxane			
MW-37	B	X	VOCs; 1,4-Dioxane			
MW-21	BC	X	VOCs; 1,4-Dioxane			
MW-08	BC	X	VOCs; 1,4-Dioxane			
MW-30B	BC	X	VOCs; 1,4-Dioxane			
MW-34C	BC	X	VOCs; 1,4-Dioxane			
MW-09	C	X		VOCs; 1,4-Dioxane		
MW-24	C	X			VOCs; 1,4-Dioxane	
MW-32C	C	X		VOCs; 1,4-Dioxane		
MW-06	D	X			VOCs	
MW-20	D	X		VOCs; 1,4-Dioxane		
MW-25	D		WATER LEVEL MEASUREMENT ONLY			

FOOTNOTES

* = Extraction well monitored monthly as part of the Groundwater Extraction and Treatment System Pilot Testing

VOCs = Volatile organic compounds

TABLE 2
WELL CONSTRUCTION SUMMARY

Well Identifier	Date Installed	Current Land Surface Elevation (feet msl)	Current Reference Point Elevation (feet msl)	Total Depth of Borehole (feet bls)	Perforated Interval (feet bls)	Screen Slot Size (inches)	Borehole Diameter (inches)	Casing Diameter (inches) (a)	Filter Pack Interval (feet bls)	Filter Pack Sand Size	Grout Filter/ Intermediate Seal Interval (feet bls) (b)	Annular Seal Interval (feet bls) (c)
<u>Regional Groundwater System Monitor Wells, Extraction Wells and Piezometers:</u>												
MW-06	1/16/1997	185.0	184.70	190.9	149.6 - 189.6	0.010	8.5	2	145.4 - 190.9	#2/16	139.4 - 145.4 (d)	0 - 139.4
MW-08	1/22/1997	156.6	155.91	167.2	126.1 - 166.1	0.010	8.5	2	120.7 - 167.2	#2/16	115.7 - 120.7	0 - 115.7
MW-09	3/21/1997	180.5	180.10	194.2	152.2 - 192.2	0.010	8.5	2	146.2 - 194.2	#2/16	141.2 - 146.2	0 - 141.2
MW-13	4/16/1997	142.5	141.84	159.6	120.6 - 159.6	0.010	8.5	2	114.6 - 159.6	#2/16	109.6 - 114.6	0 - 109.6
MW-15	5/18/1998	145.6	144.95	174.8	120.8 - 170.8	0.010	8.5	2	115.8 - 174.8	#2/16	112.8 - 115.8	0 - 112.8
MW-16	11/20/1999	143.0	142.40	179.5	148.5 - 178.5	0.010	11.0	4	144.5 - 179.5	#2/16	134.5 - 144.5 (e)	0 - 134.5
MW-17	5/31/2000	142.8	142.70	203.7	173.1 - 193.1 (i)	0.020	10.0	4	159.7 - 193.1	#2/16	156.2 - 159.7 193.1 - 203.7 (j)	0 - 156.2
MW-18	5/24/2000	142.4	142.32	195.6	164.1 - 194.1	0.020	10.0	4	158.9 - 194.5	#2/16	154.2 - 158.9	0 - 154.2
MW-19	5/26/2000	142.7	142.06	205.5	184.9 - 204.9	0.020	10.0	4	177.0 - 205.3	#2/16	171.5 - 177.0	0 - 171.5
MW-20	6/26/2003	184.4	184.19	200.0	158.6 - 198.2	0.020	11.0	4 (f)	158.0 - 200.0	#2/12	151.0 - 158.0 (g)	0 - 151.1 (h)
MW-21	7/17/2003	143.3	141.18	238.3	212.1 - 232.1	0.010	8.0	4 (k)	205.0 - 234.5	#2/16	202.0 - 205.0 234.5 - 238 (j)	0 - 202.0 (h)
MW-22	8/13/2003	139.4	138.65	245.0	217.4 - 237.4	0.020	8.0	4 (l)	215.0 - 238.0	#2/12	208.0 - 215.0 (m)	0 - 208.0 (h)
MW-23	8/18/2003	137.8	137.33	235.6	215.2 - 235.2	0.020	8.0	4 (n)	209.4 - 235.6	#2/12	203.5 - 209.4 (m)	0 - 203.5 (h)
MW-24	9/15/2004	143.1	142.83	338.0	310.3 - 330.3	0.030	10.6	4 (o)	306 - 330	#3	301 - 306 (p)	0 - 301 (h)
MW-25	9/10/2004	143.0	142.64	805	449.4 - 479.8	0.010	8.5 (q)	2 (r)	429 - 485	#2/16	418 - 429	0 - 418 (h)
MW-26A (s)	10/1/2004	137.6	137.04	805	279 - 309	0.020	12.25 (q)	2 (t)	274 - 315	#2/12	266 - 274	0 - 266 (h)
MW-26B (s)	10/1/2004	137.6	137.05	805	339 - 379	0.020	12.25 (q)	2 (u)	334 - 387	#2/12	266 - 274	0 - 266 (h)
MW-26C (s)	10/1/2004	137.6	137.22	805	459 - 499	0.020	12.25 (q)	2 (v)	435 - 499	#2/12	387 - 435 (w)	0 - 266 (h)
MW-27	4/22/2008	137.6	137.16	550	475 - 505.2 (cc)	0.030	11.25 (q)	4 (z)	468 - 520	#3	457.5 - 468	0 - 457.5 (h)
MW-28	5/5/2008	141.4	140.77	425	335 - 375	0.040	12.25 (q)	4 (z)	325.4 - 377	#8	318 - 325.4	0 - 318 (h)
MW-29	8/15/2008	142.7	142.34	265.7	200 - 240	0.020	10.0 (aa)	4 (z)	185 - 246	#2/12	176 - 185	0 - 176 (h)
MW-30A(s)	11/26/2008	130.2	129.44	635 (j)	524-564	0.020	14.25	3 (y)	515.9-570.5	#2/12	495.5-515.9	0-495.5 (bb)
MW-30B(s)	11/26/2008	130.2	129.39	635 (j)	596-616	0.020	14.25	3 (y)	586.8-625	#2/12	586.8-570.5	0-495.5 (bb)
MW-31	10/2/2009	120.3	119.60	1,100 (jj)	946-996	0.020	13	6(kk)	922-1,006	#2/12	904-922	0-904
MW-32A(s)	12/10/2009	93.4	92.88	1,153 (gg)	890-905	0.020	18.5	4(dd)	880-910	#2/12	832-880	0-832
MW-32B(s)	12/10/2009	93.4	92.89	1,153 (gg)	969-999	0.020	18.5	4(dd)	960-1,004.5	#2/12	910-960	0-832
MW-32C(s)	12/10/2009	93.4	92.88	1,153 (gg)	1,070-1,090	0.020	18.5	4(dd)	1,054-1,100	#2/12	1,004.5-1,054	0-832
MW-33	7/2/2010	83.8	83.19	1,080 (hh)	980-1,020	0.020	11	4(dd)	970-1,025	#2/12	924-970	0-924 (ii)
MW-34A	2/3/2011	154.0	153.25	290	220 - 280	0.020	12.25	4(dd)	211 - 290	#2/12	175 - 211	0 - 175
MW-34B	2/1/2011	153.9	153.11	540	486 - 536	0.020	12.25	4(dd)	475 - 540	#2/12	449 - 475	0 - 449
MW-34C	1/19/2011	154.1	153.29	709 (ll)	556 - 576	0.020	12.25	4(dd)	551 - 582	#2/12	530 - 551	0 - 530
MW-35A	12/20/2010	94.3	93.57	1,101	420 - 470	0.020	18	4(dd)	401 - 482	#2/12	376 - 401	0 - 376
MW-35B	12/20/2010	94.3	93.56	1,101	745 - 805	0.020	18	4(dd)	725 - 816	#2/12	482 - 725	0 - 376
MW-35C	12/20/2010	94.3	93.55	1101 (ll)	990 - 1,040	0.020	12.25	4(dd)	980 - 1048	#2/12	816 - 980	0 - 376
MW-36	1/3/2012	87.19	86.65	1030 (mm)	934 - 954 974 - 994	0.020	12.25	4(dd)	914 - 1003	#2/12	95 - 853 (oo), 853 - 914 (pp)	0 - 95 (qq)
MW-37	10/17/2012	156.02	155.60	916	770-820	0.020	12.25	4(dd)	755-834	#2/12	229-724 (rr) 724-755 (pp)	0-229 (ss)
EW-01	5/16/2005	143.3	141.07	195	138.1-188.1	0.020	7.6	4 (x)	134.1-195	#2/12	129-134.1 (m)	0-129 (h)
EW-02	10/20/2009	136.0	132.97	473 (ee)	410-460	0.030	17.0	8 (ff)	400-465	#3	384-400	0-384
<u>Perched Zone Piezometers</u>												
P-07	6/6/1997	142.7	142.31	116.8	107.7 - 117.7	0.010	8.5	2	104.7 - 117.7	#2/16	101.7 - 104.7	0 - 101.7
P-09	6/30/2003	184.3	183.86	130.0	109.6 - 129.6	0.010	11.0	4	114.0 - 130.0	#2/16	101.0 - 108.0 (g)	0 - 101.0 (h)

NOTE: Refer to page 2 of this table for footnotes.

TABLE 2
WELL CONSTRUCTION SUMMARY

FOOTNOTES

- msl = Mean sea level, City of Fullerton datum
- bls = Below current land surface (October 2004)
- (a) = Schedule 40 polyvinyl chloride (PVC) screen and casing, unless otherwise indicated
- (b) = Medium bentonite chip seal, unless otherwise indicated
- (c) = Bentonite grout annular seal unless otherwise indicated, completed at surface with vault set in concrete
- (d) = No. 60 silica sand
- (e) = Includes 2.0 feet of No. 60 silica sand placed above filter pack
- (f) = Schedule 80 polyvinyl chloride screen and casing
- (g) = Includes 2.5 to 3.0 feet of No. 60 silica sand placed above bentonite chip seal
- (h) = Cement/bentonite grout, Type I/II Portland, less than 5% bentonite
- (i) = Well plug, approximately 0.5-foot length, set at bottom of perforated interval
- (j) = Bottom of borehole backfilled with bentonite chips
- (k) = Stainless steel wire wrap screen; Schedule 10 stainless steel casing 122.0 - 212.1 feet bls; Schedule 40 mild steel casing 0 - 122.0 feet bls
- (l) = Stainless steel wire wrap screen; Schedule 10 stainless steel casing 112.4 - 217.4 feet bls; Schedule 40 mild steel casing 0 - 112.4 feet bls
- (m) = 1/4-inch coated bentonite pellets
- (n) = Stainless steel wire wrap screen; Schedule 10 stainless steel casing 110.1 - 215.2 feet bls; Schedule 40 mild steel casing 0 - 110.1 feet bls
- (o) = Mild steel wire wrap screen and Schedule 40 mild steel well casing
- (p) = Includes 1 to 2 feet of #2/16 sand placed above bentonite chip seal
- (q) = Below filter pack, diameter of the original pilot borehole is 5 to 6.25 inches to total depth of boring. Lower borehole backfilled with cement/bentonite grout, Type I/II Portland, less than 5% bentonite
- (r) = Stainless steel wire wrap screen, Schedule 10 stainless steel casing 429.4 - 449.4 feet bls, Schedule 80 polyvinylchloride casing 429.0 - 429.4 feet bls, Schedule 40 mild steel casing 0 - 429.0 feet bls
- (s) = Nested wells MW-26A, MW-26B, MW-26C, and MW-32A, MW-32B, MW-32C are constructed with three separate well casings in a single borehole; nested well MW-30A and MW-30B is constructed with two separate casings in a single borehole.
- (t) = Stainless steel wire wrap screen; Schedule 10 stainless steel casing 259 - 279 feet bls and 0 - 19 feet bls; Schedule 40 mild steel casing 19 - 259 feet bls
- (u) = Stainless steel wire wrap screen; Schedule 10 stainless steel casing 319 - 339 feet bls; Schedule 40 mild steel casing 0 - 319 feet bls
- (v) = Stainless steel wire wrap screen; Schedule 10 stainless steel casing 439 - 459 feet bls; Schedule 40 mild steel casing 0 - 439 feet bls
- (w) = #8 granular bentonite with exception of heavy mud/formational caving filling annular interval from 417 to 428 feet bls
- (x) = Stainless steel wire wrap screen; Schedule 10 stainless steel casing 118.1-138.1 feet bls; Schedule 40 mild steel casing 0-118.1 feet bls
- (y) = Schedule 40 Stainless steel endcaps; Schedule 10 stainless steel casing; Stainless steel wire wrap screen
- (z) = Schedule 80 PVC blank and screen casing
- (aa) = Below filter pack, diameter of the original pilot borehole is 8 inches to total depth of boring. Lower borehole backfilled with cement/bentonite grout, Type I/II Portland, less than 5% bentonite
- (bb) = Neat cement
- (cc) = Depth of screen interval adjusted to account for loss at bottom of casing due to breakage in casing wall. Original casing (515 ft bls) was sealed at 505.2 ft bls
- (dd) = Schedule 40 Stainless steel endcaps; Schedule 80 polyvinyl chloride casing; Stainless steel wire wrap screen
- (ee) = Pilot borehole drilled to a total depth of 493 feet bls and backfilled with 5% bentonite-cement grout seal to 465 feet bls
- (ff) = Schedule 40 Stainless steel endcaps; Schedule 40 stainless steel casing; Stainless steel wire wrap screen; 2.5-foot stainless steel sump
- (gg) = Pilot borehole drilled to a total depth of 1,153 feet bls and backfilled with 5% bentonite-cement grout seal to 1,100 feet bls
- (hh) = Pilot borehole drilled to a total depth of 1,080 feet bls and backfilled with 5% bentonite-cement grout seal to 1,025 feet bls
- (ii) = Annular seal interval is composed of cement grout with approximately 5% bentonite from 720 to 924 feet bls and bentonite grout from near land surface to 720 feet bls
- (jj) = Pilot borehole drilled to a total depth of 1,100 feet bls and backfilled with 5% bentonite-cement grout seal to 1,006 feet bls
- (kk) = Schedule 40 Stainless steel endcaps; Schedule 40 stainless steel casing; Stainless steel wire wrap screen; 5-foot stainless steel sump
- (ll) = Bottom of borehole backfilled with approximately 5% bentonite-cement grout
- (mm) = Bottom of borehole backfilled with bentonite pellets
- (oo) = High solids bentonite grout
- (pp) = Bentonite chips
- (qq) = Portland cement with approximately 5% bentonite
- (rr) = Medium bentonite chips and #2/12 Sand; 1:1 dry volume mix
- (ss) = Portland cement with approximately 2.5% bentonite

TABLE 3
GROUNDWATER LEVELS

Well Identifier	Date Measured	Reference Point Elevation (a) (feet msl)	Depth to Water (feet bls)	Water Level Elevation (feet msl)	Remediation System On
Regional Groundwater System Monitor and Extraction Wells					
MW-06	01/27/97	174.27	144.62	29.65	
	02/18/97	174.27	142.26	32.01	
	02/26/97	174.27	141.97	32.30	
	03/06/97	174.27	141.52	32.75	
	03/12/97	174.27	141.24	33.03	
	03/28/97	174.27	140.90	33.37	
	05/19/97	174.27	142.85	31.42	
	10/16/97	174.27	158.05	16.22	
	05/13/98	174.27	143.00	31.27	
	05/27/98	174.27	143.49	30.78	
	06/11/98	174.27	144.43	29.84	
	07/14/98	174.27	147.46	26.81	
	11/11/98	174.27	155.60	18.67	
	11/18/98	174.27	154.82	19.45	SVE, DPE-H2O
	11/18/98	174.27	154.96	19.31	SVE, DPE-H2O
	11/19/98	174.27	154.82	19.45	SVE, DPE-H2O
	11/20/98	174.27	154.17	20.10	SVE, DPE, DPE-H2O
	11/23/98	174.27	154.43	19.84	SVE, DPE-H2O
	11/23/98	174.27	154.40	19.87	SVE, DPE-H2O
	11/24/98	174.27	154.44	19.83	SVE, DPE-H2O
	12/07/98	174.27	153.08	21.19	SVE, DPE-H2O
	12/10/98	174.27	152.56	21.71	SVE, DPE, DPE-H2O
	12/11/98	174.27	152.14	22.13	SVE, DPE, DPE-H2O
	12/14/98	174.27	151.82	22.45	SVE, DPE-H2O
	12/14/98	174.27	151.72	22.55	SVE, DPE-H2O
	12/16/98	174.27	151.73	22.54	SVE, DPE, DPE-H2O
	01/06/99	174.27	150.40	23.87	SVE, DPE, DPE-H2O
	01/20/99	174.27	149.92	24.35	
	01/25/99	174.27	149.58	24.69	DPE, DPE-H2O
	01/27/99	174.27	149.71	24.56	SVE, DPE, DPE-H2O
	02/01/99	174.27	149.37	24.90	DPE, DPE-H2O
	02/10/99	174.27	148.87	25.40	SVE, DPE, DPE-H2O
	02/23/99	174.27	148.30	25.97	
	03/01/99	174.27	148.33	25.94	DPE
	03/09/99	174.27	148.39	25.88	SVE, DPE, DPE-H2O
	03/10/99	174.27	148.35	25.92	SVE, DPE, DPE-H2O
	04/07/99	174.27	147.82	26.45	SVE, DPE-H2O
	04/23/99	174.27	147.00	27.27	SVE, DPE-H2O
	06/16/99	174.27	150.62	23.65	SVE, DPE-H2O
	06/25/99	174.27	151.91	22.36	SVE, DPE-H2O
	08/30/99	174.27	164.08	10.19	DPE-H2O
	09/27/99	174.27	166.78	7.49	
	11/02/99	174.27	169.28	4.99	
	12/06/99	174.27	158.87	15.40	
	02/07/00	174.27	164.21	10.06	
	03/08/00	174.27	160.82	13.45	
	05/08/01	174.23	155.05	19.18	
	06/26/01	174.23	161.99	12.24	
	10/24/01	188.33	DRY	--	
	01/15/02	188.33	183.41	4.92	
	03/19/02	188.33	177.86	10.47	
	04/15/02	188.33	176.83	11.50	
	11/18/02	188.33	182.81	5.52	
	05/08/03	188.33	174.07	14.26	

TABLE 3
GROUNDWATER LEVELS

Well Identifier	Date Measured	Reference	Depth to	Water Level	Remediation System On
		Point Elevation (a) (feet msl)	Water (feet bls)	Elevation (feet msl)	
Regional Groundwater System Monitor and Extraction Wells (continued)					
MW-06	06/09/03	188.33	175.45	12.88	
(Cont'd)	09/15/03	184.7	177.09	7.61	
	10/14/03	184.7	178.31	6.39	
	12/15/03	184.7	176.24	8.46	
	03/29/04	184.7	166.60	18.10	
	06/14/04	184.7	169.41	15.29	
	09/20/04	184.70	179.48	5.22	
	11/10/04	184.70	180.65	4.05	
	12/06/04	184.70	178.73	5.97	
	03/14/05	184.70	166.99	17.71	
	06/20/05	184.70	162.59	22.11	
	09/19/05	184.70	165.10	19.60	
	12/17/05	184.70	155.90	28.80	
	03/20/06	184.70	147.23	37.47	
	05/18/06	184.70	143.25	41.45	
	06/19/06	184.70	145.48	39.22	
	09/25/06	184.70	154.15	30.55	
	10/05/06	184.70	154.47	30.23	
	12/12/06	184.70	152.28	32.42	
	03/12/07	184.70	149.91	34.79	
	06/18/07	184.70	156.19	28.51	
	09/24/07	184.70	173.50	11.20	
	12/10/07	184.70	183.15	1.55	
	03/17/08	184.70	182.08	2.62	
	06/23/08	184.70	182.92	1.78	
	09/22/08	184.70	186.55	-1.85	
	12/15/08	184.70	188.45	-3.75	
	12/19/08	184.70	188.47	-3.77	
	03/16/09	184.70	187.58	-2.88	
	03/18/09	184.70	187.51	-2.81	
	06/22/09	184.70	186.43	-1.73	
	06/26/09	184.70	186.46	-1.76	
	08/31/09	184.70	187.31	-2.61	
	09/10/09	184.70	187.42	-2.72	
	12/07/09	184.70	187.82	-3.12	
	03/01/10	184.70	184.83	-0.13	
	03/22/10	184.70	182.35	2.35	
	06/07/10	184.70	178.27	6.43	
	09/07/10	184.70	180.20	4.50	
	12/06/10	184.70	178.75	5.95	
	03/24/11	184.70	UTM	--	
	06/20/11	184.70	164.20	20.50	
	08/01/11	184.70	160.31	24.39	
	10/31/11	184.70	153.73	30.97	
	02/06/12	184.70	150.51	34.19	
	05/07/12	184.70	149.37	35.33	
	08/06/12	184.70	154.85	29.85	
	11/05/12	184.70	161.82	22.88	
	02/04/13	184.70	157.85	26.85	
MW-08	01/27/97	169.53	150.66	18.87	
	02/18/97	169.53	149.78	19.75	
	02/26/97	169.53	149.60	19.93	
	03/06/97	169.53	149.62	19.91	

TABLE 3
GROUNDWATER LEVELS

Well Identifier	Date Measured	Reference Point Elevation (a) (feet msl)	Depth to Water (feet bls)	Water Level Elevation (feet msl)	Remediation System On
Regional Groundwater System Monitor and Extraction Wells (continued)					
MW-08	03/12/97	169.53	149.55	19.98	
(Cont'd)	03/28/97	169.53	149.46	20.07	
	05/19/97	169.53	149.33	20.20	
	05/13/98	169.53	149.54	19.99	
	05/27/98	169.53	149.40	20.13	
	06/11/98	169.53	149.30	20.23	
	08/30/99	169.53	155.13	14.40	
	12/06/99	169.53	159.36	10.17	DPE-H2O
	02/07/00	169.53	159.68	9.85	3.4 inches water in vaccum
	03/08/00	169.53	159.23	10.30	
	05/09/01	164.79	157.50	7.29	
	06/26/01	164.79	157.79	7.00	
	10/24/01	164.79	161.80	2.99	
	01/15/02	164.79	162.42	2.37	
	03/19/02	164.79	161.09	3.70	
	04/15/02	158.04	153.98	4.06	
	11/18/02	158.04	156.47	1.57	
	01/17/03	158.04	152.46	5.58	
	05/08/03	158.04	149.90	8.14	
	06/09/03	158.04	150.27	7.77	
	09/15/03	NA	UTM	--	
	10/14/03	NA	UTM	--	
	12/15/03	155.91	150.19	5.72	
	03/29/04	155.91	145.40	10.51	
	06/14/04	155.91	143.68	12.23	
	09/20/04	155.91	145.45	10.46	
	10/19/04	155.91	145.74	10.17	
	11/10/04	155.91	146.04	9.87	
	12/06/04	155.91	145.71	10.20	
	03/14/05	155.91	142.32	13.59	
	06/20/05	155.91	139.61	16.30	
	09/19/05	155.91	139.77	16.14	
	12/17/05	155.91	135.10	20.81	
	03/20/06	155.91	127.02	28.89	
	05/18/06	155.91	121.53	34.38	
	06/19/06	155.91	121.31	34.60	
	09/25/06	155.91	124.38	31.53	
	10/05/06	155.91	124.56	31.35	
	12/12/06	155.91	123.83	32.08	
	03/12/07	155.91	127.24	28.67	
	06/18/07	155.91	132.36	23.55	
	09/24/07	155.91	137.96	17.95	
	12/10/07	155.91	142.65	13.26	
	03/17/08	155.91	145.83	10.08	
	06/23/08	155.91	149.00	6.91	
	09/22/08	155.91	153.53	2.38	
	12/15/08	155.91	157.03	-1.12	
	12/19/08	155.91	157.39	-1.48	
	03/16/09	155.91	157.87	-1.96	
	03/18/09	155.91	157.92	-2.01	
	06/22/09	155.91	157.63	-1.72	
	06/26/09	155.91	157.70	-1.79	
	08/31/09	155.91	159.37	-3.46	
	09/10/09	155.91	159.45	-3.54	

TABLE 3
GROUNDWATER LEVELS

Well Identifier	Date Measured	Reference Point Elevation (a) (feet msl)	Depth to Water (feet bls)	Water Level Elevation (feet msl)	Remediation System On
Regional Groundwater System Monitor and Extraction Wells (continued)					
MW-08	10/28/09	155.91	159.75	-3.84	
(Cont'd)	10/30/09	155.91	159.73	-3.82	
	11/04/09	155.91	159.84	-3.93	
	12/07/09	155.91	159.17	-3.26	
	03/01/10	155.91	157.11	-1.20	
	06/07/10	155.91	152.97	2.94	
	09/07/10	155.91	151.91	4.00	
	12/06/10	155.91	152.22	3.69	
	03/24/11	155.91	146.19	9.72	
	03/25/11	155.91	145.55	10.36	
	06/20/11	155.91	141.72	14.19	
	08/01/11	155.91	139.94	15.97	
	08/05/11	155.91	139.80	16.11	
	10/31/11	155.91	136.88	19.03	
	02/06/12	155.91	136.04	19.87	
	05/07/12	155.91	127.33	28.58	
	08/06/12	155.91	130.71	25.20	
	11/05/12	155.91	136.67	19.24	
	02/04/13	155.91	135.88	20.03	
MW-09	03/25/97	166.42	137.58	28.84	
	03/28/97	166.42	137.34	29.08	
	05/19/97	166.42	138.31	28.11	
	05/13/98	166.42	139.18	27.24	
	05/27/98	166.42	139.57	26.85	
	06/11/98	166.42	140.03	26.39	
	07/14/98	166.42	142.56	23.86	
	11/11/98	166.42	150.98	15.44	
	11/18/98	166.42	150.72	15.70	SVE, DPE-H2O
	11/18/98	166.42	150.57	15.85	SVE, DPE-H2O
	11/19/98	166.42	150.63	15.79	SVE, DPE-H2O
	11/20/98	166.42	150.64	15.78	SVE, DPE, DPE-H2O
	11/23/98	166.42	150.47	15.95	SVE, DPE-H2O
	11/23/98	166.42	150.43	15.99	SVE, DPE-H2O
	11/24/98	166.42	150.45	15.97	SVE, DPE-H2O
	12/07/98	166.42	149.98	16.44	SVE, DPE-H2O
	12/10/98	166.42	149.67	16.75	SVE, DPE, DPE-H2O
	12/11/98	166.42	149.68	16.74	SVE, DPE, DPE-H2O
	12/14/98	166.42	149.18	17.24	SVE, DPE-H2O
	12/16/98	166.42	148.97	17.45	SVE, DPE, DPE-H2O
	01/06/99	166.42	147.76	18.66	SVE, DPE, DPE-H2O
	01/20/99	166.42	147.18	19.24	
	01/25/99	166.42	146.80	19.62	DPE, DPE-H2O
	01/27/99	166.42	146.98	19.44	SVE, DPE, DPE-H2O
	02/01/99	166.42	146.85	19.57	SVE, DPE, DPE-H2O
	02/10/99	166.42	146.43	19.99	SVE, DPE, DPE-H2O
	02/23/99	166.42	145.78	20.64	
	03/01/99	166.42	145.68	20.74	DPE
	03/09/99	166.42	145.73	20.69	SVE, DPE, DPE-H2O
	03/10/99	166.42	145.70	20.72	SVE, DPE, DPE-H2O
	03/15/99	166.42	145.57	20.85	SVE, DPE, DPE-H2O
	04/07/99	166.42	145.35	21.07	SVE, DPE-H2O
	04/23/99	166.42	144.61	21.81	SVE, DPE-H2O
	06/16/99	166.42	147.11	19.31	SVE, DPE-H2O

TABLE 3
GROUNDWATER LEVELS

Well Identifier	Date Measured	Reference Point Elevation (a) (feet msl)	Depth to Water (feet bls)	Water Level Elevation (feet msl)	Remediation System On
Regional Groundwater System Monitor and Extraction Wells (continued)					
MW-09	06/25/99	166.42	148.10	18.32	SVE, DPE-H2O
(Cont'd)	08/30/99	166.42	156.90	9.52	DPE-H2O
	09/27/99	166.42	159.80	6.62	
	11/02/99	166.42	163.08	3.34	
	11/09/99	166.42	163.51	2.91	
	11/10/99	166.42	163.44	2.98	
	11/23/99	166.42	163.92	2.50	
	12/06/99	166.42	163.59	2.83	
	12/07/99	166.42	163.41	3.01	
	02/07/00	166.42	160.51	5.91	
	06/29/00	166.42	UTM	--	
	10/24/01	182.15	184.16	-2.01	
	01/15/02	182.15	182.12	0.03	
	03/19/02	182.15	177.57	4.58	
	04/15/02	182.15	176.29	5.86	
	11/18/02	182.28	181.80	0.48	
	01/17/03	182.28	174.44	7.84	
	05/08/03	182.28	172.56	9.72	
	06/09/03	182.28	173.57	8.71	
	09/15/03	182.28	178.03	4.25	
	09/24/03	182.28	178.46	3.82	
	10/14/03	182.28	179.10	3.18	
	12/15/03	182.28	178.00	4.28	
	03/29/04	180.10	166.90	13.20	
	06/14/04	180.10	168.36	11.74	
	09/20/04	180.10	176.29	3.81	
	10/19/04	180.10	178.00	2.10	
	11/10/04	180.10	177.75	2.35	
	12/06/04	180.10	176.64	3.46	
	03/14/05	180.10	167.00	13.10	
	06/20/05	180.10	162.13	17.97	
	09/19/05	180.10	164.58	15.52	
	12/17/05	180.10	156.29	23.81	
	03/20/06	180.10	146.90	33.20	
	05/18/06	180.10	142.77	37.33	
	06/19/06	180.10	144.64	35.46	
	09/25/06	180.10	151.96	28.14	
	10/05/06	180.10	152.33	27.77	
	12/19/06	180.10	150.40	29.70	
	03/12/07	180.10	148.81	31.29	
	06/18/07	180.10	UTM	--	
	09/24/07	180.10	171.33	8.77	
	12/10/07	180.10	179.73	0.37	
	03/17/08	180.10	180.71	-0.61	
	06/27/08	180.10	182.20	-2.10	
	09/22/08	180.10	187.53	-7.43	
	12/15/08	180.10	DRY	--	Dry @ 190.2 ft bls
	03/16/09	180.10	DRY	--	Dry @ 190.0 ft bls
	06/23/09	180.10	187.69	-7.59	
	08/31/09	180.10	189.34	-9.24	
	12/07/09	180.10	189.35	-9.25	
	03/02/10	180.10	186.09	-5.99	
	06/07/10	180.10	180.11	-0.01	
	09/07/10	180.10	180.51	-0.41	

TABLE 3
GROUNDWATER LEVELS

Well Identifier	Date Measured	Reference Point Elevation (a) (feet msl)	Depth to Water (feet bls)	Water Level Elevation (feet msl)	Remediation System On
Regional Groundwater System Monitor and Extraction Wells (continued)					
MW-09	12/06/10	180.10	179.83	0.27	
(Cont'd)	03/24/11	180.10	170.04	10.06	
	06/20/11	180.10	165.04	15.06	
	08/01/11	180.10	161.84	18.26	
	11/01/11	180.10	155.13	24.97	
	02/06/12	180.10	150.19	29.91	
	05/07/12	180.10	147.54	32.56	
	08/06/12	180.10	152.77	27.33	
	11/05/12	180.10	160.00	20.10	
	02/04/13	180.10	156.77	23.33	
MW-13	05/19/97	162.92	149.06	13.86	
	05/13/98	162.92	150.56	12.36	
	05/27/98	162.92	149.67	13.25	
	06/11/98	162.92	149.63	13.29	
	11/02/99	162.92	166.86	-3.94	
	11/09/99	162.92	167.25	-4.33	
	11/10/99	162.92	167.36	-4.44	
	11/23/99	162.92	167.92	-5.00	
	12/06/99	162.92	168.35	-5.43	
	12/07/99	162.92	168.38	-5.46	
	02/07/00	162.92	167.88	-4.96	
	06/21/00	162.55	164.42	-1.87	
	07/05/00	162.55	165.68	-3.13	
	01/16/01	142.51	151.58	-9.07	
	03/19/01	142.51	149.31	-6.80	
	03/26/01	142.51	148.72	-6.21	
	04/03/01	142.51	148.30	-5.79	
	04/10/01	142.51	148.00	-5.49	
	04/17/01	142.51	147.90	-5.39	
	04/26/01	142.51	147.50	-4.99	
	05/07/01	142.51	147.14	-4.63	
	06/26/01	142.51	147.61	-5.10	
	09/10/01	142.19	151.32	-9.13	
	10/22/01	142.19	153.62	-11.43	
	10/24/01	142.19	153.68	-11.49	
	01/15/02	142.19	153.78	-11.59	
	01/15/02	142.19	153.76	-11.57	
	03/19/02	142.19	148.86	-6.67	
	04/15/02	142.19	148.29	-6.10	
	10/31/02	142.19	154.39	-12.20	
	10/31/02	142.19	154.38	-12.19	
	11/07/02	142.19	153.97	-11.78	
	11/07/02	142.19	153.95	-11.76	
	11/18/02	142.19	153.20	-11.01	
	01/17/03	142.19	142.13	0.06	
	05/08/03	142.19	138.90	3.29	
	06/09/03	142.19	140.81	1.38	
	09/15/03	142.19	146.63	-4.44	
	10/14/03	142.19	147.73	-5.54	
	12/02/03	142.19	145.21	-3.02	
	12/15/03	142.19	143.91	-1.72	
	03/29/04	142.19	132.94	9.25	
	06/14/04	142.19	132.76	9.43	

TABLE 3
GROUNDWATER LEVELS

Well Identifier	Date Measured	Reference Point Elevation (a) (feet msl)	Depth to Water (feet bls)	Water Level Elevation (feet msl)	Remediation System On
Regional Groundwater System Monitor and Extraction Wells (continued)					
MW-13	09/20/04	142.19	138.99	3.20	
(Cont'd)	10/19/04	142.19	140.31	1.88	
	11/10/04	142.19	138.99	2.13	
	12/06/04	142.19	139.08	3.11	
	03/14/05	142.19	127.95	14.24	
	06/20/05	142.19	129.49	12.70	
	09/19/05	142.19	132.44	9.75	
	12/17/05	142.19	116.10	26.09	
	03/20/06	142.19	112.58	29.61	
	06/19/06	142.19	108.37	33.82	
	09/25/06	142.19	115.66	26.53	
	12/12/06	142.19	112.59	29.60	
	03/12/07	142.19	117.07	25.12	
	06/18/07	142.19	126.05	16.14	
	09/24/07	142.19	137.98	4.21	
	12/10/07	142.19	146.51	-4.32	
	03/17/08	142.19	147.13	-4.94	
	06/23/08	142.19	149.38	-7.19	
	09/22/08	142.19	153.18	-10.99	
	12/15/08	142.19	156.91	-14.72	
	03/16/09	142.19	155.95	-13.76	
	06/22/09	142.19	152.05	-9.86	
	08/31/09	142.19	154.42	-12.23	
	12/07/09	142.19	153.32	-11.13	
	03/01/10	142.19	148.41	-6.22	
	06/07/10	142.19	141.51	0.68	
	09/07/10	142.19	142.67	-0.48	
	12/06/10	142.19	144.25	-2.06	
	03/24/11	142.19	132.38	9.81	
	06/20/11	142.19	125.39	16.80	
	08/01/11	142.19	127.15	15.04	
	10/31/11	142.19	124.07	18.12	
	02/06/12	142.19	117.20	24.99	
	05/07/12	142.19	110.72	31.47	
	08/06/12	141.84	122.77	19.07	
	11/05/12	141.84	126.32	15.52	
	02/04/13	141.84	122.23	19.61	
MW-15	05/27/98	159.20	153.83	5.37	
	06/11/98	159.20	153.16	6.04	
	11/09/99	159.20	165.47	-6.27	
	12/06/99	159.20	166.56	-7.36	
	02/07/00	159.20	167.68	-8.48	
	06/21/00	159.2	164.57	-5.37	
	07/05/00	159.2	164.94	-5.74	
	01/16/01	154.35	166.25	-11.90	
	03/19/01	154.35	165.42	-11.07	
	05/08/01	154.35	164.16	-9.81	
	06/26/01	154.35	164.09	-9.74	
	09/10/01	154.35	166.43	-12.08	
	10/24/01	154.35	168.27	-13.92	
	01/15/02	154.35	169.03	-14.68	
	03/19/02	154.35	167.33	-12.98	
	04/15/02	146.14	158.58	-12.44	

TABLE 3
GROUNDWATER LEVELS

Well Identifier	Date Measured	Reference Point Elevation (a) (feet msl)	Depth to Water (feet bls)	Water Level Elevation (feet msl)	Remediation System On
Regional Groundwater System Monitor and Extraction Wells (continued)					
MW-15	11/18/02	146.14	160.67	-14.53	
(Cont'd)	01/17/03	146.14	155.87	-9.73	
	05/08/03	NA	UTM	--	
	06/09/03	144.99	149.92	-4.93	
	09/15/03	144.99	152.72	-7.73	
	09/23/03	144.99	152.99	-8.00	
	10/14/03	144.99	153.64	-8.65	
	12/15/03	144.99	152.50	-7.51	
	03/29/04	144.99	146.10	-1.11	
	06/14/04	144.99	142.94	2.05	
	09/20/04	144.99	143.78	1.21	
	10/19/04	144.99	143.74	1.25	
	11/10/04	144.99	144.01	0.98	
	12/06/04	144.99	143.95	1.04	
	03/14/05	144.99	140.02	4.97	
	06/20/05	144.99	137.35	7.64	
	09/19/05	144.99	137.57	7.42	
	12/17/05	144.99	134.72	10.27	
	03/20/06	144.99	124.34	20.65	
	05/18/06	144.99	117.13	27.86	
	06/19/06	144.99	115.44	29.55	
	09/25/06	144.99	116.80	28.19	
	10/05/06	144.99	117.09	27.90	
	12/12/06	144.99	117.21	27.78	
	03/12/07	144.99	118.76	26.23	
	06/18/07	144.99	123.16	21.83	
	09/24/07	144.99	132.92	12.07	
	12/10/07	144.99	141.07	3.92	
	03/17/08	144.99	149.72	-4.73	
	06/23/08	144.99	154.59	-9.60	
	09/22/08	144.99	160.27	-15.28	
	12/15/08	144.92	164.12	-19.20	
	12/19/08	144.92	164.61	-19.69	
	03/16/09	144.92	164.01	-19.09	
	03/18/09	144.92	165.33	-20.41	
	06/22/09	144.92	161.11	-16.19	
	06/26/09	144.92	161.17	-16.25	
	08/31/09	144.92	162.89	-17.97	
	09/10/09	144.92	163.05	-18.13	
	10/28/09	144.92	162.60	-17.68	
	10/30/09	144.92	162.66	-17.74	
	11/04/09	144.92	162.38	-17.46	
	12/07/09	144.92	161.33	-16.41	
	03/01/10	144.92	159.25	-14.33	
	06/07/10	144.92	154.43	-9.51	
	09/07/10	144.92	152.71	-7.79	
	12/06/10	144.92	153.09	-8.17	
	03/24/11	144.92	147.05	-2.13	
	03/25/11	144.92	146.74	-1.82	
	06/20/11	144.92	142.83	2.09	
	08/01/11	144.92	141.00	3.92	
	08/05/11	144.92	140.61	4.31	
	10/31/11	144.92	138.25	6.67	
	02/06/12	144.92	133.38	11.54	

TABLE 3
GROUNDWATER LEVELS

Well Identifier	Date Measured	Reference Point Elevation (a) (feet msl)	Depth to Water (feet bsl)	Water Level Elevation (feet msl)	Remediation System On
Regional Groundwater System Monitor and Extraction Wells (continued)					
MW-15	05/07/12	144.92	125.83	19.09	
(Cont'd)	08/06/12	144.95	124.70	20.25	
	11/05/12	144.95	130.04	14.91	
	02/04/13	144.95	130.76	14.19	
MW-16	11/09/99	164.08	170.71	-6.63	
	11/09/99	164.08	170.84	-6.76	
	11/10/99	164.08	171.00	-6.92	
	11/10/99	164.08	174.01	-9.93	
	11/22/99	164.08	163.94	0.14	
	11/23/99	164.08	164.17	-0.09	
	12/06/99	164.08	164.36	-0.28	
	12/07/99	164.08	164.32	-0.24	
	12/07/99	164.08	172.50	-8.42	
	02/07/00	164.08	162.75	1.33	
	02/18/00	164.08	162.36	1.72	
	06/21/00	164.08	160.66	3.42	
	07/05/00	164.08	161.62	2.46	
	07/06/00	164.08	161.62	2.46	
	01/16/01	146.18	148.73	-2.55	
	03/19/01	146.18	146.47	-0.29	
	03/26/01	146.18	146.07	0.11	
	04/03/01	146.18	145.80	0.38	
	04/10/01	146.18	145.50	0.68	
	04/17/01	146.18	145.20	0.98	
	04/26/01	146.18	145.50	0.68	
	05/10/01	146.18	144.70	1.48	
	06/26/01	146.18	149.09	-2.91	
	10/24/01	146.26	151.72	-5.46	
	01/15/02	142.73	148.36	-5.63	
	03/19/02	142.73	145.53	-2.80	
	04/15/02	142.73	145.24	-2.51	
	10/31/02	142.73	149.95	-7.22	
	11/18/02	142.73	147.11	-4.38	
	01/17/03	142.73	133.43	9.30	
	01/17/03	142.73	133.44	9.29	
	05/08/03	142.73	142.24	0.49	
	06/09/03	142.73	145.96	-3.23	
	09/15/03	142.73	150.25	-7.52	
	09/19/03	142.73	150.32	-7.59	
	09/24/03	142.73	150.37	-7.64	
	09/25/03	142.73	150.26	-7.53	
	10/14/03	142.73	149.51	-6.78	
	12/02/03	142.73	143.81	-1.08	
	12/03/03	142.73	143.52	-0.79	
	12/15/03	142.73	141.50	1.23	
	03/29/04	142.73	129.17	13.56	
	04/29/04	142.73	128.89	13.84	
	06/14/04	142.73	134.28	8.45	
	09/20/04	142.73	146.47	-3.74	
	10/19/04	142.73	146.25	-3.52	
	11/10/04	142.73	144.36	-1.63	
	12/06/04	142.73	141.31	1.42	
	03/14/05	142.73	127.49	15.24	

TABLE 3
GROUNDWATER LEVELS

Well Identifier	Date Measured	Reference Point Elevation (a) (feet msl)	Depth to Water (feet bls)	Water Level Elevation (feet msl)	Remediation System On
Regional Groundwater System Monitor and Extraction Wells (continued)					
MW-16	06/20/05	142.73	132.93	9.80	
(Cont'd)	07/13/05	142.73	130.66	12.07	
	09/19/05	142.73	140.08	2.65	
	09/21/05	142.73	140.27	2.46	
	12/17/05	142.73	119.28	23.45	
	03/20/06	142.73	112.82	29.91	
	06/19/06	142.73	108.54	34.19	
	09/25/06	142.73	118.38	24.35	
	10/05/06	142.73	118.60	24.13	
	12/11/06	142.73	116.26	26.47	
	03/12/07	142.73	122.91	19.82	
	06/18/07	142.73	133.17	9.56	
	09/24/07	142.73	153.25	-10.52	
	12/10/07	142.73	150.10	-7.37	
	12/20/07	142.73	150.49	-7.76	
	03/17/08	142.73	150.44	-7.71	
	06/23/08	142.73	152.46	-9.73	
	07/11/08	142.73	153.82	-11.09	
	07/14/08	142.73	153.73	-11.00	
	07/15/08	142.73	153.81	-11.08	
	07/30/08	142.73	155.17	-12.44	
	09/22/08	142.73	159.91	-17.18	
	10/22/08	142.73	162.00	-19.27	
	12/15/08	142.73	164.63	-21.90	
	12/19/08	142.73	164.07	-21.34	
	02/25/09	142.73	159.44	-16.71	
	03/16/09	142.73	159.56	-16.83	
	03/18/09	142.73	160.35	-17.62	
	04/29/09	142.73	154.63	-11.90	
	04/29/09	142.73	154.68	-11.95	
	05/27/09	142.73	156.56	-13.83	
	06/22/09	142.73	157.90	-15.17	
	06/26/09	142.73	158.59	-15.86	
	08/31/09	142.73	160.61	-17.88	
	09/10/09	142.73	161.06	-18.33	
	10/23/09	142.73	158.83	-16.10	
	10/30/09	142.73	157.98	-15.25	
	11/04/09	142.73	157.58	-14.85	
	12/07/09	142.73	156.03	-13.30	
	01/19/10	142.73	154.70	-11.97	
	03/01/10	142.73	149.08	-6.35	
	06/07/10	142.73	144.31	-1.58	
	09/07/10	142.73	151.63	-8.90	
	12/06/10	142.73	150.27	-7.54	
	03/24/11	142.73	134.07	8.66	
	06/20/11	142.73	129.99	12.74	
	08/01/11	142.73	130.92	11.81	
	08/05/11	142.73	131.23	11.50	
	10/31/11	142.73	128.83	13.90	
	02/06/12	142.73	121.44	21.29	
	05/07/12	142.73	115.07	27.66	
	08/06/12	142.40	127.03	15.37	
	11/05/12	142.40	137.88	4.52	
	12/10/12	142.40	134.83	7.57	

TABLE 3
GROUNDWATER LEVELS

Well Identifier	Date Measured	Reference Point Elevation (a) (feet msl)	Depth to Water (feet bls)	Water Level Elevation (feet msl)	Remediation System On
Regional Groundwater System Monitor and Extraction Wells (continued)					
MW-16 (Cont'd)	02/04/13	142.40	130.18	12.22	
MW-17	06/21/00	158.77	163.65	-4.88	
	07/05/00	158.77	166.30	-7.53	
	01/16/01	145.28	154.14	-8.86	
	03/19/01	145.28	148.20	-2.92	
	03/26/01	145.28	147.96	-2.68	
	04/03/01	145.28	148.00	-2.72	
	04/10/01	145.28	147.80	-2.52	
	04/17/01	145.28	147.70	-2.42	
	04/26/01	145.28	147.90	-2.62	
	05/08/01	145.28	148.34	-3.06	
	06/26/01	145.28	152.88	-7.60	
	09/10/01	142.49	159.11	-16.62	
	10/22/01	142.49	162.45	-19.96	
	10/24/01	142.49	162.52	-20.03	
	01/15/02	142.49	150.30	-7.81	
	03/19/02	142.49	146.31	-3.82	
	04/15/02	142.49	146.92	-4.43	
	11/18/02	142.49	145.21	-2.72	
	05/08/03	142.49	142.77	-0.28	
	06/09/03	142.49	146.12	-3.63	
	09/15/03	142.66	151.61	-8.95	
	10/14/03	142.66	152.31	-9.65	
	12/02/03	142.66	141.10	1.56	
	12/15/03	142.66	138.77	3.89	
	03/29/04	142.66	128.10	14.56	
	06/14/04	142.66	135.02	7.64	
	09/20/04	142.66	145.34	-2.68	
	10/19/04	142.66	144.94	-2.28	
	11/10/04	142.66	142.71	-0.05	
	12/06/04	142.66	138.67	3.99	
	03/14/05	142.66	125.49	17.17	
	06/20/05	142.66	132.60	10.06	
	09/19/05	142.66	137.49	5.17	
	12/17/05	142.66	116.68	25.98	
	03/20/06	142.66	113.20	29.46	
	06/19/06	142.66	108.97	33.69	
	09/25/06	142.66	116.20	26.46	
	12/12/06	142.66	113.17	29.49	
	03/12/07	142.66	117.46	25.20	
	06/18/07	142.66	129.43	13.23	
	09/24/07	142.66	149.29	-6.63	
	12/10/07	142.66	154.89	-12.23	
	03/17/08	142.66	149.19	-6.53	
	06/23/08	142.66	154.35	-11.69	
	09/22/08	142.66	162.79	-20.13	
	12/15/08	142.66	162.89	-20.23	
	03/16/09	142.66	151.39	-8.73	
	06/22/09	142.66	152.09	-9.43	
	08/31/09	142.66	156.35	-13.69	
	12/07/09	142.66	150.10	-7.44	
	03/01/10	142.66	145.46	-2.80	

TABLE 3
GROUNDWATER LEVELS

Well Identifier	Date Measured	Reference Point Elevation (a) (feet msl)	Depth to Water (feet bls)	Water Level Elevation (feet msl)	Remediation System On
Regional Groundwater System Monitor and Extraction Wells (continued)					
MW-17	06/07/10	142.66	139.06	3.60	
(Cont'd)	09/08/10	142.66	145.75	-3.09	
	12/06/10	142.66	143.89	-1.23	
	03/24/11	142.66	128.87	13.79	
	06/20/11	142.66	125.84	16.82	
	08/01/11	142.66	127.11	15.55	
	10/31/11	142.66	124.34	18.32	
	02/06/12	142.66	117.62	25.04	
	05/07/12	142.66	111.26	31.40	
	08/06/12	142.70	123.10	19.60	
	11/05/12	142.70	129.72	12.98	
	02/04/13	142.70	122.55	20.15	
MW-18	06/15/00	161.51	166.05	-4.54	
	06/21/00	161.51	167.18	-5.67	
	07/05/00	161.51	169.55	-8.04	
	01/16/01	144.03	153.83	-9.80	
	03/19/01	144.03	147.97	-3.94	
	03/26/01	144.03	147.72	-3.69	
	04/03/01	144.03	147.70	-3.67	
	04/10/01	144.03	147.40	-3.37	
	04/17/01	144.03	147.30	-3.27	
	04/26/01	144.03	147.60	-3.57	
	05/07/01	144.03	148.07	-4.04	
	06/26/01	144.03	152.56	-8.53	
	09/10/01	142.11	159.63	-17.52	
	10/22/01	142.11	162.83	-20.72	
	10/24/01	142.11	162.88	-20.77	
	01/15/02	142.11	150.89	-8.78	
	01/15/02	142.11	150.84	-8.73	
	03/19/02	142.11	146.87	-4.76	
	04/15/02	142.11	147.46	-5.35	
	10/31/02	142.11	151.28	-9.17	
	10/31/02	142.11	151.24	-9.13	
	11/07/02	142.11	149.20	-7.09	
	11/07/02	142.11	149.17	-7.06	
	11/18/02	142.11	145.66	-3.55	
	01/17/03	142.11	131.07	11.04	
	05/08/03	142.11	143.19	-1.08	
	06/09/03	142.11	146.59	-4.48	
	09/15/03	142.11	151.93	-9.82	
	10/14/03	142.11	152.61	-10.50	
	12/02/03	142.11	141.26	0.85	
	12/03/03	142.11	141.04	1.07	
	12/15/03	142.11	138.95	3.16	
	03/29/04	142.11	128.16	13.95	
	04/29/04	142.11	128.60	13.51	
	06/14/04	142.11	135.03	7.08	
	09/20/04	142.11	145.41	-3.30	
	10/19/04	142.11	145.00	-2.89	
	11/10/04	142.11	142.82	-0.71	
	12/06/04	142.11	138.22	3.89	
	03/14/05	142.11	125.47	16.64	
	06/20/05	142.11	131.58	10.53	

TABLE 3
GROUNDWATER LEVELS

Well Identifier	Date Measured	Reference	Depth to Water (feet bls)	Water Level Elevation (feet msl)	Remediation System On
		Point Elevation (a) (feet msl)			
Regional Groundwater System Monitor and Extraction Wells (continued)					
MW-18	07/13/05	142.11	128.64	13.47	
(Cont'd)	09/19/05	142.11	137.61	4.50	
	09/21/05	142.11	137.79	4.32	
	12/17/05	142.11	116.61	25.50	
	03/20/06	142.11	112.95	29.16	
	05/18/06	142.11	106.02	36.09	
	06/19/06	142.11	108.73	33.38	
	09/25/06	142.11	116.04	26.07	
	12/12/06	142.11	112.97	29.14	
	03/12/07	142.11	117.39	24.72	
	06/18/07	142.11	129.43	12.68	
	09/24/07	142.11	149.48	-7.37	
	12/10/07	142.11	155.01	-12.90	
	03/17/08	142.11	149.46	-7.35	
	06/23/08	142.11	154.58	-12.47	
	09/22/08	142.11	162.96	-20.85	
	12/15/08	142.11	163.14	-21.03	
	03/16/09	142.11	151.76	-9.65	
	06/22/09	142.11	152.37	-10.26	
	08/31/09	142.11	156.67	-14.56	
	12/07/09	142.11	150.40	-8.29	
	03/01/10	142.11	145.68	-3.57	
	06/07/10	142.11	139.22	2.89	
	09/07/10	142.11	145.91	-3.80	
	12/06/10	142.11	144.09	-1.98	
	03/24/11	142.11	128.91	13.20	
	06/20/11	142.11	125.82	16.29	
	08/01/11	142.11	127.20	14.91	
	10/31/11	142.11	124.44	17.67	
	02/06/12	142.11	117.59	24.52	
	05/07/12	142.11	111.11	31.00	
	08/06/12	142.32	123.29	19.03	
	11/05/12	142.32	129.95	12.37	
	02/04/13	142.32	122.75	19.57	
MW-19	06/14/00	156.43	160.16	-3.73	
	06/21/00	156.43	161.53	-5.10	
	07/05/00	156.43	164.21	-7.78	
	01/16/01	145.28	UTM	--	
	03/19/01	145.28	UTM	--	
	05/08/01	145.28	148.50	-3.22	
	06/26/01	145.28	153.11	-7.83	
	09/10/01	142.55	159.50	-16.95	
	10/22/01	142.55	162.99	-20.44	
	10/24/01	142.55	162.98	-20.43	
	01/15/02	142.55	150.68	-8.13	
	03/19/02	142.55	146.60	-4.05	
	04/15/02	142.55	147.21	-4.66	
	11/18/02	142.55	145.68	-3.13	
	05/08/03	142.55	143.03	-0.48	
	06/09/03	142.55	146.39	-3.84	
	09/15/03	142.55	151.75	-9.20	
	09/19/03	142.55	151.85	-9.30	
	10/14/03	142.55	152.45	-9.90	

TABLE 3
GROUNDWATER LEVELS

Well Identifier	Date Measured	Reference Point Elevation (a) (feet msl)	Depth to Water (feet bls)	Water Level Elevation (feet msl)	Remediation System On
Regional Groundwater System Monitor and Extraction Wells (continued)					
MW-19	12/02/03	142.55	141.40	1.15	
(Cont'd)	12/15/03	142.72	139.07	3.65	
	03/29/04	142.72	128.10	14.62	
	06/14/04	142.72	135.09	7.63	
	09/20/04	142.72	145.55	-2.83	
	10/19/04	142.72	145.20	-2.48	
	11/10/04	142.72	142.94	-0.22	
	12/06/04	142.72	138.87	3.85	
	03/14/05	142.72	125.50	17.22	
	06/20/05	142.72	131.63	11.09	
	09/19/05	142.72	137.49	5.23	
	12/17/05	142.72	116.59	26.13	
	03/20/06	142.72	112.71	30.01	
	06/19/06	142.72	108.71	34.01	
	09/25/06	142.72	116.10	26.62	
	12/12/06	142.72	113.00	29.72	
	03/12/07	142.72	117.20	25.52	
	06/18/07	142.72	129.32	13.40	
	09/24/07	142.72	149.46	-6.74	
	12/10/07	142.72	155.15	-12.43	
	03/17/08	142.72	149.35	-6.63	
	06/23/08	142.72	154.47	-11.75	
	09/22/08	142.72	163.03	-20.31	
	12/15/08	142.72	163.18	-20.46	
	03/16/09	142.72	151.68	-8.96	
	06/22/09	142.72	152.41	-9.69	
	08/31/09	142.72	156.69	-13.97	
	12/07/09	142.72	150.42	-7.70	
	03/01/10	142.72	145.73	-3.01	
	06/07/10	142.72	139.20	3.52	
	09/08/10	142.72	145.97	-3.25	
	12/06/10	142.72	144.11	-1.39	
	03/24/11	142.72	128.79	13.93	
	06/20/11	142.72	125.82	16.90	
	08/01/11	142.72	127.06	15.66	
	10/31/11	142.72	124.19	18.53	
	02/06/12	142.72	117.41	25.31	
	05/07/12	142.72	111.03	31.69	
	08/06/12	142.06	122.99	19.07	
	11/05/12	142.06	129.73	12.33	
	02/04/13	142.06	122.49	19.57	
MW-20	06/30/03	184.19	168.22	15.97	
	09/15/03	184.19	171.58	12.61	
	09/23/03	184.19	171.95	12.24	
	10/08/03	184.19	172.43	11.76	
	10/14/03	184.19	172.83	11.36	
	12/15/03	184.19	172.34	11.85	
	03/29/04	184.19	163.81	20.38	
	06/14/04	184.19	165.21	18.98	
	09/20/04	184.19	174.15	10.04	
	11/10/04	184.19	176.60	7.59	
	12/06/04	184.19	175.49	8.70	
	03/14/05	184.19	165.05	19.14	

TABLE 3
GROUNDWATER LEVELS

Well Identifier	Date Measured	Reference Point Elevation (a) (feet msl)	Depth to Water (feet bls)	Water Level Elevation (feet msl)	Remediation System On
Regional Groundwater System Monitor and Extraction Wells (continued)					
MW-20	06/20/05	184.19	158.60	25.59	
(Con't)	09/19/05	184.19	160.38	23.81	
	12/17/05	184.19	153.77	30.42	
	03/20/06	184.19	144.52	39.67	
	06/19/06	184.19	142.00	42.19	
	09/25/06	184.19	149.33	34.86	
	12/12/06	184.19	148.77	35.42	
	03/12/07	184.19	146.04	38.15	
	06/18/07	184.19	150.00	34.19	
	09/24/07	184.19	166.46	17.73	
	12/10/07	184.19	176.76	7.43	
	03/17/08	184.19	177.00	7.19	
	06/23/08	184.19	176.53	7.66	
	09/22/08	184.19	182.60	1.59	
	12/15/08	184.19	185.69	-1.50	
	03/16/09	184.19	184.62	-0.43	
	06/22/09	184.19	182.07	2.12	
	08/31/09	184.19	183.50	0.69	
	12/07/09	184.19	184.31	-0.12	
	03/01/10	184.19	180.87	3.32	
	06/07/10	184.19	174.32	9.87	
	09/07/10	184.19	175.17	9.02	
	12/06/10	184.19	174.53	9.66	
	03/24/11	184.19	165.49	18.70	
	06/20/11	184.19	160.68	23.51	
	08/01/11	184.19	156.84	27.35	
	10/31/11	184.19	149.75	34.44	
	02/06/12	184.19	145.82	38.37	
	05/07/12	184.19	144.24	39.95	
	08/06/12	184.19	148.35	35.84	
	11/05/12	184.19	155.69	28.50	
	02/04/13	184.19	153.17	31.02	
MW-21	09/15/03	142.68	146.34	-3.66	
	09/19/03	142.68	146.53	-3.85	
	09/23/03	142.68	146.75	-4.07	
	09/25/03	142.68	147.05	-4.37	
	10/08/03	142.68	147.31	-4.63	
	10/14/03	142.68	147.72	-5.04	
	12/02/03	142.68	142.95	-0.27	
	12/03/03	142.68	142.65	0.03	
	12/15/03	142.68	141.34	1.34	
	03/29/04	142.68	130.83	11.85	
	04/29/04	142.68	129.48	13.20	
	06/14/04	142.68	131.21	11.47	
	09/20/04	142.68	138.15	4.53	
	10/19/04	142.68	138.75	3.93	
	11/10/04	142.68	138.82	3.86	
	12/06/04	142.68	137.64	5.04	
	03/14/05	142.68	128.64	14.04	
	06/20/05	142.68	127.83	14.85	
	07/13/05	142.68	126.82	15.86	
	09/19/05	142.68	131.31	11.37	
	09/21/05	142.68	131.51	11.17	

TABLE 3
GROUNDWATER LEVELS

Well Identifier	Date Measured	Reference Point Elevation (a) (feet msl)	Depth to Water (feet bls)	Water Level Elevation (feet msl)	Remediation System On
Regional Groundwater System Monitor and Extraction Wells (continued)					
MW-21	12/17/05	142.68	120.26	22.42	
(Cont'd)	03/20/06	142.68	113.24	29.44	
	06/19/06	142.68	107.60	35.08	
	09/25/06	142.68	111.36	31.32	
	10/05/06	142.68	111.45	31.23	
	12/11/06	142.68	110.57	32.11	
	03/12/07	142.68	114.18	28.50	
	06/18/07	142.68	120.04	22.64	
	09/24/07	142.68	135.85	6.83	
	12/10/07	142.68	146.37	-3.69	
	01/21/08	140.30	148.51	-8.2	
	03/17/08	140.30	146.90	-6.6	
	05/27/08	141.23	148.71	-7.48	
	06/23/08	141.23	150.40	-9.17	
	07/09/08	141.18	160.02	-18.84	Pilot GETS
	07/11/08	141.18	153.31	-12.13	
	07/14/08	141.18	152.84	-11.66	
	07/15/08	141.18	161.98	-20.8	Pilot GETS
	07/30/08	141.18	162.93	-21.75	Pilot GETS
	08/14/08	141.18	165.94	-24.76	Pilot GETS
	08/25/08	141.18	167.47	-26.29	Pilot GETS
	09/22/08	141.18	170.65	-29.47	Pilot GETS
	10/22/08	141.18	172.35	-31.17	
	12/15/08	141.18	168.21	-27.03	
	12/19/08	141.18	166.50	-25.32	
	01/07/09	141.18	161.36	-20.18	
	02/25/09	141.18	165.74	-24.56	Pilot GETS
	03/16/09	141.18	166.33	-25.15	Pilot GETS
	03/18/09	141.18	164.52	-23.34	Pilot GETS
	04/29/09	141.18	156.91	-15.73	
	04/29/09	141.18	162.95	-21.77	Pilot GETS
	05/27/09	141.18	162.71	-21.53	Pilot GETS
	06/22/09	141.18	163.25	-22.07	Pilot GETS
	06/26/09	141.18	163.49	-22.31	Pilot GETS
	06/29/09	141.18	163.93	-22.75	Pilot GETS
	07/22/09	141.18	166.47	-25.29	Pilot GETS
	08/14/09	141.18	170.24	-29.06	Pilot GETS
	08/31/09	141.18	166.80	-25.62	Pilot GETS
	09/10/09	141.18	168.29	-27.11	Pilot GETS
	09/11/09	141.18	167.13	-25.95	Pilot GETS
	10/08/09	141.18	166.65	-25.47	Pilot GETS
	10/23/09	141.18	155.98	-14.80	Pilot GETS
	10/30/09	141.18	154.90	-13.72	
	11/04/09	141.18	154.08	-12.90	
	12/07/09	141.18	150.92	-9.74	
	12/09/09	141.18	155.00	-13.82	
	03/01/10	141.18	144.78	-3.60	
	06/07/10	141.18	137.88	3.30	
	09/07/10	141.18	139.87	1.31	
	12/06/10	141.18	141.05	0.13	
	03/24/11	141.18	129.59	11.59	
	06/20/11	141.18	124.57	16.61	
	08/01/11	141.18	123.72	17.46	
	08/05/11	141.18	123.64	17.54	

TABLE 3
GROUNDWATER LEVELS

Well Identifier	Date Measured	Reference Point Elevation (a) (feet msl)	Depth to Water (feet bls)	Water Level Elevation (feet msl)	Remediation System On
Regional Groundwater System Monitor and Extraction Wells (continued)					
MW-21	10/14/11	141.18	120.69	20.49	
(Cont'd)	10/31/11	141.18	120.89	20.29	
	12/08/11	141.18	131.77	9.41	Pilot GETS
	01/05/12	141.18	133.06	8.12	Pilot GETS
	01/06/12	141.18	133.19	7.99	Pilot GETS
	01/25/12	141.18	132.89	8.29	Pilot GETS
	02/06/12	141.18	132.30	8.88	Pilot GETS
	02/08/12	141.18	132.93	8.25	Pilot GETS
	03/09/12	141.18	131.41	9.77	Pilot GETS
	04/02/12	141.18	114.08	27.10	Pilot GETS
	05/07/12	141.18	111.08	30.10	
	06/26/12	141.18	111.62	29.56	
	08/06/12	141.18	115.74	25.44	
	11/05/12	141.18	122.76	18.42	
	02/04/13	141.18	120.81	20.37	
MW-22	09/15/03	138.65	147.40	-8.75	
	09/15/03	138.65	148.23	-9.58	
	09/19/03	138.65	147.65	-9.00	
	09/23/03	138.65	147.77	-9.12	
	09/25/03	138.65	147.92	-9.27	
	10/08/03	138.65	148.08	-9.43	
	10/14/03	138.65	148.24	-9.59	
	12/02/03	138.65	136.80	1.85	
	12/03/03	138.65	136.56	2.09	
	12/15/03	138.65	134.47	4.18	
	03/29/04	138.65	123.84	14.81	
	04/29/04	138.65	124.38	14.27	
	06/14/04	138.65	130.80	7.85	
	09/20/04	138.65	141.03	-2.38	
	10/19/04	138.65	140.81	-2.16	
	11/10/04	138.65	138.43	0.22	
	12/06/04	138.65	134.38	4.27	
	03/14/05	138.65	121.17	17.48	
	06/20/05	138.65	127.33	11.32	
	07/13/05	138.65	124.37	14.28	
	09/19/05	138.65	133.55	5.10	
	09/21/05	138.65	133.66	4.99	
	12/17/05	138.65	112.37	26.28	
	03/20/06	138.65	109.01	29.64	
	06/19/06	138.65	104.82	33.83	
	09/25/06	138.65	112.02	26.63	
	12/12/06	138.65	108.93	29.72	
	03/12/07	138.65	113.44	25.21	
	06/18/07	138.65	125.49	13.16	
	09/24/07	138.65	145.19	-6.54	
	12/10/07	138.65	150.68	-12.03	
	12/20/07	138.65	150.54	-11.89	
	01/21/08	138.65	148.35	-9.70	
	03/17/08	138.65	145.11	-6.46	
	04/21/08	138.65	145.53	-6.88	
	05/27/08	138.65	148.00	-9.35	
	06/23/08	138.65	150.29	-11.64	
	09/22/08	138.65	158.69	-20.04	

TABLE 3
GROUNDWATER LEVELS

Well Identifier	Date Measured	Reference Point Elevation (a) (feet msl)	Depth to Water (feet bsl)	Water Level Elevation (feet msl)	Remediation System On
Regional Groundwater System Monitor and Extraction Wells (continued)					
MW-22	12/15/08	138.65	158.75	-20.10	
(Cont'd)	03/16/09	138.65	147.07	-8.42	
	06/22/09	138.65	147.84	-9.19	
	08/31/09	138.65	152.10	-13.45	
	12/07/09	138.65	145.84	-7.19	
	03/01/10	138.65	141.12	-2.47	
	06/07/10	138.65	134.83	3.82	
	09/07/10	138.65	141.49	-2.84	
	12/06/10	138.65	139.63	-0.98	
	03/25/11	138.65	124.60	14.05	
	06/20/11	138.65	121.60	17.05	
	08/01/11	138.65	123.01	15.64	
	10/31/11	138.65	120.38	18.27	
	02/06/12	138.65	113.56	25.09	
	05/07/12	138.65	107.13	31.52	
	08/06/12	138.65	119.55	19.10	
	11/05/12	138.65	126.01	12.64	
	02/04/13	138.65	118.83	19.82	
MW-23	09/15/03	137.16	147.30	-10.14	
	09/19/03	137.33	147.75	-10.42	
	09/23/03	137.33	147.75	-10.42	
	09/25/03	137.33	147.87	-10.54	
	10/08/03	137.33	148.09	-10.76	
	10/14/03	137.33	148.21	-10.88	
	12/02/03	137.33	136.17	1.16	
	12/15/03	137.33	133.83	3.50	
	03/29/04	137.33	123.30	14.03	
	04/29/04	137.33	123.77	13.56	
	06/14/04	137.33	130.20	7.13	
	09/20/04	137.33	140.19	-2.86	
	10/19/04	137.33	UTM	--	
	11/10/04	137.33	137.76	-0.43	
	12/06/04	137.33	133.56	3.77	
	03/14/05	137.33	120.52	16.81	
	06/20/05	137.33	127.18	10.15	
	07/13/05	137.33	123.89	13.44	
	09/19/05	137.33	133.50	3.83	
	09/21/05	137.33	133.67	3.66	
	12/17/05	137.33	111.74	25.59	
	03/20/06	137.33	108.90	28.43	
	05/18/06	137.33	101.55	35.78	
	06/19/06	137.33	104.32	33.01	
	09/25/06	137.33	111.42	25.91	
	12/12/06	137.33	108.30	29.03	
	03/12/07	137.33	113.48	23.85	
	06/18/07	137.33	125.48	11.85	
	09/24/07	137.33	144.94	-7.61	
	12/10/07	137.33	150.40	-13.07	
	12/20/07	137.33	150.23	-12.90	
	03/17/08	137.33	145.00	-7.67	
	04/21/08	137.33	145.50	-8.17	
	06/23/08	137.33	150.33	-13.00	
	08/26/08	137.33	166.71	-29.38	

TABLE 3
GROUNDWATER LEVELS

Well Identifier	Date Measured	Reference Point Elevation (a) (feet msl)	Depth to Water (feet bsl)	Water Level Elevation (feet msl)	Remediation System On
Regional Groundwater System Monitor and Extraction Wells (continued)					
MW-23	09/22/08	137.33	158.58	-21.25	
(Cont'd)	12/15/08	137.33	158.48	-21.15	
	03/16/09	137.33	146.43	-9.10	
	06/23/09	137.33	147.50	-10.17	
	08/31/09	137.33	151.58	-14.25	
	10/23/09	137.33	148.44	-11.11	
	10/30/09	137.33	147.82	-10.49	
	11/04/09	137.33	147.40	-10.07	
	12/07/09	137.33	145.18	-7.85	
	03/01/10	137.33	140.52	-3.19	
	06/07/10	137.33	134.30	3.03	
	09/07/10	137.33	140.90	-3.57	
	12/06/10	137.33	139.15	-1.82	
	03/15/11	137.33	123.40	13.93	
	03/24/11	137.33	124.57	12.76	
	06/20/11	137.33	121.15	16.18	
	08/01/11	137.33	122.97	14.36	
	08/05/11	137.33	123.90	13.43	
	10/31/11	137.33	120.60	16.73	
	01/13/12	137.33	114.41	22.92	
	01/26/12	137.33	113.42	23.91	
	02/16/12	137.33	113.49	23.84	
	05/07/12	137.33	106.79	30.54	
	06/07/12	137.33	112.15	25.18	
	06/26/12	137.33	111.39	25.94	
	08/06/12	137.33	119.31	18.02	
	11/05/12	137.33	125.95	11.38	
	02/04/13	137.33	118.72	18.61	
MW-24	09/23/04	142.83	139.35	3.48	
	10/19/04	142.83	141.09	1.74	
	11/10/04	142.83	140.60	2.23	
	12/06/04	142.83	139.34	3.49	
	03/14/05	142.83	129.12	13.71	
	06/20/05	142.83	124.62	18.21	
	07/13/05	142.83	124.60	18.23	
	09/19/05	142.83	127.51	15.32	
	09/21/05	142.83	127.60	15.23	
	12/17/05	142.83	118.37	24.46	
	03/20/06	142.83	109.25	33.58	
	06/19/06	142.83	107.30	35.53	
	09/25/06	142.83	115.04	27.79	
	10/05/06	142.83	115.35	27.48	
	12/11/06	142.83	113.61	29.22	
	03/12/07	142.83	111.60	31.23	
	06/18/07	142.83	118.08	24.75	
	09/24/07	142.83	135.15	7.68	
	12/10/07	142.83	143.49	-0.66	
	03/17/08	142.83	143.70	-0.87	
	06/23/08	142.83	145.17	-2.34	
	07/11/08	142.83	146.50	-3.67	
	07/14/08	142.83	146.72	-3.89	
	07/15/08	142.83	146.84	-4.01	
	09/22/08	142.83	151.29	-8.46	

TABLE 3
GROUNDWATER LEVELS

Well Identifier	Date Measured	Reference Point Elevation (a) (feet msl)	Depth to Water (feet bls)	Water Level Elevation (feet msl)	Remediation System On
Regional Groundwater System Monitor and Extraction Wells (continued)					
MW-24	10/22/08	142.83	152.72	-9.89	
(Cont'd)	12/15/08	142.83	154.29	-11.46	
	12/19/08	142.83	154.81	-11.98	
	02/25/09	142.83	153.94	-11.11	
	03/16/09	142.83	152.94	-10.11	
	03/18/09	142.83	152.55	-9.72	
	05/27/09	142.83	150.38	-7.55	
	06/22/09	142.83	150.37	-7.54	
	06/26/09	142.83	150.42	-7.59	
	08/31/09	142.83	152.31	-9.48	
	09/10/09	142.83	152.59	-9.76	
	12/07/09	142.83	152.04	-9.21	
	02/10/10	142.83	149.58	-6.75	
	02/12/10	142.83	149.53	-6.70	
	03/01/10	142.83	148.54	-5.71	
	06/07/10	142.83	142.40	0.43	
	09/07/10	142.83	143.41	-0.58	
	12/06/10	142.83	142.45	0.38	
	03/24/11	142.83	132.13	10.70	
	06/20/11	142.83	127.36	15.47	
	08/01/11	142.83	124.12	18.71	
	08/05/11	142.83	123.84	18.99	
	10/31/11	142.83	117.61	25.22	
	02/06/12	142.83	112.65	30.18	
	05/07/12	142.83	110.05	32.78	
	06/26/12	142.83	111.97	30.86	
	08/06/12	142.83	115.85	26.98	
	11/05/12	142.83	123.08	19.75	
	12/10/12	142.83	122.41	20.42	
	02/04/13	142.83	119.55	23.28	
MW-25	09/20/04	142.64	152.87	-10.23	
	10/19/04	142.64	145.96	-3.32	
	11/10/04	142.64	143.60	-0.96	
	12/06/04	142.64	140.84	1.80	
	03/14/05	142.64	129.79	12.85	
	06/20/05	142.64	125.06	17.58	
	07/13/05	142.64	122.98	19.66	
	09/19/05	142.64	126.64	16.00	
	09/21/05	142.64	127.57	15.07	
	12/17/05	142.64	115.32	27.32	
	03/20/06	142.64	107.47	35.17	
	06/19/06	142.64	106.28	36.36	
	09/25/06	142.64	114.63	28.01	
	10/05/06	142.64	117.63	25.01	
	12/12/06	142.64	113.90	28.74	
	03/12/07	142.64	111.03	31.61	
	06/18/07	142.64	118.13	24.51	
	09/24/07	142.64	137.17	5.47	
	12/10/07	142.64	148.21	-5.57	
	12/20/07	142.64	151.34	-8.70	
	03/17/08	142.64	146.31	-3.67	
	06/23/08	142.64	147.94	-5.30	
	09/22/08	142.64	157.18	-14.54	

TABLE 3
GROUNDWATER LEVELS

Well Identifier	Date Measured	Reference Point Elevation (a) (feet msl)	Depth to Water (feet bls)	Water Level Elevation (feet msl)	Remediation System On
Regional Groundwater System Monitor and Extraction Wells (continued)					
MW-25	10/22/08	142.64	158.43	-15.79	
(Cont'd)	12/15/08	142.64	158.84	-16.20	
	12/19/08	142.64	158.79	-16.15	
	02/25/09	142.64	155.58	-12.94	
	03/16/09	142.64	153.43	-10.79	
	03/18/09	142.64	154.82	-12.18	
	05/27/09	142.64	150.45	-7.81	
	06/22/09	142.64	150.68	-8.04	
	06/26/09	142.64	151.00	-8.36	
	08/31/09	142.64	154.61	-11.97	
	09/10/09	142.64	154.66	-12.02	
	12/07/09	142.64	153.57	-10.93	
	03/01/10	142.64	146.59	-3.95	
	06/07/10	142.64	140.30	2.34	
	09/07/10	142.64	144.61	-1.97	
	12/06/10	142.64	141.89	0.75	
	03/24/11	142.64	125.44	17.20	
	06/20/11	142.64	125.12	17.52	
	08/01/11	142.64	120.05	22.59	
	10/31/11	142.64	113.28	29.36	
	02/06/12	142.64	109.05	33.59	
	05/07/12	142.64	107.92	34.72	
	08/06/12	142.64	140.61	2.03	
	11/05/12	142.64	122.83	19.81	
	02/04/13	142.64	120.54	22.10	
MW-26A	10/19/04	137.30	135.45	1.85	
	11/10/04	137.30	135.59	1.71	
	12/06/04	137.30	135.06	2.24	
	03/14/05	137.30	127.74	9.56	
	06/20/05	137.30	125.41	11.89	
	07/13/05	137.30	125.00	12.30	
	09/19/05	137.30	127.22	10.08	
	09/21/05	137.30	127.31	9.99	
	12/17/05	137.30	121.44	15.86	
	03/20/06	137.30	112.18	25.12	
	05/18/06	137.30	107.48	29.82	
	06/19/06	137.30	106.50	30.80	
	09/25/06	137.30	108.81	28.49	
	12/12/06	137.30	108.94	28.36	
	03/12/07	137.30	110.51	26.79	
	06/18/07	137.30	115.63	21.67	
	09/24/07	137.30	129.55	7.75	
	12/10/07	137.30	138.57	-1.27	
	12/20/07	137.30	139.55	-2.25	
	12/20/07	137.30	139.52	-2.22	
	01/21/08	137.30	141.21	-3.91	
	03/17/08	137.30	142.09	-4.79	
	04/21/08	137.30	142.34	-5.04	
	05/27/08	137.04	142.91	-5.87	
	06/23/08	137.04	144.94	-7.90	
	08/26/08	137.04	147.75	-10.71	
	09/22/08	137.04	149.54	-12.50	
	12/15/08	137.04	153.18	-16.14	

TABLE 3
GROUNDWATER LEVELS

Well Identifier	Date Measured	Reference Point Elevation (a) (feet msl)	Depth to Water (feet bls)	Water Level Elevation (feet msl)	Remediation System On
Regional Groundwater System Monitor and Extraction Wells (continued)					
MW-26A	03/16/09	137.04	151.38	-14.34	
(Cont'd)	06/22/09	137.04	147.67	-10.63	
	08/31/09	137.04	150.21	-13.17	
	10/13/09	137.04	150.44	-13.40	
	10/30/09	137.04	149.92	-12.88	
	12/07/09	137.04	148.20	-11.16	
	03/01/10	137.04	145.68	-8.64	
	03/22/10	137.04	144.06	-7.02	
	06/07/10	137.04	139.28	-2.24	
	09/07/10	137.04	139.18	-2.14	
	12/06/10	137.04	140.17	-3.13	
	03/24/11	137.04	130.88	6.16	
	06/20/11	137.04	126.68	10.36	
	08/01/11	137.04	125.09	11.95	
	10/31/11	137.04	122.65	14.39	
	02/06/12	137.04	117.96	19.08	
	05/07/12	137.04	112.82	24.22	
	08/06/12	137.04	114.42	22.62	
	11/05/12	137.04	120.59	16.45	
	02/04/13	137.04	119.79	17.25	
MW-26B	10/19/04	137.20	136.23	0.97	
	11/10/04	137.20	136.16	1.04	
	12/06/04	137.20	136.02	1.18	
	03/14/05	137.20	131.73	5.47	
	06/20/05	137.20	129.29	7.91	
	07/13/05	137.20	129.00	8.20	
	09/19/05	137.20	129.99	7.21	
	09/21/05	137.20	130.07	7.13	
	12/17/05	137.20	126.53	10.67	
	03/20/06	137.20	118.22	18.98	
	06/19/06	137.20	110.17	27.03	
	09/25/06	137.20	110.84	26.36	
	10/05/06	137.20	111.20	26.00	
	12/12/06	137.20	111.31	25.89	
	03/12/07	137.20	113.61	23.59	
	06/18/07	137.20	117.50	19.70	
	09/24/07	137.20	127.68	9.52	
	12/10/07	137.20	135.82	1.38	
	12/20/07	137.20	136.85	0.35	
	12/20/07	137.20	136.78	0.42	
	01/21/08	137.20	139.21	-2.01	
	03/17/08	137.20	142.10	-4.90	
	05/27/08	137.05	144.96	-7.91	
	06/23/08	137.05	146.29	-9.24	
	08/26/08	137.05	150.28	-13.23	
	09/22/08	137.05	151.94	-14.89	
	12/15/08	137.05	155.64	-18.59	
	12/19/08	137.05	156.13	-19.08	
	03/16/09	137.05	155.53	-18.48	
	03/18/09	137.05	155.16	-18.11	
	06/22/09	137.05	152.80	-15.75	
	08/31/09	137.05	154.60	-17.55	
	09/10/09	137.05	154.60	-17.55	

TABLE 3
GROUNDWATER LEVELS

Well Identifier	Date Measured	Reference Point Elevation (a) (feet msl)	Depth to Water (feet bsl)	Water Level Elevation (feet msl)	Remediation System On
Regional Groundwater System Monitor and Extraction Wells (continued)					
MW-26B	10/13/09	137.05	154.75	-17.70	
(Cont'd)	10/14/09	137.05	154.80	-17.75	
	10/30/09	137.05	154.41	-17.36	
	12/07/09	137.05	153.17	-16.12	
	02/10/10	137.05	151.63	-14.58	
	03/01/10	137.05	151.04	-13.99	
	06/07/10	137.05	146.22	-9.17	
	09/07/10	137.05	144.57	-7.52	
	12/06/10	137.05	144.78	-7.73	
	03/24/11	137.05	138.67	-1.62	
	06/20/11	137.05	134.45	2.60	
	08/01/11	137.05	132.83	4.22	
	08/05/11	137.05	132.55	4.50	
	10/31/11	137.05	129.89	7.16	
	02/06/12	137.05	125.63	11.42	
	05/07/12	137.05	120.17	16.88	
	08/06/12	137.05	118.61	18.44	
	11/05/12	137.05	122.68	14.37	
	02/04/13	137.05	123.42	13.63	
MW-26C	10/19/04	137.28	141.81	-4.53	
	11/10/04	137.28	139.83	-2.55	
	12/06/04	137.28	135.90	1.38	
	03/14/05	137.28	121.75	15.53	
	06/20/05	137.28	128.11	9.17	
	07/13/05	137.28	125.75	11.53	
	09/19/05	137.28	137.35	-0.07	
	09/21/05	137.28	137.45	-0.17	
	12/17/05	137.28	112.48	24.80	
	03/20/06	137.28	109.21	28.07	
	06/19/06	137.28	104.32	32.96	
	09/25/06	137.28	113.96	23.32	
	10/05/06	137.28	114.08	23.20	
	12/12/06	137.28	111.13	26.15	
	03/12/07	137.28	119.52	17.76	
	06/18/07	137.28	130.71	6.57	
	09/24/07	137.28	153.19	-15.91	
	12/10/07	137.28	160.43	-23.15	
	12/20/07	137.28	160.88	-23.60	
	01/21/08	137.28	157.99	-20.71	
	02/21/08	137.28	155.52	-18.24	
	03/17/08	137.28	154.73	-17.45	
	04/21/08	137.28	155.21	-17.93	
	05/27/08	137.06	158.25	-21.19	
	06/10/08	137.06	159.70	-22.64	
	06/23/08	137.06	161.15	-24.09	
	07/16/08	137.06	164.52	-27.46	
	08/26/08	137.06	169.10	-32.04	
	09/22/08	137.06	170.89	-33.83	
	10/22/08	137.06	171.58	-34.52	
	12/15/08	137.06	169.04	-31.98	
	12/19/08	137.06	169.36	-32.30	
	01/07/09	137.06	163.22	-26.16	
	03/16/09	137.06	153.10	-16.04	

TABLE 3
GROUNDWATER LEVELS

Well Identifier	Date Measured	Reference Point Elevation (a) (feet msl)	Depth to Water (feet bls)	Water Level Elevation (feet msl)	Remediation System On
Regional Groundwater System Monitor and Extraction Wells (continued)					
MW-26C	03/18/09	137.06	152.44	-15.38	
(Cont'd)	04/29/09	137.06	148.57	-11.51	
	06/22/09	137.06	152.47	-15.41	
	06/26/09	137.06	155.40	-18.34	
	08/31/09	137.06	158.68	-21.62	
	09/10/09	137.06	161.04	-23.98	
	10/13/09	137.06	156.48	-19.42	
	10/14/09	137.06	156.42	-19.36	
	10/23/09	137.06	154.73	-17.67	
	10/30/09	137.06	154.12	-17.06	
	11/04/09	137.06	153.77	-16.71	
	12/07/09	137.06	150.92	-13.86	
	01/19/10	137.06	149.68	-12.62	
	02/10/10	137.06	145.81	-8.75	
	02/12/10	137.06	145.52	-8.46	
	03/01/10	137.06	143.18	-6.12	
	06/07/10	137.06	140.37	-3.31	
	07/30/10	137.22	144.20	-6.98	
	09/07/10	137.22	147.97	-10.75	
	12/06/10	137.22	145.78	-8.56	
	03/01/11	137.22	128.33	8.89	
	03/24/11	137.22	130.31	6.91	
	03/25/11	137.22	129.76	7.46	
	06/20/11	137.22	125.03	12.19	
	06/23/11	137.22	125.92	11.30	
	08/01/11	137.22	127.39	9.83	
	08/05/11	137.22	127.92	9.30	
	10/31/11	137.22	125.34	11.88	
	11/01/11	137.22	125.37	11.85	
	02/06/12	137.22	117.23	19.99	
	05/07/12	137.22	110.60	26.62	
	08/06/12	137.22	124.89	12.33	
	11/05/12	137.22	134.41	2.81	
	02/04/13	137.22	126.26	10.96	
MW-27	05/27/08	137.16	157.80	-20.64	
	06/10/08	137.16	159.22	-22.06	
	06/23/08	137.16	160.75	-23.59	
	07/16/08	137.16	164.03	-26.87	
	08/26/08	137.16	168.65	-31.49	
	09/22/08	137.16	170.52	-33.36	
	10/22/08	137.16	171.19	-34.03	
	12/15/08	137.16	168.92	-31.76	
	12/19/08	137.16	169.05	-31.89	
	01/07/09	137.16	163.06	-25.90	
	03/16/09	137.16	153.24	-16.08	
	03/18/09	137.16	152.49	-15.33	
	04/29/09	137.16	148.59	-11.43	
	06/22/09	137.16	152.42	-15.26	
	06/24/09	137.16	154.08	-16.92	
	08/31/09	137.16	158.65	-21.49	
	09/10/09	137.16	160.81	-23.65	
	10/13/09	137.16	156.43	-19.27	
	10/14/09	137.16	156.35	-19.19	

TABLE 3
GROUNDWATER LEVELS

Well Identifier	Date Measured	Reference Point Elevation (a) (feet msl)	Depth to Water (feet bls)	Water Level Elevation (feet msl)	Remediation System On
Regional Groundwater System Monitor and Extraction Wells (continued)					
MW-27	10/23/09	137.16	154.73	-17.57	
(Cont'd)	10/30/09	137.16	154.10	-16.94	
	11/04/09	137.16	153.77	-16.61	
	12/07/09	137.16	150.98	-13.82	
	01/19/10	137.16	149.60	-12.44	
	03/01/10	137.16	143.25	-6.09	
	03/02/10	137.16	143.02	-5.86	
	06/07/10	137.16	139.74	-2.58	
	07/30/10	137.16	143.73	-6.57	
	09/07/10	137.16	147.75	-10.59	
	12/06/10	137.16	145.39	-8.23	
	03/01/11	137.16	127.65	9.51	
	03/24/11	137.16	129.57	7.59	
	06/20/11	137.16	124.36	12.80	
	08/01/11	137.16	126.64	10.52	
	08/05/11	137.16	127.08	10.08	
	10/31/11	137.16	124.43	12.73	
	02/06/12	137.16	116.35	20.81	
	05/07/12	137.16	110.03	27.13	
	08/06/12	137.16	124.18	12.98	
	11/05/12	137.16	134.75	2.41	
	02/04/13	137.16	125.54	11.62	
MW-28	05/16/08	140.77	160.41	-19.64	
	05/27/08	140.77	161.69	-20.92	
	06/10/08	140.77	163.08	-22.31	
	06/23/08	140.77	164.55	-23.78	
	07/16/08	140.77	167.88	-27.11	
	08/26/08	140.77	174.46	-33.69	
	09/22/08	140.77	174.45	-33.68	
	10/22/08	140.77	175.11	-34.34	
	12/15/08	140.77	172.87	-32.10	
	12/19/08	140.77	172.97	-32.20	
	01/07/09	140.77	166.82	-26.05	
	03/16/09	140.77	157.25	-16.48	
	03/18/09	140.77	156.45	-15.68	
	04/29/09	140.77	152.49	-11.72	
	06/22/09	140.77	156.45	-15.68	
	06/24/09	140.77	157.74	-16.97	
	08/31/09	140.77	162.68	-21.91	
	09/10/09	140.77	164.54	-23.77	
	10/13/09	140.77	160.35	-19.58	
	10/14/09	140.77	160.32	-19.55	
	10/23/09	140.77	158.57	-17.80	
	10/30/09	140.77	158.02	-17.25	
	11/04/09	140.77	157.61	-16.84	
	12/07/09	140.77	154.74	-13.97	
	01/19/10	140.77	153.63	-12.86	
	03/01/10	140.77	147.29	-6.52	
	03/04/10	140.77	146.80	-6.03	
	06/07/10	140.77	143.98	-3.21	
	07/30/10	140.77	147.43	-6.66	
	09/07/10	140.77	151.67	-10.90	
	12/06/10	140.77	149.96	-9.19	

TABLE 3
GROUNDWATER LEVELS

Well Identifier	Date Measured	Reference Point Elevation (a) (feet msl)	Depth to Water (feet bls)	Water Level Elevation (feet msl)	Remediation System On
Regional Groundwater System Monitor and Extraction Wells (continued)					
MW-28	03/01/11	140.77	132.48	8.29	
(Cont'd)	03/24/11	140.77	133.95	6.82	
	06/20/11	140.77	129.10	11.67	
	08/01/11	140.77	131.02	9.75	
	08/05/11	140.77	131.37	9.40	
	10/31/11	140.77	129.07	11.70	
	02/06/12	140.77	120.98	19.79	
	05/07/12	140.77	114.45	26.32	
	08/06/12	140.77	128.07	12.70	
	11/05/12	140.77	138.26	2.51	
	02/04/13	140.77	130.17	10.60	
MW-29	08/15/08	142.21	174.90	-32.69	
	08/19/08	142.21	174.44	-32.23	
	08/26/08	142.21	175.21	-33.00	
	09/22/08	142.21	177.31	-35.10	
	10/22/08	142.21	178.13	-35.92	
	12/15/08	142.34	176.26	-33.92	
	01/07/09	142.34	170.00	-27.66	
	03/16/09	142.34	160.00	-17.66	
	03/18/09	142.34	159.22	-16.88	
	04/29/09	142.34	154.91	-12.57	
	06/22/09	142.34	158.97	-16.63	
	06/24/09	142.34	159.99	-17.65	
	08/31/09	142.34	165.42	-23.08	
	09/10/09	142.34	167.01	-24.67	
	10/13/09	142.34	162.76	-20.42	
	10/14/09	142.34	162.78	-20.44	
	10/23/09	142.34	161.07	-18.73	
	10/30/09	142.34	160.59	-18.25	
	11/04/09	142.34	160.05	-17.71	
	12/07/09	142.34	156.92	-14.58	
	01/19/10	142.34	156.32	-13.98	
	03/01/10	142.34	149.84	-7.50	
	03/04/10	142.34	149.36	-7.02	
	06/07/10	142.34	146.45	-4.11	
	07/30/10	142.34	149.78	-7.44	
	09/07/10	142.34	154.30	-11.96	
	12/06/10	142.34	153.12	-10.78	
	03/01/11	142.34	135.43	6.91	
	03/24/11	142.34	136.86	5.48	
	03/30/11	142.34	135.81	6.53	
	06/20/11	142.34	131.87	10.47	
	08/01/11	142.34	134.23	8.11	
	08/05/11	142.34	134.61	7.73	
	10/31/11	142.34	132.65	9.69	
	02/06/12	142.34	124.12	18.22	
	05/07/12	142.34	117.12	25.22	
	08/06/12	142.34	130.62	11.72	
	11/05/12	142.34	141.32	1.02	
	02/04/13	142.34	133.48	8.86	
MW-30A	12/04/08	129.44	164.15	-34.71	
	12/05/08	129.44	164.29	-34.85	

TABLE 3
GROUNDWATER LEVELS

Well Identifier	Date Measured	Reference Point Elevation (a) (feet msl)	Depth to Water (feet bsl)	Water Level Elevation (feet msl)	Remediation System On
Regional Groundwater System Monitor and Extraction Wells (continued)					
MW-30A	12/15/08	129.44	162.77	-33.33	
(Cont'd)	12/19/08	129.44	163.02	-33.58	
	01/07/09	129.44	156.65	-27.21	
	03/16/09	129.44	145.68	-16.24	
	03/18/09	129.44	144.93	-15.49	
	04/29/09	129.44	141.29	-11.85	
	06/22/09	129.44	145.32	-15.88	
	06/24/09	129.44	148.04	-18.60	
	08/31/09	129.44	151.45	-22.01	
	09/10/09	129.44	154.83	-25.39	
	10/13/09	129.44	149.24	-19.80	
	10/14/09	129.44	149.22	-19.78	
	10/23/09	129.44	147.49	-18.05	
	10/30/09	129.44	146.87	-17.43	
	11/04/09	129.44	146.56	-17.12	
	12/07/09	129.44	143.60	-14.16	
	01/19/10	129.44	142.52	-13.08	
	03/01/10	129.44	135.95	-6.51	
	03/03/10	129.44	135.69	-6.25	
	06/07/10	129.44	133.44	-4.00	
	07/30/10	129.44	137.11	-7.67	
	09/07/10	129.44	140.90	-11.46	
	12/06/10	129.44	138.63	-9.19	
	03/01/11	129.44	120.97	8.47	
	03/15/11	129.44	123.10	6.34	
	03/24/11	129.44	123.64	5.80	
	06/20/11	129.44	117.99	11.45	
	08/01/11	129.44	121.07	8.37	
	08/05/11	129.44	121.58	7.86	
	10/31/11	129.44	119.19	10.25	
	02/06/12	129.44	110.70	18.74	
	05/07/12	129.44	103.59	25.85	
	08/06/12	129.44	119.04	10.40	
	11/05/12	129.44	127.77	1.67	
	01/03/13	129.44	119.71	9.73	
	02/04/13	129.44	119.49	9.95	
MW-30B	12/04/08	129.39	160.82	-31.43	
	12/05/08	129.39	161.49	-32.10	
	12/15/08	129.39	160.27	-30.88	
	01/07/09	129.39	154.82	-25.43	
	03/16/09	129.39	144.60	-15.21	
	03/18/09	129.39	143.96	-14.57	
	04/29/09	129.39	141.03	-11.64	
	06/22/09	129.39	144.02	-14.63	
	06/24/09	129.39	147.85	-18.46	
	08/31/09	129.39	149.39	-20.00	
	09/10/09	129.39	154.06	-24.67	
	10/13/09	129.39	147.92	-18.53	
	10/14/09	129.39	147.93	-18.54	
	10/23/09	129.39	146.17	-16.78	
	10/30/09	129.39	145.42	-16.03	
	11/04/09	129.39	145.25	-15.86	
	12/07/09	129.39	142.39	-13.00	

TABLE 3
GROUNDWATER LEVELS

Well Identifier	Date Measured	Reference Point Elevation (a) (feet msl)	Depth to Water (feet bls)	Water Level Elevation (feet msl)	Remediation System On
Regional Groundwater System Monitor and Extraction Wells (continued)					
MW-30B	01/19/10	129.39	140.64	-11.25	
(Cont'd)	03/01/10	129.39	134.60	-5.21	
	06/07/10	129.39	130.92	-1.53	
	09/07/10	129.39	136.39	-7.00	
	12/06/10	129.39	133.99	-4.60	
	03/15/11	129.39	122	7	
	03/24/11	129.39	121.97	7.42	
	06/20/11	129.39	115.40	13.99	
	08/01/11	129.39	118.29	11.10	
	08/05/11	129.39	119.13	10.26	
	10/31/11	129.39	116.07	13.32	
	01/20/12	129.39	109.57	19.82	
	02/06/12	129.39	109.28	20.11	
	05/07/12	129.39	101.72	27.67	
	08/06/12	129.39	115.80	13.59	
	11/05/12	129.39	122.38	7.01	
	01/03/13	129.39	115.74	13.65	
	01/09/13	129.39	116.81	12.58	
	02/04/13	129.39	115.71	13.68	
MW-31	10/13/09	123.7	140.92	-17.2	
	10/14/09	123.7	140.85	-17.1	
	10/23/09	119.60	136.95	-17.35	
	10/30/09	119.60	136.26	-16.66	
	11/02/09	119.60	136.18	-16.58	
	12/07/09	119.60	133.45	-13.85	
	01/19/10	119.60	131.88	-12.28	
	02/10/10	119.60	127.61	-8.01	
	02/12/10	119.60	127.51	-7.91	
	03/01/10	119.60	124.99	-5.39	
	06/07/10	119.60	122.62	-3.02	
	07/30/10	119.60	126.33	-6.73	
	09/07/10	119.60	129.42	-9.82	
	12/06/10	119.60	125.45	-5.85	
	03/01/11	119.60	108.80	10.80	
	03/24/11	119.60	112.56	7.04	
	06/20/11	119.60	106.02	13.58	
	08/01/11	119.60	110.28	9.32	
	08/05/11	119.60	111.32	8.28	
	10/31/11	119.60	107.84	11.76	
	02/06/12	119.60	99.66	19.94	
	05/07/12	119.60	92.21	27.39	
	08/06/12	119.60	109.72	9.88	
	11/05/12	119.60	116.38	3.22	
	02/04/13	119.60	107.58	12.02	
MW-32A	01/04/10	92.88	110.20	-17.32	
	01/19/10	92.88	107.34	-14.46	
	02/10/10	92.88	101.90	-9.02	
	02/12/10	92.88	102.03	-9.15	
	03/01/10	92.88	99.24	-6.36	
	06/07/10	92.88	97.01	-4.13	
	09/07/10	92.88	104.02	-11.14	
	12/06/10	92.88	100.08	-7.20	

TABLE 3
GROUNDWATER LEVELS

Well Identifier	Date Measured	Reference Point Elevation (a) (feet msl)	Depth to Water (feet bls)	Water Level Elevation (feet msl)	Remediation System On
Regional Groundwater System Monitor and Extraction Wells (continued)					
MW-32A	03/24/11	92.88	87.97	4.91	
(Cont'd)	06/20/11	92.88	80.19	12.69	
	08/01/11	92.88	87.56	5.32	
	10/14/11	92.88	84.70	8.18	
	10/31/11	92.88	85.17	7.71	
	02/06/12	92.88	75.40	17.48	
	05/07/12	92.88	66.57	26.31	
	08/06/12	92.88	88.32	4.56	
	11/05/12	92.88	93.88	-1.00	
	02/04/13	92.88	83.24	9.64	
MW-32B	01/04/10	92.89	109.29	-16.40	
	01/19/10	92.89	106.40	-13.51	
	02/10/10	92.89	101.75	-8.86	
	02/12/10	92.89	101.68	-8.79	
	03/01/10	92.89	99.18	-6.29	
	03/04/10	92.89	99.22	-6.33	
	06/07/10	92.89	96.71	-3.82	
	07/30/10	92.89	100.91	-8.02	
	09/07/10	92.89	103.45	-10.56	
	12/06/10	92.89	99.75	-6.86	
	03/01/11	92.89	82.87	10.02	
	03/24/11	92.89	87.67	5.22	
	06/20/11	92.89	80.34	12.55	
	08/01/11	92.89	86.35	6.54	
	10/14/11	92.89	83.95	8.94	
	10/31/11	92.89	84.01	8.88	
	02/06/12	92.89	74.84	18.05	
	05/07/12	92.89	66.54	26.35	
	08/06/12	92.89	86.18	6.71	
	11/05/12	92.89	92.20	0.69	
	01/03/13	92.89	81.64	11.25	
	02/04/13	92.89	82.76	10.13	
MW-32C	01/05/10	92.88	102.93	-10.05	
	01/19/10	92.88	102.03	-9.15	
	02/10/10	92.88	100.10	-7.22	
	02/12/10	92.88	100.03	-7.15	
	03/01/10	92.88	98.65	-5.77	
	06/07/10	92.88	93.19	-0.31	
	09/07/10	92.88	96.89	-4.01	
	12/06/10	92.88	94.01	-1.13	
	03/24/11	92.88	81.27	11.61	
	06/20/11	92.88	77.32	15.56	
	08/01/11	92.88	74.40	18.48	
	10/14/11	92.88	67.59	25.29	
	10/31/11	92.88	68.65	24.23	
	02/06/12	92.88	63.71	29.17	
	05/07/12	92.88	61.18	31.70	
	08/06/12	92.88	69.95	22.93	
	11/05/12	92.88	77.51	15.37	
	01/03/13	92.88	74.05	18.83	
	02/04/13	92.88	72.28	20.60	

TABLE 3
GROUNDWATER LEVELS

Well Identifier	Date Measured	Reference Point Elevation (a) (feet msl)	Depth to Water (feet bbs)	Water Level Elevation (feet msl)	Remediation System On
Regional Groundwater System Monitor and Extraction Wells (continued)					
MW-33	07/16/10	83.19	89.80	-6.61	
	07/30/10	83.19	92.32	-9.13	
	09/07/10	83.19	94.86	-11.67	
	12/06/10	83.19	90.88	-7.69	
	03/01/11	83.19	73.60	9.59	
	03/15/11	83.19	85.21	-2.02	
	03/24/11	83.19	80.03	3.16	
	06/20/11	83.19	71.50	11.69	
	08/01/11	83.19	82.56	0.63	
	10/14/11	83.19	80.82	2.37	
	10/31/11	83.19	77.92	5.27	
	02/06/12	83.19	68.13	15.06	
	05/07/12	83.19	57.78	25.41	
	08/06/12	83.19	83.31	-0.12	
	11/05/12	83.19	87.51	-4.32	
12/10/12	83.19	76.87	6.32		
01/03/13	83.19	75.02	8.17		
02/04/13	83.19	78.41	4.78		
MW-34A	02/25/11	153.25	142.78	10.47	
	03/10/11	153.25	142.26	10.99	
	03/15/11	153.25	143.61	9.64	
	03/24/11	153.25	144.68	8.57	
	06/20/11	153.25	140.26	12.99	
	08/01/11	153.25	143.63	9.62	
	10/14/11	153.25	140.77	12.48	
	10/31/11	153.25	141.95	11.30	
	02/06/12	153.25	134.13	19.12	
	05/07/12	153.25	126.22	27.03	
	06/26/12	153.25	130.37	22.88	
	08/06/12	153.25	139.39	13.86	
	11/05/12	153.25	146.00	7.25	
02/04/13	153.25	138.95	14.30		
MW-34B	02/25/11	153.11	146.89	6.22	
	03/01/11	153.11	146.32	6.79	
	03/10/11	153.11	146.80	6.31	
	03/15/11	153.11	147.91	5.20	
	03/24/11	153.11	148.84	4.27	
	06/20/11	153.11	142.81	10.30	
	08/01/11	153.11	147.20	5.91	
	09/30/11	153.11	146.12	6.99	
	10/14/11	153.11	144.55	8.56	
	10/31/11	153.11	146.19	6.92	
	02/06/12	153.11	136.92	16.19	
	05/07/12	153.11	127.89	25.22	
	06/26/12	153.11	132.73	20.38	
	08/06/12	153.11	144.08	9.03	
	11/05/12	153.11	153.67	-0.56	
12/10/12	153.11	149.08	4.03		
01/03/13	153.11	145.69	7.42		
02/04/13	153.11	145.61	7.50		

TABLE 3
GROUNDWATER LEVELS

Well Identifier	Date Measured	Reference Point Elevation (a) (feet msl)	Depth to Water (feet bls)	Water Level Elevation (feet msl)	Remediation System On
Regional Groundwater System Monitor and Extraction Wells (continued)					
MW-34C	02/25/11	153.29	145.40	7.89	
	03/10/11	153.29	148.34	4.95	
	03/15/11	153.29	149.75	3.54	
	03/24/11	153.29	149.08	4.21	
	06/20/11	153.29	141.68	11.61	
	08/01/11	153.29	146.36	6.93	
	10/14/11	153.29	144.06	9.23	
	10/31/11	153.29	144.52	8.77	
	02/06/12	153.29	136.08	17.21	
	05/07/12	153.29	128.1	25.19	
	06/26/12	153.29	132.07	21.22	
	08/06/12	153.29	144.46	8.83	
	11/05/12	153.29	150.45	2.84	
	12/10/12	153.29	144.11	9.18	
	01/03/13	153.29	143.18	10.11	
02/04/13	153.29	143.01	10.28		
MW-35A	01/19/11	93.57	77.69	15.88	
	02/03/11	93.57	77.51	16.06	
	03/24/11	93.57	76.01	17.56	
	06/20/11	93.57	71.74	21.83	
	08/01/11	93.57	75.29	18.28	
	10/31/11	93.57	71.55	22.02	
	02/06/12	93.57	64.46	29.11	
	05/07/12	93.57	60.11	33.46	
	06/26/12	93.57	64.03	29.54	
	08/06/12	93.57	72.82	20.75	
	11/05/12	93.57	76.05	17.52	
02/04/13	93.57	68.48	25.09		
MW-35B	01/19/11	93.56	84.50	9.06	
	02/03/11	93.56	84.59	8.97	
	03/24/11	93.56	82.95	10.61	
	06/20/11	93.56	78.82	14.74	
	08/01/11	93.56	82.78	10.78	
	10/31/11	93.56	79.67	13.89	
	02/06/12	93.56	72.06	21.50	
	05/07/12	93.56	65.67	27.89	
	06/26/12	93.56	70.36	23.20	
	08/06/12	93.56	80.68	12.88	
	11/05/12	93.56	85.02	8.54	
02/04/13	93.56	77.70	15.86		
MW-35C	01/19/11	93.55	88.79	4.76	
	02/03/11	93.55	88.62	4.93	
	03/01/11	93.55	82.54	11.01	
	03/24/11	93.55	87.38	6.17	
	06/20/11	93.55	80.47	13.08	
	08/01/11	93.55	86.38	7.17	
	10/31/11	93.55	83.44	10.11	
	02/06/12	93.55	74.42	19.13	
	05/07/12	93.55	66.84	26.71	
	06/26/12	93.55	72.84	20.71	

TABLE 3
GROUNDWATER LEVELS

Well Identifier	Date Measured	Reference Point Elevation (a) (feet msl)	Depth to Water (feet bls)	Water Level Elevation (feet msl)	Remediation System On
Regional Groundwater System Monitor and Extraction Wells (continued)					
MW-35C	08/06/12	93.55	88.31	5.24	
Cont'd	11/05/12	93.55	92.71	0.84	
	02/04/13	93.55	83.56	9.99	
MW-36	01/13/12	86.65	76.60	10.05	
	01/26/12	86.65	76.55	10.10	
	02/06/12	86.65	76.62	10.03	
	05/07/12	86.65	61.99	24.66	
	08/06/12	86.65	88.09	-1.44	
	11/05/12	86.65	93.33	-6.68	
	01/04/13	86.65	81.65	5.00	
	02/04/13	86.65	84.54	2.11	
MW-37	10/26/12	155.60	144.62	10.98	
	11/05/12	155.60	142.07	13.53	
	12/10/13	155.60	140.12	15.48	
	01/03/13	155.60	137.21	18.39	
	02/04/13	155.60	136.18	19.42	
EW-01	06/20/05	142.65	132.89	9.76	
	09/19/05	142.65	140.63	2.02	
	09/21/05	142.65	140.88	1.77	
	12/17/05	142.65	119.06	23.59	
	03/20/06	142.65	112.76	29.89	
	05/18/06	142.65	105.98	36.67	
	06/19/06	142.65	108.61	34.04	
	09/25/06	142.65	118.60	24.05	
	12/11/06	142.5	116.08	26.4	
	03/12/07	142.5	122.93	19.6	
	06/18/07	142.5	133.31	9.2	
	09/24/07	142.5	157.35	-14.9	
	12/10/07	142.5	164.54	-22.0	
	12/20/07	142.5	164.75	-22.3	
	01/21/08	140.3	162.41	-22.1	
	03/17/08	140.3	156.96	-16.7	
	05/27/08	141.13	160.10	-18.97	
	06/10/08	141.13	161.48	-20.35	
	06/23/08	141.13	162.89	-21.76	
	07/09/08	141.07	165.87	-24.80	Pilot GETS
	07/11/08	141.07	165.59	-24.52	
	07/14/08	141.07	165.71	-24.64	
	07/15/08	141.07	167.64	-26.57	Pilot GETS
	07/30/08	141.07	168.45	-27.38	Pilot GETS
	08/14/08	141.07	> 172.65	< -31.58	Pilot GETS
	08/25/08	141.07	171.89	-30.82	Pilot GETS
	09/22/08	141.07	> 172.65	< -31.58	Pilot GETS
	10/22/08	141.07	> 172.65	< -31.58	Pilot GETS
	12/15/08	141.07	171.93	-30.86	
	12/19/08	141.07	171.74	-30.67	
	01/07/09	141.07	165.86	-24.79	
	02/25/09	141.07	162.17	-21.10	Pilot GETS
	03/16/09	141.07	157.84	-16.77	Pilot GETS
	03/18/09	141.07	158.69	-17.62	Pilot GETS
	04/29/09	141.07	152.31	-11.24	

TABLE 3
GROUNDWATER LEVELS

Well Identifier	Date Measured	Reference Point Elevation (a) (feet msl)	Depth to Water (feet bls)	Water Level Elevation (feet msl)	Remediation System On
Regional Groundwater System Monitor and Extraction Wells (continued)					
EW-01	04/29/09	141.07	152.85	-11.78	Pilot GETS
(Cont'd)	05/27/09	141.07	155.10	-14.03	Pilot GETS
	06/22/09	141.07	156.88	-15.81	Pilot GETS
	06/26/09	141.07	157.98	-16.91	Pilot GETS
	06/29/09	141.07	158.68	-17.61	Pilot GETS
	07/22/09	141.07	164.06	-22.99	Pilot GETS
	08/14/09	141.07	168.21	-27.14	Pilot GETS
	08/31/09	141.07	163.05	-21.98	Pilot GETS
	09/10/09	141.07	164.32	-23.25	Pilot GETS
	09/11/09	141.07	164.23	-23.16	Pilot GETS
	10/08/09	141.07	> 172.65	< -31.58	Pilot GETS
	10/23/09	141.07	158.25	-17.18	Pilot GETS
	10/30/09	141.07	157.75	-16.68	
	11/04/09	141.07	157.23	-16.16	
	12/07/09	141.07	154.56	-13.49	
	12/09/09	141.07	155.28	-14.21	
	01/19/10	141.07	153.29	-12.22	
	03/01/10	141.07	147.07	-6.00	
	06/07/10	141.07	142.43	-1.36	
	09/07/10	141.07	150.09	-9.02	
	12/06/10	141.07	148.66	-7.59	
	03/01/11	141.07	131.68	9.39	
	03/24/11	141.07	132.08	8.99	
	06/20/11	141.07	127.90	13.17	
	08/01/11	141.07	128.94	12.13	
	08/05/11	141.07	129.27	11.80	
	10/14/11	141.07	125.48	15.59	
	10/31/11	141.07	126.74	14.33	
	01/05/12	141.07	121.24	19.83	
	02/06/12	141.07	119.36	21.71	
	05/07/12	141.07	113.04	28.03	
	06/26/12	141.07	117.34	23.73	
	08/06/12	141.07	125.45	15.62	
	11/05/12	141.07	136.31	4.76	
	02/04/13	141.07	128.42	12.65	
EW-02	10/23/09	137.6	137.92	-0.3	
	10/30/09	137.6	156.81	-19.2	
	10/31/09	137.6	155.97	-18.3	
	11/04/09	136.2	153.21	-17.0	
	12/07/09	132.97	UTM	--	
	02/10/10	132.97	142.49	-9.52	
	03/01/10	132.97	139.89	-6.92	
	03/22/10	132.97	136.73	-3.76	Pre-Startup
	03/22/10	132.97	143.6	-10.6	Pilot GETS
	03/23/10	132.97	143.25	-10.28	Pilot GETS
	03/24/10	132.97	144.42	-11.45	Pilot GETS
	03/25/10	132.97	144.60	-11.63	Pilot GETS
	03/26/10	132.97	144.99	-12.02	Pilot GETS
	06/07/10	132.97	143.34	-10.37	Pilot GETS
	06/10/10	132.97	143.42	-10.45	Pilot GETS
	07/08/10	132.97	144.76	-11.79	Pilot GETS
	07/30/10	132.97	145.5	-12.53	Pilot GETS

TABLE 3
GROUNDWATER LEVELS

Well Identifier	Date Measured	Reference Point Elevation (a) (feet msl)	Depth to Water (feet bls)	Water Level Elevation (feet msl)	Remediation System On
<u>Regional Groundwater System Monitor and Extraction Wells (continued)</u>					
EW-02	08/02/10	132.97	146.95	-13.98	Pilot GETS
(Cond't)	09/02/10	132.97	150.82	-17.85	Pilot GETS
	09/07/10	132.97	150.46	-17.49	Pilot GETS
	10/07/10	132.97	153.49	-20.52	Pilot GETS
	11/11/10	132.97	153.63	-20.66	Pilot GETS
	12/07/10	132.97	148.62	-15.65	Pilot GETS
	01/13/11	132.97	138.52	-5.55	Pilot GETS
	02/03/11	132.97	136.61	-3.64	Pilot GETS
	03/02/11	132.97	130.70	2.27	Pilot GETS
	03/24/11	132.97	133.23	-0.26	Pilot GETS
	04/01/11	132.97	132.74	0.23	Pilot GETS
	05/04/11	132.97	134.42	-1.45	Pilot GETS
	06/07/11	132.97	129.64	3.33	Pilot GETS
	06/20/11	132.97	128.12	4.85	Pilot GETS
	07/02/11	132.97	127.73	5.24	Pilot GETS
	08/01/11	132.97	130.41	2.56	Pilot GETS
	08/05/11	132.97	130.83	2.14	Pilot GETS
	09/09/11	132.97	131.13	1.84	Pilot GETS
	09/30/11	132.97	128.61	4.36	
	10/17/11	132.97	127.67	5.30	Pilot GETS
	10/31/11	132.97	128.83	4.14	Pilot GETS
	11/01/11	132.97	128.76	4.21	Pilot GETS
	12/07/11	132.97	122.0	11.0	Pilot GETS
	12/08/12	132.97	123.51	9.46	Pilot GETS
	01/06/12	132.97	119.6	13.4	Pilot GETS
	01/10/12	132.97	120.72	12.25	Pilot GETS
	02/06/12	132.97	118.95	14.02	Pilot GETS
	02/08/12	132.97	119.22	13.75	Pilot GETS
	03/09/12	132.97	113.25	19.72	Pilot GETS
	04/02/12	132.97	116.19	16.78	Pilot GETS
	04/16/12	132.97	114.57	18.40	Pilot GETS
	05/01/12	132.97	113.65	19.32	Pilot GETS
	05/07/12	132.97	113.55	19.42	Pilot GETS
	06/07/12	132.97	118.65	14.32	
	06/08/12	132.97	118.79	14.18	Pilot GETS
	06/26/12	132.97	118.32	14.65	Pilot GETS
	07/11/12	132.97	121.79	11.18	Pilot GETS
	08/06/12	132.97	127.16	5.81	Pilot GETS
	08/06/12	132.97	127.42	5.55	Pilot GETS
	09/06/12	132.97	132.79	0.18	Pilot GETS
	10/15/12	132.97	156.45	-23.48	Pilot GETS
	11/05/12	132.97	137.50	-4.53	Pilot GETS
	12/10/12	132.97	133.49	-0.52	Pilot GETS
	02/04/13	132.97	129.53	3.44	Pilot GETS
<u>Perched Zone Water Levels</u>					
P-07	06/12/97	165.34	135.20	30.14	
	05/13/98	165.34	135.11	30.23	
	05/27/98	165.34	135.12	30.22	
	06/11/98	165.34	135.15	30.19	
	07/14/98	165.34	135.26	30.08	
	11/11/98	165.34	135.39	29.95	
	11/18/98	165.34	135.42	29.92	SVE, DPE-H2O
	11/18/98	165.34	135.48	29.86	SVE, DPE-H2O

TABLE 3
GROUNDWATER LEVELS

Well Identifier	Date Measured	Reference Point Elevation (a) (feet msl)	Depth to Water (feet bls)	Water Level Elevation (feet msl)	Remediation System On
<u>Perched Zone Water Levels (continued)</u>					
P-07	11/19/98	165.34	135.36	29.98	SVE, DPE-H2O
(Cont'd)	11/20/98	165.34	135.44	29.90	SVE, DPE, DPE-H2O
	11/23/98	165.34	135.36	29.98	SVE, DPE-H2O
	11/23/98	165.34	135.52	29.82	SVE, DPE-H2O
	11/24/98	165.34	135.53	29.81	SVE, DPE-H2O
	12/07/98	165.34	135.40	29.94	SVE, DPE-H2O
	12/07/98	165.34	135.52	29.82	SVE, DPE-H2O
	12/10/98	165.34	135.50	29.84	SVE, DPE, DPE-H2O
	12/11/98	165.34	135.37	29.97	SVE, DPE, DPE-H2O
	12/14/98	165.34	135.26	30.08	SVE, DPE-H2O
	12/14/98	165.34	135.27	30.07	SVE, DPE-H2O
	12/16/98	165.34	135.48	29.86	SVE, DPE, DPE-H2O
	01/06/99	165.34	135.36	29.98	SVE, DPE, DPE-H2O
	01/20/99	165.34	135.20	30.14	
	01/25/99	165.34	135.50	29.84	DPE, DPE-H2O
	01/27/99	165.34	135.51	29.83	SVE, DPE, DPE-H2O
	02/01/99	165.34	135.25	30.09	SVE, DPE, DPE-H2O
	02/10/99	165.34	135.56	29.78	SVE, DPE, DPE-H2O
	02/23/99	165.34	135.17	30.17	
	03/01/99	165.34	135.55	29.79	DPE
	03/12/99	165.34	135.51	29.83	SVE, DPE, DPE-H2O
	03/15/99	165.34	135.59	29.75	SVE, DPE, DPE-H2O
	03/17/99	165.34	135.54	29.80	SVE, DPE, DPE-H2O
	03/29/99	165.34	135.34	30.00	SVE, DPE-H2O
	04/07/99	165.34	DRY	--	SVE, DPE-H2O
	04/12/99	165.34	135.58	29.76	SVE, DPE-H2O
	04/23/99	165.34	135.22	30.12	SVE, DPE-H2O
	04/29/99	165.34	DRY	--	SVE, DPE-H2O
	05/17/99	165.34	135.66	29.68	SVE, DPE-H2O
	06/16/99	165.34	135.66	29.68	SVE, DPE-H2O
	06/25/99	165.34	135.28	30.06	SVE, DPE-H2O
	07/15/99	165.34	135.57	29.77	DPE, DPE-H2O
	08/30/99	165.34	135.58	29.76	DPE-H2O
	09/27/99	165.34	135.58	29.76	5.6 inches water in vacuum
	11/02/99	165.34	135.56	29.78	5 inches water in vacuum
	11/23/99	165.34	135.27	30.07	
	11/23/99	165.34	135.13	30.21	
	11/23/99	165.34	135.14	30.20	
	12/06/99	165.34	135.70	29.64	
	02/07/00	165.34	135.49	29.85	
	07/05/00	165.34	135.03	30.31	
	01/16/01	145.52	115.25	30.27	
	03/19/01	145.52	115.34	30.18	
	03/26/01	145.52	115.24	30.28	
	04/03/01	145.52	115.30	30.22	
	04/10/01	145.52	115.20	30.32	
	04/17/01	145.52	115.20	30.32	
	04/26/01	145.52	115.30	30.22	
	05/10/01	145.52	115.35	30.17	
	06/26/01	145.52	115.16	30.36	
	09/10/01	142.31	111.91	30.40	
	10/24/01	142.31	112.04	30.27	
	01/15/02	142.31	111.98	30.33	
	03/19/02	142.31	111.92	30.39	

TABLE 3
GROUNDWATER LEVELS

Well Identifier	Date Measured	Reference Point Elevation (a) (feet msl)	Depth to Water (feet bls)	Water Level Elevation (feet msl)	Remediation System On
<u>Perched Zone Water Levels (continued)</u>					
P-07	04/15/02	142.31	112.04	30.27	
(Cont'd)	10/31/02	142.31	112.13	30.18	
	11/18/02	142.31	112.11	30.20	
	05/08/03	142.31	112.48	29.83	
	06/09/03	142.31	112.94	29.37	
	09/15/03	142.31	113.65	28.66	
	10/14/03	142.31	113.82	28.49	
	12/15/03	142.31	114.04	28.27	
	03/29/04	142.31	112.42	29.89	
	06/14/04	142.31	113.91	28.40	
	09/20/04	142.31	DRY	--	Dry to 117.4 feet bls. Water level elevation <24.9 feet msl.
	10/19/04	142.31	116.30	26.01	
	12/06/04	142.31	115.65	26.66	
	03/15/05	142.31	DRY	--	Dry @ 116.8 ft.
	09/19/05	142.31	DRY	--	Dry @ 115.0 ft bls.
	12/17/05	142.31	112.26	30.05	
	03/20/06	142.31	110.94	31.37	
	06/19/06	142.31	107.57	34.74	
	09/25/06	142.31	111.19	31.12	
	12/11/06	142.31	111.22	31.09	
	03/12/07	142.31	111.71	30.60	
	06/18/07	142.31	114.92	27.39	
	09/24/07	142.31	DRY	--	
	12/10/07	142.31	DRY	--	Dry @ 115.16 ft bls.
	03/17/08	142.31	114.58	27.73	
	06/23/08	142.31	114.13	28.18	
	09/22/08	142.31	113.85	28.46	
	12/15/08	142.31	113.47	28.84	
	03/16/09	142.31	113.13	29.18	
	06/22/09	142.31	112.81	29.50	
	08/31/09	142.31	112.67	29.64	
	12/07/09	142.31	112.52	29.79	
	03/01/10	142.31	112.34	29.97	
	06/07/10	142.31	112.24	30.07	
	09/07/10	142.31	112.51	29.80	
	12/06/10	142.31	112.27	30.04	
	03/24/11	142.31	111.51	30.80	
	06/20/11	142.31	111.36	30.95	
	08/01/11	142.31	111.31	31.00	
	10/31/11	142.31	111.28	31.03	
	02/06/12	142.31	111.01	31.30	
	05/07/12	142.31	110.72	31.59	
	08/06/12	142.31	111.39	30.92	
	11/05/12	142.31	112.34	29.97	
	02/04/13	142.31	111.50	30.81	
P-09	09/15/03	183.86	121.85	62.01	
	10/08/03	183.86	121.68	62.18	
	10/14/03	183.86	121.53	62.33	
	12/15/03	183.86	122.09	61.77	
	03/29/04	183.86	122.03	61.83	
	06/14/04	183.86	122.29	61.57	
	09/20/04	183.86	122.49	61.37	

TABLE 3
GROUNDWATER LEVELS

Well Identifier	Date Measured	Reference Point Elevation (a) (feet msl)	Depth to Water (feet bls)	Water Level Elevation (feet msl)	Remediation System On
<u>Perched Zone Water Levels (continued)</u>					
P-09	11/10/04	183.86	122.00	61.31	
(Cont'd)	12/06/04	183.86	122.93	61.10	
	03/14/05	183.86	121.45	62.41	
	06/20/05	183.86	121.50	62.36	
	09/19/05	183.86	121.34	62.52	
	12/17/05	183.86	121.32	62.54	
	03/20/06	183.86	121.20	62.66	
	06/19/06	183.86	120.96	62.90	
	09/25/06	183.86	120.85	63.01	
	12/12/06	183.86	120.94	62.92	
	03/12/07	183.86	120.93	62.93	
	06/18/07	183.86	120.80	63.06	
	09/24/07	183.86	120.91	62.95	
	12/10/07	183.86	120.84	63.02	
	03/17/08	183.86	120.76	63.10	
	06/23/08	183.86	120.73	63.13	
	09/22/08	183.86	120.83	63.03	
	12/15/08	183.86	120.64	63.22	
	03/16/09	183.86	120.70	63.16	
	06/22/09	183.86	120.66	63.20	
	08/31/09	183.86	120.75	63.11	
	12/07/09	183.86	120.80	63.06	
	03/01/10	183.86	120.74	63.12	
	06/07/10	183.86	120.69	63.17	
	09/07/10	183.86	120.78	63.08	
	12/06/10	183.86	120.60	63.26	
	03/24/11	183.86	120.44	63.42	
	06/20/11	183.86	120.48	63.38	
	08/01/11	183.86	120.48	63.38	
	10/31/11	183.86	120.50	63.36	
	02/06/12	183.86	120.50	63.36	
	05/07/12	183.86	120.57	63.29	
	08/06/12	183.86	120.48	63.38	
	11/05/12	183.86	120.70	63.16	
	2/4/213	183.86	120.54	63.32	

FOOTNOTES

(a) Reference point elevations are relative to City of Fullerton datum.

(>) = Greater than

(<) = Less than

(--) = Not Calculated

bls = Below land surface

msl = Mean sea level

NA = Reference Point Not Available

SVE = Soil Vapor Extraction System On

DPE = Vapor Phase Dual Vapor Extraction System On

DPE-H2O = Water Phase Dual Vapor Extraction System On

Pilot GETS = Pilot Groundwater Extraction and Treatment System On

UTM = Unable to Measure

**TABLE 4
PREVALENT VOLATILE ORGANIC COMPOUNDS AND 1,4-DIOXANE IN GROUNDWATER**

.....Concentration (micrograms per liter).....

Well Identifier / Sample Identifier	Date Sampled	QA Code	VOLATILE ORGANIC COMPOUNDS (FEDERAL MCL/CALIFORNIA MCL)											Semi-VOCs		
			Benzene (5/1)	Carbon Tetrachloride (5/0.5)	Chloroform (80/80)	1,1-DCA (--/5)	1,2-DCA (--/--)	1,1-DCE (7/6)	cis-1,2-DCE (70/6)	PCE (5/5)	1,1,1-TCA (200/200)	1,1,2-TCA (5/5)	TCE (5/5)	TCFM (--/150)	Toluene (1,000/150)	1,4-DIOXANE (3*/1**)
Regional Groundwater System Monitor and Extraction Wells																
MW-06	01/30/97	ORG	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	NA
MW-600	01/30/97	FD	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	NA
MW-06	02/19/97	ORG	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	NA
MW-06	02/09/00	ORG	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	NA
MW-06	05/08/01	ORG	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	NA
MW-06	04/17/02	ORG	< 0.50	< 0.50	1.5	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.5
MW-06	04/17/02	SPT	< 0.50	< 0.50	2.6	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 1.0
MW-06	11/18/02	ORG	< 0.50	< 0.50	2.3	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	NA
MW-06	06/10/03	ORG	< 0.50	< 0.50	1.3	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.5
MW-06	12/17/03	ORG	< 0.50	< 0.50	1.3	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 2.0
MW-06	06/16/04	ORG	< 0.50	< 0.50	2.2 U	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 2.0
MW-06	12/09/04	ORG	< 0.50	< 0.50	2.8	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 2.1
MW-06	06/23/05	ORG	< 0.50	< 0.50	1.6	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 2.0
MW-06	12/20/05	ORG	< 0.50	< 0.50	1.4	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 2.0
MW-06	06/21/06	ORG	< 0.50	< 0.50	0.62	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 2.0
MW-06	12/18/06	ORG	< 0.50	< 0.50	2.0	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 2.0
MW-06	06/21/07	ORG	< 0.50	< 0.50	1.2	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 2.0
MW-06	12/12/07	ORG	< 0.50	< 0.50	0.78	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 2.0
MW-06	06/26/08	ORG	< 0.50	< 0.50	0.85 U	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 2.0
MW-06	06/25/09	ORG	< 0.50	< 0.50	0.52	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 2.0
MW-06	12/08/09	ORG	< 0.50	< 0.50	0.53	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	NA
MW-06	06/08/10	ORG	< 0.50	< 0.50	0.56	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 2.0
MW-06	12/10/10	ORG	< 0.50	< 0.50	0.62	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 2.0
MW-06	02/08/12	ORG	< 0.50	< 0.50	1.5	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	NA
MW-06	02/05/13	ORG	< 0.50	< 0.50	1.5	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	NA
MW-06 Historical Range***			< 0.50 - < 5.0	< 0.50 - < 5.0	0.52 - 2.8	< 0.50 - < 5.0	< 0.50 - < 5.0	< 0.50 - < 5.0	< 0.50 - < 5.0	< 0.50 - < 5.0	< 0.50 - < 5.0	< 0.50 - < 5.0	< 0.50 - < 5.0	< 0.50 - < 5.0	< 0.50 - < 5.0	< 0.50 - < 2.0
MW-08	01/28/97	ORG	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	3.3	< 1.0	< 1.0	NA
MW-08	02/19/97	ORG	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	3.9	< 1.0	< 1.0	NA
MW-08	02/17/00	ORG	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	NA
MW-08	05/09/01	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	12	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	1.0	< 0.50	NA
MW-08	04/17/02	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	0.51	< 0.50	< 0.50	< 0.50	< 0.50	8.5	< 0.50	< 0.50	< 0.5
MW-08	04/17/02	SPT	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	8.0	< 0.50	< 0.50	< 1.0
MW-08	11/21/02	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	7.2	< 0.50	< 0.50	< 0.50	< 0.50	7.6	< 0.50	< 0.50	NA
MW-08	06/11/03	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	0.98	0.67	< 0.50	< 0.50	< 0.50	14	< 0.50	< 0.50	NA
MW-08	12/18/03	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	9.6	< 0.50	< 0.50	< 0.50	< 0.50	5.8	< 0.50	< 0.50	NA
MW-08	03/30/04	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	26	0.52	< 0.50	< 0.50	< 0.50	12	< 0.50	< 0.50	NA
MW-08	06/17/04	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	64	5.6	< 0.50	< 0.50	< 0.50	89	< 0.50	< 0.50	NA
MW-800	06/17/04	FD	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	60	5.1	< 0.50	< 0.50	< 0.50	87	< 0.50	< 0.50	NA
MW-08	06/17/04	SPT	< 1	< 1	< 1	< 1	< 1	48	4.0	< 1	< 1	< 1	65	< 1	< 1	NA
MW-08	07/28/04	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	23 E	2.5	< 0.50	< 0.50	< 0.50	40 E	< 0.50	< 0.50	< 2
MW-800	07/28/04	FD	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	23 E	2.1	< 0.50	< 0.50	< 0.50	39 E	< 0.50	< 0.50	< 2
MW-08	07/28/04	SPT	< 1	< 1	< 1	< 1	< 1	13 E	1.0	< 1	< 1	< 1	23 E	< 1	< 1	< 1
MW-08	09/21/04	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	4.4	1.0	< 0.50	< 0.50	< 0.50	19	< 0.50	< 0.50	NA
MW-08	12/15/04	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	8.7	0.61	< 0.50	< 0.50	< 0.50	13	< 0.50	< 0.50	< 2.2

TABLE 4
PREVALENT VOLATILE ORGANIC COMPOUNDS AND 1,4-DIOXANE IN GROUNDWATER

.....Concentration (micrograms per liter).....

Well Identifier / Sample Identifier	Date Sampled	QA Code	VOLATILE ORGANIC COMPOUNDS (FEDERAL MCL/CALIFORNIA MCL)										Semi-VOCs			
			Benzene (5/1)	Carbon Tetrachloride (5/0.5)	Chloroform (80/80)	1,1-DCA (--/5)	1,2-DCA (--/--)	1,1-DCE (7/6)	cis-1,2-DCE (70/6)	PCE (5/5)	1,1,1-TCA (200/200)	1,1,2-TCA (5/5)	TCE (5/5)	TCFM (--/150)	Toluene (1,000/150)	1,4-DIOXANE (3*/1**)
Regional Groundwater System Monitor and Extraction Wells (cont'd)																
MW-08	03/16/05	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	8.7	0.65	< 0.50	< 0.50	< 0.50	15	< 0.50	< 0.50	< 2.0
MW-08	06/24/05	ORG	0.85	< 0.50	< 0.50	< 0.50	< 0.50	180	7.7	< 0.50	< 0.50	< 0.50	130	< 0.50	< 0.50	< 2.0
MW-800	06/24/05	FD	0.87	< 0.50	< 0.50	< 0.50	< 0.50	160	7.6	< 0.50	< 0.50	< 0.50	130	< 0.50	< 0.50	< 2.0
MW-08	09/22/05	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	45 E	3.4	< 0.50	< 0.50	< 0.50	61 E	< 0.50	< 0.50	< 2.0
MW-800	09/22/05	FD	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	22 E	2.1	< 0.50	< 0.50	< 0.50	39	< 0.50	< 0.50	20 U
MW-08	09/22/05	SPT	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	15 E	2.0	< 0.50	< 0.50	< 0.50	33 E	0.90	< 0.50	< 1.0
MW-08	12/20/05	ORG	< 0.50	< 0.50	< 0.50	2.0	< 0.50	370	3.2	0.66	< 0.50	< 0.50	82	< 0.50	< 0.50	12
MW-08	12/20/05	SPT	< 0.50	0.5	< 0.50	2.0	< 0.50	350	3.0	< 0.50	< 0.50	< 0.50	76	0.50	< 0.50	13
MW-08	03/23/06	ORG	< 0.50	< 0.50	0.76	3.6	0.92	270	2.5	0.55	< 0.50	< 0.50	55	< 0.50	< 0.50	65
MW-800	03/23/06	FD	< 0.50	< 0.50	0.82	4.7	1.0	380	2.9	0.74	< 0.50	< 0.50	65	< 0.50	< 0.50	81
MW-08	06/22/06	ORG	< 0.50	< 0.50	0.69	5.1	0.99	500	2.6	1.3	< 0.50	< 0.50	69	< 0.50	< 0.50	130
MW-800	06/22/06	FD	< 0.50	< 0.50	0.69	5.0	1.0	410	2.5	1.2	< 0.50	< 0.50	69	< 0.50	< 0.50	110
MW-08	06/22/06	SPT	< 3.0	< 3.0	< 3.0	6.0	< 3.0	380	3.0	< 3.0	< 3.0	< 3.0	50	< 3.0	< 3.0	140
MW-08	09/28/06	ORG	0.95	< 0.50	< 0.50	< 0.50	< 0.50	27	6.5	< 0.50	< 0.50	< 0.50	120	< 0.50	< 0.50	< 2.0
MW-800	09/28/06	FD	1.1	< 0.50	< 0.50	< 0.50	< 0.50	24	7.7	< 0.50	< 0.50	< 0.50	110	< 0.50	< 0.50	< 2.0
MW-08	09/28/06	SPT	1.0	< 0.50	< 0.50	< 0.50	< 0.50	28	6.2	< 0.50	< 0.50	< 0.50	130	< 0.50	< 0.50	< 1
MW-08	12/19/06	ORG	0.93	< 0.50	< 0.50	< 0.50	< 0.50	13	7.1	< 0.50	< 0.50	< 0.50	130	< 0.50	< 0.50	< 2.0
MW-800	12/19/06	FD	0.95	< 0.50	< 0.50	< 0.50	< 0.50	14	7.1	< 0.50	< 0.50	< 0.50	110	< 0.50	< 0.50	< 2.0
MW-08	03/15/07	ORG	< 0.50	< 0.50	< 0.50	0.57	< 0.50	120	4.5	< 0.50	< 0.50	< 0.50	90	< 0.50	< 0.50	26
MW-08	06/22/07	ORG	< 0.50	< 0.50	0.50	0.51	< 0.50	87	4.4	< 0.50	< 0.50	< 0.50	92	< 0.50	< 0.50	25
MW-08	09/26/07	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	32 E	1.5	< 0.50	< 0.50	< 0.50	25	< 0.50	< 0.50	7.7
MW-800	09/26/07	FD	< 0.50	< 0.50	< 0.50	0.52	< 0.50	47 E	1.5	< 0.50	< 0.50	< 0.50	27	< 0.50	< 0.50	8.2
MW-08	09/26/07	SPT	< 1	< 1	< 1	< 1	< 1	42 E	1.0	< 1	< 1	< 1	26	< 1	< 1	11
MW-08	12/13/07	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	39	1.3	< 0.50	< 0.50	< 0.50	27	< 0.50	< 0.50	6.0
MW-08	03/18/08	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	28	0.97	< 0.50	< 0.50	< 0.50	19	< 0.50	< 0.50	5.4
MW-800	03/18/08	FD	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	30	1.1	< 0.50	< 0.50	< 0.50	20	< 0.50	< 0.50	5.3
MW-08	03/18/08	SPT	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	27	0.9	< 0.50	< 0.50	< 0.50	21	0.60	< 0.50	7.0
MW-08	06/27/08	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	29	1.3	< 0.50	< 0.50	< 0.50	23	< 0.50	< 0.50	5.9
MW-08	09/26/08	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	19	1.0	< 0.50	< 0.50	< 0.50	18	< 0.50	< 0.50	3.7 BU
MW-08	12/19/08	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	23	0.7	< 0.50	< 0.50	< 0.50	13	< 0.50	< 0.50	3.9
MW-08	03/17/09	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	26	1.2	< 0.50	< 0.50	< 0.50	21	< 0.50	< 0.50	3.9
MW-08	06/25/09	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	19	1.1	< 0.50	< 0.50	< 0.50	23	< 0.50	< 0.50	2.7
MW-08	09/01/09	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	17	0.56	< 0.50	< 0.50	< 0.50	14	< 0.50	< 0.50	2.4
MW-08	12/10/09	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	22	0.68	< 0.50	< 0.50	< 0.50	15	< 0.50	< 0.50	7.2
MW-08	03/03/10	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	33	0.87	< 0.50	< 0.50	< 0.50	21	< 0.50	< 0.50	8.4
MW-08	06/10/10	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	35	7.1	< 0.50	< 0.50	< 0.50	110	< 0.50	< 0.50	< 2.0
MW-08	09/10/10	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	36	9.8	< 0.50	< 0.50	< 0.50	200	< 0.50	< 0.50	2.4
MW-08	12/09/10	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	32	6.0	< 0.50	< 0.50	< 0.50	110	< 0.50	< 0.50	< 2.0
MW-08	03/30/11	ORG	0.84	< 0.50	0.69	< 0.50	< 0.50	38	10	< 0.50	< 0.50	< 0.50	230	< 0.50	< 0.50	< 0.20
MW-08	06/24/11	ORG	0.57	< 0.50	0.65	< 0.50	< 0.50	67	9.4	< 0.50	< 0.50	< 0.50	210	< 0.50	< 0.50	0.75
MW-800	06/24/11	FD	0.56	< 0.50	0.67	< 0.50	< 0.50	68	9.0	< 0.50	< 0.50	< 0.50	220	< 0.50	< 0.50	0.59
MW-08	08/02/11	ORG	0.64	< 0.50	0.86	< 0.50	< 0.50	190	13	< 0.50	< 0.50	< 0.50	480	< 0.50	< 0.50	0.69
MW-08	11/04/11	ORG	< 0.50	< 0.50	0.60	< 0.50	< 0.50	39.4	9.2	< 0.50	< 0.50	< 0.50	200	< 0.50	< 0.50	0.40
MW-0800	11/04/11	FD	< 0.50	< 0.50	0.60	< 0.50	< 0.50	39.5	7.6	< 0.50	< 0.50	< 0.50	170	< 0.50	< 0.50	0.40
MW-08	02/09/12	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	29	8.4	< 0.50	< 0.50	< 0.50	170	< 0.50	< 0.50	0.94

**TABLE 4
PREVALENT VOLATILE ORGANIC COMPOUNDS AND 1,4-DIOXANE IN GROUNDWATER**

.....Concentration (micrograms per liter).....

Well Identifier / Sample Identifier	Date Sampled	QA Code	VOLATILE ORGANIC COMPOUNDS (FEDERAL MCL/CALIFORNIA MCL)											Semi-VOCs		
			Benzene (5/1)	Carbon Tetrachloride (5/0.5)	Chloroform (80/80)	1,1-DCA (-/5)	1,2-DCA (-/-)	1,1-DCE (7/6)	cis-1,2-DCE (70/6)	PCE (5/5)	1,1,1-TCA (200/200)	1,1,2-TCA (5/5)	TCE (5/5)	TCFM (-/150)	Toluene (1,000/150)	1,4-DIOXANE (3*/1**)
Regional Groundwater System Monitor and Extraction Wells (cont'd)																
MW-08	05/11/12	ORG	<1.0	<1.0	<1.0	1.4	<1.0	340	5.0	1.1	<1.0	<1.0	120	<1.0	<1.0	6.3
MW-08	08/09/2012	ORG	< 0.50	< 0.50	0.67	< 0.50	< 0.50	52	6.0	< 0.50	< 0.50	< 0.50	120	< 0.50	< 0.50	0.38
MW-08	11/7/2012	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	22	2.6	< 0.50	< 0.50	< 0.50	57	< 0.50	< 0.50	4.4
MW-08	2/8/2013	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	16	1.8	< 0.50	< 0.50	< 0.50	41	< 0.50	< 0.50	1.1
MW-08 Historical Range***			< 0.50 - 0.95	< 0.50	< 0.50 - 0.86	< 0.50 - 5.1	< 0.50 - 0.99	< 0.50 - 500	< 0.50 - 13	< 0.50 - 1.3	< 0.50 - < 5.0	< 0.50 - < 5.0	< 0.50 - 480	< 0.50 - 1.0	< 0.50 - 1.0	< 0.20 - 130
MW-09	03/26/97	ORG	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	4.9	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	NA
MW-09	04/10/97	ORG	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	NA
MW-09	02/17/00	ORG	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	NA
MW-09	11/21/02	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	1.6	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	5.3	< 0.50	7.6
MW-900	11/21/02	FD	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	1.5	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	5.2	< 0.50	7.7
MW-09	11/21/02	SPT	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	3.0	< 1.0	6.8
MW-09	06/10/03	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	2.2	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	2.3	< 0.50	4.0
MW-900	06/10/03	FD	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	2.3	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	3.1	< 0.50	7.4
MW-09	06/10/03	SPT	< 1	< 1	< 1	< 1	< 1	2.0	< 1	< 1	< 1	< 1	< 1	2.0	< 1	3.8
MW-09	09/24/03	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	1.4	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 2.0
MW-09	12/18/03	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	1.8	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	0.81	< 0.50	< 2.0
MW-900	12/18/03	FD	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	1.7	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	1.2	< 0.50	< 2.0
MW-09	03/30/04	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	1.8	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	1.8	< 0.50	< 2.0
MW-09	06/16/04	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	1.7	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 2.0
MW-09	09/21/04	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	1.6	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	0.77	< 0.50	< 2.0
MW-09	12/08/04	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	1.3	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	1.6	< 0.50	< 2.1
MW-09	03/15/05	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	1.1	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	0.69	< 0.50	< 2.2
MW-09	03/15/05	SPT	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	0.8	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	0.50	< 0.50	3.0
MW-09	06/23/05	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	1.0	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 2.0
MW-09	09/21/05	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	0.82	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 2.0
MW-09	12/20/05	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	0.85	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 2.0
MW-09	03/22/06	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	0.77	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 2.0
MW-09	06/21/06	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	0.80	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 2.0
MW-09	09/28/06	ORG	< 0.50	< 0.50	< 0.50	0.79	< 0.50	32	< 0.50	< 0.50	< 0.50	< 0.50	0.96	< 0.50	< 0.50	52 E
MW-09	12/19/06	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	2.5	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 2.0 E
MW-900	12/19/06	FD	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	2.6	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	6.1 E
MW-09	03/14/07	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	2.0	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 2.0
MW-09	09/26/07	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	0.70	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 2.0
MW-09	12/12/07	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	0.75	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 2.0
MW-09	03/18/08	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	0.65	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	2.0
MW-09	06/27/08	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	0.54	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 2.0
MW-09	09/25/08	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 2.0
MW-09	09/01/09	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 2.0
MW-09	12/08/09	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 2.5
MW-09	03/03/10	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 2.0
MW-09	06/11/10	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 2.0
MW-09	09/09/10	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 2.0
MW-09	12/09/10	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 2.0
MW-09	03/29/11	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.20
MW-09	08/02/11	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	0.59

**TABLE 4
PREVALENT VOLATILE ORGANIC COMPOUNDS AND 1,4-DIOXANE IN GROUNDWATER**

.....Concentration (micrograms per liter).....

Well Identifier / Sample Identifier	Date Sampled	QA Code	VOLATILE ORGANIC COMPOUNDS (FEDERAL MCL/CALIFORNIA MCL)													Semi-VOCs	
			Benzene (5/1)	Carbon Tetrachloride (5/0.5)	Chloroform (80/80)	1,1-DCA (-/5)	1,2-DCA (-/-)	1,1-DCE (7/6)	cis-1,2-DCE (70/6)	PCE (5/5)	1,1,1-TCA (200/200)	1,1,2-TCA (5/5)	TCE (5/5)	TCFM (-/150)	Toulene (1,000/150)	1,4-DIOXANE (3*/1**)	
Regional Groundwater System Monitor and Extraction Wells (cont'd)																	
MW-09	02/08/12	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.20	
MW-09	08/08/12	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	0.52	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.20	
MW-09	02/08/13	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.20	
MW-09 Historical Range***			< 0.50 - < 5.0	< 0.50 - < 5.0	< 0.50 - < 5.0	< 0.50 - 0.79	< 0.50 - < 5.0	< 0.50 - 4.9	< 0.50 - < 5.0	< 0.50 - < 5.0	< 0.50 - < 5.0	< 0.50 - < 5.0	< 0.50 - 0.96	< 0.50 - 5.3	< 0.50 - < 5.0	< 0.20 - 52 E	
MW-13	04/22/97	ORG	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	1.3	< 1.0	NA	
MW-13	05/21/97	ORG	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	NA	
MW-13	02/15/00	ORG	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	NA	
MW-13	07/06/00	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 3.0	
MW-13	05/07/01	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	NA	
MW-13	10/24/01	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	NA	
MW-13	04/17/02	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.5	
MW-13	04/17/02	SPT	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 1.0	
MW-13	11/19/02	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	0.78	< 0.5	
MW-13	06/10/03	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	1.4	< 0.5	
MW-13	12/16/03	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	1.9	< 0.5	
MW-13	06/15/04	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	3.2	< 0.5	
MW-13	12/08/04	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	3.3	< 0.5	
MW-13	06/23/05	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	0.60	< 0.5	
MW-13	12/19/05	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	0.50	< 0.5	
MW-13	06/22/06	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	0.58	< 0.5	
MW-13	09/29/06	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	4.5	< 0.5	
MW-13	09/29/06	SPT	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	0.50	< 0.5	
MW-13	12/14/06	ORG	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	2.3	< 2.0	
MW-13	06/21/07	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	1.4	< 2.0	
MW-13	12/12/07	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 2.0	
MW-13	06/26/08	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	1.7	< 2.0	
MW-13	12/18/08	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	1.4	< 2.5	
MW-13	06/24/09	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	3.2	< 2.0	
MW-13	12/08/09	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	1.4	< 2.0	
MW-13	06/11/10	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	4.0	< 2.0	
MW-13	12/09/10	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	3.2	< 2.0	
MW-13	02/08/12	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	5.3	< 0.20	
MW-13	02/06/13	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	5.0	< 0.20	
MW-13 Historical Range***			< 0.50 - < 5.0	< 0.50 - < 5.0	< 0.50 - < 5.0	< 0.50 - < 5.0	< 0.50 - < 5.0	< 0.50 - < 5.0	< 0.50 - < 5.0	< 0.50 - < 5.0	< 0.50 - < 5.0	< 0.50 - < 5.0	< 0.50 - 0.60	< 0.50 - 5.3	< 0.50 - < 5.0	< 0.20 - 2.4	
MW-15	05/27/98	ORG	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	5.0	< 5.0	< 5.0	NA	
MW-15	06/11/98	ORG	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	5.5	20	< 5.0	NA	
MW-15	02/16/00	ORG	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	5.9	< 5.0	< 5.0	< 5.0	< 5.0	9.6	< 5.0	NA		
MW-1500	02/16/00	FD	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	6.7	< 5.0	< 5.0	< 5.0	< 5.0	9.8	< 5.0	NA		
MW-15	07/05/00	ORG	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	8.4	< 1.0	< 1.0	< 1.0	< 1.0	1.9	4.7	< 1.0	NA	
MW-15	07/05/00	SPT	< 0.50	< 0.50	< 1.0	< 1.0	< 0.50	10	< 1.0	< 1.0	< 1.0	< 1.0	2.4	< 0.50	< 1.0	< 3.0	
MW-15	05/08/01	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	1.2	< 0.50	< 0.50	< 0.50	< 0.50	7.8	< 0.50	< 0.50	NA	
MW-15	10/25/01	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	9.0	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	NA	
MW-15	04/18/02	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	10.0	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.5	
MW-15	04/18/02	SPT	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	10.4	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 1.0	
MW-15	11/21/02	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	14	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	0.53	NA	
MW-15	06/11/03	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	3.2	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	NA	

**TABLE 4
PREVALENT VOLATILE ORGANIC COMPOUNDS AND 1,4-DIOXANE IN GROUNDWATER**

.....Concentration (micrograms per liter).....

Well Identifier / Sample Identifier	Date Sampled	QA Code	VOLATILE ORGANIC COMPOUNDS (FEDERAL MCL/CALIFORNIA MCL)											Semi-VOCs		
			Benzene (5/1)	Carbon Tetrachloride (5/0.5)	Chloroform (80/80)	1,1-DCA (-/5)	1,2-DCA (-/-)	1,1-DCE (7/6)	cis-1,2-DCE (70/6)	PCE (5/5)	1,1,1-TCA (200/200)	1,1,2-TCA (5/5)	TCE (5/5)	TCFM (-/150)	Toluene (1,000/150)	1,4-DIOXANE (3*/1**)
Regional Groundwater System Monitor and Extraction Wells (cont'd)																
MW-15	09/23/03	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	4.9	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	0.52	< 0.50	NA
MW-15	12/18/03	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	6.4	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	NA
MW-15	03/30/04	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	2.1	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	0.60	< 0.50	NA
MW-15	06/17/04	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	5.1	< 0.50	NA
MW-15	09/21/04	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	5.6	10	< 0.50
MW-15	12/15/04	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	6.7	11	< 0.50
MW-15	03/15/05	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	5.0	9.4	< 0.50
MW-15	03/15/05	SPT	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	4.0	7.5	< 0.50
MW-15	06/23/05	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	5.4	11	< 0.50
MW-15	09/22/05	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	4.1	13	< 0.50
MW-15	12/20/05	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	4.1	9.2	< 0.50
MW-15	03/22/06	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	2.6	11	< 0.50
MW-15	06/22/06	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	4.7	10	< 0.50
MW-15	09/29/06	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	3.3	< 0.50	< 0.50
MW-1500	09/29/06	FD	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	3.2	12	< 0.50
MW-15	12/19/06	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	2.9	8.0	< 0.50
MW-15	03/15/07	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	2.4	5.8	< 0.50
MW-15	06/22/07	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	5.1	12	< 0.50
MW-15	09/26/07	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	2.5	5.9	< 0.50
MW-1500	09/26/07	FD	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	2.6	6.6	< 0.50
MW-15	09/26/07	SPT	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	3.0	5.0	< 1
MW-15	12/13/07	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	1.4	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	2.5	7.2	< 0.50
MW-15	03/18/08	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	2.5	5.5	< 0.50
MW-15	06/27/08	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	2.4	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	2.6	5.8	< 0.50
MW-15	09/26/08	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	7.7	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	1.8	3.3	< 0.50
MW-15	12/16/08	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	9.8	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	1.3	1.9	< 0.50
MW-15	03/17/09	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	12	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	1.4	2.6	< 0.50
MW-15	06/24/09	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	8.8	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	1.0	1.9	< 0.50
MW-15	09/01/09	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	8.4	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	1.2	2.1	< 0.50
MW-15	12/10/09	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	8.5	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	0.94	2.0	< 0.50
MW-15	03/03/10	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	7.2	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	0.73	1.6	< 0.50
MW-15	06/11/10	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	3.1	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	1.4	< 0.50
MW-15	09/10/10	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	2.4	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	1.0	< 0.50
MW-15	12/09/10	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	3.7	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	0.50	1.7	< 0.50
MW-15	03/28/11	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	0.88	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	3.4	6.8	< 0.50
MW-15	08/02/11	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	3.9	7.7	< 0.50
MW-15	02/09/12	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	4.0	9.1	< 0.50
MW-15	08/09/12	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	4.1	14	< 0.50
MW-15	02/07/13	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	4.0	5.8	< 0.50
MW-15 Historical Range***			< 0.50 - < 5.0	< 0.50 - < 5.0	< 0.50 - < 5.0	< 0.50 - < 5.0	< 0.50 - < 5.0	< 0.50 - < 5.0	< 0.50 - < 5.0	< 0.50 - < 5.0	< 0.50 - < 5.0	< 0.50 - < 5.0	< 0.50 - < 5.0	< 0.50 - 7.8	< 0.50 - 20	< 0.50 - < 5.0
MW-16 ^(a)	11/05/99	ORG	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	317	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	NA
MW-16 ^(a)	11/05/99	SPT	< 1.0	< 1.0	< 1.0	3.6	< 1.0	510	< 1.0	< 1.0	5	< 1.0	< 1.0	< 1.0	< 1.0	NA
MW-16	11/23/99	ORG	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	73	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	NA
MW-16 ^(b)	11/23/99	ORG	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	99	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	NA

**TABLE 4
PREVALENT VOLATILE ORGANIC COMPOUNDS AND 1,4-DIOXANE IN GROUNDWATER**

.....Concentration (micrograms per liter).....

Well Identifier / Sample Identifier	Date Sampled	QA Code	VOLATILE ORGANIC COMPOUNDS (FEDERAL MCL/CALIFORNIA MCL)											Semi-VOCs		
			Benzene (5/1)	Carbon Tetrachloride (5/0.5)	Chloroform (80/80)	1,1-DCA (--/5)	1,2-DCA (--/--)	1,1-DCE (7/6)	cis-1,2-DCE (70/6)	PCE (5/5)	1,1,1-TCA (200/200)	1,1,2-TCA (5/5)	TCE (5/5)	TCFM (--/150)	Toluene (1,000/150)	1,4-DIOXANE (3*/1**)
Regional Groundwater System Monitor and Extraction Wells (cont'd)																
MW-16	12/07/99	ORG	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	49	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	NA
MW-16	12/07/99	SPT	< 2	< 5.0	< 5.0	< 2	< 5.0	44	< 2	< 2	< 2	< 2	< 2	< 5.0	< 5.0	NA
MW-16	02/18/00	ORG	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	238	< 5.0	< 5.0	11	< 5.0	< 5.0	< 5.0	< 5.0	NA
MW-1600	02/18/00	FD	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	264	< 5.0	< 5.0	10	< 5.0	< 5.0	< 5.0	< 5.0	NA
MW-16	07/05/00	ORG	< 0.50	< 0.50	0.59	9.4	1.5	1,100 E	< 0.50	2.0	28 E	4.3	2.2	< 0.50	< 0.50	133
MW-1600	07/05/00	FD	0.54	< 0.50	0.56	9.2	1.5	1,100 E	< 0.50	1.7	26 E	4.0	2.0	< 0.50	< 0.50	77
MW-16	07/05/00	SPT	NA	0.80	0.80	13.4	1.9	2,400 E	NA	2.0	41.5 E	2.8	2.5	< 0.50	< 0.50	63.05
MW-1600	05/10/01	FD	< 5.0	< 5.0	< 5.0	12	2 J	870	< 5.0	2 J	20	3 J	2 J	< 5.0	< 5.0	174 E
MW-16	05/10/01	ORG	< 5.0	< 5.0	0.50 J	11	2.0 J	790	< 5.0	0.90 J	18	3.0 J	1.0 J	< 5.0	< 5.0	165 E
MW-16	05/10/01	SPT	< 5.0	< 5.0	< 5.0	9.0	< 5.0	940	< 5.0	< 5.0	20	< 5.0	< 5.0	< 5.0	< 5.0	270 E
MW-16	10/23/01	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	88	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 3.0
MW-16	10/23/01	SPT	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	99	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	2.0
MW-16	04/16/02	ORG	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	500	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	190
MW-1600	04/16/02	FD	< 5.0	< 5.0	< 5.0	6.0	< 5.0	420	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	190
MW-16	04/16/02	SPT	< 3.0	< 3.0	< 3.0	5.0	< 3.0	350	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0	281
MW-16	11/20/02	ORG	< 2.5	< 2.5	< 2.5	7.1	< 2.5	440	< 2.5	< 2.5	3.6	3.7	< 2.5	< 2.5	< 2.5	420
MW-16	06/11/03	ORG	< 0.50	< 0.50	< 0.50	4.1	1.1	390	< 0.50	0.72	1.1	2.3	1.0	< 0.50	< 0.50	230
MW-16	09/24/03	ORG	< 0.50	< 0.50	< 0.50	1.2	< 0.50	120	< 0.50	< 0.50	< 0.50	< 0.50	0.61	< 0.50	< 0.50	12
MW-16	12/17/03	ORG	< 0.50	< 0.50	< 0.50	2.9	< 0.50	240	< 0.50	0.58	< 0.50	1.4	1.1	< 0.50	< 0.50	45
MW-16	12/17/03	SPT	< 1.0	< 1.0	< 1.0	3	< 1.0	200	< 1.0	< 1.0	< 1.0	1.0	< 1.0	< 1.0	< 1.0	100
MW-16	03/31/04	ORG	< 0.50	< 0.50	< 0.50	8.2	< 0.50	590	< 0.50	1.9	1.8	5.6	1.9	< 0.50	< 0.50	180
MW-1600	03/31/04	FD	< 0.50	< 0.50	< 0.50	8.3	< 0.50	590	< 0.50	1.9	1.8	5.6	1.8	< 0.50	< 0.50	180
MW-16	06/18/04	ORG	< 0.50	< 0.50	0.98 U	14	< 0.50	870	0.50	2.7	2.6	10	2.8	< 0.50	< 0.50	400
MW-16	09/22/04	ORG	< 0.50	< 0.50	< 0.50	2	< 0.50	260	< 0.50	< 0.50	< 0.50	0.51	1.0	< 0.50	< 0.50	11
MW-16	12/10/04	ORG	< 0.50	< 0.50	< 0.50	3.7	< 0.50	900	< 0.50	0.61	< 0.50	1.0	1.8	< 0.50	< 0.50	26
MW-16	03/17/05	ORG	< 0.50	0.58	1.1	18	4.5	1,900	0.57	2.9	2.0	10	3.7	< 0.50	< 0.50	250
MW-1600	03/17/05	FD	< 0.50	0.58	1.1	17	4.2	1,400	0.51	2.7	1.9	9.8	3.6	< 0.50	< 0.50	290
MW-16	06/24/05	ORG	< 0.50	< 0.50	< 0.50	6.9	1.7	710	< 0.50	1.3	< 0.50	4.2	2.3	< 0.50	< 0.50	110
MW-16	09/22/05	ORG	< 0.50	< 0.50	< 0.50	2.9	< 0.50	320	< 0.50	< 0.50	< 0.50	0.88	1.7	< 0.50	< 0.50	< 2.0
MW-16	12/21/05	ORG	< 0.50	< 0.50	< 0.50	4.3	1.2	370	< 0.50	1.1	< 0.50	2.2	1.2	< 0.50	< 0.50	190
MW-1600	12/21/05	FD	< 0.50	< 0.50	< 0.50	3.8	1.1	320	< 0.50	0.99	< 0.50	1.9	1.1	< 0.50	< 0.50	180
MW-16	03/22/06	ORG	< 0.50	< 0.50	< 0.50	3.1	1.1	210	< 0.50	0.70	< 0.50	1.4	0.63	< 0.50	< 0.50	110
MW-16	06/22/06	ORG	< 0.50	< 0.50	< 0.50	2.7	0.85	240	< 0.50	0.95	< 0.50	1.7	0.86	< 0.50	< 0.50	140
MW-16	09/28/06	ORG	< 0.50	< 0.50	< 0.50	2.6	< 0.5	280	< 0.50	0.51	< 0.50	0.93	1.4	< 0.50	< 0.50	130
MW-16	12/15/06	ORG	< 2.5	< 2.5	< 2.5	< 2.5	< 2.5	220	< 2.5	< 2.5	< 2.5	< 2.5	< 2.5	< 2.5	< 2.5	64
MW-16	03/14/07	ORG	< 0.50	< 0.50	< 0.50	1.1	< 0.50	270	< 0.50	< 0.50	< 0.50	0.91	2.0	< 0.50	< 0.50	54
MW-16	03/14/07	SPT	< 2	< 2	< 2	2.0	< 2	270	< 2	< 2	< 2	< 2	< 2	< 2	< 2	71
MW-16	06/20/07	ORG	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	140	< 1.0	< 1.0	< 1.0	< 1.0	2.0	< 1.0	< 1.0	25
MW-16	09/27/07	ORG	< 0.50	< 0.50	< 0.50	2.4	< 0.50	330	< 0.50	< 0.50	< 0.50	< 0.50	3.2	< 0.50	< 0.50	14
MW-16	12/13/07	ORG	< 0.50	< 0.50	< 0.50	2.7	< 0.50	320	< 0.50	< 0.50	< 0.50	< 0.50	2.8	< 0.50	< 0.50	17
MW-16	03/19/08	ORG	< 0.50	< 0.50	< 0.50	2.2	< 0.50	330	< 0.50	< 0.50	< 0.50	< 0.50	2.3	< 0.50	< 0.50	30 U
MW-16	06/24/08	ORG	< 0.50	< 0.50	< 0.50	2.2	< 0.50	480	< 0.50	< 0.50	< 0.50	< 0.50	3.6	< 0.50	< 0.50	13
MW-16	09/25/08	ORG	< 0.50	< 0.50	< 0.50	5.2	< 0.50	820	< 0.50	< 0.50	< 0.50	< 0.50	1.6	< 0.50	< 0.50	19 B
MW-1600	09/25/08	FD	< 0.50	< 0.50	< 0.50	4.8	< 0.50	800	< 0.50	< 0.50	< 0.50	< 0.50	1.9	< 0.50	< 0.50	21 B
MW-16	09/25/08	SPT	< 1.0	< 1.0	< 1.0	4.0	< 1.0	880	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	26

TABLE 4
PREVALENT VOLATILE ORGANIC COMPOUNDS AND 1,4-DIOXANE IN GROUNDWATER

.....Concentration (micrograms per liter).....

Well Identifier / Sample Identifier	Date Sampled	QA Code	VOLATILE ORGANIC COMPOUNDS (FEDERAL MCL/CALIFORNIA MCL)											Semi-VOCs		
			Benzene (5/1)	Carbon Tetrachloride (5/0.5)	Chloroform (80/80)	1,1-DCA (--/5)	1,2-DCA (--/--)	1,1-DCE (7/6)	cis-1,2-DCE (70/6)	PCE (5/5)	1,1,1-TCA (200/200)	1,1,2-TCA (5/5)	TCE (5/5)	TCFM (--/150)	Toulene (1,000/150)	1,4-DIOXANE (3*/1**)
Regional Groundwater System Monitor and Extraction Wells (cont'd)																
MW-16	12/19/08	ORG	< 2.5	< 2.5	< 2.5	5.2	< 2.5	1,100	< 2.5	< 2.5	< 2.5	< 2.5	< 2.5	< 2.5	< 2.5	27
MW-1600	12/19/08	FD	< 2.5	< 2.5	< 2.5	5.4	< 2.5	1,100	< 2.5	< 2.5	< 2.5	< 2.5	< 2.5	< 2.5	< 2.5	29
MW-16	03/17/09	ORG	< 5.0	< 5.0	< 5.0	8.9	< 5.0	1,500	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	65
MW-1600	03/17/09	FD	< 5.0	< 5.0	< 5.0	9.1	< 5.0	1,500	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	62
MW-16	06/24/09	ORG	< 2.5	< 2.5	< 2.5	6.1	< 2.5	790	< 2.5	< 2.5	< 2.5	< 2.5	< 2.5	< 2.5	< 2.5	360
MW-16	09/02/09	ORG	< 2.5	< 2.5	< 2.5	7.0	< 2.5	1,100	< 2.5	< 2.5	< 2.5	< 2.5	< 2.5	< 2.5	< 2.5	73
MW-16	12/09/09	ORG	< 2.5	< 2.5	< 2.5	5.5	< 2.5	910	< 2.5	< 2.5	< 2.5	< 2.5	3.0	< 2.5	< 2.5	100
MW-16	03/03/10	ORG	< 1.0	< 1.0	< 1.0	4.8	1.5	590	< 1.0	< 1.0	< 1.0	2.1	4.3	< 1.0	< 1.0	440
MW-16	06/11/10	ORG	< 1.0	< 1.0	< 1.0	4.6	< 1.0	560	< 1.0	< 1.0	< 1.0	1.3	4.5	< 1.0	< 1.0	180
MW-16	06/11/10	SPT	< 1.0	< 1.0	< 1.0	4.0	< 1.0	620	< 1.0	< 1.0	< 1.0	1.0	4.0	< 1.0	< 1.0	210
MW-16	09/09/10	ORG	< 1.0	< 1.0	< 1.0	3.1	< 1.0	540	< 1.0	< 1.0	< 1.0	< 1.0	4.9	< 1.0	< 1.0	45
MW-16	12/09/10	ORG	< 1.0	< 1.0	< 1.0	3.0	< 1.0	630	< 1.0	< 1.0	< 1.0	< 1.0	4.0	< 1.0	< 1.0	31
MW-16	03/28/11	ORG	< 1.0	< 1.0	< 1.0	7.8	1.7	680	< 1.0	1.5	3.6	< 1.0	4.1	< 1.0	< 1.0	99
MW-16	08/05/11	ORG	< 1.0	< 1.0	< 1.0	8.9	1.5	910	< 1.0	1.1	3.6	2.9	5.3	< 1.0	< 1.0	260
MW-16	02/07/12	ORG	< 1.0	< 1.0	< 1.0	2.3	< 1.0	95	< 1.0	< 1.0	< 1.0	1.3	< 1.0	< 1.0	< 1.0	44
MW-16	08/10/12	ORG	< 0.50	< 0.50	< 0.50	3.5	< 0.50	560	< 0.50	0.57	< 0.50	0.52	4.2	< 0.50	< 0.50	24
MW-16	02/06/13	ORG	< 1.0	< 1.0	< 1.0	3.9	< 1.0	680	< 1.0	< 1.0	< 1.0	< 1.0	4.5	< 1.0	< 1.0	49
MW-16 Historical Range***			< 0.50 - < 5.0	< 0.50 - 0.58	< 0.50 - 1.1	< 0.50 - 18	< 0.50 - 4.5	49 - 1,900 E	< 0.50 - 0.57	< 0.50 - 2.9	< 0.50 - 28 E	< 0.50 - 10	< 0.50 - 4.9	< 0.50 - < 5.0	< 0.50 - < 5.0	< 2.0 - 440
MW-17	06/15/00	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	NA
MW-17	06/15/00	SPT	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	NA
MW-17	07/06/00	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 3.0
MW-17	07/06/00	SPT	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	NA
MW-17	05/08/01	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	NA
MW-17	10/22/01	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	NA
MW-1700	10/22/01	FD	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	NA
MW-17	04/16/02	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.5
MW-17	04/16/02	SPT	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 1.0
MW-17	11/20/02	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.5
MW-17	06/09/03	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.5
MW-17	12/16/03	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 2.0
MW-17	06/16/04	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 2.0
MW-17	12/08/04	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 2.1
MW-17	06/22/05	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 2.0
MW-17	12/19/05	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 2.0
MW-17	06/21/06	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 2.0
MW-17	12/13/06	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 2.0
MW-17	06/18/07	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 2.0
MW-17	12/11/07	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 2.0
MW-17	06/25/08	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 2.0
MW-17	12/18/08	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 2.0
MW-17	06/24/09	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 2.0
MW-17	12/10/09	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 2.0
MW-17	06/08/10	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 2.0

TABLE 4
PREVALENT VOLATILE ORGANIC COMPOUNDS AND 1,4-DIOXANE IN GROUNDWATER

.....Concentration (micrograms per liter).....

Well Identifier / Sample Identifier	Date Sampled	QA Code	VOLATILE ORGANIC COMPOUNDS (FEDERAL MCL/CALIFORNIA MCL)											Semi-VOCS		
			Benzene (5/1)	Carbon Tetrachloride (5/0.5)	Chloroform (80/80)	1,1-DCA (-/5)	1,2-DCA (-/5)	1,1-DCE (7/6)	cis-1,2-DCE (70/6)	PCE (5/5)	1,1,1-TCA (200/200)	1,1,2-TCA (5/5)	TCE (5/5)	TCFM (-/150)	Toluene (1,000/150)	1,4-DIOXANE (3*/1**)
Regional Groundwater System Monitor and Extraction Wells (cont'd)																
MW-17	12/08/10	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 2.0
MW-17 Historical Range***			< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50 - < 3.0
MW-18	06/15/00	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	NA
MW-1800	06/15/00	FD	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	2.5	< 0.50	NA
MW-18	07/06/00	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	0.51	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	1.7	< 0.50	< 3.0
MW-18	05/07/01	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	3.9	< 0.50	NA
MW-18	10/23/01	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	NA
MW-18	04/16/02	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	1.3	< 0.50	< 0.5
MW-18	04/16/02	SPT	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 1.0
MW-18	11/19/02	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	1.0	< 0.50	< 0.5
MW-18	06/10/03	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	1.3	< 0.50	< 0.5
MW-18	12/16/03	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	1.3	< 0.50	< 2.0
MW-18	06/15/04	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	2.3	< 0.50	< 2.0
MW-18	12/09/04	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	2.6	< 0.50	< 2.0
MW-18	06/22/05	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	2.3	< 0.50	< 2.0
MW-18	12/21/05	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	1.9	< 0.50	< 2.0
MW-18	06/20/06	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	1.5	< 0.50	< 2.0
MW-18	12/15/06	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	1.5	< 0.50	< 2.0
MW-18	06/18/07	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	1.2	< 0.50	< 2.0
MW-18	12/12/07	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 2.0
MW-18	06/24/08	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	1.1	< 0.50	< 2.0
MW-18	12/17/08	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	0.65	< 0.50	6.9
MW-18	06/26/08	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	3.8	< 0.50	4.6
MW-1800	06/26/08	FD	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	3.7	< 0.50	5.0
MW-18	12/10/09	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	3.8	< 0.50	7.7 E
MW-1800	12/10/09	FD	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	3.6	< 0.50	7.0 E
MW-18	12/10/09	SPT	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	3.0	< 1	1 E
MW-18	06/09/10	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	6.3	< 0.50	< 2.0
MW-18	12/10/10	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	3.0	< 0.50	< 2.0
MW-18	08/03/11	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	2.8	< 0.50	< 0.20
MW-18	02/07/12	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	2.2	< 0.50	< 0.20
MW-18	08/09/12	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	2.5	< 0.50	< 0.20
MW-18	02/05/13	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	1.2	< 0.50	< 0.20
MW-18 Historical Range***			< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50 - 0.51	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50 - 6.3	< 0.50	< 0.20 - 7.7 E
MW-19	06/14/00	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	NA
MW-19	06/14/00	SPT	< 0.50	< 0.50	< 1.0	< 0.50	< 1.0	< 1.0	< 0.50	< 1.0	< 1.0	< 1.0	< 1.0	< 0.50	< 1.0	NA
MW-19	07/06/00	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 3.0
MW-19	05/08/01	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	0.64	< 0.50	NA
MW-19	10/22/01	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	NA
MW-19	04/16/02	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	NA
MW-19	04/16/02	SPT	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 1.0
MW-19	11/20/02	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	NA
MW-19	06/10/03	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.5

**TABLE 4
PREVALENT VOLATILE ORGANIC COMPOUNDS AND 1,4-DIOXANE IN GROUNDWATER**

.....Concentration (micrograms per liter).....

Well Identifier / Sample Identifier	Date Sampled	QA Code	VOLATILE ORGANIC COMPOUNDS (FEDERAL MCL/CALIFORNIA MCL)											Semi-VOCs		
			Benzene (5/1)	Carbon Tetrachloride (5/0.5)	Chloroform (80/80)	1,1-DCA (-/5)	1,2-DCA (-/-)	1,1-DCE (7/6)	cis-1,2-DCE (70/6)	PCE (5/5)	1,1,1-TCA (200/200)	1,1,2-TCA (5/5)	TCE (5/5)	TCFM (-/150)	Toulene (1,000/150)	1,4-DIOXANE (3*/1**)
Regional Groundwater System Monitor and Extraction Wells (cont'd)																
MW-19	12/16/03	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 2.0
MW-19	06/16/04	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 2.0
MW-19	12/09/04	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 2.0
MW-19	06/22/05	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 2.0
MW-19	12/19/05	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 2.0
MW-19	06/21/06	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 2.0
MW-19	12/13/06	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 2.0
MW-19	06/18/07	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 2.0
MW-19	12/10/07	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 2.0
MW-19	06/25/08	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 2.0
MW-19	12/18/08	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 2.0
MW-19	06/24/09	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 2.0
MW-19	12/10/09	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 2.0
MW-19	06/08/10	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 2.0
MW-19	12/07/10	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 2.0
MW-19	02/09/12	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	NA
MW-19 Historical Range***			< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50 - 0.64	< 0.50	< 0.50 - < 3.0
MW-20	09/23/03	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	82	< 0.50	< 0.50	0.63	< 0.50	< 0.50	0.58	< 0.50	< 2.2
MW-20	10/08/03	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	68	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 2.0
MW-20	12/18/03	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	44	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 2.0
MW-20	12/29/04	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	9.0	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 2.0
MW-20	06/24/05	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 2.0
MW-20	12/21/05	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 2.0
MW-20	06/21/06	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 2.0
MW-20	12/13/06	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 2.0
MW-20	06/21/07	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 2.0
MW-20	12/11/07	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 2.0
MW-20	06/23/08	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 2.0
MW-20	12/18/08	ORG	< 0.50	< 0.50	0.70	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	3.9
MW-20	06/25/09	ORG	< 0.50	< 0.50	0.64	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 2.0
MW-2000	06/25/09	FD	< 0.50	< 0.50	0.61	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 2.0
MW-20	12/08/09	ORG	< 0.50	< 0.50	0.78	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 2.5
MW-20	06/10/10	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 2.0
MW-20	12/08/10	ORG	< 0.50	< 0.50	0.59	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 2.0
MW-20	08/05/11	ORG	< 0.50	< 0.50	0.59	< 0.50	< 0.50	0.80	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	0.80
MW-20	02/07/12	ORG	< 0.50	< 0.50	0.50	< 0.50	< 0.50	2.8	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.20
MW-20	08/09/12	ORG	< 0.50	< 0.50	0.53	< 0.50	< 0.50	3.6	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.20
MW-20	02/06/13	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.20
MW-20 Historical Range***			< 0.50	< 0.50	< 0.50 - 0.78	< 0.50	< 0.50	< 0.50 - 82	< 0.50	< 0.50	< 0.50 - 0.63	< 0.50	< 0.50	< 0.50 - 0.58	< 0.50	< 0.20 - 3.9
MW-21-200	7/14/2003	ORG	< 0.50	< 0.50	< 0.50	4.4	< 0.50	300	< 0.50	< 0.50	< 0.50	0.99	0.96	< 0.50	< 0.50	43
MW-21	09/23/03	ORG	< 0.50	0.51	2.2	26	< 0.50	1,300	1.3	4.3	1.1	11	29	< 0.50	< 0.50	160
MW-2100	09/23/03	FD	< 0.50	0.53	2.4	26	< 0.50	1,700	1.2	4.7	1.1	12	29	< 0.50	< 0.50	160
MW-21	09/23/03	SPT	< 1.0	< 1.0	2	24	3 E	1,400	1.0	3.0	< 1.0	11	27	< 1.0	< 1.0	340
MW-21	10/08/03	ORG	< 25	< 25	< 25	< 25	< 25	1,600	< 25	< 25	< 25	< 25	30	< 25	< 25	160

TABLE 4
PREVALENT VOLATILE ORGANIC COMPOUNDS AND 1,4-DIOXANE IN GROUNDWATER

.....Concentration (micrograms per liter).....

Well Identifier / Sample Identifier	Date Sampled	QA Code	VOLATILE ORGANIC COMPOUNDS (FEDERAL MCL/CALIFORNIA MCL)													Semi-VOCs	
			Benzene (5/1)	Carbon Tetrachloride (5/0.5)	Chloroform (80/80)	1,1-DCA (-/5)	1,2-DCA (-/-)	1,1-DCE (7/6)	cis-1,2-DCE (70/6)	PCE (5/5)	1,1,1-TCA (200/200)	1,1,2-TCA (5/5)	TCE (5/5)	TCFM (-/150)	Toulene (1,000/150)	1,4-DIOXANE (3*/1**)	
Regional Groundwater System Monitor and Extraction Wells (cont'd)																	
MW-21	12/17/03	ORG	< 0.50	1.8	3.9	62	6.8	3,500	2.3	12	1.6	20	43	< 0.50	< 0.50	150	
MW-2100	12/17/03	FD	< 0.50	1.8	4.1	64	7.0	3,500	2.4	14	1.7	21	45	< 0.50	< 0.50	150	
MW-21	12/17/03	SPT	< 1.0	1.0	4.0	58	6.0	2,800	2.0	9.0	1.0	20	40	< 1.0	< 1.0	290	
MW-21	03/31/04	ORG	< 5.0	< 5.0	< 5.0	30	< 5.0	2,200	< 5.0	8.1	< 5.0	8.9	23	< 5.0	< 5.0	64 E	
MW-21	03/31/04	SPT	< 1.0	< 1.0	< 1.0	30	< 1.0	2,100	< 1.0	< 1.0	< 1.0	< 1.0	20	< 1.0	< 1.0	140 E	
MW-21	06/18/04	ORG	< 5.0	< 5.0	< 5.0	23	< 5.0	1,600	< 5.0	6.0	< 5.0	6.6	22	< 5.0	< 5.0	40	
MW-21	09/22/04	ORG	< 5.0	< 5.0	< 5.0	7.5	< 5.0	530	< 5.0	< 5.0	< 5.0	< 5.0	22	< 5.0	< 5.0	13	
MW-21	12/10/04	ORG	< 5.0	< 5.0	< 5.0	26	< 5.0	1,700	< 5.0	5.3	< 5.0	8.8	30	< 5.0	< 5.0	35	
MW-21	03/17/05	ORG	< 0.50	1.9	4.6	71	8.9	4,600	2.4	12	2.0	27	46	0.53	< 0.50	300	
MW-2100	03/17/05	FD	< 0.50	1.8	4.3	66	8.7	4,600	2.3	12	1.9	27	44	< 0.50	< 0.50	330	
MW-21	06/22/05	ORG	< 0.50	1.2	2.9	42	5.9	3,000	1.9	8.2	< 0.50	19	37	< 0.50	< 0.50	210 E	
MW-21	06/22/05	SPT	< 1.0	1.1	2.9	42	6.2	2,400	1.7	7.2	1.2	18	35	< 1.0	< 1.0	1,100 JE	
MW-21	09/22/05	ORG	< 0.50	0.64	1.8	26	4.4	1,700	1.4	4.0	< 0.50	12	33	< 0.50	< 0.50	250	
MW-21	12/19/05	ORG	< 0.50	< 0.50	2.8	31	< 0.50	4,100	< 0.50	7.4	< 0.50	10	18	< 0.50	< 0.50	430	
MW-21	03/23/06	ORG	< 5.0	< 5.0	< 5.0	52	< 5.0	4,000	< 5.0	11	< 5.0	14	30	< 5.0	< 5.0	240	
MW-21	03/23/06	SPT	< 0.50	< 3.00	< 3.00	40	< 3.00	2,900	< 3.00	< 3.00	< 3.00	< 3.00	30	< 3.00	< 3.00	250	
MW-21	06/22/06	ORG	< 0.50	0.89	1.6	22	2.3	2,000	1.2	8.5	< 0.50	6.9	31	< 0.50	< 0.50	120	
MW-21	06/22/06	SPT	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	150	
MW-21	09/27/06	ORG	< 2.5	< 2.5	< 2.5	17	< 2.5	1,400	< 2.5	3.3	< 2.5	4.2	30	< 2.5	< 2.5	1,100	
MW-21	12/11/06	ORG	< 0.50	0.53	1.2	16	2.0	1,200	1.4	3.2	< 0.50	5.5	31	< 0.50	< 0.50	150	
MW-21	12/11/06	SPT	< 7	< 7	< 7	10 E	< 7	1,000	< 7	< 7	< 7	< 7	30	< 7	< 7	180	
MW-21	03/14/07	ORG	< 2.5	< 2.5	< 2.5	12 E	3.2	1,400	< 2.5	4.4	< 2.5	8.2	32	< 2.5	< 2.5	330	
MW-2100	03/14/07	FD	< 2.5	< 2.5	< 2.5	18 E	3.2	1,400	< 2.5	4.3	< 2.5	8.6	33	< 2.5	< 2.5	320	
MW-21	03/14/07	SPT	< 1.0	< 1.0	< 1.0	20 E	< 1.0	1,500	< 1.0	< 1.0	< 1.0	< 1.0	30	< 1.0	< 1.0	450	
MW-21	06/20/07	ORG	< 1.0	< 1.0	< 1.0	19	< 1.0	1,400	< 1.0	< 1.0	< 1.0	< 1.0	35	< 1.0	< 1.0	240	
MW-21	09/27/07	ORG	< 0.50	< 0.50	< 0.50	5.6	0.72	490	1.8	1.2	< 0.50	2.0	36	< 0.50	< 0.50	51	
MW-21	12/13/07	ORG	< 0.50	< 0.50	0.50 U	4.8	< 0.50	320	1.8	0.96	< 0.50	1.4	41	< 0.50	< 0.50	47	
MW-2100	12/13/07	FD	< 0.50	< 0.50	0.50 U	5.0	< 0.50	620	1.7	1.0	< 0.50	1.4	42	< 0.50	< 0.50	49	
MW-21	12/13/07	SPT	< 5	< 5	< 5	< 5	< 5	480	< 5	< 5	< 5	< 5	40	< 5	< 5	54	
MW-21	06/25/08	ORG	< 5	< 5	< 5	60	6.9	4,900	< 5	11	< 5	20	34	< 5	< 5	370	
MW-2100	06/25/08	FD	< 5	< 5	< 5	60	7.0	5,100	< 5	11	< 5	20	34	< 5	< 5	380	
MW-21	06/25/08	SPT	< 5	< 5	< 5	50	6.0	3,500	< 5	10	< 5	20	30	< 5	< 5	440	
MW-21	07/08/08	ORG	< 10	< 10	< 10	47	< 10	3,500	< 10	11	< 10	16	26	< 10	< 10	410	
MW-21	07/09/08	ORG	< 10	< 10	< 10	54	< 10	4,200	< 10	10	< 10	17	25	< 10	< 10	360	
MW-21	07/10/08	ORG	< 5	< 5	< 5	38	5.2	3,800	< 5	12	< 5	13	23	< 5	< 5	330	
MW-21	07/15/08	ORG	< 5	< 5	< 5	42	< 5	3,500	< 5	12	< 5	13	30	< 5	< 5	290	
MW-21	07/16/08	ORG	< 5	< 5	< 5	47	5.5	4,800	< 5	9.7	< 5	14	26	< 5	< 5	310	
MW-21	07/23/08	ORG	< 10	< 10	< 10	40	< 10	3,500	< 10	< 10	< 10	13	24	< 10	< 10	220	
MW-21	07/30/08	ORG	< 10	< 10	< 10	41	< 10	3,400	< 10	< 10	< 10	10	20	< 10	< 10	230	
MW-21	08/06/08	ORG	< 5	< 5	< 5	32	< 5	1,500	< 5	7.0	< 5	7.7	19	< 5	< 5	230	
MW-21	08/25/08	ORG	< 5	< 5	< 5	21	< 5	1,800	< 5	5.1	< 5	6.3	16	< 5	< 5	150	
MW-21	09/24/08	ORG	< 2.5	< 2.5	< 2.5	15	< 2.5	1,200	< 2.5	3.4	< 2.5	4.8	16	< 2.5	< 2.5	100	
MW-21	10/22/08	ORG	< 2.5	< 2.5	< 2.5	13	< 2.5	1,200	< 2.5	3.2	< 2.5	3.0	14	< 2.5	< 2.5	95	
MW-21	11/26/08	ORG	< 2.5	< 2.5	< 2.5	11	< 2.5	1,100	< 2.5	2.6	< 2.5	2.5	12	< 2.5	< 2.5	74	
MW-21	02/25/09	ORG	< 2.5	< 2.5	< 2.5	6.6	< 2.5	720	< 2.5	< 2.5	< 2.5	< 2.5	12	< 2.5	< 2.5	83	

TABLE 4
PREVALENT VOLATILE ORGANIC COMPOUNDS AND 1,4-DIOXANE IN GROUNDWATER

.....Concentration (micrograms per liter).....

Well Identifier / Sample Identifier	Date Sampled	QA Code	VOLATILE ORGANIC COMPOUNDS (FEDERAL MCL/CALIFORNIA MCL)											Semi-VOCs		
			Benzene (5/1)	Carbon Tetrachloride (5/0.5)	Chloroform (80/80)	1,1-DCA (--/5)	1,2-DCA (--/--)	1,1-DCE (7/6)	cis-1,2-DCE (70/6)	PCE (5/5)	1,1,1-TCA (200/200)	1,1,2-TCA (5/5)	TCE (5/5)	TCFM (--/150)	Toluene (1,000/150)	1,4-DIOXANE (3*/1**)
Regional Groundwater System Monitor and Extraction Wells (cont'd)																
MW-21	03/18/09	ORG	< 2.5	< 2.5	< 2.5	7.7	< 2.5	900	< 2.5	< 2.5	< 2.5	2.5	11	< 2.5	< 2.5	54
MW-21	04/29/09	ORG	< 2.5	< 2.5	< 2.5	7.8	< 2.5	860	< 2.5	< 2.5	< 2.5	< 2.5	14	< 2.5	< 2.5	65
MW-21	05/27/09	ORG	< 2.5	< 2.5	< 2.5	8.4	< 2.5	940	< 2.5	< 2.5	< 2.5	2.5	14	< 2.5	< 2.5	71
MW-21	06/29/09	ORG	< 0.5	< 0.5	0.64	7.4	0.81	860	0.63	2.1	< 0.5	2.1	17	< 0.5	< 0.5	68
MW-21	07/22/09	ORG	< 1.0	< 1.0	< 1.0	8.4	< 1.0	870	1.0	1.6	< 1.0	1.9	16	< 1.0	< 1.0	65
MW-21	08/14/09	ORG	< 2.5	< 2.5	< 2.5	8.8	< 2.5	900	< 2.5	< 2.5	< 2.5	< 2.5	18	< 2.5	< 2.5	72
MW-21	09/11/09	ORG	< 2.5	< 2.5	< 2.5	8.3	< 2.5	1,100	< 2.5	< 2.5	< 2.5	< 2.5	14	< 2.5	< 2.5	63
MW-21	10/08/09	ORG	< 2.5	< 2.5	< 2.5	9.2	< 2.5	830	< 2.5	< 2.5	< 2.5	< 2.5	19	< 2.5	< 2.5	76
MW-21	12/09/09	ORG	< 0.50	< 0.50	< 0.50	1.7	< 0.50	200	< 0.50	< 0.50	< 0.50	< 0.50	12	< 0.50	< 0.50	11
MW-21	03/05/10	ORG	< 1.0	< 1.0	< 1.0	2.9	< 1.0	370	< 1.0	< 1.0	< 1.0	< 1.0	14	< 1.0	< 1.0	21
MW-21	06/11/10	ORG	< 2.0	< 2.0	< 2.0	8.6	< 2.0	800	< 2.0	< 2.0	< 2.0	< 2.0	22	< 2.0	< 2.0	40
MW-21	06/11/10	SPT	< 1	< 1	< 1	7.0	< 1	850	< 1	1.0	< 1	2.0	21	< 1	< 1	47
MW-21	09/08/10	ORG	< 2.0	< 2.0	< 2.0	12	< 2.0	1,000	< 2.0	< 2.0	< 2.0	< 2.0	21	< 2.0	< 2.0	74
MW-21	12/06/10	ORG	< 5.0	< 5.0	< 5.0	25	< 5.0	2,300	< 5.0	< 5.0	< 5.0	7.6	23	< 5.0	< 5.0	250
MW-21	12/06/10	SPT	< 5	< 5	< 5	10	< 5	1,600	< 5	< 5	5.0	< 5	10	< 5	< 5	360
MW-21	03/24/11	ORG	< 5.0	< 5.0	< 5.0	38	5.7	2,800	< 5.0	8.7	< 5.0	13	23	< 5.0	< 5.0	93 E
MW-21	03/24/11	SPT	< 1	1.0	2.0	33	4.0	2,400	2.0	6.0	< 1	13	18	2	< 1	560 E
MW-21	06/23/11	ORG	< 5.0	< 5.0	< 5.0	33	5.0	2,700	< 5.0	5.8	< 5.0	12	24	< 5.0	< 5.0	400
MW-21	06/23/11	SPT	< 1	< 1	2.0	27	4.0	2,300	1.0	5.0	< 1	10	20	< 1	< 1	450
MW-21	08/02/11	ORG	< 5.0	< 5.0	< 5.0	34	< 5.0	2,400	< 5.0	5.6	< 5.0	11 E	24 E	< 5.0	< 5.0	360 E
MW-2100	08/02/11	FD	< 2.5	< 2.5	< 2.5	34	4.4	2,000	< 2.5	5.4	< 2.5	11 E	23 E	< 2.5	< 2.5	340 E
MW-21	08/02/11	SPT	< 1.0	< 1.0	2.0	22	3.0	1,800	< 1.0	4.0	< 1.0	8 E	17 E	< 1.0	< 1.0	430
MW-21	11/01/11	ORG	< 2.5	< 2.5	< 2.5	29	4.9	1,600	< 2.5	5.6	< 2.5	11	22	< 2.5	< 2.5	390
MW-21	12/07/11	ORG	< 10	< 10	< 10	43	< 10	3,200	< 10	< 10	< 10	< 10	20	< 10	< 10	450
MW-21	01/06/12	ORG	< 10	< 10	< 10	15	< 10	1,400	< 10	< 10	< 10	< 10	13	< 10	< 10	120
MW-21	02/08/12	ORG	< 4.0	< 4.0	< 4.0	8.5	< 4.0	520	< 4.0	< 4.0	< 4.0	< 4.0	11	< 4.0	< 4.0	33
MW-21	03/09/12	ORG	< 4.0	< 4.0	< 4.0	8.6	< 4.0	860	< 4.0	< 4.0	< 4.0	< 4.0	14	< 4.0	< 4.0	61
MW-21	05/07/12	ORG	< 4.0	< 4.0	< 4.0	6.5	< 4.0	490	< 4.0	< 4.0	< 4.0	< 4.0	11	< 4.0	< 4.0	23
MW-2100	05/07/12	FD	< 4.0	< 4.0	< 4.0	6.3	< 4.0	480	< 4.0	< 4.0	< 4.0	< 4.0	12	< 4.0	< 4.0	19
MW-21	08/06/2012	ORG	< 5.0	< 5.0	< 5.0	10	< 5.0	1,300	< 5.0	< 5.0	< 5.0	< 5.0	12	< 5.0	< 5.0	60
MW-21	11/5/2012	ORG	< 5.0	< 5.0	< 5.0	24	< 5.0	2,000	< 5.0	6.1	< 5.0	6.8	16	< 5.0	< 5.0	240
MW-21	2/4/2013	ORG	< 2.5	< 2.5	< 2.5	33	5.8	1,900	< 2.5	5.1	< 2.5	12	19	< 2.5	< 2.5	480
MW-21 Historical Range***			< 0.50 - < 25	< 0.50 - 1.9	< 0.50 - 4.6	< 0.50 - 71	< 0.50 - 8.9	200 - 4,900	< 0.50 - 2.4	< 0.50 - 12	< 0.50 - 2.0	< 0.50 - 27	< 0.50 - 46	< 0.50 - 0.53	< 0.50 - < 10	11 - 1,100
MW-22-203	07/28/03	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.5
MW-22	09/23/03	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 2.0
MW-22	10/08/03	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 2.0
MW-22	12/15/03	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	NA
MW-22	03/30/04	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	NA
MW-22	06/14/04	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	NA
MW-22	09/21/04	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	NA
MW-22	12/07/04	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	NA
MW-22	03/14/05	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	NA
MW-22	06/21/05	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	NA
MW-22	09/20/05	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	NA

**TABLE 4
PREVALENT VOLATILE ORGANIC COMPOUNDS AND 1,4-DIOXANE IN GROUNDWATER**

.....Concentration (micrograms per liter).....

Well Identifier / Sample Identifier	Date Sampled	QA Code	VOLATILE ORGANIC COMPOUNDS (FEDERAL MCL/CALIFORNIA MCL)											Semi-VOCs		
			Benzene (5/1)	Carbon Tetrachloride (5/0.5)	Chloroform (80/80)	1,1-DCA (-/5)	1,2-DCA (-/-)	1,1-DCE (7/6)	cis-1,2-DCE (70/6)	PCE (5/5)	1,1,1-TCA (200/200)	1,1,2-TCA (5/5)	TCE (5/5)	TCFM (-/150)	Toluene (1,000/150)	1,4-DIOXANE (3*/1**)
Regional Groundwater System Monitor and Extraction Wells (cont'd)																
MW-26B	12/18/05	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	NA
MW-26B	03/21/06	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	NA
MW-26B	06/20/06	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	NA
MW-26B	09/27/06	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	NA
MW-26B	12/12/06	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	NA
MW-26B	03/13/07	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	NA
MW-26B	06/18/07	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	NA
MW-26B	09/25/07	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	NA
MW-26B	12/10/07	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	NA
MW-26B	03/17/08	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	NA
MW-26B	06/23/08	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	NA
MW-26B	09/24/08	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	NA
MW-26B	12/17/08	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	NA
MW-26B	03/18/09	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	NA
MW-26B	06/23/09	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	NA
MW-26B	09/02/09	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	NA
MW-26B	12/09/09	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	NA
MW-26B	03/02/10	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	NA
MW-26B	06/08/10	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	NA
MW-26B	09/08/10	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	NA
MW-26B	12/08/10	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	NA
MW-26B	03/25/11	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	NA
MW-26B Historical Range***			< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 2.0
MW-26C	10/19/04	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 2.0
MW-26C	11/10/04	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 2.0
MW-26C	12/07/04	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	NA
MW-2600C	12/07/04	FD	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	NA
MW-26C	03/16/05	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 2.1
MW-26C	06/21/05	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 2.0
MW-26C	09/21/05	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 2.0
MW-26C	12/18/05	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 2.0
MW-26C	03/21/06	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 2.0
MW-26C	06/20/06	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 2.0
MW-26C	09/27/06	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 2.0
MW-26C	12/12/06	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 2.0
MW-26C	03/13/07	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	0.55	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 2.0
MW-26C	06/19/07	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 2.0
MW-2600C	06/19/07	FD	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 1
MW-26C	06/19/07	SPT	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 2.0
MW-26C	09/25/07	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 2.0
MW-26C	12/11/07	ORG	< 0.50	< 0.50	< 0.50	1.5	< 0.50	100	< 0.50	< 0.50	< 0.50	0.61	< 0.50	< 0.50	< 0.50	57
MW-26C	12/20/07	ORG	< 0.50	< 0.50	< 0.50	1.7	< 0.50	120	< 0.50	< 0.50	< 0.50	0.72	< 0.50	< 0.50	< 0.50	55 E
MW-2600C	12/20/07	FD	< 0.50	< 0.50	< 0.50	1.7	< 0.50	120	< 0.50	< 0.50	< 0.50	0.77	< 0.50	< 0.50	< 0.50	34 U
MW-26C	12/20/07	SPT	< 0.50	< 0.50	< 0.50	2.0	< 0.50	100	< 0.50	< 0.50	< 0.50	0.8	< 0.50	< 0.50	< 0.50	76 E

TABLE 4
PREVALENT VOLATILE ORGANIC COMPOUNDS AND 1,4-DIOXANE IN GROUNDWATER

.....Concentration (micrograms per liter).....

Well Identifier / Sample Identifier	Date Sampled	QA Code	VOLATILE ORGANIC COMPOUNDS (FEDERAL MCL/CALIFORNIA MCL)											Semi-VOCs		
			Benzene (5/1)	Carbon Tetrachloride (5/0.5)	Chloroform (80/80)	1,1-DCA (--/5)	1,2-DCA (--/--)	1,1-DCE (7/6)	cis-1,2-DCE (70/6)	PCE (5/5)	1,1,1-TCA (200/200)	1,1,2-TCA (5/5)	TCE (5/5)	TCFM (--/150)	Toulene (1,000/150)	1,4-DIOXANE (3*/1**)
Regional Groundwater System Monitor and Extraction Wells (cont'd)																
MW-26C	01/21/08	ORG	< 0.50	< 0.50	< 0.50	1.3	< 0.50	110	< 0.50	< 0.50	< 0.50	0.77	< 0.50	< 0.50	< 0.50	75
MW-26C	02/21/08	ORG	< 0.50	< 0.50	< 0.50	1.0	< 0.50	71	< 0.50	0.79	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	36
MW-26C	03/19/08	ORG	< 0.50	< 0.50	< 0.50	0.61	< 0.50	46	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	37 E
MW-2600C	03/19/08	FD	< 0.50	< 0.50	< 0.50	0.59	< 0.50	46	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	31 U
MW-26C	03/19/08	SPT	< 0.50	< 0.50	< 0.50	0.60	< 0.50	44	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	22 U
MW-26C	04/21/08	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	18	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	11
MW-26C	05/27/08	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	38	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	13
MW-26C	06/24/08	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	15	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	5.9
MW-26C	07/16/08	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	13	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	5.3
MW-26C	08/26/08	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	10	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	5.9
MW-26C	09/25/08	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	9.6	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	3.1 BU
MW-26C	12/17/08	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	16	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	6.5
MW-26C	03/18/09	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	1.0	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 2.0
MW-26C	06/23/09	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	1.3	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 2.0
MW-26C	09/02/09	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	1.4	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	3.6
MW-26C	12/09/09	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	0.59	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 2.0
MW-26C	03/02/10	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 2.0
MW-26C	06/08/10	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 2.0
MW-26C	09/08/10	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 2.0
MW-26C	12/08/10	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	22	< 2.0
MW-26C	03/25/11	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	15	0.91
MW-26C	06/24/11	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	7.9	< 0.20
MW-26C	08/04/11	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	9.7	0.34
MW-26C	11/01/11	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	9.1	< 0.20
MW-26C	02/09/12	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	7.5	< 0.20
MW-26C	05/09/12	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	6.6	< 0.20
MW-26C	08/07/12	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	0.95	< 0.20
MW-26C	11/07/12	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.20
MW-26C	02/08/13	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.20
MW-26C Historical Range***			< 0.50	< 0.50	< 0.50	< 0.50 - 1.7	< 0.50	< 0.50 - 120	< 0.50	< 0.50 - 0.79	< 0.50	< 0.50 - 0.77	< 0.50	< 0.50	< 0.50 - 22	< 0.20 - 55 E
MW-27	05/27/08	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 2.0
MW-2700	05/27/08	FD	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 2.0
MW-27	05/27/08	SPT	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 1
MW-27	06/10/08	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 2.0
MW-27	06/25/08	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 2.0
MW-27	07/16/08	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 2.0
MW-27	08/26/08	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 2.0
MW-27	09/23/08	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 2.0
MW-27	12/18/08	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 2.0
MW-27	03/17/09	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 2.0
MW-27	06/22/09	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 2.0
MW-27	09/01/09	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 2.0
MW-27	12/09/09	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 2.0
MW-27	03/02/10	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 2.0

TABLE 4
PREVALENT VOLATILE ORGANIC COMPOUNDS AND 1,4-DIOXANE IN GROUNDWATER

.....Concentration (micrograms per liter).....

Well Identifier / Sample Identifier	Date Sampled	QA Code	VOLATILE ORGANIC COMPOUNDS (FEDERAL MCL/CALIFORNIA MCL)													Semi-VOCs
			Benzene (5/1)	Carbon Tetrachloride (5/0.5)	Chloroform (80/80)	1,1-DCA (--/5)	1,2-DCA (--/--)	1,1-DCE (7/6)	cis-1,2-DCE (70/6)	PCE (5/5)	1,1,1-TCA (200/200)	1,1,2-TCA (5/5)	TCE (5/5)	TCFM (--/150)	Toulene (1,000/150)	1,4-DIOXANE (3*/1**)
Regional Groundwater System Monitor and Extraction Wells (cont'd)																
MW-27	06/08/10	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 2.0
MW-27	09/08/10	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 2.0
MW-27	12/07/10	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 2.0
MW-27	03/30/11	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	0.24
MW-27	02/09/12	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	<0.20
MW-27	02/07/13	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	<0.20
MW-27 Historical Range***			< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	<0.20 - 0.24
MW-28	05/16/08	ORG	< 0.50	< 0.50	< 0.50	0.94	< 0.50	76 E	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	19
MW-2800	05/16/08	FD	< 0.50	< 0.50	< 0.50	0.98	< 0.50	78 E	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	20
MW-28	05/16/08	SPT	< 0.50	< 0.50	< 0.50	0.50	< 0.50	45 E	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	23
MW-28	05/27/08	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	22	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	8.2
MW-28	06/27/08	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	19	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	9.3
MW-28	07/17/08	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	9.9	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	5.8
MW-28	08/26/08	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	4.1	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 2.0
MW-28	09/25/08	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	23	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	8.2 BE
MW-28	12/18/08	ORG	< 0.50	< 0.50	< 0.50	0.70	< 0.50	60	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	18
MW-28	03/17/09	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	41	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	14
MW-28	06/23/09	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	28	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	8.2
MW-28	09/01/09	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	27	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	9.1
MW-2800	09/01/09	FD	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	33	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	9.4
MW-28	12/10/09	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	32	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	9.5
MW-28	03/04/10	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	18	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	7.0
MW-28	06/09/10	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	6.3	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	2.1
MW-2800	06/09/10	FD	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	5.3	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	2.0
MW-28	09/08/10	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	5.2	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	2.1
MW-28	12/08/10	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	3.5	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 2.0
MW-28	03/30/11	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	1.6	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	1.2
MW-28	06/21/11	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	1.6	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	0.49
MW-28	08/05/11	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	1.7	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	0.53
MW-28	11/03/11	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	1.1	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	0.30
MW-28	02/09/12	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	0.84	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	<0.20
MW-28	05/11/12	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	0.99	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	0.22
MW-28	08/10/12	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	2.4	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.20
MW-28	11/07/12	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	5.2	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	2.2
MW-28	02/07/13	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	1.3	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.20
MW-28 Historical Range***			< 0.50	< 0.50	< 0.50	< 0.50 - 0.94	< 0.50	0.84 - 76 E	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	<0.20- 19
MW-29	08/26/08	ORG	< 0.50	< 0.50	< 0.50	1.5	< 0.50	150	< 0.50	< 0.50	< 0.50	0.50	0.60	< 0.50	< 0.50	54
MW-2900	08/26/08	FD	< 0.50	< 0.50	< 0.50	1.6	< 0.50	140	< 0.50	< 0.50	< 0.50	< 0.50	0.58	< 0.50	< 0.50	55
MW-29	08/26/08	SPT	< 1	< 1	< 1	1.0	< 1	120	< 1	< 1	< 1	< 1	< 1	< 1	< 1	67
MW-29	09/25/08	ORG	< 0.50	< 0.50	< 0.50	1.2 E	< 0.50	110 E	< 0.50	< 0.50	< 0.50	< 0.50	0.74 E	< 0.50	< 0.50	26 BE
MW-2900	09/25/08	FD	< 0.50	< 0.50	< 0.50	1.2	< 0.50	99	< 0.50	< 0.50	< 0.50	< 0.50	1.4	< 0.50	< 0.50	32 BE
MW-29	09/25/08	SPT	< 1	< 1	< 1	1.0	< 1	100	< 1	< 1	< 1	< 1	< 1	< 1	< 1	40 E
MW-29	12/18/08	ORG	< 1.0	< 1.0	< 1.0	4.7	1.0	400	< 1.0	1.3	< 1.0	1.4	4.3	< 1.0	< 1.0	98

TABLE 4
PREVALENT VOLATILE ORGANIC COMPOUNDS AND 1,4-DIOXANE IN GROUNDWATER

.....Concentration (micrograms per liter).....

Well Identifier / Sample Identifier	Date Sampled	QA Code	VOLATILE ORGANIC COMPOUNDS (FEDERAL MCL/CALIFORNIA MCL)											Semi-VOCs		
			Benzene (5/1)	Carbon Tetrachloride (5/0.5)	Chloroform (80/80)	1,1-DCA (--/5)	1,2-DCA (--/--)	1,1-DCE (7/6)	cis-1,2-DCE (70/6)	PCE (5/5)	1,1,1-TCA (200/200)	1,1,2-TCA (5/5)	TCE (5/5)	TCFM (--/150)	Toulene (1,000/150)	1,4-DIOXANE (3*/1**)
Regional Groundwater System Monitor and Extraction Wells (cont'd)																
MW-2900	12/18/08	FD	< 1.0	< 1.0	< 1.0	4.5	1.0	390	< 1.0	1.3	< 1.0	1.5	4.3	< 1.0	< 1.0	110
MW-29	03/17/09	ORG	< 0.50	< 0.50	0.62	5.2	1.0	530	< 0.50	1.5	< 0.50	1.9	4.0	0.81	< 0.50	110
MW-2900	03/17/09	FD	< 0.50	< 0.50	0.60	5.0	1.0	550	< 0.50	1.4	< 0.50	1.9	4.0	0.78	< 0.50	100
MW-29	06/24/09	ORG	< 0.50	< 0.50	< 0.50	2.7	0.55	320	< 0.50	1.1	< 0.50	0.91	3.3	0.60	< 0.50	84
MW-29	09/02/09	ORG	< 0.50	< 0.50	< 0.50	2.7	0.57	310	< 0.50	0.97	< 0.50	0.93	3.4	0.62	< 0.50	71
MW-2900	09/02/09	FD	< 0.50	< 0.50	< 0.50	3.0	0.64	340	< 0.50	1.0	< 0.50	0.89	3.6	0.68	< 0.50	75
MW-29	12/10/09	ORG	< 0.50	< 0.50	< 0.50	3.0	0.50	290	< 0.50	0.97	< 0.50	0.84	3.5	0.54	< 0.50	74
MW-29	03/04/10	ORG	< 0.50	< 0.50	< 0.50	3.0	0.52	340	< 0.50	1.2	< 0.50	0.73	3.6	0.61	< 0.50	95
MW-2900	03/04/10	FD	< 0.50	< 0.50	< 0.50	3.0	0.50	320	< 0.50	1.1	< 0.50	0.64	3.9	0.58	< 0.50	96
MW-29	06/09/10	ORG	< 0.50	< 0.50	< 0.50	2.9	< 0.50	300	< 0.50	0.85	< 0.50	0.73	3.2	0.65	< 0.50	61
MW-29	09/09/10	ORG	< 0.50	< 0.50	< 0.50	1.1	< 0.50	140	< 0.50	< 0.50	< 0.50	< 0.50	1.0	< 0.50	< 0.50	30
MW-29	12/07/10	ORG	< 0.50	< 0.50	< 0.50	2.3	< 0.50	200	< 0.50	0.71	< 0.50	0.55	3.2	< 0.50	< 0.50	41
MW-2900	12/07/10	FD	< 0.50	< 0.50	< 0.50	2.2	< 0.50	220	< 0.50	0.71	< 0.50	0.53	3.1	< 0.50	< 0.50	43
MW-29	03/30/11	ORG	< 0.50	< 0.50	< 0.50	1.9	< 0.50	200	< 0.50	0.77	< 0.50	0.56	3.6	0.51	< 0.50	29
MW-29	06/21/11	ORG	< 0.50	< 0.50	< 0.50	2.0	< 0.50	220	< 0.50	0.85	< 0.50	0.55	4.5	0.71	< 0.50	30
MW-29	08/05/11	ORG	< 0.50	< 0.50	0.63	3.6	0.55	330	0.61	0.87	< 0.50	0.76	5.6	1.2	< 0.50	45 E
MW-2900	08/05/11	FD	< 0.50	< 0.50	0.62	3.6	0.54	370	0.57	0.84	< 0.50	0.75	5.7	1.2	< 0.50	54 E
MW-29	08/05/11	SPT	< 1.0	< 1.0	< 1.0	2.0	< 1.0	270	< 1.0	< 1.0	< 1.0	< 1.0	4.0	< 1.0	< 1.0	82 E
MW-29	11/03/11	ORG	< 0.50	< 0.50	0.80	7.8	1.4	804	0.60	1.3	< 0.50	2.3	6.0	1.0	< 0.50	301
MW-29	02/09/12	ORG	< 5.0	< 5.0	< 5.0	9.2	< 5.0	900 E	< 5.0	< 5.0	< 5.0	< 5.0	7.5	< 5.0	< 5.0	130 E
MW-2900	02/09/12	FD	< 5.0	< 5.0	< 5.0	9.0	< 5.0	910 E	< 5.0	< 5.0	< 5.0	< 5.0	7.1	< 5.0	< 5.0	120 E
MW-29	02/09/12	SPT	< 1.0	< 1.0	< 1.0	5.0	< 1.0	380 E	< 1.0	1.0	1.0	2.0	4.0	1.0	< 1.0	340 E
MW-29	05/11/12	ORG	<4.0	<4.0	<4.0	8.3	<4.0	780	<4.0	5.7	<4.0	<4.0	6.2	<4.0	<4.0	300
MW-2900	05/11/12	FD	<5.0	<5.0	<5.0	8.5	<5.0	830	<5.0	<5.0	<5.0	<5.0	5.3	<5.0	<5.0	280
MW-29	05/11/12	SPT ^E	< 1	< 1	< 1	5.0	1.0	550	< 1	1.0	< 1	2.0	4.0	1.0	< 1	300
MW-29	05/11/12	SPT ^C	< 0.50	< 0.50	< 1.0	6.0	1.1	730	< 1.0	1.1	< 1.0	2.1	4.6	< 1.0	< 1.0	290
MW-29	08/06/12	ORG	< 1.0	< 1.0	< 1.0	3.8	< 1.0	440	< 1.0	1.2	< 1.0	1.1	2.2	1.0	< 1.0	110
MW-29	11/07/12	ORG	< 1.0	< 1.0	< 1.0	4.6	1.2	560	< 1.0	6.6	< 1.0	1.6	5.0	1.7	< 1.0	250
MW-29	02/07/13	ORG	< 1.0	< 1.0	< 1.0	3.8	< 1.0	410	< 1.0	1.0	< 1.0	1.2	8.3	1.9	< 1.0	130
MW-2900	02/07/13	FD	< 1.0	< 1.0	< 1.0	3.7	1.0	370	< 1.0	1.0	< 1.0	1.1	8.2	2.0	< 1.0	130
MW-29	02/07/13	SPT	< 1.0	< 1.0	<2.0	2.6	< 1.0	290	<2.0	<2.0	<2.0	3.0	7.3	<2.0	<2.0	160
Historical High/Low													HIGH	HIGH		
MW-29 Historical Range***			< 0.50 - < 1.0	< 0.50 - < 1.0	< 0.50 - 0.8	1 - 7.8	< 0.50 - 1.4	99 - 900 E	< 0.50 - < 4.0	< 0.50 - 6.6	< 0.50 - < 4.0	< 0.50 - 2.3	0.58 - 6.0	< 0.50 - 1.7	< 0.50 - 4.0	29 - 301
MW-30A	12/18/08	ORG	< 0.50	< 0.50	< 0.50	2.9	0.67	270	< 0.50	0.58	< 0.50	1.1	0.72	< 0.50	< 0.50	86
MW-30A	12/18/08	SPT	< 1	< 1	< 1	3.0	< 1	290	< 1	< 1	< 1	1.0	< 1	< 1	< 1	110
MW-30A	01/07/09	ORG	< 0.50	< 0.50	< 0.50	2.5	0.57	270	< 0.50	0.52	< 0.50	0.95	0.52	< 0.50	< 0.50	95
MW-30A	03/17/09	ORG	< 0.50	< 0.50	< 0.50	1.1	< 0.50	140 E	< 0.50	< 0.50	< 0.50	0.57	< 0.50	< 0.50	< 0.50	53
MW-30A	03/17/09	SPT	< 1	< 1	< 1	< 1	< 1	69 E	< 1	< 1	< 1	< 1	< 1	< 1	< 1	40
MW-30A	06/23/09	ORG	< 0.50	< 0.50	< 0.50	0.89	< 0.50	80	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	32
MW-30A	06/23/09	SPT	< 1	< 1	< 1	< 1	< 1	79	< 1	< 1	< 1	< 1	< 1	< 1	< 1	38
MW-30A	09/02/09	ORG	< 0.50	< 0.50	< 0.50	1.2	< 0.50	140	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	46
MW-30A	09/02/09	SPT	< 1	< 1	< 1	1.0	< 1	110	< 1	< 1	< 1	< 1	< 1	< 1	< 1	54
MW-30A	12/10/09	ORG	< 0.50	< 0.50	< 0.50	1.1	< 0.50	92	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	36
MW-30A	03/03/10	ORG	< 0.50	< 0.50	< 0.50	1.1	< 0.50	85 E	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	43

TABLE 4
PREVALENT VOLATILE ORGANIC COMPOUNDS AND 1,4-DIOXANE IN GROUNDWATER

.....Concentration (micrograms per liter).....

Well Identifier / Sample Identifier	Date Sampled	QA Code	VOLATILE ORGANIC COMPOUNDS (FEDERAL MCL/CALIFORNIA MCL)											Semi-VOCs		
			Benzene (5/1)	Carbon Tetrachloride (5/0.5)	Chloroform (80/80)	1,1-DCA (--/5)	1,2-DCA (--/--)	1,1-DCE (7/6)	cis-1,2-DCE (70/6)	PCE (5/5)	1,1,1-TCA (200/200)	1,1,2-TCA (5/5)	TCE (5/5)	TCFM (--/150)	Toluene (1,000/150)	1,4-DIOXANE (3*/1**)
Regional Groundwater System Monitor and Extraction Wells (cont'd)																
MW-3000A	03/03/10	FD	< 0.50	< 0.50	< 0.50	1.1	< 0.50	65 E	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	41
MW-30A	06/09/10	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	24	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	13
MW-30A	09/08/10	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	9.0	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	3.6
MW-30A	12/10/10	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	1.8	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 2.0
MW-30A	03/30/11	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	0.44
MW-30A	06/21/11	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	0.52	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	0.21
MW-30A	08/05/11	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	0.93	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	NA
MW-30A	11/02/11	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	0.5	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	0.30
MW-30A	02/09/12	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	0.66	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.20
MW-30A	05/10/12	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.20
MW-30A	08/10/12	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	2.9	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	1.8	< 0.50	< 0.20
MW-30A	11/06/12	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	0.84	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	0.98	< 0.50	< 0.20
MW-30A	01/03/13	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	0.51	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	0.62	< 0.50	< 0.20
MW-30A	02/06/13	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.20
MW-30A	02/06/13	SPT	< 0.50	< 0.50	< 1.0	< 1.0	< 0.50	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
MW-30A Historical Range***			< 0.50	< 0.50	< 0.50	< 0.50 - 3	< 0.50 - 0.67	< 0.50 - 290	< 0.50	< 0.50 - 0.58	< 0.50	< 0.50 - 1.1	< 0.50 - 1.8	< 0.50	< 0.50	< 0.20 - 110
MW-30B	12/18/08	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	4.1	1.3	< 0.50	< 0.50	< 0.50	26	< 0.50	< 0.50	< 2.0
MW-30B	12/18/08	SPT	< 1	< 1	< 1	< 1	< 1	4.0	1.0	< 1	< 1	< 1	24	< 1	< 1	< 1
MW-30B	01/07/09	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 2.0
MW-30B	03/17/09	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	7.0	2.0	< 0.50	< 0.50	< 0.50	35	< 0.50	< 0.50	28E
MW-30B	03/17/09	SPT	< 1	< 1	< 1	< 1	< 1	5.0	2.0	< 1	< 1	< 1	30	< 1	< 1	< 1E
MW-30B	06/23/09	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	0.91	< 0.50	< 0.50	< 2.0
MW-30B	06/23/09	SPT	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
MW-30B	09/02/09	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	0.96	< 0.50	< 0.50	< 2.0
MW-30B	09/02/09	SPT	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
MW-30B	12/10/09	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	2.1	0.67	< 0.50	< 0.50	< 0.50	12	< 0.50	< 0.50	< 2.0
MW-3000B	12/10/09	FD	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	2.1	0.70	< 0.50	< 0.50	< 0.50	12	< 0.50	< 0.50	< 2.0
MW-30B	12/10/09	SPT	< 1	< 1	< 1	< 1	< 1	1.0	< 1	< 1	< 1	< 1	10	< 1	< 1	< 1
MW-30B	03/30/10	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	1.3	< 0.50	< 0.50	< 0.50	< 0.50	9.4	< 0.50	< 0.50	< 2.0
MW-30B	06/08/10	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	13	4.3	< 0.50	< 0.50	< 0.50	78	< 0.50	< 0.50	< 2.0
MW-30B	09/08/10	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	11	3.4	< 0.50	< 0.50	< 0.50	65	< 0.50	< 0.50	< 2.0
MW-3000B	09/08/10	FD	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	13	3.7	< 0.50	< 0.50	< 0.50	70	< 0.50	< 0.50	< 2.0
MW-30B	12/10/10	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	8.9	2.8	< 0.50	< 0.50	< 0.50	49	< 0.50	< 0.50	< 2.0
MW-30B	06/21/11	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	14	4.3	< 0.50	< 0.50	< 0.50	87	< 0.50	3.5	0.56
MW-30B	08/05/11	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	18 E	5.6	< 0.50	< 0.50	< 0.50	87	< 0.50	4.5	< 0.20
MW-3000B	08/05/11	FD	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	19 E	5.6	< 0.50	< 0.50	< 0.50	87	< 0.50	4.7	< 0.20
MW-30B	08/05/11	SPT	< 1	< 1	< 1	< 1	< 1	10 E	3.0	< 1	< 1	< 1	73	< 1	3.0	< 1
MW-30B	11/02/11	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	13.6	4.2	< 0.50	< 0.50	< 0.50	80.7	< 0.50	3.2	0.40
MW-3000B	11/02/11	FD	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	13.7	4.4	< 0.50	< 0.50	< 0.50	82.6	< 0.50	2.8	0.40
MW-30B	02/09/12	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	14	4.2	< 0.50	< 0.50	< 0.50	75	< 0.50	< 0.50	0.30
MW-30B	02/09/12	SPT	< 1	< 1	< 1	< 1	< 1	8.0	3.0	< 1	< 1	< 1	53	< 1	< 1	< 1
MW-30B	05/10/12	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	12	3.8	< 0.50	< 0.50	< 0.50	63	< 0.50	1.8	0.27
MW-30B	08/10/12	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	21 E	4.4	< 0.50	< 0.50	< 0.50	88	< 0.50	2.0	< 0.20
MW-30B	08/10/12	SPT	< 0.50	< 0.50	< 1.0	< 1.0	< 0.50	11 E	3.7	< 1.0	< 1.0	< 1.0	74	< 1.0	1.8	< 1

**TABLE 4
PREVALENT VOLATILE ORGANIC COMPOUNDS AND 1,4-DIOXANE IN GROUNDWATER**

.....Concentration (micrograms per liter).....

Well Identifier / Sample Identifier	Date Sampled	QA Code	VOLATILE ORGANIC COMPOUNDS (FEDERAL MCL/CALIFORNIA MCL)											Semi-VOCs		
			Benzene (5/1)	Carbon Tetrachloride (5/0.5)	Chloroform (80/80)	1,1-DCA (-/5)	1,2-DCA (-/-)	1,1-DCE (7/6)	cis-1,2-DCE (70/6)	PCE (5/5)	1,1,1-TCA (200/200)	1,1,2-TCA (5/5)	TCE (5/5)	TCFM (-/150)	Toulene (1,000/150)	1,4-DIOXANE (3*/1**)
Regional Groundwater System Monitor and Extraction Wells (cont'd)																
MW-30B	11/06/12	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	14	3.2	< 0.50	< 0.50	< 0.50	68	< 0.50	1.6	< 0.20
MW-30B	01/03/13	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	18	4.5	< 0.50	< 0.50	< 0.50	93	< 0.50	2.5	< 0.20
MW-30B	02/06/13	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	17	4.6	< 0.50	< 0.50	< 0.50	96	< 0.50	4.4	< 0.20
Historical High/Low													HIGH			
MW-30B Historical Range***			< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50 - 21 E	< 0.50 - 5.6	< 0.50	< 0.50	< 0.50	< 0.50 - 78	< 0.50	< 0.50 - 4.5	< 0.20 - 28 E
MW-31	10/13/09	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	74	< 0.50	< 0.50	< 0.50	< 0.50	3.7	< 0.50	< 0.50	< 2.0
MW-3100	10/13/09	FD	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	72	< 0.50	< 0.50	< 0.50	< 0.50	3.6	< 0.50	< 0.50	< 2.0
MW-31	11/04/09	ORG	< 0.50	< 0.50	< 0.50	1.7	< 0.50	290	0.77	< 0.50	< 0.50	< 0.50	13	< 0.50	< 0.50	4.1
MW-3100	11/04/09	FD	< 0.50	< 0.50	< 0.50	1.6	< 0.50	270	0.73	< 0.50	< 0.50	< 0.50	12	< 0.50	< 0.50	3.9
MW-31	11/04/09	SPT	< 1	< 1	< 1	2.0	< 1	270	< 1	< 1	< 1	< 1	11	< 1	< 1	< 4
MW-31	12/10/09	ORG	< 0.50	< 0.50	< 0.50	1.6	< 0.50	240	0.73	< 0.50	< 0.50	< 0.50	10	< 0.50	< 0.50	2.8
MW-3100	12/10/09	FD	< 0.50	< 0.50	< 0.50	1.6	< 0.50	230	0.72	< 0.50	< 0.50	< 0.50	11	< 0.50	< 0.50	2.8
MW-31	12/10/09	SPT	< 1	< 1	< 1	1.0	< 1	190	< 1	< 1	< 1	< 1	8	< 1	< 1	3.0
MW-31	03/03/10	ORG	< 0.50	< 0.50	< 0.50	0.50	< 0.50	90	< 0.50	< 0.50	< 0.50	< 0.50	4.2	< 0.50	< 0.50	< 2.0
MW-31	03/03/10	SPT	< 1	< 1	< 1	< 1	< 1	87	< 1	< 1	< 1	< 1	4.0	< 1	< 1	1.0
MW-31	06/09/10	ORG	< 0.50	< 0.50	< 0.50	3.0	< 0.50	370	1.2	< 0.50	< 0.50	< 0.50	15	< 0.50	< 0.50	5.3
MW-3100	06/09/10	FD	< 0.50	< 0.50	< 0.50	2.9	< 0.50	360	1.1	< 0.50	< 0.50	< 0.50	15	< 0.50	< 0.50	5.2
MW-31	06/09/10	SPT	< 1	< 1	< 1	3.0	< 1	370	< 1	< 1	< 1	< 1	15	< 1	< 1	7.0
MW-31	09/09/10	ORG	< 1.0	< 1.0	< 1.0	3.6	< 1.0	430	1.2	< 1.0	< 1.0	< 1.0	17	< 1.0	< 1.0	5.6
MW-31	09/09/10	SPT	< 1	< 1	< 1	3.0	< 1	430	< 1	< 1	< 1	< 1	15	< 1	< 1	7.0
MW-31	12/08/10	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	68	< 0.50	< 0.50	< 0.50	< 0.50	2.2	< 0.50	< 0.50	< 2.0
MW-31	03/28/11	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	25	< 0.50	< 0.50	< 0.50	< 0.50	2.2	< 0.50	0.57	0.25
MW-3100	03/28/11	FD	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	27	< 0.50	< 0.50	< 0.50	< 0.50	2.3	< 0.50	0.52	0.25
MW-31	06/24/11	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	61	< 0.50	< 0.50	< 0.50	< 0.50	5.1	< 0.50	0.83	0.51
MW-31	08/05/11	ORG	< 0.50	< 0.50	< 0.50	0.69	< 0.50	93	< 0.50	< 0.50	< 0.50	< 0.50	6.9	< 0.50	< 0.50	1.1
MW-31	11/03/11	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	32.6	< 0.50	< 0.50	< 0.50	< 0.50	4.4	< 0.50	0.6	< 2.0
MW-31	11/03/11	SPT	< 1	< 1	< 1	< 1	< 1	28	< 1	< 1	< 1	< 1	3.0	< 1	< 1	< 1
MW-31	02/09/12	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	26	< 0.50	< 0.50	< 0.50	< 0.50	3.8	< 0.50	0.52	< 2.0
MW-31	05/11/12	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	48	< 0.50	< 0.50	< 0.50	< 0.50	5.9	< 0.50	0.75	0.49
MW-31	08/06/12	ORG	< 0.50	< 0.50	< 0.50	1.3	< 0.50	190	0.57	< 0.50	< 0.50	< 0.50	10	< 0.50	< 0.50	0.37
MW-3100	08/06/12	FD	< 0.50	< 0.50	< 0.50	1.2	< 0.50	180	0.61	< 0.50	< 0.50	< 0.50	9.8	< 0.50	< 0.50	0.40
MW-31	11/06/12	ORG	< 0.50	< 0.50	< 0.50	0.81	< 0.50	170	< 0.50	0.81	< 0.50	< 0.50	9.2	< 0.50	< 0.50	2.3
MW-31	02/08/13	ORG	< 0.50	< 0.50	< 0.50	1.8	< 0.50	330	0.87	< 0.50	< 0.50	< 0.50	21	< 0.50	< 0.50	4.9
Historical High/Low													HIGH			
MW-31 Historical Range***			< 0.50	< 0.50	< 0.50	< 0.50 - 3.6	< 0.50	25 - 430	< 0.50 - 1.2	< 0.50	< 0.50	< 0.50	2.2 - 17	< 0.50	< 0.50 - 0.83	< 0.20 - 7
MW-32A	01/04/10	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 2.0
MW-32A	01/04/10	DUP	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 2.0
MW-32A	01/04/10	SPT	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
MW-32A	01/19/10	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 2.0
MW-32A	03/04/10	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 2.0
MW-32A	06/09/10	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 2.0
MW-32A	09/07/10	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 2.0
MW-32A	12/09/10	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 2.0

TABLE 4
PREVALENT VOLATILE ORGANIC COMPOUNDS AND 1,4-DIOXANE IN GROUNDWATER

.....Concentration (micrograms per liter).....

Well Identifier / Sample Identifier	Date Sampled	QA Code	VOLATILE ORGANIC COMPOUNDS (FEDERAL MCL/CALIFORNIA MCL)												Semi-VOCS	
			Benzene (5/1)	Carbon Tetrachloride (5/0.5)	Chloroform (80/80)	1,1-DCA (-/5)	1,2-DCA (-/-)	1,1-DCE (7/6)	cis-1,2-DCE (70/6)	PCE (5/5)	1,1,1-TCA (200/200)	1,1,2-TCA (5/5)	TCE (5/5)	TCFM (-/150)	Toluene (1,000/150)	1,4-DIOXANE (3*/1**)
Regional Groundwater System Monitor and Extraction Wells (cont'd)																
MW-32A	03/29/11	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.20
MW-32A	06/23/11	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	0.57
MW-32A	08/03/11	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.20
MW-32A	11/03/11	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.20
MW-32A	02/07/12	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.20
MW-32A	05/08/12	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.20
MW-32A	08/09/12	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.20
MW-32A	02/05/13	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.20
MW-32A Historical Range***			< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	<0.20 - 0.57
MW-32B	01/04/10	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	31	4.0	< 0.50	< 0.50	< 0.50	55	< 0.50	< 0.50	< 2.0
MW-32B	01/04/10	DUP	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	32	4.0	< 0.50	< 0.50	< 0.50	57	< 0.50	< 0.50	2.0
MW-32B	01/04/10	SPT	< 1	< 1	< 1	< 1	< 1	27	3.0	< 1	< 1	< 1	44	< 1	< 1	3.0
MW-32B	01/19/10	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	38	4.2	< 0.50	< 0.50	< 0.50	59	< 0.50	< 0.50	< 2.0
MW-32B	01/19/10	FD	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	38	4.2	< 0.50	< 0.50	< 0.50	59	< 0.50	< 0.50	< 2.0
MW-32B	03/05/10	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	16	1.9	< 0.50	< 0.50	< 0.50	24	< 0.50	< 0.50	< 2.0
MW-32B	03/05/10	SPT	< 1	< 1	< 1	< 1	< 1	15	2.0	< 1	< 1	< 1	21	< 1	< 1	1.0
MW-32B	06/09/10	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	19	2.3	< 0.50	< 0.50	< 0.50	27	< 0.50	< 0.50	< 2.0
MW-3200B	06/09/10	FD	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	26	3.0	< 0.50	< 0.50	< 0.50	33	< 0.50	< 0.50	< 2.0
MW-32B	09/07/10	ORG	< 0.50	< 0.50	< 0.50	0.50	< 0.50	58	5.7	< 0.50	< 0.50	< 0.50	63	< 0.50	< 0.50	3.0
MW-32B	12/09/10	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	44	4.2	< 0.50	< 0.50	< 0.50	45	< 0.50	< 0.50	< 2.0
MW-3200B	12/09/10	FD	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	46	4.3	< 0.50	< 0.50	< 0.50	46	< 0.50	< 0.50	2.0
MW-32B	12/09/10	SPT	< 1	< 1	< 1	< 1	< 1	27	3	< 1	< 1	< 1	37	< 1	< 1	3
MW-32B	03/29/11	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	42	4.2	< 0.50	< 0.50	< 0.50	46	< 0.50	< 0.50	0.49
MW-32B	06/23/11	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	35	2.4	< 0.50	< 0.50	< 0.50	31	< 0.50	< 0.50	1.6
MW-32B	08/03/11	ORG	< 0.50	< 0.50	< 0.50	0.70	< 0.50	77	5.6	< 0.50	< 0.50	< 0.50	54	< 0.50	< 0.50	2.5
MW-32B	11/03/11	ORG	< 0.50	< 0.50	< 0.50	0.6	< 0.50	69.9	4.3	< 0.50	< 0.50	< 0.50	48.6	< 0.50	< 0.50	2.3
MW-32B	02/07/12	ORG	< 0.50	< 0.50	< 0.50	0.59	< 0.50	73	4.0	< 0.50	< 0.50	< 0.50	44	< 0.50	< 0.50	1.5
MW-3200B	02/07/12	FD	< 0.50	< 0.50	< 0.50	0.61	< 0.50	74	4.0	< 0.50	< 0.50	< 0.50	46	< 0.50	< 0.50	1.6
MW-32B	05/08/12	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	39	2.8	< 0.50	< 0.50	< 0.50	30	< 0.50	< 0.50	1.4
MW-32B	08/09/12	ORG	< 0.50	< 0.50	< 0.50	0.76	< 0.50	120	5.5	< 0.50	< 0.50	< 0.50	62	< 0.50	< 0.50	0.39
MW-32B	11/07/12	ORG	< 0.50	< 0.50	< 0.50	0.92	< 0.50	100	5.4	< 0.50	< 0.50	< 0.50	66	< 0.50	< 0.50	3.4
MW-32B	01/03/13	ORG	< 0.50	< 0.50	< 0.50	0.74	< 0.50	120	4.0	< 0.50	< 0.50	< 0.50	49	< 0.50	< 0.50	0.6
MW-32B	02/05/13	ORG	< 0.50	< 0.50	< 0.50	0.92	< 0.50	100	4.8	< 0.50	< 0.50	< 0.50	53	< 0.50	< 0.50	3.1
MW-3200B	02/05/13	FD	< 0.50	< 0.50	< 0.50	1.0	< 0.50	100	5.0	< 0.50	< 0.50	< 0.50	54	< 0.50	< 0.50	3.0
MW-32B Historical Range***			< 0.50	< 0.50	< 0.50	< 0.50 - 0.92	< 0.50	16 - 120	1.9 - 5.7	< 0.50	< 0.50	< 0.50	24 - 66	< 0.50	< 0.50	0.49 - 3.4
MW-32C	01/05/10	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 2.0
MW-32C	01/05/10	DUP	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 1
MW-32C	01/05/10	SPT	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 2.0
MW-32C	01/19/10	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 2.0
MW-32C	03/05/10	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 2.0
MW-32C	06/10/10	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 2.0
MW-32C	09/07/10	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 2.0
MW-32C	12/09/10	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 2.0

**TABLE 4
PREVALENT VOLATILE ORGANIC COMPOUNDS AND 1,4-DIOXANE IN GROUNDWATER**

.....Concentration (micrograms per liter).....

Well Identifier / Sample Identifier	Date Sampled	QA Code	VOLATILE ORGANIC COMPOUNDS (FEDERAL MCL/CALIFORNIA MCL)											Semi-VOCS		
			Benzene (5/1)	Carbon Tetrachloride (5/0.5)	Chloroform (80/80)	1,1-DCA (--/5)	1,2-DCA (--/--)	1,1-DCE (7/6)	cis-1,2-DCE (70/6)	PCE (5/5)	1,1,1-TCA (200/200)	1,1,2-TCA (5/5)	TCE (5/5)	TCFM (--/150)	Toulene (1,000/150)	1,4-DIOXANE (3*/1**)
Regional Groundwater System Monitor and Extraction Wells (cont'd)																
MW-32C	03/29/11	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.20
MW-32C	06/23/11	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	1.0
MW-32C	08/03/11	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.20
MW-32C	11/03/11	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.20
MW-32C	02/07/12	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.20
MW-32C	05/08/12	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	0.56	< 0.50	< 0.50	< 0.50	< 0.50	< 0.20
MW-32C	08/09/12	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.20
MW-32C	01/03/13	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.20
MW-32C	02/05/13	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.20
MW-32C Historical Range***			< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50 - 0.56	< 0.50	< 0.50	< 0.50	< 0.50	< 0.20 - 1.0
MW-33	07/16/10	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	5.6	< 0.50	< 0.50	< 0.50	< 0.50	1.2	< 0.50	1.4	< 2.0
MW-3300	07/16/10	FD	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	5.8	< 0.50	< 0.50	< 0.50	< 0.50	1.3	< 0.50	1.1	< 2.0
MW-33	07/16/10	SPT	< 1	< 1	< 1	< 1	< 1	4.0	< 1	< 1	< 1	< 1	1.0	< 1	1.0	< 1
MW-33	07/30/10	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	4.4	< 0.50	< 0.50	< 0.50	< 0.50	0.55	< 0.50	0.61	< 2.0
MW-33	09/09/10	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	5.3	< 0.50	< 0.50	< 0.50	< 0.50	0.69	< 0.50	0.65	< 2.0
MW-3300	09/09/10	FD	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	5.4	< 0.50	< 0.50	< 0.50	< 0.50	0.74	< 0.50	0.55	< 2.0
MW-33	12/09/10	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	12	< 0.50	< 0.50	< 0.50	< 0.50	1.6	< 0.50	< 0.50	< 2.0
MW-3300	12/09/10	FD	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	12	< 0.50	< 0.50	< 0.50	< 0.50	1.6	< 0.50	< 0.50	< 2.0
MW-33	03/28/11	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	8.0	< 0.50	< 0.50	< 0.50	< 0.50	1.4	< 0.50	< 0.50	< 0.20
MW-33	06/22/11	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	6.4	< 0.50	< 0.50	< 0.50	< 0.50	1.4	< 0.50	< 0.50	< 0.20
MW-33	08/04/11	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	5.7	< 0.50	< 0.50	< 0.50	< 0.50	1.3	< 0.50	< 0.50	< 0.20
MW-33	11/02/11	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	1.7	< 0.50	< 0.50	< 0.50	< 0.50	0.50	< 0.50	< 0.50	< 0.20
MW-33	02/08/12	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	3.9	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.20
MW-33	05/08/12	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	4.2	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.20
MW-33	08/09/12	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	5.2	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.20
MW-33	11/06/12	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	4.6	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.20
MW-33	01/04/13	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	6.5	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.20
MW-33	02/06/13	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	5.0	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.20
MW-33 Historical Range***			< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	1.7 - 12	< 0.50	< 0.50	< 0.50	< 0.50	0.5 - 1.6	< 0.50	< 0.50 - 1.4	< 0.20 - < 2.0
MW-34A	02/25/11	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	1.6	1.7	< 2.0
MW-3400A	02/25/11	FD	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	1.8	2.0	< 2.0
MW-34A	02/25/11	SPT	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	1.0	< 1	
MW-34A	03/10/11	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	1.4	1.4	< 0.20
MW-34A	03/29/11	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	1.0	2.8	< 0.20
MW-34A	06/21/11	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	1.5	< 0.50	< 0.20
MW-34A	08/04/11	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	0.63	0.68	< 0.20
MW-34A	11/02/11	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.20
MW-34A	02/08/12	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	0.75	< 0.50	< 0.20
MW-34A	05/10/12	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	1.1	< 0.50	< 0.20
MW-34A	08/08/12	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	0.77	< 0.50	< 0.20
MW-34A	11/06/12	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.20

TABLE 4
PREVALENT VOLATILE ORGANIC COMPOUNDS AND 1,4-DIOXANE IN GROUNDWATER

.....Concentration (micrograms per liter).....

Well Identifier / Sample Identifier	Date Sampled	QA Code	VOLATILE ORGANIC COMPOUNDS (FEDERAL MCL/CALIFORNIA MCL)											Semi-VOCS			
			Benzene (5/1)	Carbon Tetrachloride (5/0.5)	Chloroform (80/80)	1,1-DCA (-/5)	1,2-DCA (-/-)	1,1-DCE (7/6)	cis-1,2-DCE (70/6)	PCE (5/5)	1,1,1-TCA (200/200)	1,1,2-TCA (5/5)	TCE (5/5)	TCFM (-/150)	Toluene (1,000/150)	1,4-DIOXANE (3*/1**)	
Regional Groundwater System Monitor and Extraction Wells (cont'd)																	
MW-34A	02/05/13	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	0.70	< 0.50	< 0.20
MW-34A Historical Range***			< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	<0.50- 1.6	< 0.50 - 2.8	< 0.20 - < 2.0
MW-34B	02/25/11	ORG	< 1.0	< 1.0	< 1.0	5.1	< 1.0	560	< 1.0	< 1.0	< 1.0	1.3	1.6	< 1.0	< 1.0	75	
MW-3400B	02/25/11	FD	< 1.0	< 1.0	< 1.0	6.2	< 1.0	650	< 1.0	1.1	< 1.0	1.5	1.9	< 1.0	< 1.0	61	
MW-34B	02/25/11	SPT	< 1	< 1	< 1	4.0	< 1	590	< 1	< 1	< 1	1.0	1.0	< 1	< 1	78	
MW-34B	03/10/11	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	20 E	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	2.6	4.1
MW-3400B	03/10/11	FD	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	25 E	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	2.7	4.3
MW-34B	03/10/11	SPT	< 1	< 1	< 1	< 1	< 1	12 E	< 1	< 1	< 1	< 1	< 1	< 1	< 1	2.0	6.0
MW-34B-1 (c)	03/15/11	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	28 E	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	2.0	4.9
MW-34B-1 (c)	03/15/11	SPT	< 1	< 1	< 1	< 1	< 1	18 E	< 1	< 1	< 1	< 1	< 1	< 1	< 1	1.0	7.0
MW-34B-2 (d)	03/15/11	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	23	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	1.4	NA
MW-34B-3 (e)	03/15/11	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	30	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	0.60	NA
MW-34B-4 (f)	03/15/11	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	31	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	0.57	5.0
MW-34B	03/29/11	ORG	< 0.50	< 0.50	< 0.50	0.51	< 0.50	27 E	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	1.6	9.4 E
MW-3400B	03/29/11	FD	< 0.50	< 0.50	< 0.50	0.53	< 0.50	37 E	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	1.8	9.4 E
MW-34B	03/29/11	SPT	< 1	< 1	< 1	< 1	< 1	31 E	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	13 E
MW-34B	06/21/11	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	21 E	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	1.8	8.1
MW-34B	06/21/11	SPT	< 1	< 1	< 1	< 1	< 1	10 E	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	11
MW-34B	08/04/11	ORG	< 0.50	< 0.50	< 0.50	4.8	0.71	410	< 0.50	< 0.50	< 0.50	1.2	0.65	< 0.50	< 0.50	1.5	84 E
MW-34B	11/02/11	ORG	< 0.50	< 0.50	0.50	6.3	1.2	502	< 0.50	< 0.50	< 0.50	2.1	0.70	< 0.50	< 0.50	196	
MW-34B	11/02/11	SPT	< 1	< 1	< 1	4.0	< 1	340	< 1	< 1	1.0	< 1	< 1	< 1	< 1	< 1	220
MW-34B	02/08/12	ORG	< 2.5	< 2.5	< 2.5	6.0	< 2.5	550 E	< 2.5	< 2.5	< 2.5	< 2.5	< 2.5	< 2.5	< 2.5	< 2.5	64 E
MW-3400B	02/08/12	FD	< 2.5	< 2.5	< 2.5	6.0	< 2.5	570 E	< 2.5	< 2.5	< 2.5	< 2.5	< 2.5	< 2.5	< 2.5	< 2.5	66 E
MW-34B	02/08/12	SPT	< 1	< 1	< 1	3.0	< 1	250 E	< 1	< 1	< 1	1.0	< 1	< 1	< 1	< 1	190 E
MW-34B	05/10/12	ORG	< 0.50	< 0.50	< 0.50	2.3	< 0.50	120	< 0.50	< 0.50	< 0.50	0.60	< 0.50	< 0.50	< 0.50	< 0.50	58
MW-34B	05/10/12	SPT ^E	< 1	< 1	< 1	1.0	< 1	120	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	63
MW-34B	05/10/12	SPT ^C	< 0.50	< 0.50	< 1.0	1.6	< 0.50	110	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	62
MW-34B	08/10/12	ORG	< 5.0	< 5.0	< 5.0	9.8	< 5.0	1,100	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	250
MW-34B	11/07/12	ORG	<1.0	<1.0	<1.0	7.9	1.7	590 E	<1.0	<1.0	<1.0	2.6	1.4	<1.0	<1.0	<1.0	260
MW-34B	11/07/12	SPT	<0.50	<0.50	<1.0	6.4	1.5	180 E	<1.0	<1.0	<1.0	3.0	1.4	<1.0	<1.0	<1.0	320
MW-34B	01/03/13	ORG	<1.0	<1.0	<1.0	5.3	1.1	580	<1.0	<1.0	<1.0	1.8	< 1.0	<1.0	<1.0	<1.0	68
MW-34B	01/03/13	FD	<1.0	<1.0	<1.0	5.4	1.1	590	<1.0	<1.0	<1.0	1.7	< 1.0	<1.0	<1.0	<1.0	74
MW-34B	02/06/13	ORG	<1.0	<1.0	<1.0	5.5	1.4	580	<1.0	<1.0	<1.0	1.7	< 1.0	<1.0	<1.0	<1.0	180
MW-34B	02/06/13	FD	<1.0	<1.0	<1.0	5.6	1.4	550	<1.0	<1.0	<1.0	1.7	< 1.0	<1.0	<1.0	<1.0	170
MW-34B	02/06/13	SPT	<0.50	<0.50	<1.0	4.6	1.0	440	<1.0	<1.0	<1.0	2.0	< 1.0	<1.0	<1.0	<1.0	250
MW-34B Historical Range***			< 0.50 - < 1.0	< 0.50 - < 1.0	< 0.50 - < 1.0	< 0.50 - 9.8	< 0.50 - 1.7	20 - 1,100	< 0.50 - < 1.0	< 0.50 - < 1.0	< 0.50 - < 1.0	< 0.50 - 2.6	< 0.50 - 1.6	< 0.50 - < 1.0	< 0.50 - 1.8	4.1 - 250	
MW-34C	02/25/11	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	3.1	< 2.0
MW-3400C	02/25/11	FD	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	3.7	< 2.0
MW-34C	02/25/11	SPT	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
MW-34C	03/10/11	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	9.0	< 0.20
MW-34C	03/29/11	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	3.1	< 0.20
MW-34C	03/29/11	SPT	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	3	< 1

TABLE 4
PREVALENT VOLATILE ORGANIC COMPOUNDS AND 1,4-DIOXANE IN GROUNDWATER

.....Concentration (micrograms per liter).....

Well Identifier / Sample Identifier	Date Sampled	QA Code	VOLATILE ORGANIC COMPOUNDS (FEDERAL MCL/CALIFORNIA MCL)												Semi-VOCs		
			Benzene (5/1)	Carbon Tetrachloride (5/0.5)	Chloroform (80/80)	1,1-DCA (--/5)	1,2-DCA (--/--)	1,1-DCE (7/6)	cis-1,2-DCE (70/6)	PCE (5/5)	1,1,1-TCA (200/200)	1,1,2-TCA (5/5)	TCE (5/5)	TCFM (--/150)	Toulene (1,000/150)	1,4-DIOXANE (3*/1**)	
Regional Groundwater System Monitor and Extraction Wells (cont'd)																	
MW-34C	06/21/11	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	2.1	< 0.20
MW-34C	08/04/11	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	9.6	< 0.20
MW-34C	11/02/11	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.20
MW-34C	02/08/12	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.20
MW-34C	05/10/12	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.20
MW-34C	08/08/12	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.20
MW-34C	11/06/12	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.20
MW-34C	01/03/13	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.20
MW-34C	02/06/13	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.20
MW-34C Historical Range***			< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50 - 9.6	< 0.20 - < 2.0
MW-35A	01/19/11	ORG	< 0.50	< 0.50	67	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 2.0
MW-3500A	01/19/11	FD	< 0.50	< 0.50	67	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 2.0
MW-35A	01/19/11	SPT	< 1	< 1	50	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
MW-35A	02/03/11	ORG	< 0.50	< 0.50	46 E	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 2.0
MW-3500A	02/03/11	FD	< 0.50	< 0.50	49 E	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 2.0
MW-35A	02/03/11	SPT	< 1	< 1	33 E	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
MW-35A	03/28/11	ORG	< 0.50	< 0.50	20	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.20
MW-35A	06/22/11	ORG	< 0.50	< 0.50	11	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.20
MW-35A	08/04/11	ORG	< 0.50	< 0.50	14	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.20
MW-35A	11/01/11	ORG	< 0.50	< 0.50	6.5	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.20
MW-35A	02/08/12	ORG	< 0.50	< 0.50	4.4	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.20
MW-35A	05/09/12	ORG	< 0.50	< 0.50	2.1	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.20
MW-35A	08/07/12	ORG	< 0.50	< 0.50	1.5	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.20
MW-35A	11/06/12	ORG	< 0.50	< 0.50	0.72	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.20
MW-35A	02/06/13	ORG	< 0.50	< 0.50	0.74	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.20
MW-35A Historical Range***			< 0.50	< 0.50	0.72 - 67	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.20 - < 2.0
MW-35B	01/19/11	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 2.0
MW-3500B	01/19/11	FD	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 2.0
MW-35B	01/19/11	SPT	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
MW-35B	02/03/11	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 2.0
MW-3500B	02/03/11	FD	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 2.0
MW-35B	02/03/11	SPT	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
MW-35B	03/28/11	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.20
MW-35B	06/22/11	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.20
MW-35B	08/04/11	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.20
MW-35B	11/01/11	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.20
MW-35B	02/08/12	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.20
MW-35B	05/09/12	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.20
MW-35B	08/07/12	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.20
MW-35B	11/06/12	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.20
MW-35B	02/05/13	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.20
MW-35B Historical Range***			< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.20 - < 2.0

TABLE 4
PREVALENT VOLATILE ORGANIC COMPOUNDS AND 1,4-DIOXANE IN GROUNDWATER

.....Concentration (micrograms per liter).....

Well Identifier / Sample Identifier	Date Sampled	QA Code	VOLATILE ORGANIC COMPOUNDS (FEDERAL MCL/CALIFORNIA MCL)											Semi-VOCS		
			Benzene (5/1)	Carbon Tetrachloride (5/0.5)	Chloroform (80/80)	1,1-DCA (-/5)	1,2-DCA (-/-)	1,1-DCE (7/6)	cis-1,2-DCE (70/6)	PCE (5/5)	1,1,1-TCA (200/200)	1,1,2-TCA (5/5)	TCE (5/5)	TCFM (-/150)	Toluene (1,000/150)	1,4-DIOXANE (3*/1**)
Regional Groundwater System Monitor and Extraction Wells (cont'd)																
MW-35C	01/19/11	ORG	< 0.50	< 0.50	120	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 2.0
MW-3500C	01/19/11	FD	< 0.50	< 0.50	120	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 2.0
MW-35C	01/19/11	SPT	< 1	< 1	87	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
MW-35C	02/03/11	ORG	< 0.50	< 0.50	0.59	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 2.0
MW-3500C	02/03/11	FD	< 0.50	< 0.50	0.67	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 2.0
MW-35C	02/03/11	SPT	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
MW-35C	03/28/11	ORG	< 0.50	< 0.50	1.4	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.20
MW-3500C	03/28/11	FD	< 0.50	< 0.50	1.4	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.20
MW-35C	06/22/11	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.20
MW-35C	08/04/11	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.20
MW-35C	11/01/11	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.20
MW-35C	02/08/12	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.20
MW-35C	05/09/12	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.20
MW-35C	08/07/12	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.20
MW-35C	11/06/12	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.20
MW-35C	02/06/13	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.20
MW-35C Historical Range***			< 0.50	< 0.50	< 0.50 - 120	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.20 - < 2.0
MW-36	01/13/12	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	4.0	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	5.9	<0.20
MW-3600	01/13/12	FD	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	3.6	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	7.0	<0.20
MW-36	01/13/12	SPT	< 1	< 1	< 1	< 1	< 1	2.0	< 1	< 1	< 1	< 1	< 1	< 1	4.0	< 1
MW-36	01/26/12	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	5.2	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	4.3	<0.20
MW-3600	01/26/12	FD	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	5.0	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	8.5	<0.20
MW-36	01/26/12	SPT	< 1	< 1	< 1	< 1	< 1	3.0	< 1	< 1	< 1	< 1	< 1	< 1	3.0	< 1
MW-36	02/08/12	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	2.9	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	4.2	<0.20
MW-3600	02/08/12	FD	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	3.3	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	5.1	<0.20
MW-36	02/08/12	SPT	< 1	< 1	< 1	< 1	< 1	2.0	< 1	< 1	< 1	< 1	< 1	< 1	3.0	< 1
MW-36	05/10/12	ORG	< 0.50	< 0.50	< 0.50	0.52	< 0.50	45	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	1.1	2.8
MW-36	08/10/12	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	19 E	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.20
MW-3600	08/10/12	FD	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	19 E	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.20
MW-36	08/10/12	SPT	< 0.50	< 0.50	< 1.0	< 1.0	< 0.50	9.9 E	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	1.2	< 1.1
MW-36	11/07/12	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	27	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	0.88	1.4
MW-3600	11/07/12	FD	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	25	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	0.59	1.4
MW-36	01/04/13	ORG	< 0.50	< 0.50	< 0.50	1.5	< 0.50	140	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	1.7
MW-36	02/07/13	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	28	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	1.8
MW-3600	02/07/13	FD	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	26	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	1.5
MW-36 Historical Range***			< 0.50	< 0.50	< 0.50	< 0.50 - 1.5	< 0.50	2.9 - 140	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50 - 5.9	<0.20 - 2.8
MW-37	10/26/12	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	0.73	<2.0
MW-3700	10/26/12	FD	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	1.3	<2.0
MW-37	10/26/12	SPT	< 0.50	< 0.50	< 1.0	< 1.0	< 0.50	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	1.4	<1.0
MW-37	11/07/12	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.20
MW-3700	11/07/12	FD	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.20

TABLE 4
PREVALENT VOLATILE ORGANIC COMPOUNDS AND 1,4-DIOXANE IN GROUNDWATER

.....Concentration (micrograms per liter).....

Well Identifier / Sample Identifier	Date Sampled	QA Code	VOLATILE ORGANIC COMPOUNDS (FEDERAL MCL/CALIFORNIA MCL)													Semi-VOCS
			Benzene (5/1)	Carbon Tetrachloride (5/0.5)	Chloroform (80/80)	1,1-DCA (--/5)	1,2-DCA (--/--)	1,1-DCE (7/6)	cis-1,2-DCE (70/6)	PCE (5/5)	1,1,1-TCA (200/200)	1,1,2-TCA (5/5)	TCE (5/5)	TCFM (--/150)	Toulene (1,000/150)	1,4-DIOXANE (3*/1**)
Regional Groundwater System Monitor and Extraction Wells (cont'd)																
MW-37	11/07/12	SPT	< 0.50	< 0.50	< 1.0	< 1.0	< 0.50	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 10	< 1.0	<1.0
MW-37	01/03/13	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	0.66	< 0.50	< 0.20
MW-37	01/03/13	SPT	< 0.50	< 0.50	< 1.0	< 1.0	< 0.50	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 10	< 1.0	<1.0	
MW-37	02/06/13	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.20	
MW-37	02/06/13	SPT	< 0.50	< 0.50	< 1.0	< 1.0	< 0.50	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 10	< 1.0	<1.0	
MW-37 Historical Range***			< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50 - 0.66	< 0.50	<0.50 - 1.4	<0.20 - <2.0
EW-01	6/22/2005	ORG	< 0.50	< 0.50	0.67	10	2.6	750	< 0.50	2.5	< 0.50	6.5	2.1	< 0.50	< 0.50	140 E
EW-100	6/22/2005	FD	< 0.50	< 0.50	0.65	11	2.6	740	< 0.50	2.5	< 0.50	6.8	2.2	< 0.50	< 0.50	150 E
EW-01	6/22/2005	SPT	< 1.0	< 1.0	< 1.0	10	2.5	600	< 1.0	2.2	< 1.0	6.3	1.9	< 1.0	< 1.0	600 E
EW-01	09/22/05	ORG	< 0.50	< 0.50	< 0.50	3.0	< 0.50	210 E	< 0.50	0.59	< 0.50	1.5	0.58	< 0.50	< 0.50	25 E
EW-100	09/22/05	FD	< 0.50	< 0.50	< 0.50	3.1	< 0.50	77 E	< 0.50	0.53	< 0.50	1.5	0.53	< 0.50	< 0.50	24 E
EW-01	09/22/05	SPT	< 0.50	< 0.50	< 0.50	2.0	< 0.50	120 E	< 0.50	0.5	< 0.50	1.0	< 0.50	< 0.50	< 0.50	73 E
EW-01	12/19/05	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	5.1
EW-100	12/19/05	FD	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	0.74	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	4.5
EW-01	03/22/06	ORG	< 0.50	< 0.50	< 0.50	1.9	< 0.50	1.0	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	83
EW-100	03/22/06	FD	< 0.50	< 0.50	< 0.50	2.0	0.90	< 0.50	< 0.50	< 0.50	< 0.50	1.2	< 0.50	< 0.50	< 0.50	78
EW-01	06/21/06	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	4.2	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	25
EW-100	06/21/06	FD	< 0.50	< 0.50	< 0.50	0.51	< 0.50	5.1	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	27
EW-01	12/11/06	ORG	2.0	< 0.50	< 0.50	1.6	< 0.50	4.3 E	< 0.50	< 0.50	< 0.50	0.80	< 0.50	< 0.50	< 0.50	42
EW-01	12/11/06	SPT	2.0	< 0.50	< 0.50	1.0	< 0.50	68 E	< 0.50	< 0.50	< 0.50	0.60	< 0.50	< 0.50	0.5 U	48
EW-01	03/14/07	ORG	< 0.50	< 0.50	< 0.50	1.2	< 0.50	90	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	33
EW-100	03/14/07	FD	< 0.50	< 0.50	< 0.50	1.1	< 0.50	90	< 0.50	< 0.50	< 0.50	0.51	< 0.50	< 0.50	< 0.50	30
EW-01	06/22/07	ORG	< 0.50	< 0.50	0.57	< 0.50	< 0.50	24	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	15
EW-01	09/27/07	ORG	< 0.50	< 0.50	< 0.50	3.8	0.90	< 0.50	< 0.50	0.73	< 0.50	2.1	0.56	< 0.50	< 0.50	110
EW-01	12/13/07	ORG	< 0.50	0.53	1.2	16	4.0	820	0.52	3.3	< 0.50	10	2.8	< 0.50	< 0.50	660
EW-100	12/13/07	FD	< 0.50	0.55	1.1	16	4.2	710	< 0.50	3.4	< 0.50	9.7	2.7	< 0.50	< 0.50	650
EW-01	12/13/07	SPT	< 0.50	< 0.50	1.0	14	3.0	740	< 0.50	3.0	< 0.50	8.7	3.0	< 0.50	< 0.50	770
EW-01	06/25/08	ORG	< 0.50	< 0.50	0.61	9.5	2.2	1,600 E	< 0.50	2.6	< 0.50	5.7	2.0	< 0.50	4.6	710
EW-100	06/25/08	FD	< 1.0	< 1.0	< 1.0	8.8	2.2	840 E	1.1	2.6	< 1.0	5.7	1.8	< 1.0	2.8	800
EW-01	06/25/08	SPT	< 5	< 5	< 5	8.0	< 5	620 E	< 5	< 5	< 5	< 5	< 5	< 5	< 5	530
EW-01	07/08/08	ORG	< 2.5	< 2.5	< 2.5	8.5	< 2.5	720	< 2.5	2.6	< 2.5	5.5	< 2.5	< 2.5	< 2.5	490
EW-01	07/09/08	ORG	< 0.50	< 0.50	0.76	9.2	1.9	820	< 0.50	2.2	< 0.50	5.0	1.9	< 0.50	< 0.50	410
EW-01	07/10/08	ORG	< 0.50	< 0.50	< 0.50	6.1	1.5	580	< 0.50	2.1	< 0.50	3.2	1.3	< 0.50	< 0.50	340
EW-01	07/15/08	ORG	< 1.0	< 1.0	< 1.0	7.0	1.8	630	< 1.0	2.3	< 1.0	4.6	1.4	< 1.0	< 1.0	350
EW-01	07/16/08	ORG	< 1.0	< 1.0	< 1.0	7.2	1.7	1,000	< 1.0	1.8	< 1.0	3.9	1.9	< 1.0	< 1.0	320
EW-01	07/23/08	ORG	< 1.0	< 1.0	< 1.0	5.2	1.2	520	< 1.0	2.3	< 1.0	2.6	1.2	< 1.0	< 1.0	190
EW-01	07/30/08	ORG	< 1.0	< 1.0	< 1.0	5.5	1.1	360	< 1.0	1.2	< 1.0	2.6	1.0	< 1.0	< 1.0	200
EW-01	08/06/08	ORG	< 1.0	< 1.0	< 1.0	4.2	< 1.0	340	< 1.0	< 1.0	< 1.0	2.0	< 1.0	< 1.0	< 1.0	190
EW-01	08/25/08	ORG	< 0.50	< 0.50	< 0.50	3.0	0.62	230	< 0.50	0.84	< 0.50	1.5	0.65	< 0.50	< 0.50	130
EW-01	09/24/08	ORG	< 0.50	< 0.50	< 0.50	2.4	0.57	180	< 0.50	0.94	< 0.50	1.2	1.3	< 0.50	< 0.50	74
EW-01	10/22/08	ORG	< 0.50	< 0.50	< 0.50	2.7	0.5	200	< 0.50	0.66	< 0.50	1.2	0.54	< 0.50	< 0.50	120
EW-01	11/26/08	ORG	< 0.50	< 0.50	< 0.50	2.9	0.65	190	< 0.50	0.63	< 0.50	1.5	0.51	< 0.50	< 0.50	110
EW-01	02/25/09	ORG	< 0.50	< 0.50	< 0.50	4.8	0.93	360	< 0.50	< 0.50	< 0.50	3.0	1.0	< 0.50	< 0.50	160
EW-01	03/18/09	ORG	< 0.50	< 0.50	< 0.50	1.8	< 0.50	160	< 0.50	< 0.50	< 0.50	1.2	< 0.50	< 0.50	< 0.50	70

**TABLE 4
PREVALENT VOLATILE ORGANIC COMPOUNDS AND 1,4-DIOXANE IN GROUNDWATER**

.....Concentration (micrograms per liter).....

Well Identifier / Sample Identifier	Date Sampled	QA Code	VOLATILE ORGANIC COMPOUNDS (FEDERAL MCL/CALIFORNIA MCL)											Semi-VOCS		
			Benzene (5/1)	Carbon Tetrachloride (5/0.5)	Chloroform (80/80)	1,1-DCA (-/5)	1,2-DCA (-/-)	1,1-DCE (7/6)	cis-1,2-DCE (70/6)	PCE (5/5)	1,1,1-TCA (200/200)	1,1,2-TCA (5/5)	TCE (5/5)	TCFM (-/150)	Toulene (1,000/150)	1,4-DIOXANE (3*/1**)
Regional Groundwater System Monitor and Extraction Wells (cont'd)																
EW-01	04/29/09	ORG	< 0.50	< 0.50	< 0.50	1.6	< 0.50	150	< 0.50	0.60	< 0.50	0.86	< 0.50	< 0.50	< 0.50	80
EW-01	05/27/09	ORG	< 0.50	< 0.50	< 0.50	3.4	0.76	320	< 0.50	0.79	< 0.50	1.5	0.90	< 0.50	< 0.50	150
EW-01	06/29/09	ORG	< 0.50	< 0.50	< 0.50	2.2	0.53	200	< 0.50	0.76	< 0.50	1.2	0.58	< 0.50	< 0.50	120
EW-01	07/22/09	ORG	< 0.50	< 0.50	< 0.50	3.2	0.64	260	< 0.50	0.66	< 0.50	1.3	0.62	< 0.50	< 0.50	120
EW-01	08/14/09	ORG	< 0.50	< 0.50	< 0.50	2.2	< 0.50	190	< 0.50	< 0.50	< 0.50	0.98	< 0.50	< 0.50	< 0.50	81
EW-01	09/11/09	ORG	< 0.50	< 0.50	< 0.50	3.1	0.70	280	< 0.50	0.66	< 0.50	1.3	0.60	< 0.50	< 0.50	120
EW-01	10/08/09	ORG	< 0.50	< 0.50	< 0.50	2.0	< 0.50	150	< 0.50	< 0.50	< 0.50	0.92	< 0.50	< 0.50	< 0.50	87
EW-01	12/09/09	ORG	< 0.50	< 0.50	0.65	9.2	2.1	720	< 0.50	2.0	< 0.50	5.1	1.7	< 0.50	< 0.50	490
EW-01	03/05/10	ORG	< 1.0	< 1.0	< 1.0	6.7	1.6	500	< 1.0	1.9	< 1.0	3.2	1.6	< 1.0	< 1.0	370
EW-01	06/11/10	ORG	< 1.0	< 1.0	< 1.0	9.7	1.9	720	< 1.0	1.9	< 1.0	4.7	1.6	< 1.0	< 1.0	400
EW-01	09/08/10	ORG	< 1.0	< 1.0	< 1.0	10	2.4	720	< 1.0	2.0	< 1.0	4.7	2.0	< 1.0	< 1.0	370
EW-01	12/07/10	ORG	< 1.0	< 1.0	< 1.0	7.5	1.4	600 E	< 1.0	1.4	< 1.0	2.7	1.2	< 1.0	< 1.0	220
EW-01	12/07/10	SPT	< 5	< 5	< 5	< 5	< 5	340 E	< 5	< 5	< 5	< 5	< 5	< 5	< 5	290
EW-01	03/24/11	ORG	< 0.50	< 0.50	< 0.50	2.6	0.59	200	< 0.50	0.82	< 0.50	1.3	0.54	< 0.50	< 0.50	64
EW-01	06/23/11	ORG	< 0.50	< 0.50	< 0.50	2.1	< 0.50	180	< 0.50	0.50	< 0.50	0.83	0.52	< 0.50	< 0.50	59
EW-100	06/23/11	FD	< 0.50	< 0.50	< 0.50	2.0	< 0.50	180	< 0.50	< 0.50	< 0.50	0.96	< 0.50	< 0.50	< 0.50	68
EW-01	08/02/11	ORG	< 0.50	< 0.50	< 0.50	3.1	0.61	370	< 0.50	0.67	< 0.50	1.4	0.55	< 0.50	< 0.50	80 E
EW-01	11/01/11	ORG	< 0.50	< 0.50	< 0.50	1.6	< 0.50	82	< 0.50	< 0.50	< 0.50	0.64	< 0.50	< 0.50	< 0.50	54
EW-01	02/06/12	ORG	< 0.50	< 0.50	< 0.50	0.85	< 0.50	59	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	11
EW-01	05/07/12	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	18	< 0.50	0.78	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	7.0
EW-01	08/06/12	ORG	1	< 0.50	< 0.50	1.2	< 0.50	94	< 0.50	< 0.50	< 0.50	0.56	< 0.50	< 0.50	< 0.50	42 E
EW-0100	08/06/12	FD	< 0.50	< 0.50	< 0.50	1.2	< 0.50	99	< 0.50	< 0.50	< 0.50	0.55	< 0.50	< 0.50	< 0.50	44 E
EW-01	08/06/12	SPT	< 0.50	< 0.50	< 1.0	< 1.0	< 0.50	64	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	65 E
EW-01	11/05/12	ORG	< 0.50	< 0.50	< 0.50	1.8	< 0.50	190	< 0.50	< 0.50	< 0.50	0.75	< 0.50	< 0.50	< 0.50	83
EW-01	02/04/13	ORG	< 0.50	< 0.50	< 0.50	1.9	< 0.50	130	< 0.50	< 0.50	< 0.50	0.67	< 0.50	< 0.50	< 0.50	58
EW-01 Historical Range***			< 0.50 - 2	< 0.50 - 0.55	< 0.50 - 1.2	< 0.50 - 16	< 0.50 - 4.2	< 0.50 - 1,600 E	< 0.50 - 0.52	< 0.50 - 3.3	< 0.50 - < 2.5	< 0.50 - 10	< 0.50 - 2.8	< 0.50 - < 5.0	< 0.50 - 4.6	5.1 - 710
EW-02	10/30/09	ORG	< 0.50	< 0.50	< 0.50	0.70	< 0.50	52	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	0.85	24
EW-200	10/30/09	FD	< 0.50	< 0.50	< 0.50	0.73	< 0.50	55	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	0.78	23
EW-02	03/22/10	ORG	< 0.50	< 0.50	< 0.50	0.92	< 0.50	82	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	22
EW-02	03/23/10	ORG	< 0.50	< 0.50	< 0.50	0.94	< 0.50	82	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	24
EW-02	03/24/10	ORG	< 0.50	< 0.50	< 0.50	0.85	< 0.50	74	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	25
EW-02	03/25/10	ORG	< 0.50	< 0.50	< 0.50	0.79	< 0.50	70	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	22
EW-02	03/26/10	ORG	< 0.50	< 0.50	< 0.50	0.83	< 0.50	76	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	19
EW-02	04/01/10	ORG	< 0.50	< 0.50	< 0.50	0.88	< 0.50	81	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	29
EW-02	04/09/10	ORG	< 0.50	< 0.50	< 0.50	0.90	< 0.50	85	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	31
EW-02	04/13/10	ORG	< 0.50	< 0.50	< 0.50	1.4	< 0.50	120	< 0.50	< 0.50	< 0.50	0.59	< 0.50	< 0.50	< 0.50	43
EW-02	04/23/10	ORG	< 0.50	< 0.50	< 0.50	1.0	< 0.50	91	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	35
EW-02	05/25/10	ORG	< 0.50	< 0.50	< 0.50	1.1	< 0.50	100	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	38
EW-02	06/10/10	ORG	< 0.50	< 0.50	< 0.50	1.4	< 0.50	120	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 5.0	< 5.0	40
EW-02	07/08/10	ORG	< 0.50	< 0.50	< 0.50	1.5	< 0.50	160	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	48
EW-02	08/02/10	ORG	< 0.50	< 0.50	< 0.50	1.3	< 0.50	150	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	42
EW-02	09/02/10	ORG	< 0.50	< 0.50	< 0.50	1.4	< 0.50	160	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	42
EW-02	10/07/10	ORG	< 0.50	< 0.50	< 0.50	1.4	< 0.50	140	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	39
EW-02	11/11/10	ORG	< 0.50	< 0.50	< 0.50	1.1	< 0.50	140	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	33
EW-02	12/07/10	ORG	< 0.50	< 0.50	< 0.50	1.0	< 0.50	130	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	29

**TABLE 4
PREVALENT VOLATILE ORGANIC COMPOUNDS AND 1,4-DIOXANE IN GROUNDWATER**

.....Concentration (micrograms per liter).....

Well Identifier / Sample Identifier	Date Sampled	QA Code	VOLATILE ORGANIC COMPOUNDS (FEDERAL MCL/CALIFORNIA MCL)											Semi-VOCs			
			Benzene (5/1)	Carbon Tetrachloride (5/0.5)	Chloroform (80/80)	1,1-DCA (-/5)	1,2-DCA (-/-)	1,1-DCE (7/6)	cis-1,2-DCE (70/6)	PCE (5/5)	1,1,1-TCA (200/200)	1,1,2-TCA (5/5)	TCE (5/5)	TCFM (-/150)	Toulene (1,000/150)	1,4-DIOXANE (3*/1**)	
Regional Groundwater System Monitor and Extraction Wells (cont'd)																	
EW-02	01/13/11	ORG	< 0.50	< 0.50	< 0.50	1.0	< 0.50	99	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	29
EW-02	02/03/11	ORG	< 0.50	< 0.50	< 0.50	0.88	< 0.50	83	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	22
EW-02	03/02/11	ORG	< 0.50	< 0.50	< 0.50	0.71	< 0.50	77	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	16
EW-02	04/01/11	ORG	< 0.50	< 0.50	< 0.50	0.76	< 0.50	82	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	16
EW-02	05/04/11	ORG	< 0.50	< 0.50	< 0.50	0.79	< 0.50	83	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	19
EW-02	06/07/11	ORG	< 0.50	< 0.50	< 0.50	0.65	< 0.50	67	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	20
EW-02	07/02/11	ORG	< 0.50	< 0.50	< 0.50	0.73	< 0.50	87	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	18
EW-02	08/01/11	ORG	< 0.50	< 0.50	< 0.50	0.91	< 0.50	75	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	21
EW-02	09/09/11	ORG	< 0.50	< 0.50	< 0.50	0.82	< 0.50	90	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	20
EW-02	10/17/11	ORG	< 0.50	< 0.50	< 0.50	0.62	< 0.50	67	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	19
EW-02	11/01/11	ORG	< 0.50	< 0.50	< 0.50	0.69	< 0.50	55	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	22
EW-02	12/07/11	ORG	< 0.50	< 0.50	< 0.50	0.62	< 0.50	62	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	20
EW-02	01/06/12	ORG	< 0.50	< 0.50	< 0.50	0.53	< 0.50	85	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	15
EW-02	02/08/12	ORG	< 0.50	< 0.50	< 0.50	0.53	< 0.50	54	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	6.4
EW-02	03/09/12	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	59	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	12
EW-02	04/16/12	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	45	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	14
EW-02	05/01/12	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	37	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	13
EW-02	06/08/2012	ORG	< 0.50	< 0.50	< 0.50	0.62	< 0.50	67	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	19
EW-02	07/11/2012	ORG	< 0.50	< 0.50	< 0.50	0.53	< 0.50	64	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	19
EW-02	08/03/2012	ORG	< 0.50	< 0.50	< 0.50	0.55	< 0.50	67	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	16
EW-02	09/06/12	ORG	< 0.50	< 0.50	< 0.50	0.58	< 0.50	62	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	11
EW-02	10/15/12	ORG	< 0.50	< 0.50	< 0.50	0.74	< 0.50	75	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	18
EW-02	11/05/12	ORG	< 0.50	< 0.50	< 0.50	0.52	< 0.50	63	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	12
EW-02	12/10/12	ORG	< 0.50	< 0.50	< 0.50	0.68	< 0.50	72	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	17
EW-02	01/04/13	ORG	< 0.50	< 0.50	< 0.50	0.60	< 0.50	63	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	10
EW-02	02/09/13	ORG	< 0.50	< 0.50	< 0.50	0.52	< 0.50	39	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	25
EW-02 Historical Range***			< 0.50	< 0.50	< 0.50	0.52- 1.5	< 0.50	37 - 160	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50 - 0.85	10 - 48
Perched Zone Piezometers																	
P-07	06/23/97	ORG	< 1.0	14	8.3	154	< 1.0	23,300	5.1	52	1,400	22	39	< 1.0	< 1.0		NA
P-07	08/16/99	ORG	< 1,000	< 1,000	< 1,000	< 1,000	< 1,000	22,600	< 1,000	< 1,000	1,180	< 1,000	< 1,000	< 1,000	< 1,000	< 1,000	NA
P-07	01/26/00	ORG	6.0	< 5.0	< 5.0	64	< 5.0	4,730	< 5.0	17	270	17	17	< 5.0	< 5.0		NA
P-07	05/18/00	ORG	12	7.7	5.8	98	17	13,000	< 5.0	36	355	25	37	< 5.0	< 5.0		NA
P-07	05/10/01	ORG	3.0 J	2.0 J	3.0 J	44	11	4,100	< 5.0	12	54	14	34	< 5.0	< 5.0		2,020
P-07	10/24/01	ORG	< 25	< 25	< 25	< 25	< 25	930	< 25	< 25	< 25	< 25	< 25	< 25	< 25	< 25	1,560
P-07	04/18/02	ORG	< 5.0	< 5.0	< 5.0	23	7.0	2,200	< 5.0	6.0	14	7.7	9.3	< 5.0	< 5.0		2,200 J
P-07	04/18/02	SPT	0.90	1.1	2.1	27.2	7.1	1,360	0.9	5.4	13	6.8	9.8	2.1	< 0.50		1,960
P-07	11/21/02	ORG	0.82	< 0.50	2.1	24	7.4	1,900	1.2	7.7	< 0.50	8.0	12	3.8	< 0.50		2,800
P-07	06/11/03	ORG	0.84	< 0.50	1.9	25	7.0	1,600	0.98	7.3	7.6	7.6	10	3.8	< 0.50		3,100
P-07	09/25/03	ORG	0.57	< 0.50	1.9	17	< 0.50	890	0.75	3.5	3.2	7.1	5.8	1.8	< 0.50		1,300
P-07	12/17/03	ORG	0.68	1.0	1.8	25	6.8	1,400	1.1	6.1	6.5	7.3	9.6	1.3	< 1.0		990
P-07	03/31/04	ORG	< 5.0	< 5.0	< 5.0	26	< 5.0	2,100	< 5.0	7.8	6.7	6.0	11	< 5.0	< 5.0		920
P-07	06/17/04	ORG	< 5.0	< 5.0	< 5.0	23	< 5.0	1,600	< 5.0	< 5.0	< 5.0	7.0	7.9	< 5.0	< 5.0		990
P-07	12/15/04	ORG	< 5.0	< 5.0	0.72	8.3	3.4	640	< 5.0	1.9	< 0.50	3.3	3.1	< 5.0	< 0.50		360
P-07	03/23/06	ORG	1.3	3.4	3.7	45	10	3,900	1.8	12	< 0.50	6.7	16	3.4	< 0.50		2,100
P-07	03/23/06	SPT	< 3	< 3	< 3	30	< 3	3,200	< 3	< 3	< 3	< 3	< 3	< 3	< 3		1,900 J
P-07	06/22/06	ORG	< 5.0	< 5.0	< 5.0	32	8.7	4,200	< 5.0	14	< 5.0	6.0	18	< 5.0	< 5.0		1,400

TABLE 4
PREVALENT VOLATILE ORGANIC COMPOUNDS AND 1,4-DIOXANE IN GROUNDWATER

.....Concentration (micrograms per liter).....

Well Identifier / Sample Identifier	Date Sampled	QA Code	VOLATILE ORGANIC COMPOUNDS (FEDERAL MCL/CALIFORNIA MCL)												1,4-DIOXANE	
			Benzene (5/1)	Carbon Tetrachloride (5/0.5)	Chloroform (80/80)	1,1-DCA (--/5)	1,2-DCA (--/--)	1,1-DCE (7/6)	cis-1,2-DCE (70/6)	PCE (5/5)	1,1,1-TCA (200/200)	1,1,2-TCA (5/5)	TCE (5/5)	TCFM (--/150)	Toulene (1,000/150)	(3*/1**)
Perched Zone Piezometers (continued)																
P-07	06/22/06	SPT	< 20	< 20	< 20	30	< 20	3,100	< 20	< 20	< 20	< 20	< 20	< 20	< 20	NA
P-07	09/28/06	ORG	< 5.0	< 5.0	< 5.0	44	< 5.0	5,300	< 5.0	12	< 5.0	6.1	17	< 5.0	< 5.0	2,300
P-07	12/19/06	ORG	< 1.0	< 1.0	< 1.0	38	< 1.0	3,600	< 1.0	13	< 1.0	< 1.0	13	< 1.0	< 1.0	2,300
P-07	03/13/07	ORG	1.1	2.4	2.8	31	8.0	3,100	1.7	10	< 0.50	7.2	13	2.4	< 0.50	2,300
P-07	03/19/08	ORG	< 2.5	< 2.5	3.9	31	8.4	3,200	< 2.5	8.4	< 2.5	7.0	11	5.2	< 2.5	2,300
P-07	06/27/08	ORG	0.95	2.6	3.8 U	36	11	4,500	1.9	9.4	< 0.50	9.3	15	10	< 0.50	2,500
P-07	09/25/08	ORG	< 5.0	< 5.0	< 5.0	30	6.8	3,000	< 5.0	7.9	< 5.0	7.1	17	17	< 5.0	2,500 B
P-07	12/18/08	ORG	< 5.0	< 5.0	< 5.0	30	8.0	2,800	< 5.0	6.8	< 5.0	8.2	8.4	< 5.0	< 5.0	2,600
P-07	03/17/09	ORG	< 10	< 10	< 10	40	< 10	3,500	< 10	< 10	< 10	12	14	< 10	< 10	2,600
P-07	06/25/09	ORG	< 10	< 10	< 10	29	< 10	3,100	< 10	< 10	< 10	11	10	< 10	< 10	2,900
P-07	09/01/09	ORG	< 5.0	< 5.0	< 5.0	27	7.0	2,500	< 5.0	7.4	< 5.0	8.7	10	< 5.0	< 5.0	2,600
P-07	12/10/09	ORG	< 5.0	< 5.0	< 5.0	37	8.8	3,300	< 5.0	9.7	< 5.0	11	11	< 5.0	< 5.0	2,800
P-07	03/03/10	ORG	< 5.0	< 5.0	< 5.0	35	9.8	3,500	< 5.0	9.9	< 5.0	14	12	< 5.0	< 5.0	3,100
P-07	06/11/10	ORG	< 5.0	< 5.0	< 5.0	33	7.4	2,400	< 5.0	5.6	< 5.0	12	9.7	< 5.0	< 5.0	2,500
P-07	09/10/10	ORG	< 5.0	< 5.0	< 5.0	28	7.1	1,900	< 5.0	6.7	< 5.0	7.8	13	< 5.0	< 5.0	2,500
P-07	12/10/10	ORG	< 5.0	< 5.0	< 5.0	29	6.0	2,700	< 5.0	7.1	< 5.0	9.1	8.9	< 5.0	< 5.0	2,000
P-07	03/30/11	ORG	< 5.0	< 5.0	< 5.0	29	7.9	2,400	< 5.0	9.6	< 5.0	12	11	< 5.0	< 5.0	1,000
P-07	02/09/12	ORG	< 20	< 20	< 20	33	< 20	2,800	< 20	< 20	< 20	< 20	< 20	< 20	< 20	2,200
P-07	02/07/13	ORG	< 2.5	< 2.5	< 2.5	22	6.6	1,600	< 2.5	4.8	< 2.5	7.2	5.9	2.8	< 2.5	1,900
P-07 Historical Range**			0.57 - 12	1 - 14	0.72 - 8.3	8.3 - 154	< 0.50 - 17	640 - 23,300	0.75 - 5.1	1.9 - 52	< 0.50 - 1,400	< 1.0 - 25	3.1 - 39	< 1.0 - 17	< 0.50	360 - 3,100
P-09	09/25/03	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	1.8	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 2.0
P-09	10/08/03	ORG	< 0.50	< 0.50	< 0.50	0.87	< 0.50	67	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 2.0
P-09	12/18/03	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	32	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 2.0
P-09	03/30/04	ORG	< 0.50	< 0.50	< 0.50	0.76	< 0.50	130	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 2.0
P-09	06/17/04	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	3.2	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 2.0
P-900	06/17/04	FD	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	3.0	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 2.2
P-09	06/17/04	SPT	< 1	< 1	< 1	< 1	< 1	2.0	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1.0
P-09	09/21/04	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	3.0	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 2.1
P-09	12/15/04	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	8.0	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 2.2
P-09	03/16/05	ORG	< 0.50	< 0.50	< 0.50	0.65	< 0.50	88	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 2.2
P-09	06/24/05	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	43 E	< 0.50	< 0.50	< 0.50	< 0.50	0.58	< 0.50	< 0.50	< 2.0
P-09	09/22/05	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	25	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 2.0
P-09	12/20/05	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	27	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 2.2
P-09	12/20/05	SPT	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	29	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	3.0
P-09	03/22/06	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	8.5	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	2.8
P-09	06/21/06	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	20	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 2.0
P-09	09/28/06	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	19	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 2.2
P-09	12/18/06	ORG	< 0.50	< 0.50	< 0.50	0.53	< 0.50	37	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 2.0
P-09	03/13/07	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	14	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 2.0
P-09	06/21/07	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	3.2	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 2.0
P-09	09/26/07	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	2.2	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 2.0
P-09	12/12/07	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	1.2	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 2.0
P-09	03/18/08	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	2.3	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 2.0
P-09	06/26/08	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	3.9	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 2.0

TABLE 4
PREVALENT VOLATILE ORGANIC COMPOUNDS AND 1,4-DIOXANE IN GROUNDWATER

.....Concentration (micrograms per liter).....

Well Identifier / Sample Identifier	Date Sampled	QA Code	VOLATILE ORGANIC COMPOUNDS (FEDERAL MCL/CALIFORNIA MCL)											Semi-VOCs		
			Benzene (5/1)	Carbon Tetrachloride (5/0.5)	Chloroform (80/80)	1,1-DCA (--/5)	1,2-DCA (--/--)	1,1-DCE (7/6)	cis-1,2-DCE (70/6)	PCE (5/5)	1,1,1-TCA (200/200)	1,1,2-TCA (5/5)	TCE (5/5)	TCFM (--/150)	Toluene (1,000/150)	1,4-DIOXANE (3*/1**)
Perched Zone Piezometers (continued)																
P-09	09/26/08	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	2.6	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 2.0
P-09	12/16/08	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	17	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 2.0
P-09	03/17/09	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	7.9	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	7.1
P-09	06/25/09	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	12	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 2.7
P-09	09/01/09	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	6.0	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 2.0
P-09	12/08/09	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	18	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 2.5
P-09	03/02/10	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	4.0	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 2.0
P-09	06/10/10	ORG	< 0.50	< 0.50	< 0.50	0.51	< 0.50	30	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 2.0
P-09	09/09/10	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	13	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 2.0
P-09	12/08/10	ORG	< 0.50	< 0.50	< 0.50	0.52	< 0.50	21	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 2.0
P-09	03/30/11	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	10	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	0.86
P-09	02/09/12	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	2.0	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	0.68
P-09	02/07/13	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	5.2	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.20
Historical High/Low																LOW
P-09 Historical Range***			< 0.50	< 0.50	< 0.50	< 0.50 - 0.87	< 0.50	1.2 - 130	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50 - 0.58	< 0.50	< 0.50	0.68 - 7.1
Perched Zone Grab Samples (From Regional Groundwater System Monitor Well Boring)																
MW-6-W-104	01/16/97	ORG	< 1.0	12	33	500	< 1.0	19,000	24	89	2,800	223	73	< 1.0	< 1.0	NA
MW-9-113-PW	03/21/97	ORG	< 1.0	10	15	210	< 1.0	27,300	8.2	65	4,500	120	48	11	< 1.0	NA
QUALITY ASSURANCE/QUALITY CONTROL SAMPLES																
tb-030912	03/09/13	TB	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	NA
TB-041612	04/16/12	TB	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	NA
TB-050712	05/07/12	TB	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	NA
TB-050812	05/08/12	TB	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	NA
TB-050912	05/09/12	TB	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	NA
TB-051012	05/10/12	TB	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	NA
TB-051012A	05/10/12	TB	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	NA
TB-051012B	05/10/12	TB-SPT	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	NA
TB-051012C	05/10/12	TB-SPT	< 0.50	< 0.50	< 1.0	< 1.0	< 0.50	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	NA
TB-051112	05/11/12	TB	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	NA
RB-051112	05/11/12	RB	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 2.0
TB-06082012	06/08/2012	TB	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	NA
TB-071112	07/11/2012	TB	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	NA
TB-080312	08/03/2012	TB	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	NA
TB-080612A	08/06/2012	TB	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	NA
TB-080612B	08/06/2012	TB-SPT	< 0.50	< 0.50	< 1.0	< 1.0	< 0.50	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	NA
TB-080712	08/07/2012	TB	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	NA
TB-080812	08/08/2012	TB	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	NA
TB-080912	08/09/2012	TB	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	NA
TB-081012A	08/10/2012	TB	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	NA
TB-081012B	08/10/2012	TB-SPT	< 0.50	< 0.50	< 1.0	< 1.0	< 0.50	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	NA
RB-080912	08/09/12	RB	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.20
TB-090612	9/6/2012	TB	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	NA
TB-101512	10/15/2012	TB	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	NA
TB-102612A	10/26/2012	TB	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	NA

TABLE 4
PREVALENT VOLATILE ORGANIC COMPOUNDS AND 1,4-DIOXANE IN GROUNDWATER

.....Concentration (micrograms per liter).....

Well Identifier / Sample Identifier	Date Sampled	QA Code	VOLATILE ORGANIC COMPOUNDS (FEDERAL MCL/CALIFORNIA MCL)											Semi-VOCs			
			Benzene (5/1)	Carbon Tetrachloride (5/0.5)	Chloroform (80/80)	1,1-DCA (-/5)	1,2-DCA (-/5)	1,1-DCE (7/6)	cis-1,2-DCE (70/6)	PCE (5/5)	1,1,1-TCA (200/200)	1,1,2-TCA (5/5)	TCE (5/5)	TCFM (-/150)	Toluene (1,000/150)	1,4-DIOXANE (3*/1**)	
QUALITY ASSURANCE/QUALITY CONTROL SAMPLES (continued)																	
TB-102612B	10/26/2012	TB-SPT	< 0.50	< 0.50	< 1.0	< 1.0	< 0.50	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 10	< 1.0	NA
TB-110512	11/5/2012	TB	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	NA
TB-110512	11/5/2012	TB	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	NA
TB-110612	11/6/2012	TB	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	NA
TB-110712	11/7/2012	TB	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	NA
TB-110712A	11/7/2012	TB-SPT	< 0.50	< 0.50	< 1.0	< 1.0	< 0.50	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 10	< 1.0	NA
RB-11072012	11/7/2012	RB	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	NA
TB-121012	12/10/2013	TB	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	NA
TB-010313	1/3/2013	TB	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	NA
TB-010313A	1/3/2013	TB-SPT	< 0.50	< 0.50	< 1.0	< 1.0	< 0.50	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 10	< 1.0	NA
RB-01032013	1/3/2013	RB	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	NA
TB-010413	1/4/2013	TB	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	NA
TB-010413	1/4/2013	TB	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	NA
TB-020413	2/4/2013	TB	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	NA
RB-020513	2/5/2013	RB	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	NA
TB-020613A	2/6/2013	TB	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	NA
TB-020613B	2/6/2013	TB-SPT	< 0.50	< 0.50	< 1.0	< 1.0	< 0.50	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 10	< 1.0	NA
RB-02062013	2/6/2013	RB	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	NA
TB-020713	2/7/2013	TB	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	NA
TB-020813	2/8/2013	TB	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	NA
TB-020913	2/9/2013	TB	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	NA

NOTE: Detections are shown in **BOLD** type.

FOOTNOTES

- ^(a) Reconnaissance groundwater sample; results should be considered qualitative.
- ^(b) Groundwater sample collected after purging two additional casing volumes.
- ^(c) Groundwater sample collected after standard 3 purge volumes.
- ^(d) Groundwater sample collected after 10 purge volumes.
- ^(e) Groundwater sample collected after 30 purge volumes.
- ^(f) Groundwater sample collected after 50 purge volumes.

- 1,1-DCA = 1,1-Dichloroethane
- 1,2-DCA = 1,2-Dichloroethane
- 1,1-DCE = 1,1-Dichloroethylene
- cis-1,2-DCE = cis-1,2-Dichloroethylene
- PCE = Tetrachloroethylene
- 1,1,1-TCA = 1,1,1-Trichloroethane
- 1,1,2-TCA = 1,1,2-Trichloroethane
- TCE = Trichloroethylene
- TCFM = Trichlorofluoromethane

(<) = Less than; the value is the Limit of Detection for that compound
(-) = Not promulgated

Semi-VOCs = Semivolatile organic compounds

E = Data qualified as estimated in accordance with quality control criteria.

NA = Not analyzed for constituent

FD = Field duplicate sample

J = Data qualified as Estimated; does not meet calibration range acceptance criteria.

ORG = Original sample

QA = Quality Assurance

RB = Rinsate blank sample

SPT = Split sample

TB = Trip blank sample

U = Data qualified as unusable in accordance with quality control criteria.

ug/l = Micrograms per liter

MCL = Maximum contaminant level

* = 1,4-Dioxane Action Level of 3 ug/l

** = California Notification Level for 1,4-dioxane of 1 ug/l

*** = Historical Range determined using original samples exclusively

B = Analyte detected in the associated Method Blank

TABLE 5
OTHER VOLATILE ORGANIC COMPOUNDS IN GROUNDWATER

WELL IDENTIFIER	DATE SAMPLED	QUALITY ASSURANCE CODE	COMPOUNDS	CONCENTRATION (micrograms per liter)
<u>Regional Groundwater System Monitor and Extraction Wells</u>				
EW-01	12/11/2006	SPT	Methylene chloride	4
EW-01	12/13/2007	ORG	Vinyl chloride	0.58
EW-01	12/13/2007	FD	Vinyl chloride	0.6
EW-02	12/7/2011	ORG	Naphthalene	6.4
EW-02	12/10/2012	ORG	Chloromethane	1.2
MW-08	12/20/2005	SPT	Methylene chloride	3
MW-08	6/22/2006	ORG	Methylene chloride	0.62
MW-08	6/22/2006	FD	Methylene chloride	0.69
MW-16	4/16/2002	SPT	2-butanone	7
MW-16	4/16/2002	SPT	Acetone	20
MW-16	6/18/2004	ORG	Chlorobenzene	1.0
MW-16	12/10/2004	ORG	Methylene chloride	1.3
MW-18	11/19/2002	ORG	m,p-Xylene	0.54
MW-21	9/23/2003	FD	1,3-Dichloropropane	0.8
MW-21	12/17/2003	ORG	trans-1,2-Dichloroethylene	0.62
MW-21	3/17/2005	ORG	trans-1,2-Dichloroethylene	0.57
MW-21	12/11/2006	SPT	Acetone	40
MW-21	12/11/2006	SPT	Methylene chloride	50 E
MW-21	6/24/2011	SPT	1,2,2-trichlorotrifluoroethane	2
MW-26C	12/20/2007	ORG	1,1-dichloropropene	0.93
MW-28	5/27/2008	ORG	Vinyl chloride	0.58
MW-28	3/30/2011	ORG	Chloromethane	0.91
MW29	5/11/2012	SPT	Tert-Butyl Alcohol	10
MW-30B	8/5/2011	SPT	1,2,2-trichlorotrifluoroethane	2
MW-34A	2/25/2011	SPT	Acetone	6 U
MW-34B	2/25/2011	SPT	Acetone	6 U
MW-34B	3/10/2011	SPT	Acetone	6 U
MW-34C	2/25/2011	SPT	Acetone	7 U
MW-34C	11/2/2011	ORG	Chloromethane	0.5
MW-35A	1/19/2011	ORG	Bromodichloromethane	4.3
MW-35A	1/19/2011	ORG	Bromoform	1.5
MW-35A	1/19/2011	ORG	Bromomethane	0.75
MW-35A	1/19/2011	ORG	Chloromethane	0.78
MW-35A	1/19/2011	ORG	Dibromochloromethane	2.5
MW-35A	1/19/2011	FD	Bromodichloromethane	4.0
MW-35A	1/19/2011	FD	Bromoform	1.4
MW-35A	1/19/2011	FD	Chloromethane	0.73
MW-35A	1/19/2011	FD	Dibromochloromethane	2.4

TABLE 5
OTHER VOLATILE ORGANIC COMPOUNDS IN GROUNDWATER

WELL IDENTIFIER	DATE SAMPLED	QUALITY ASSURANCE CODE	COMPOUNDS	CONCENTRATION (micrograms per liter)
<u>Regional Groundwater System Monitor and Extraction Wells (Continued)</u>				
MW-35A	1/19/2011	SPT	Bromodichloromethane	3
MW-35A	1/19/2011	SPT	Bromoform	2
MW-35A	1/19/2011	SPT	Dibromochloromethane	2
MW-35A	2/3/2011	ORG	Bromodichloromethane	3.6
MW-35A	2/3/2011	ORG	Bromoform	0.65
MW-35A	2/3/2011	ORG	Dibromochloromethane	1.7
MW-35A	2/3/2011	FD	Bromodichloromethane	4.1
MW-35A	2/3/2011	FD	Bromoform	0.69
MW-35A	2/3/2011	FD	Dibromochloromethane	2.0
MW-35A	2/3/2011	SPT	Bromodichloromethane	2
MW-35A	2/3/2011	SPT	Dibromochloromethane	1
MW-35A	3/28/2011	ORG	Bromodichloromethane	0.90
MW-35A	6/22/2011	ORG	Bromodichloromethane	0.59
MW-35A	11/1/2011	ORG	Chloromethane	0.59
MW-35C	1/19/2011	ORG	Bromodichloromethane	11 E
MW-35C	1/19/2011	ORG	Bromoform	1.1
MW-35C	1/19/2011	ORG	Bromomethane	0.52
MW-35C	1/19/2011	ORG	Dibromochloromethane	3.6
MW-35C	1/19/2011	FD	Bromodichloromethane	10 E
MW-35C	1/19/2011	FD	Bromoform	1.1
MW-35C	1/19/2011	FD	Bromomethane	0.90
MW-35C	1/19/2011	FD	Chloromethane	0.64
MW-35C	1/19/2011	FD	Dibromochloromethane	3.5
MW-35C	1/19/2011	SPT	Bromodichloromethane	8 E
MW-35C	1/19/2011	SPT	Bromoform	1
MW-35C	1/19/2011	SPT	Dibromochloromethane	3
<u>Perched Zone Piezometers</u>				
P-07	6/22/2006	ORG	Methylene chloride	7.4
P-07	3/13/2007	ORG	Vinyl chloride	1.2
P-07	6/27/2008	ORG	Vinyl chloride	1.8
P-07	9/25/2008	ORG	Vinyl chloride	7.8
P-09	12/20/2005	SPT	Methylene chloride	3 U
<u>Perched Zone Grab Samples (From Regional Groundwater System Monitor Well Boring)</u>				
MW-6-W-104	1/16/1997	ORG	1,1,1,2-tetrachloroethane	1.6
MW-6-W-104	1/16/1997	ORG	1,2-Dichloropropane	2.1

FOOTNOTES

- E = Estimated
- FD = Field duplicate sample
- ORG = Original sample
- SPT = Split sample
- U = Unusable

TABLE 6
GENERAL MINERALS AND OTHER INORGANICS IN GROUNDWATER

			CATIONS				ANIONS				OTHER INORGANICS				FIELD PARAMETERS									
			Ca	Mg	K	Na	Br	Cl	Nitrate as N	SO4	Cu	Fe	Mn	Zn	NH4 as N	MBAS	pH (LAB)	pH (FIELD)	DO	EC (LAB)	EC (FIELD)	TDS	Hardness	Alkalinity
			mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	pH units	pH units	mg/L	umhos/cm	umhos/cm	mg/L	mg/L	mg/L
CALIFORNIA MCL			--	--	--	--	--	250-600 B	--	1.0B	0.3B	0.05B	--	--	250-600B	--	--	--	--	--	--	--	--	--
FEDERAL MCL			--	--	--	--	--	250B	10	250B	1.0B	0.3B	0.05B	5B	--	250B	6.5 - 8.5 B	6.5 - 8.5 B	--	--	500B	--	--	
MONITOR WELL	DATE SAMPLED	QACODE																						
MW-30A	1/3/2013	ORG	65	21	3.8	57	0.11	44	1.1	140	0.010	<0.50	<0.50	<0.010	0.32	<0.10	7.6	7.57	0.70	740	603	470	250	180
MW-30B	1/3/2013	ORG	92	27	6	110	0.48	180	6.5	100	0.012	<0.50	<0.50	0.024	0.18	<0.10	7.5	7.37	2.51	1200	1005	700	340	240
MW-32B	1/3/2013	ORG	64	17	3.8	83	0.29	140	<0.10	86	0.0097	<0.50	<0.50	0.034	0.16	<0.10	7.8	7.77	0.16	940	920	550	230	190
MW-32C	1/3/2013	ORG	29	5.3	2.4	77	0.08	24	<0.10	61	0.0097	<0.50	<0.50	0.075	0.16	<0.10	8.1	8.17	3.02	530	521	330	94	180
MW-33	1/4/2013	ORG	58	18	3.9	61	0.13	53	1.2	110	0.0095	<0.5	<0.50	0.011	<0.15	<0.10	7.5	7.69	0.91	730	730	420	220	190
MW-34B	1/3/2013	ORG	98	32	4.6	76	0.3	130	6.1	130	0.016	0.97	<0.50	0.016E	<0.15	<0.10	7.5	7.38	3.65	1100	906	680	380	220
MW-34B	1/3/2013	FD	94	32	4.6	78	0.31	140	6.3	130	0.016	0.82	<0.50	0.058E	<0.15	<0.10	7.5	7.38	3.65	1100	906	670	370	220
MW-34C	1/3/2013	ORG	43	9.6	4	68	<0.05	68	<0.10	72	0.0059	<0.50	<0.50	0.013	0.19	<0.10	8.0	8.01	0.03	670	524	350	150	150
MW-36	1/4/2013	ORG	47	15	4.4	80	0.17	71	<0.10	89	0.0072	<0.50	<0.50	0.013	<0.15	<0.10	7.8	7.92	0.07	710	690	380	180	170
MW-37	1/3/2013	ORG	62	14	5	69	0.28	130	3.2	54	0.0095	0.78	<0.5	0.033	<0.15	<0.10	7.8	7.86	0.41	810	810	450	210	140
MW-37	1/3/2013	SPT	66	15.4	4.49	78.9	0.34	140	2.9	52	<0.0100	2.05	0.0447E	0.0269	<0.10	<0.10	7.47	7.86	0.41	790	810	510	220	154

NOTE:
 Detections are shown in BOLD type
 Detections above Federal/California MCL are highlighted in gray
 Federal and California MCL found at <http://www.epa.gov/region9/water/drinking/files/dwshat-v09.pdf>

FOOTNOTES:
 B = SECONDARY MCL Cl = Chloride DO = Dissolved Oxygen
 Br = Bromide N = Nitrogen EC = Specific Conductance
 Ca = Calcium SO4 = Sulfate TDS = Total Dissolved Solids
 Mg = Magnesium Cu = Copper mg/L = milligrams per Liter
 K = Potassium Fe = Iron umhos/cm = microhos per centimeter
 Na = Sodium Mn = Manganese MCL = Maximum Contaminant Level
 ORG = Original Sample Z = Zinc SPT = Split Sample
 FD = Field Duplicate NH4 = Ammonia MBAS = Surfactants
 E = Data qualified as estimated in accordance with quality control criteria

PILOT GROUNDWATER EXTRACTION AND TREATMENT SYSTEM SAMPLING SCHEDULE

				SAMPLE FREQUENCY AND LOCATION														
COMPOUND(S) / CONSTITUENT	ANALYTICAL METHOD	SAMPLE CONTAINER	REPORTING DETECTION LIMITS (milligrams per liter)	Daily Samples ¹ : Days 1-5					Weekly Samples ¹ : Weeks 1-4					Monthly Samples: Week 5+		Quarterly Samples: Week 1+		
				Extraction Well head (EW-02) ²	Post-Filter (PF)	Post-Oxidation (POX)	Carbon Breakthrough (CBT) ³	Post-Carbon (CEFF)	Extraction Well head (EW-02) ²	Post-Filter (PF)	Post-Oxidation (POX)	Carbon Breakthrough (CBT) ³	Post-Carbon (CEFF)	Extraction Well head (EW-02) ²	Post-Filter (PF)	Post-Oxidation (POX)	Carbon Breakthrough (CBT) ³	Post-Carbon (CEFF)	Extraction Well head (EW-02)^{2}	Post-Oxidation (POX)
COMPOUNDS/CONSTITUENTS NORMALLY REQUIRED AS PART OF NPDES OR WDR PERMITS, PURSUANT TO CRWQCB REGION 8 ORDER NO. R8-2003-008:																		
Volatile Organic Compounds	8260B	3 - 40 mL VOA, HCl	QAPP ⁴	X	X	X	X		X	X	X	X		X	X	X	X	
1,4-Dioxane	8270 Modified	1 L Amber	0.002	X					X					X				
1,4-Dioxane	8270 SIM	1L Amber	0.0002			X				X					X			
Total Suspended Solids	SM2540D	250 mL poly	10	(a)	(a)									X	X			
Total Dissolved Solids	SM2540C	250 mL poly	10	(a)										X		X		
SELECTED METALS																		
Dissolved Metals (Iron, Manganese, Calcium, Sodium, Magnesium)	6010B	500 mL poly	QAPP ⁴	(a)														X
Selenium	6010B	500 mL poly, HNO ₃	QAPP ⁴															X
SELECTED INORGANIC CONSTITUENTS																		
Hydroxide Alkalinity	SM2320B	250 mL poly	2.0	(a)														X
Bicarbonate Alkalinity	SM2320B	250 mL poly	2.0	(a)														X
Carbonate Alkalinity	SM2320B	250 mL poly	2.0	(a)														X
Total Alkalinity	SM2320B	250 mL poly	2.0	(a)														X
BROMATE EVALUATION																		
Bromate	317.0	125 mL poly	0.0005	X	X	X			X	X	X			X	X	X		
Bromide	300.0	125 mL poly	0.05	X	X	X			X	X	X			X	X	X		
OTHER CONSTITUENTS/COMPOUNDS																		
Total Organic Carbon	SM5310B	3 - 40 mL VOA, HCl	3.0	(a)														X X
Anions (Chloride, Sulfate, Nitrate, Nitrite, and Phosphate)	300.0	500 mL poly	Varies	(a)														X X
Chemical Oxygen Demand	410.4	125 mL poly, H ₂ SO ₄	5.0	(a)														X X
Field Parameters																		
Dissolve Oxygen (DO)	N/A	N/A	N/A	X	X	X			X	X	X			X	X	X	X	
Electrical Conductance (EC)	N/A	N/A	N/A	X	X	X			X	X	X			X	X	X	X	
Redox Potential	N/A	N/A	N/A	X	X	X			X	X	X			X	X	X	X	
Temperature	N/A	N/A	N/A	X	X	X	X		X	X	X	X		X	X	X	X	
pH	N/A	N/A	N/A	X	X	X	X		X	X	X	X		X	X	X	X	
Turbidity	N/A	N/A	N/A	X	X				X	X				X	X			
Flow-Meter	N/A	N/A	N/A	X			X		X			X		X			X	

FOOTNOTES

- (a) Only one sample to be collected during sampling period.
- 1 Daily and weekly samples collected during the first month of operation will be repeated after major modifications to system equipment or operating parameters, as detailed in the Workplan.
- 2 If more than one extraction well is in operation, combined influent samples will be collected in addition to extraction wellhead samples, with the same sampling schedule as the extraction wellheads.
- 3 Carbon breakthrough will be collected from the effluent of the first carbon unit in series; when breakthrough of the first unit is detected, the breakthrough sample will be collected from the effluent of the second carbon unit in series.
- 4 QAPP, Quality Assurance Project Plan, Appendix B of Additional Groundwater Assessment Workplan, Hargis + Associates, Inc., April 25, 2003.

CRWQCB = California Regional Water Quality Control Board, Santa Ana Region 8

NPDES = National Pollutant Discharge Elimination System

WDR = Waste Discharge Requirement

N/A = Not applicable

mL = Milliliter

VOA = Volatile organic analysis

HCl = Hydrochloric acid

HNO₃ = Nitric acid

H₂SO₄ = Sulfuric acid

EPA = U.S. Environmental Protection Agency

SM = Standard Method

L = Liter

poly = High density polyethylene bottle

TABLE 8

SELECT COMPOUNDS MONITORED IN
PILOT GROUNDWATER EXTRACTION AND TREATMENT SYSTEM SAMPLES
FIRST QUARTER 2013

Compound	Date	Units	MW-21	EW-01	EW-02	INF*	PF	POX	CBT	CEFF
1,1,2-Trichloroethane (5 ug/L MCL)	12/10/12	ug/L	--	--	<0.50	--	--	<0.50	<0.50	<0.50
	01/04/13	ug/L	--	--	<0.50	--	--	<0.50	<0.50	<0.50
	02/04/13	ug/L	12	0.67	--	--	--	--	--	--
	02/09/13	ug/L	--	--	<0.50	--	--	<0.50	<0.50	<0.50
1,1-Dichloroethane (5 ug/L MCL)	12/10/12	ug/L	--	--	0.68	--	--	<0.50	0.50	0.56
	01/04/13	ug/L	--	--	0.60	--	--	<0.50	<0.50	<0.50
	02/04/13	ug/L	33	1.9	--	--	--	--	--	--
1,1-Dichloroethene (6 ug/L MCL)	12/10/12	ug/L	--	--	72	--	--	<0.50	<0.50	<0.50
	01/04/13	ug/L	--	--	63	--	--	<0.50	<0.50	<0.50
	02/04/13	ug/L	1900	130	--	--	--	--	--	--
1,2-Dichloroethane (0.5 ug/L MCL)	12/10/12	ug/L	--	--	<0.50	--	--	<0.50	<0.50	<0.50
	01/04/13	ug/L	--	--	<0.50	--	--	<0.50	<0.50	<0.50
	02/04/13	ug/L	5.8	<0.50	--	--	--	--	--	--
cis-1,2-Dichloroethene (6 ug/L MCL)	12/10/12	ug/L	--	--	<0.50	--	--	<0.50	<0.50	<0.50
	01/04/13	ug/L	--	--	<0.50	--	--	<0.50	<0.50	<0.50
	02/04/13	ug/L	<2.5	<0.50	--	--	--	--	--	--
Tetrachloroethene (5 ug/L MCL)	12/10/12	ug/L	--	--	<0.50	--	--	<0.50	<0.50	<0.50
	01/04/13	ug/L	--	--	<0.50	--	--	<0.50	<0.50	<0.50
	02/04/13	ug/L	5.1	<0.50	--	--	--	--	--	--
Trichloroethene (5 ug/L MCL)	12/10/12	ug/L	--	--	<0.50	--	--	<0.50	<0.50	<0.50
	01/04/13	ug/L	--	--	<0.50	--	--	<0.50	<0.50	<0.50
	02/04/13	ug/L	19	<0.50	--	--	--	--	--	--
1,4-Dioxane (1 ug/L California Notification Level)	12/10/12	ug/L	--	--	17	--	--	<0.20	--	--
	01/04/13	ug/L	--	--	10	--	--	<0.20	--	--
	02/04/13	ug/L	480	58	--	--	--	--	--	--
Bromide	12/10/12	ug/L	--	--	180	--	--	170	--	170
	01/04/13	ug/L	--	--	70	--	--	210	--	220
	02/09/13	ug/L	--	--	190	--	--	210	--	190
Bromate (10 ug/L MCL)	12/10/12	ug/L	--	--	<0.5	--	--	8.0	--	5.5
	01/04/13	ug/L	--	--	0.3	--	--	9	--	7.5
	02/09/13	ug/L	--	--	0.4	--	--	9	--	6.5
Total Non-Filterable Residue	12/10/12	mg/L	--	--	<10	--	<10	--	--	--
	01/04/13	mg/L	--	--	<10	--	<10	--	--	--
	02/09/13	mg/L	--	--	<3.8	--	<4.0	--	--	--
Total Filterable Residue (500 mg/L MCL)	12/10/12	mg/L	--	--	620	--	--	600	--	600
	01/04/13	mg/L	--	--	560	--	--	560	--	600
	02/09/13	mg/L	--	--	600	--	--	600	--	610

FOOTNOTES

MCL = Maximum Contaminant Level or Drinking Water Action Level, if applicable
 ug/L = Micrograms per liter
 mg/L = Milligrams per liter
 (--) = Not scheduled for performance monitoring
 (<) = Less than; the numerical value is the Limit of Detection for that compound
 INF* = Influent (same as EW-02, when active)
 PF = Post Particulate Filter
 POX = Post Hypox Oxidation
 CBT = Carbon Breakthrough
 CEFF = Carbon Effluent

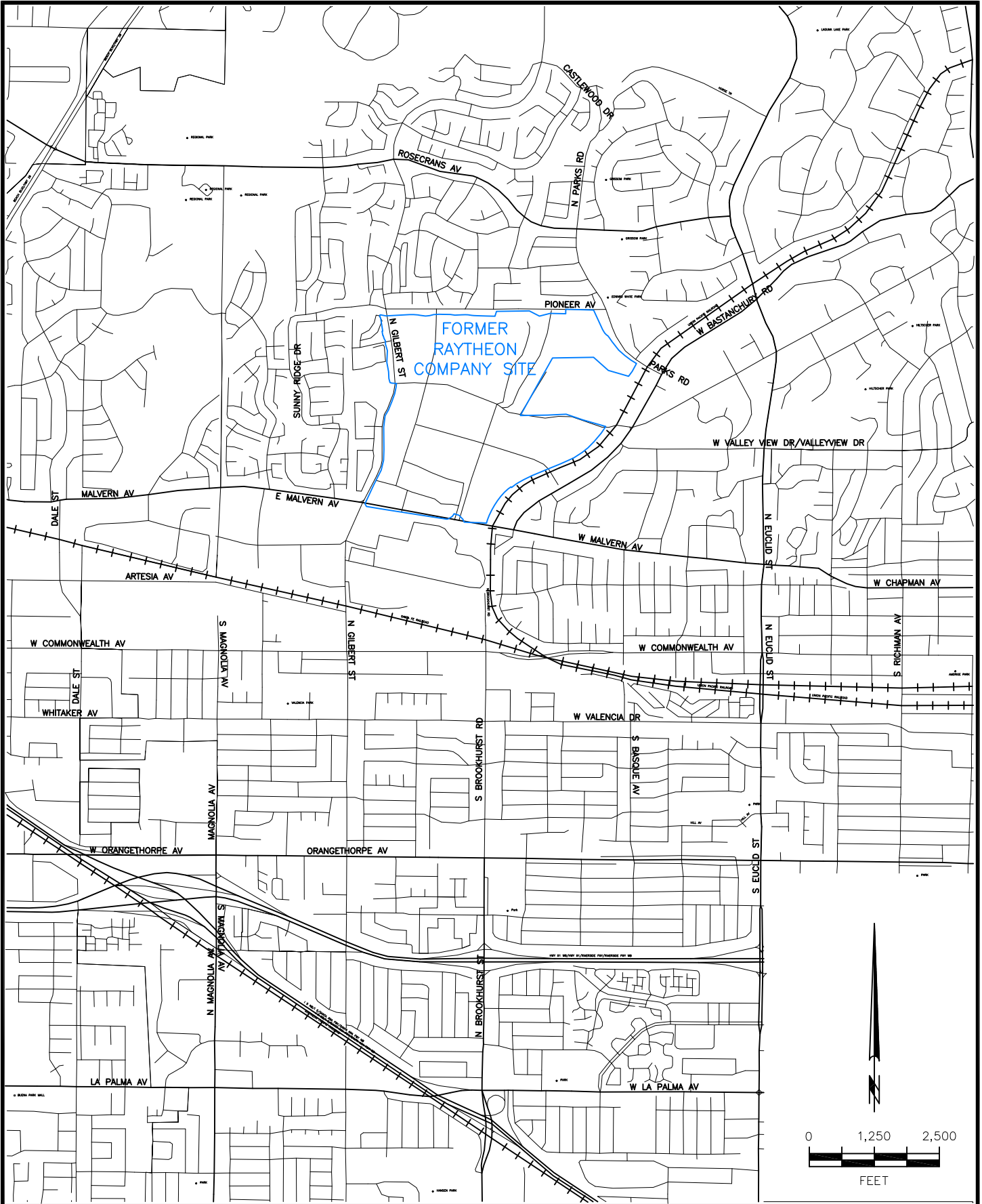
TABLE 9

PILOT GROUNDWATER EXTRACTION AND TREATMENT SYSTEM OPERATIONAL SUMMARY

OPERATIONAL PERIOD (MONTH/QUARTER/YEAR)	WELLFIELD PRODUCTION ^(a) (gallons)	AVERAGE DISCHARGE RATE ^(b) (gpm)	AVERAGE OPERATIONAL DISCHARGE RATE ^(c) (gpm)	OPERATIONAL HOURS DURING OPERATIONAL PERIOD	HOURS IN OPERATIONAL PERIOD	% OPERATIONAL
2008^(d)	3,659,562	13.8	18.2	3,358	4,416	76%
2009	5,787,848	11.0	18.1	5,319	8,760	61%
2010	14,295,261	27.2	46.4	5,131	8,760	59%
2011	20,456,899	38.9	45.8	7,442	8,760	85%
2012^(e)	19,378,122	40.2	47.2	6,850	8,040	85%
Dec-12	1,902,877	42.6	46.7	679	744	91%
Jan-13	1,843,701	41.3	43.7	704	744	95%
Feb-13	1,730,028	42.9	46.5	620	672	92%
1Q2013	5,476,605	42.3	45.6	2,003	2,160	93%
SINCE INCEPTION	69,054,296	28.1	38.2	30,102	40,896	74%

Notes:

- (a) Based on Effluent totalizer readings from CEFF, which also includes relatively small amounts of monitor well purge water from quarterly sampling events, well installations, and aquifer testing.
 - (b) Total volume of water treated during the operational period divided by the total number of minutes in that operational period.
 - (c) Total volume of water treated during the operational period divided by the minutes of operation in that operational period.
 - (d) Operational period beginning 7/1/2008 (first month of system operation).
 - (e) 2012 Calendar year is from 1/1/2012 through 11/30/2012.
- gpm = gallons per minute
Refer to previous quarterly reports for detail of 2008 thru 2011 operational summary
Treatment of groundwater from EW-02 initiated in 2010
CEFF = Carbon effluent



HARGIS + ASSOCIATES, INC.
Hydrogeology/Engineering

FIGURE 1. SITE LOCATION

Jan 18, 2013 8:18am ADE - T: 2013\500-599\532 Raytheon Hydrogeology\H+A BaseMaps\410-8861.dwg

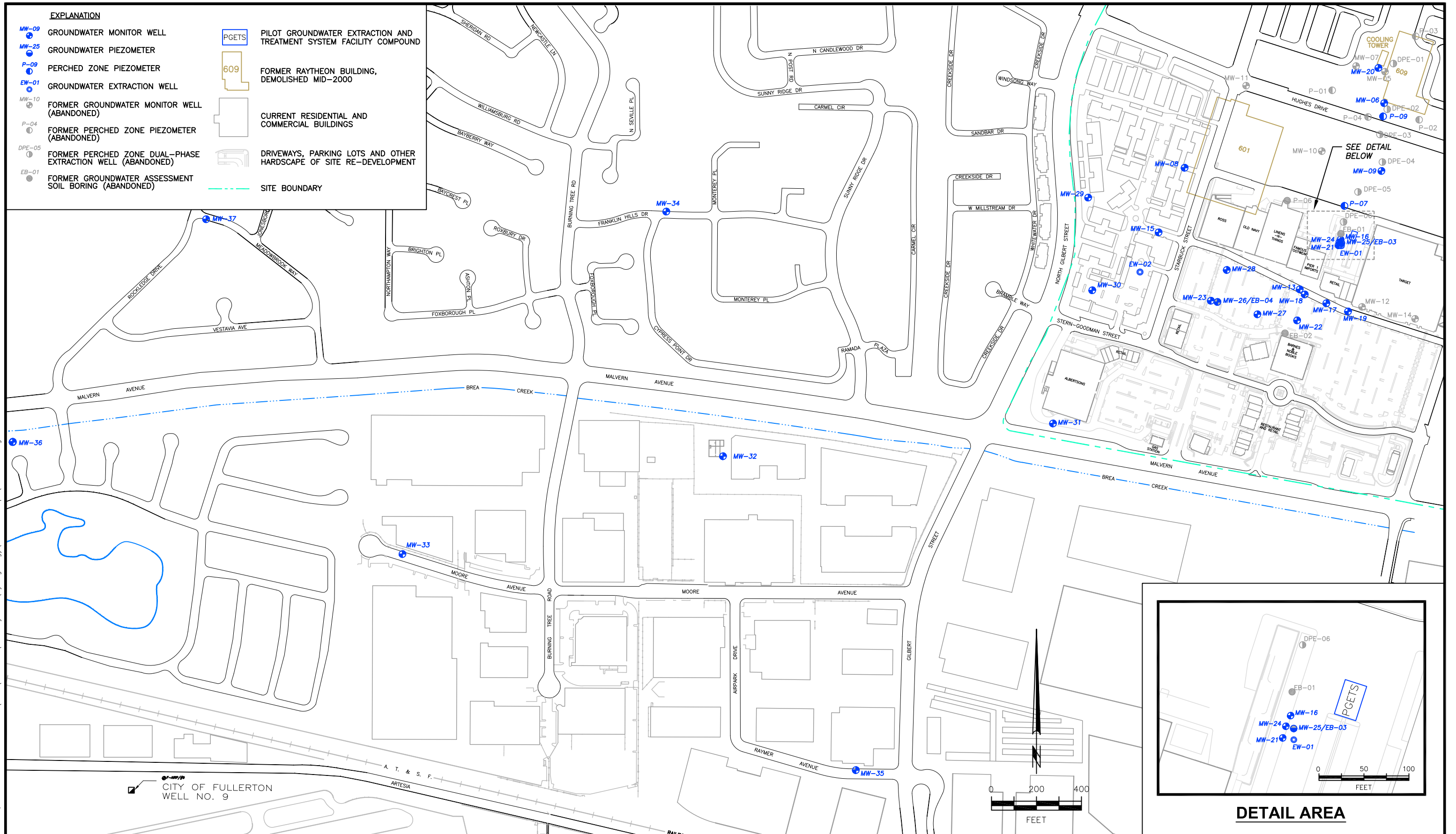


FIGURE 2.
WELL AND PIEZOMETER LOCATIONS

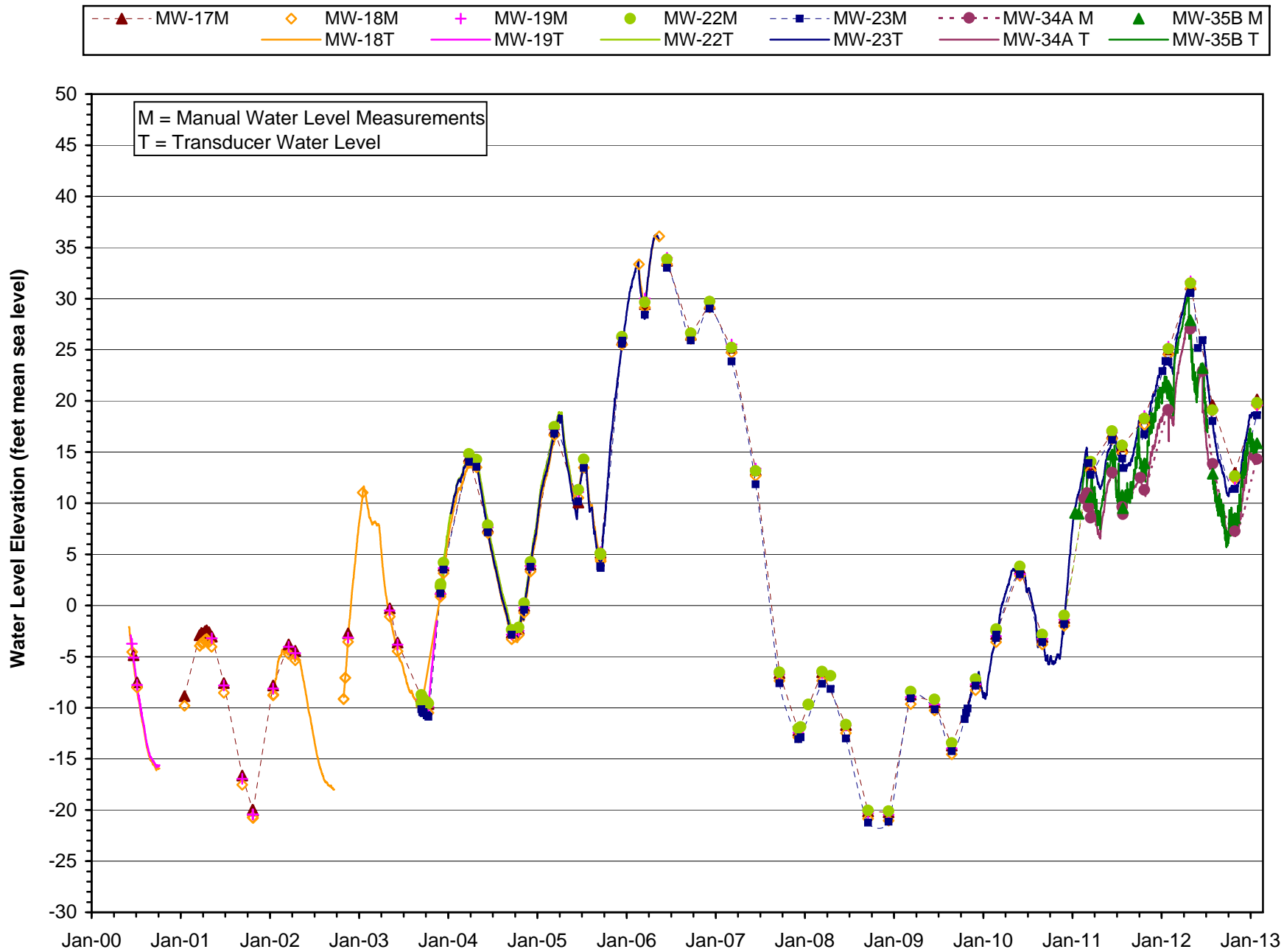


FIGURE 3. REGIONAL GROUNDWATER SYSTEM WATER LEVELS, UNIT A MONITOR WELLS

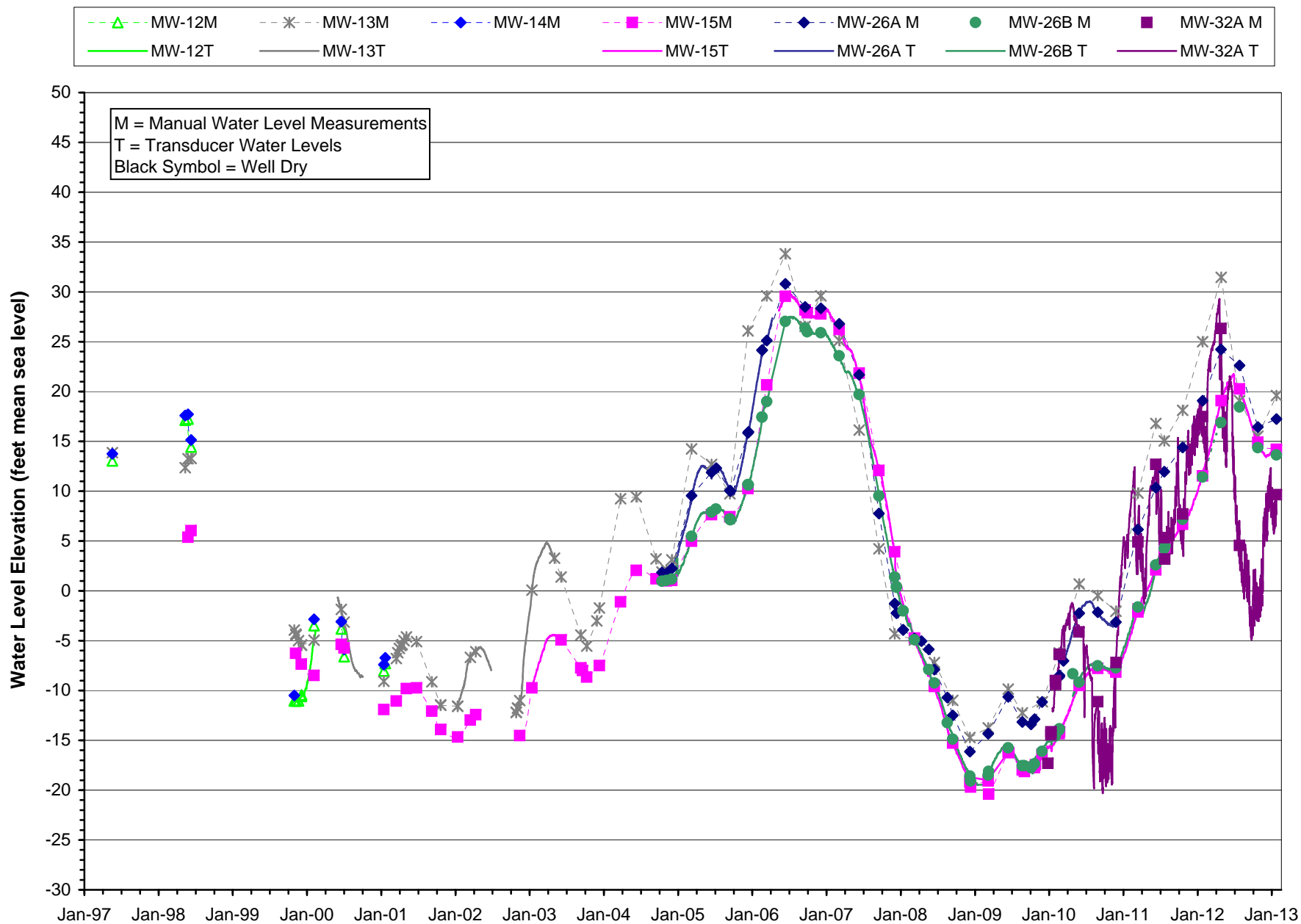


FIGURE 4. REGIONAL GROUNDWATER SYSTEM WATER LEVELS, UNIT AB MONITOR WELLS

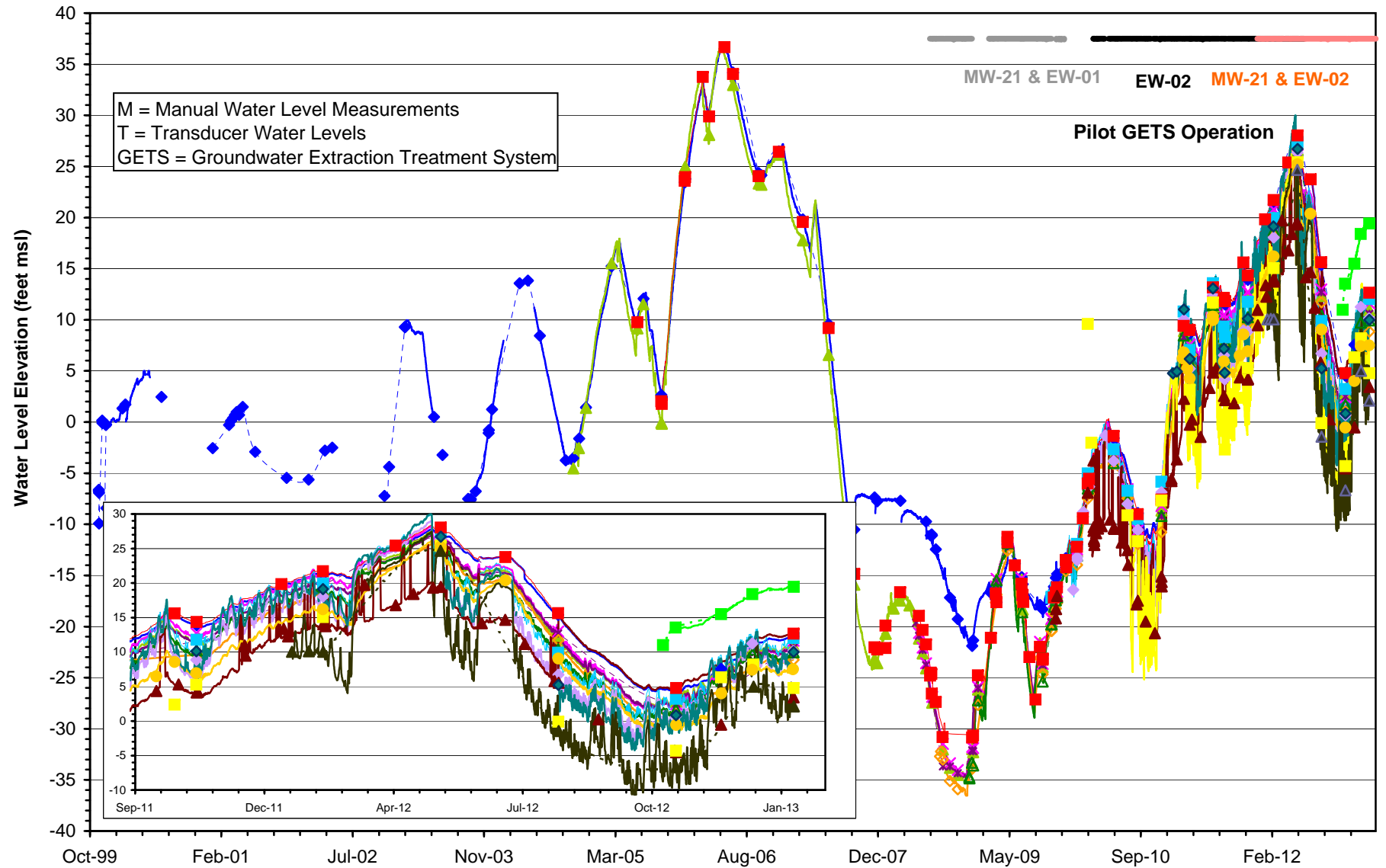
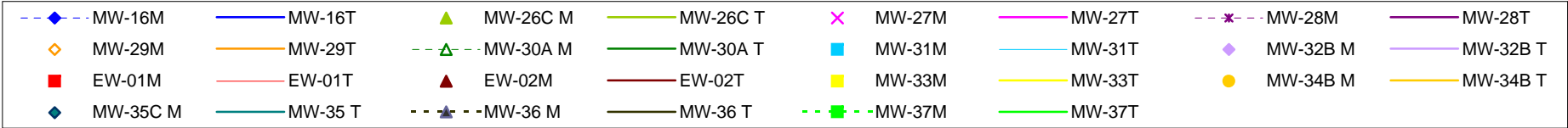


FIGURE 5. REGIONAL GROUNDWATER SYSTEM WATER LEVELS, UNIT B MONITOR AND EXTRACTION WELLS

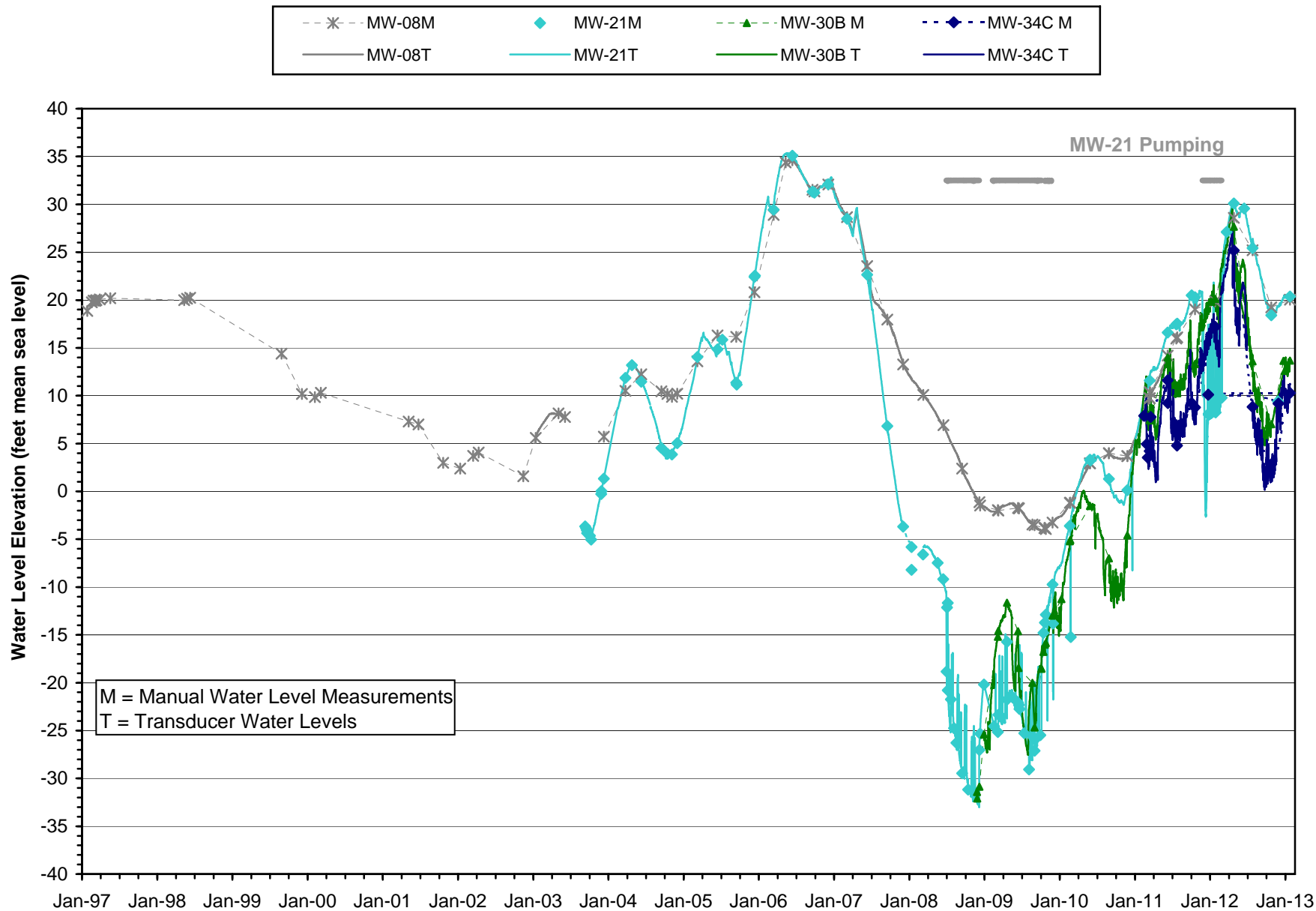


FIGURE 6. REGIONAL GROUNDWATER SYSTEM WATER LEVELS, UNIT BC MONITOR AND EXTRACTION WELLS

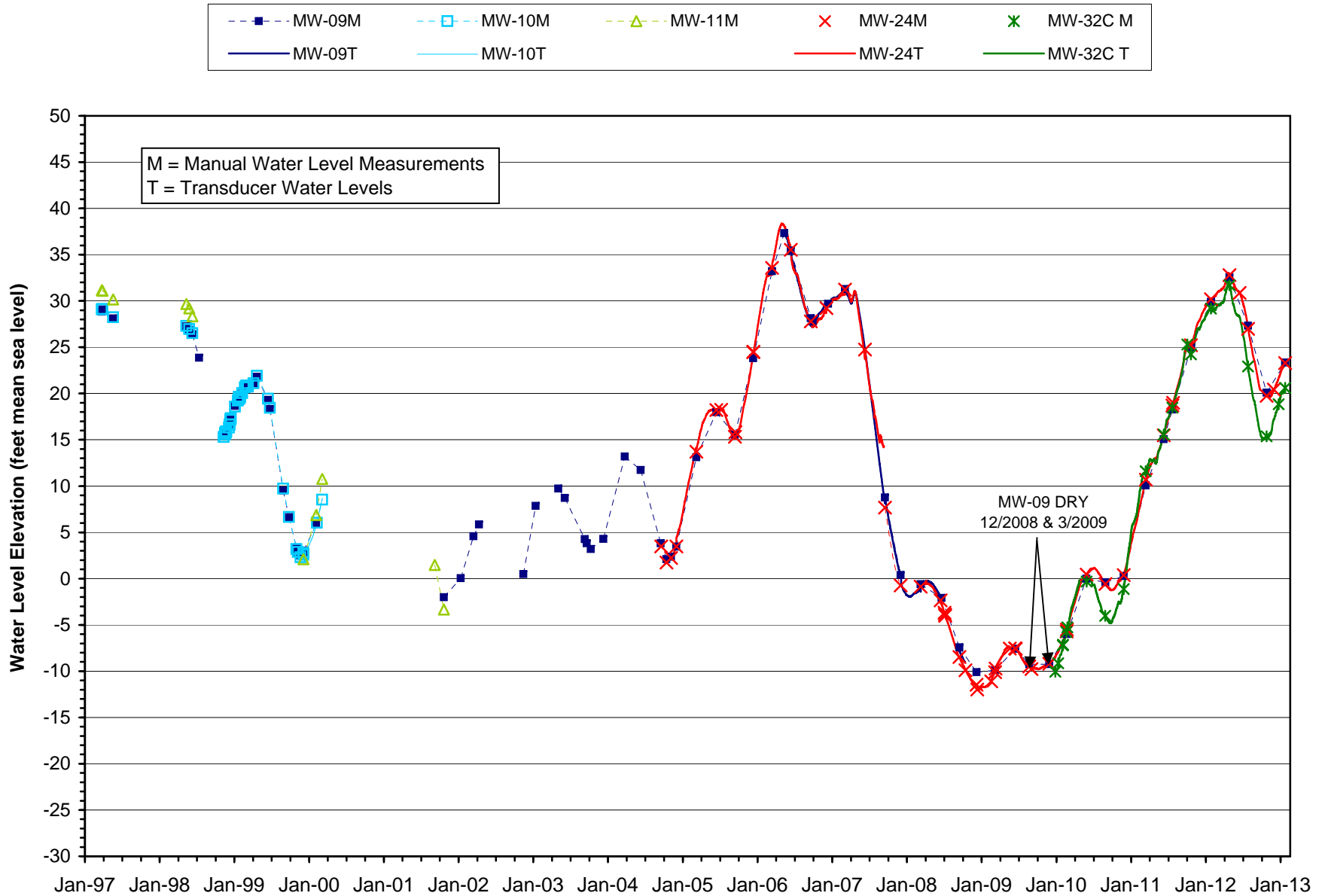


FIGURE 7. REGIONAL GROUNDWATER SYSTEM WATER LEVELS, UNIT C MONITOR WELLS

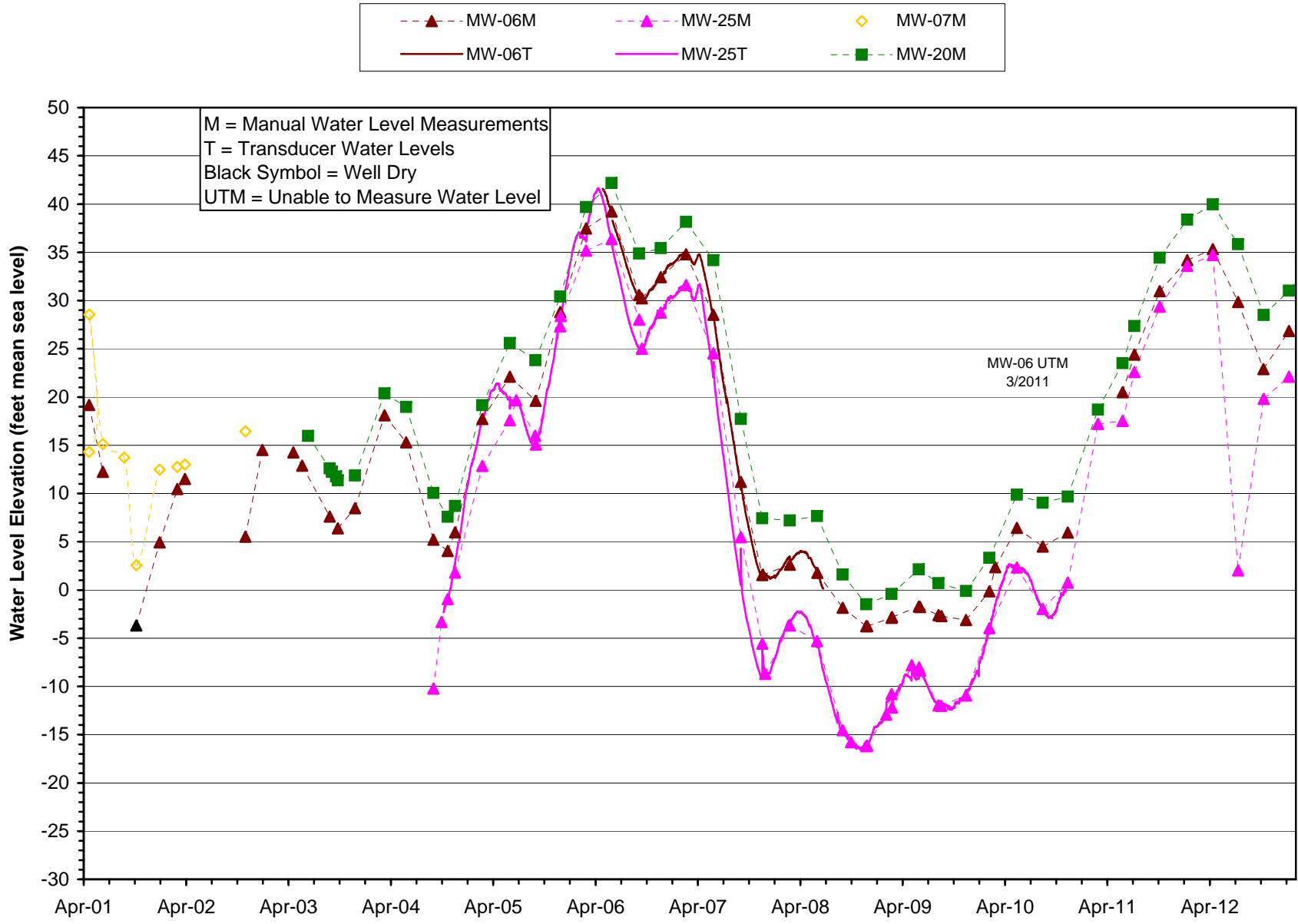


FIGURE 8. REGIONAL GROUNDWATER SYSTEM WATER LEVELS, UNIT D MONITOR WELLS

Mar 14, 2013 - 10:24am ADE - T:\2013\500-599\532 Roytheon\Hydrogeology\X-Sections\310-1177.dwg

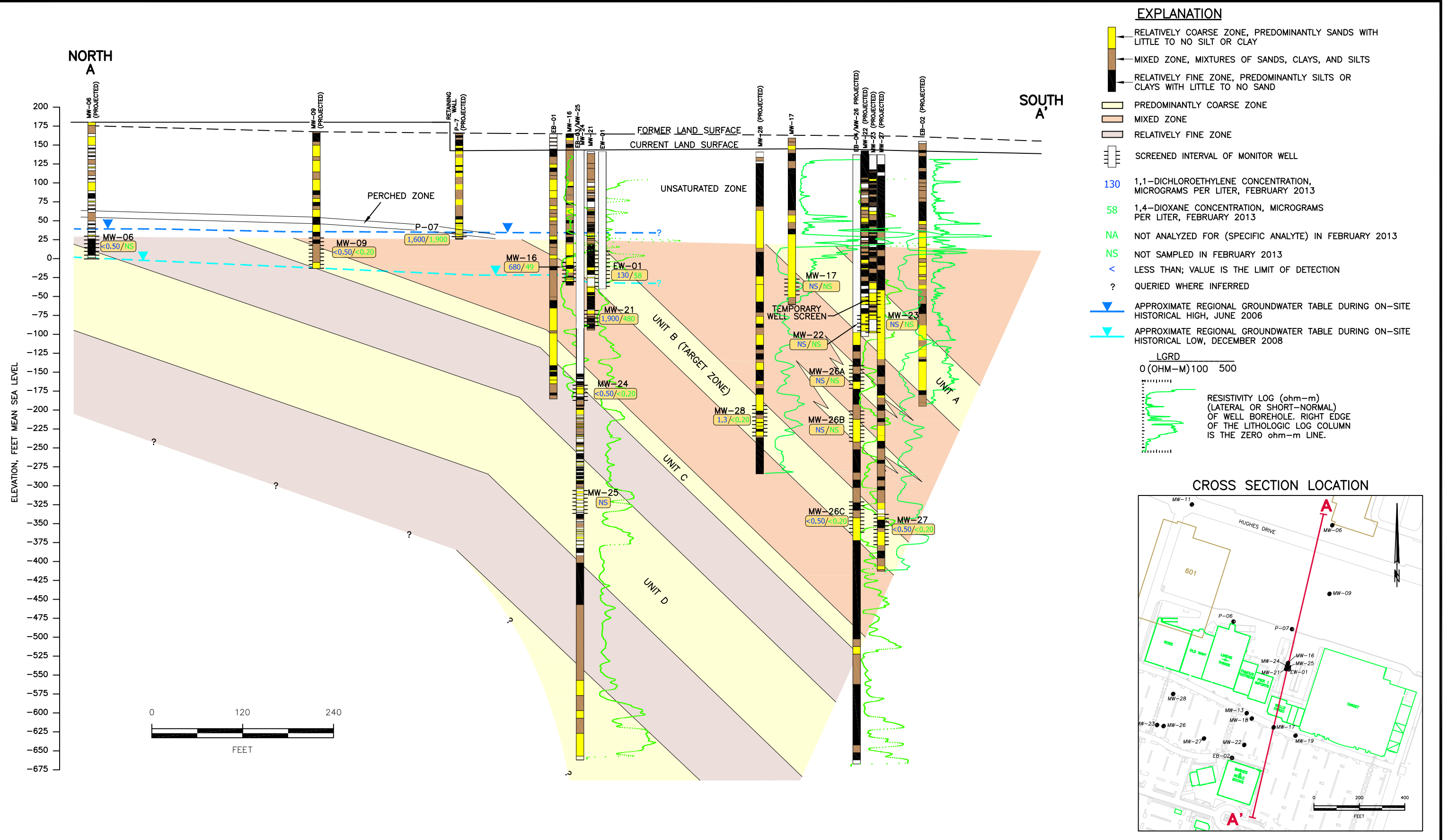
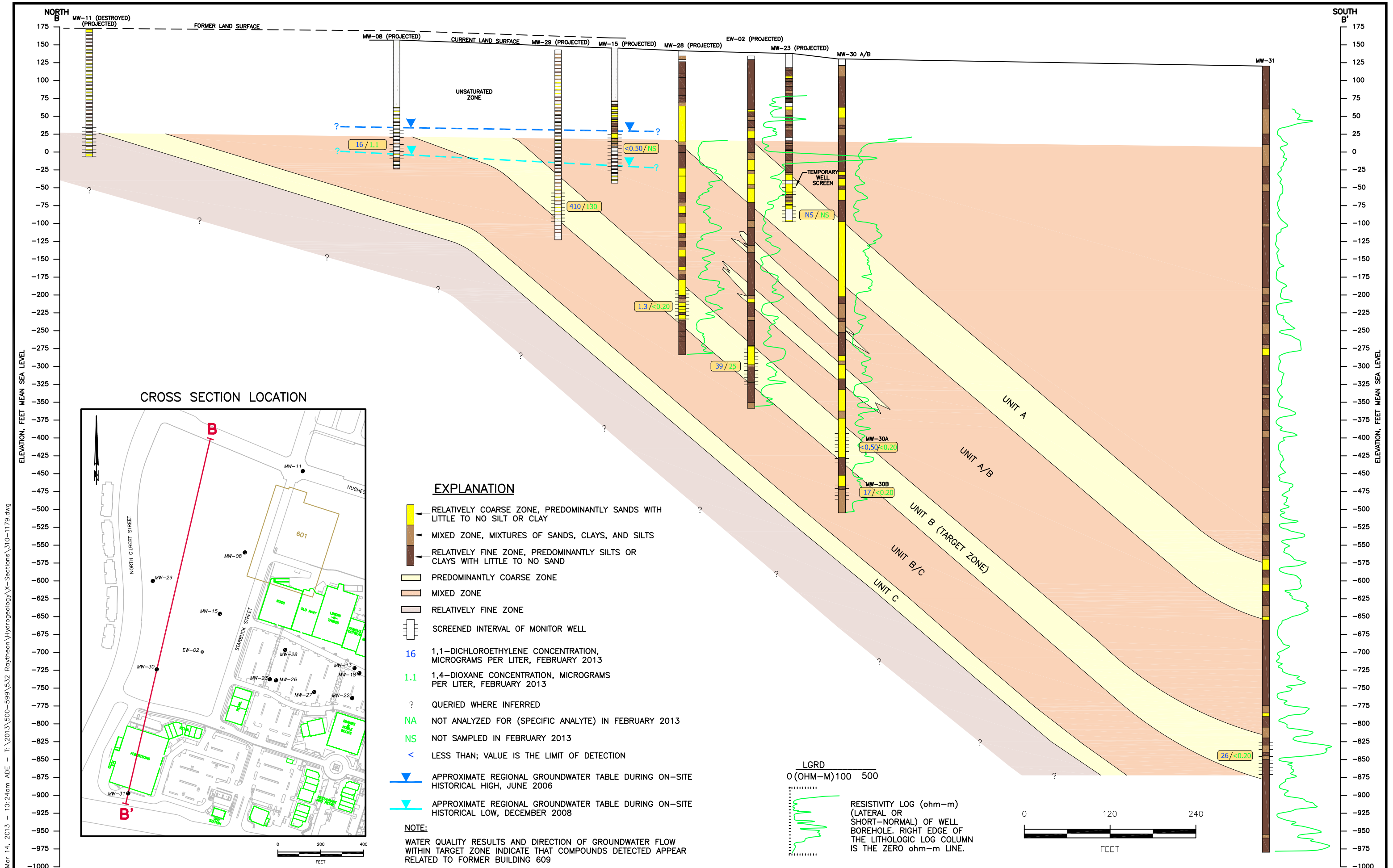


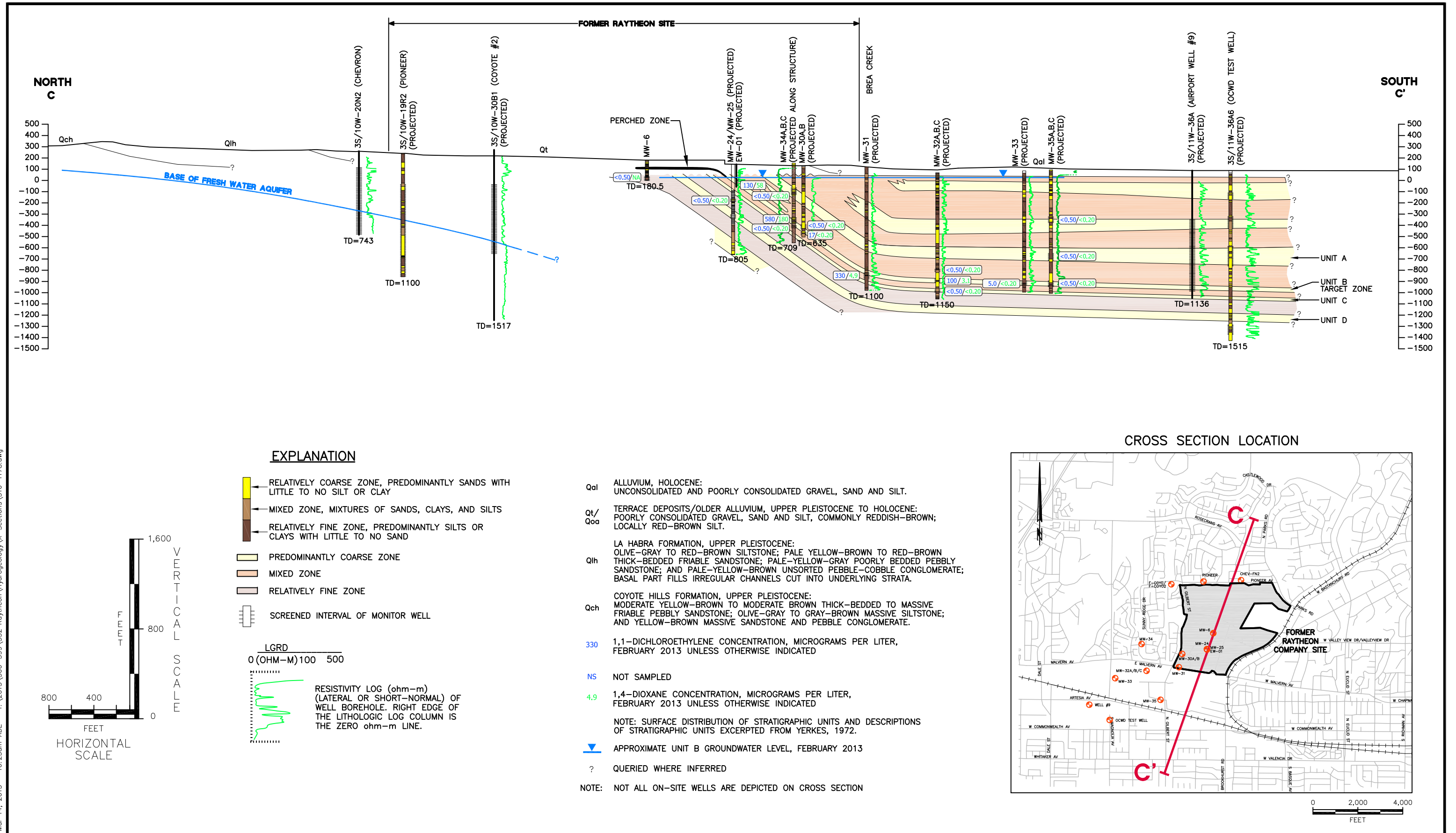
FIGURE 9.
SITE CONCEPTUAL GROUNDWATER MODEL HYDROGEOLOGIC CROSS-SECTION A-A'



Mar 14, 2013 10:24am ADE - T: 2013\500-599\532 Raytheon\Hydrogeology\X-Sections\310-1179.dwg

FIGURE 10. SITE CONCEPTUAL GROUNDWATER MODEL HYDROGEOLOGIC CROSS-SECTION B-B'

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CROSS SECTION LOCATION

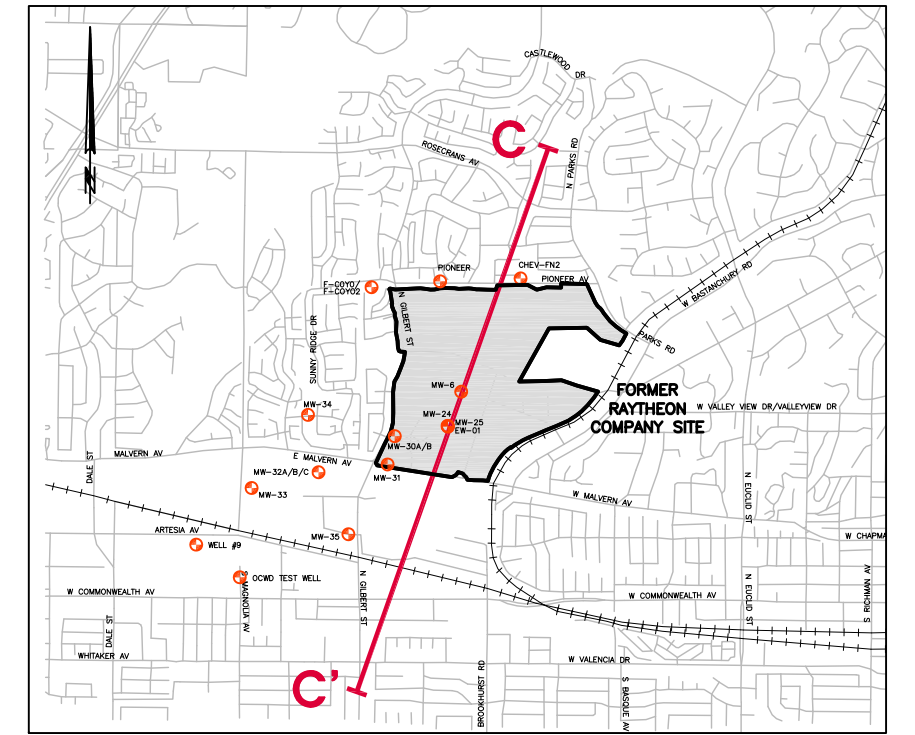
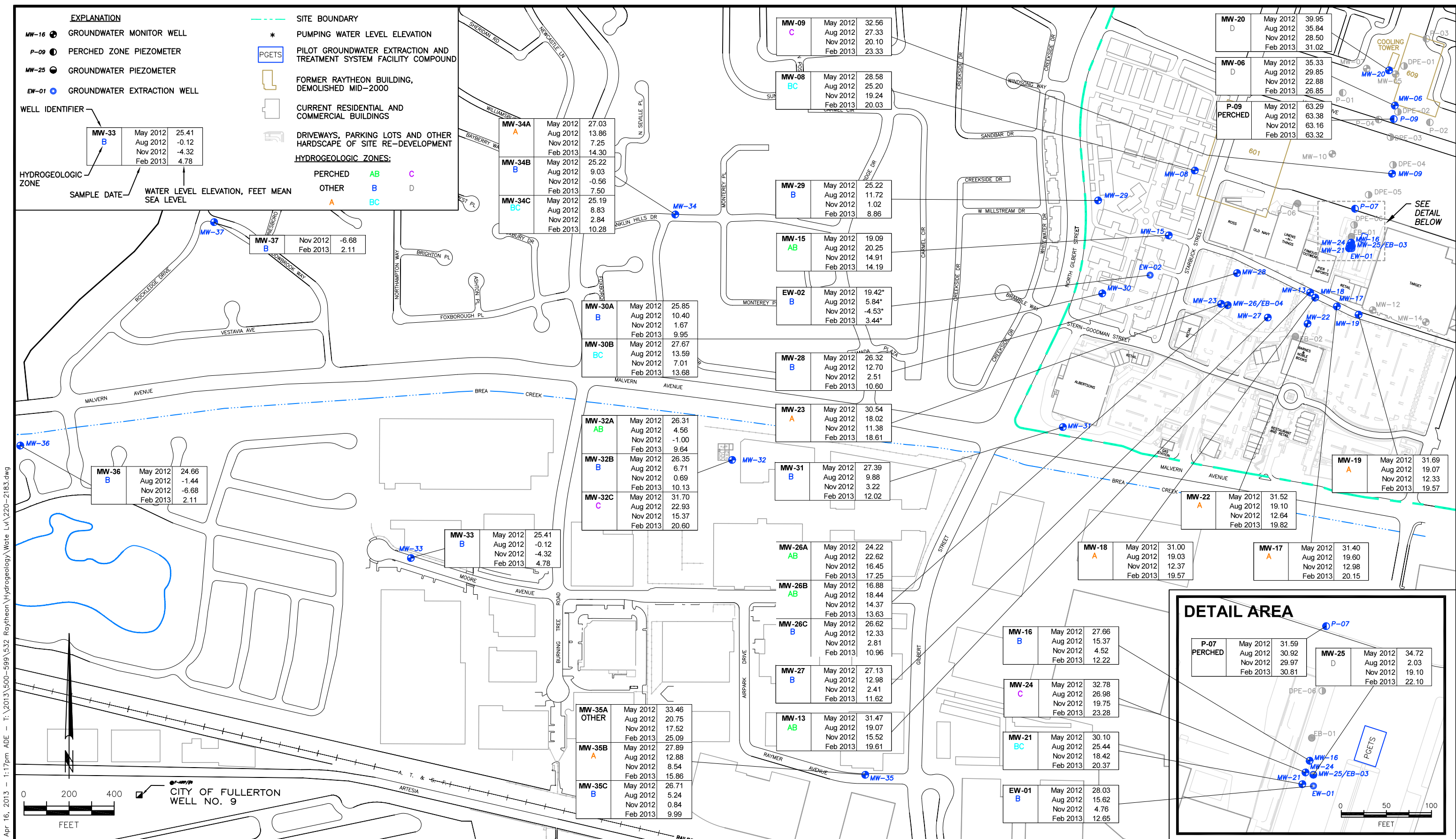
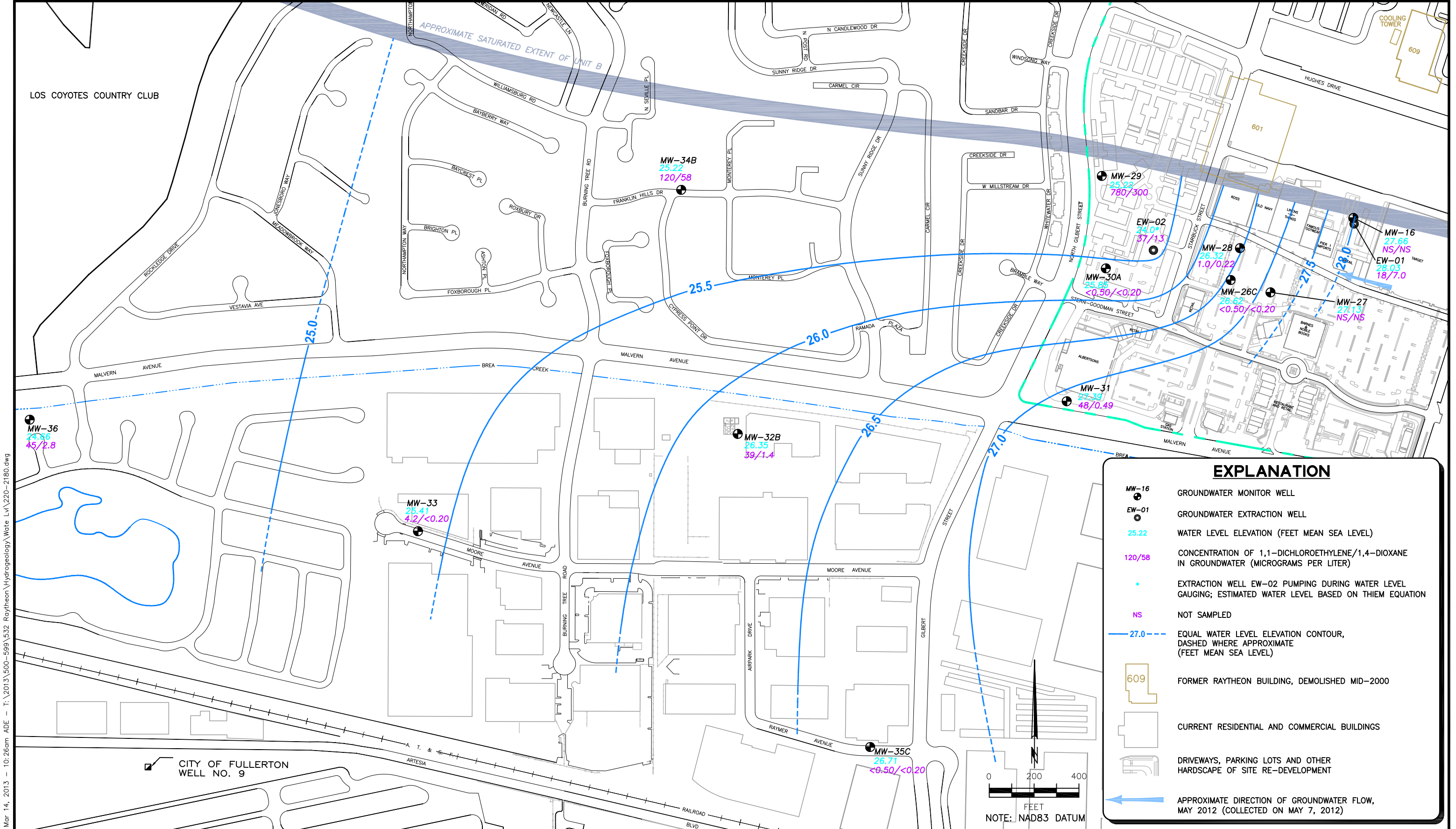


FIGURE 11.
REGIONAL CONCEPTUAL GROUNDWATER MODEL HYDROGEOLOGIC CROSS-SECTION C-C'



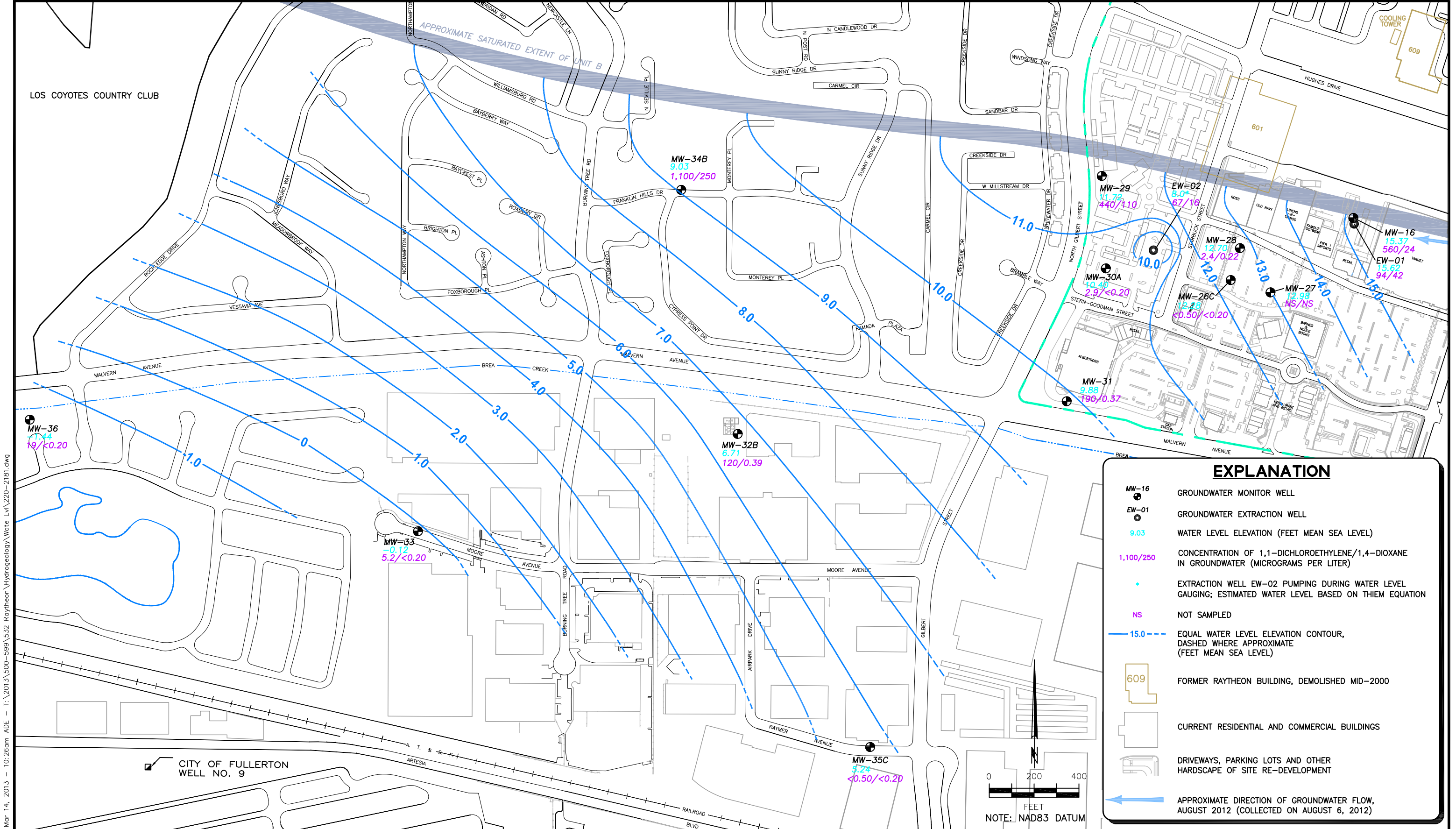
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FIGURE 12.
WATER LEVEL ELEVATIONS
MAY 2012 THROUGH FEBRUARY 2013



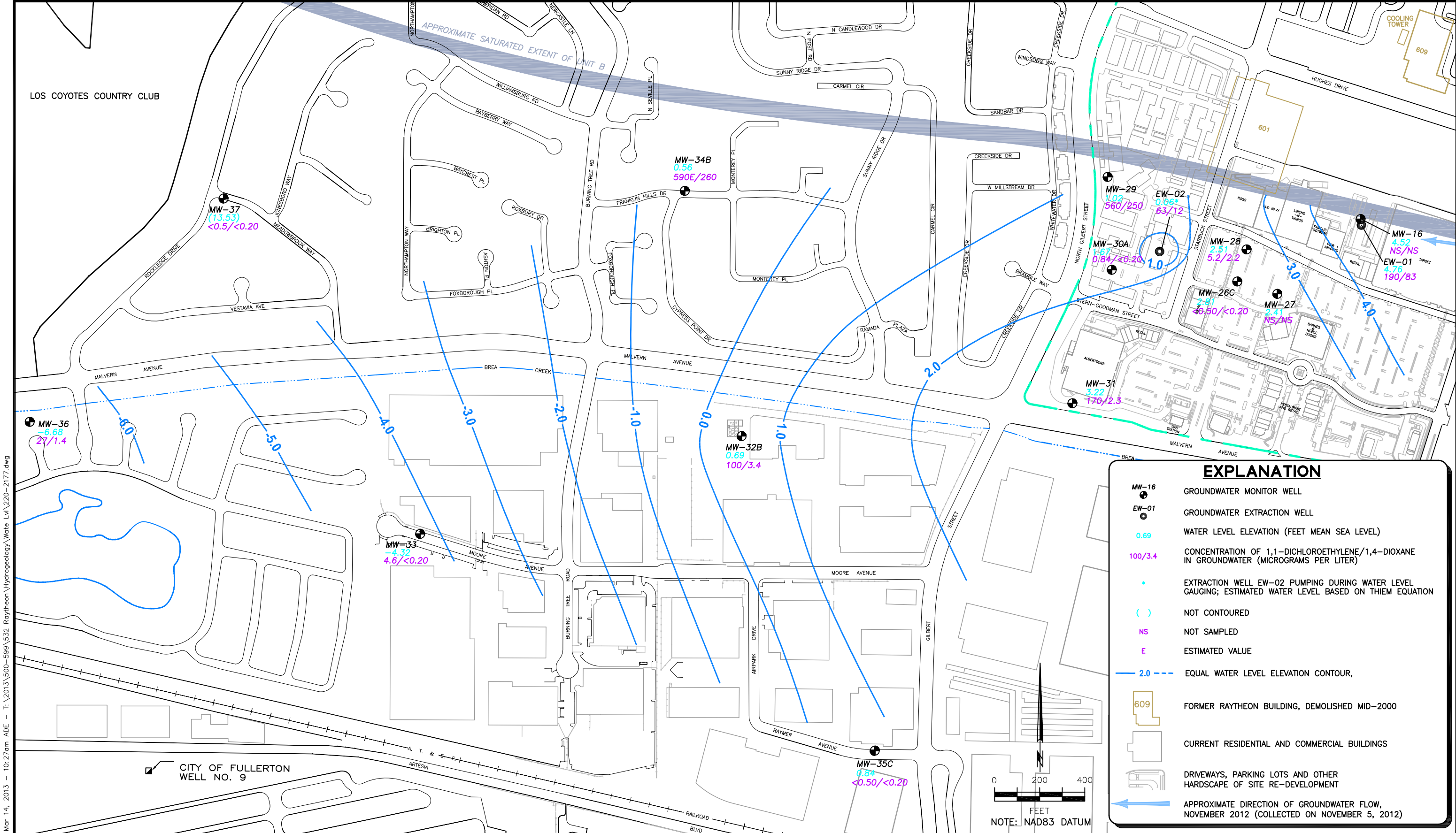
Mar 14, 2013 - 10:26am ADE - T:\2013\500-599\532 Roytheon Hydrogeology\Wate Lvl\220-2180.dwg

FIGURE 13A.
WATER LEVEL AND WATER QUALITY UNIT B
MAY 2012



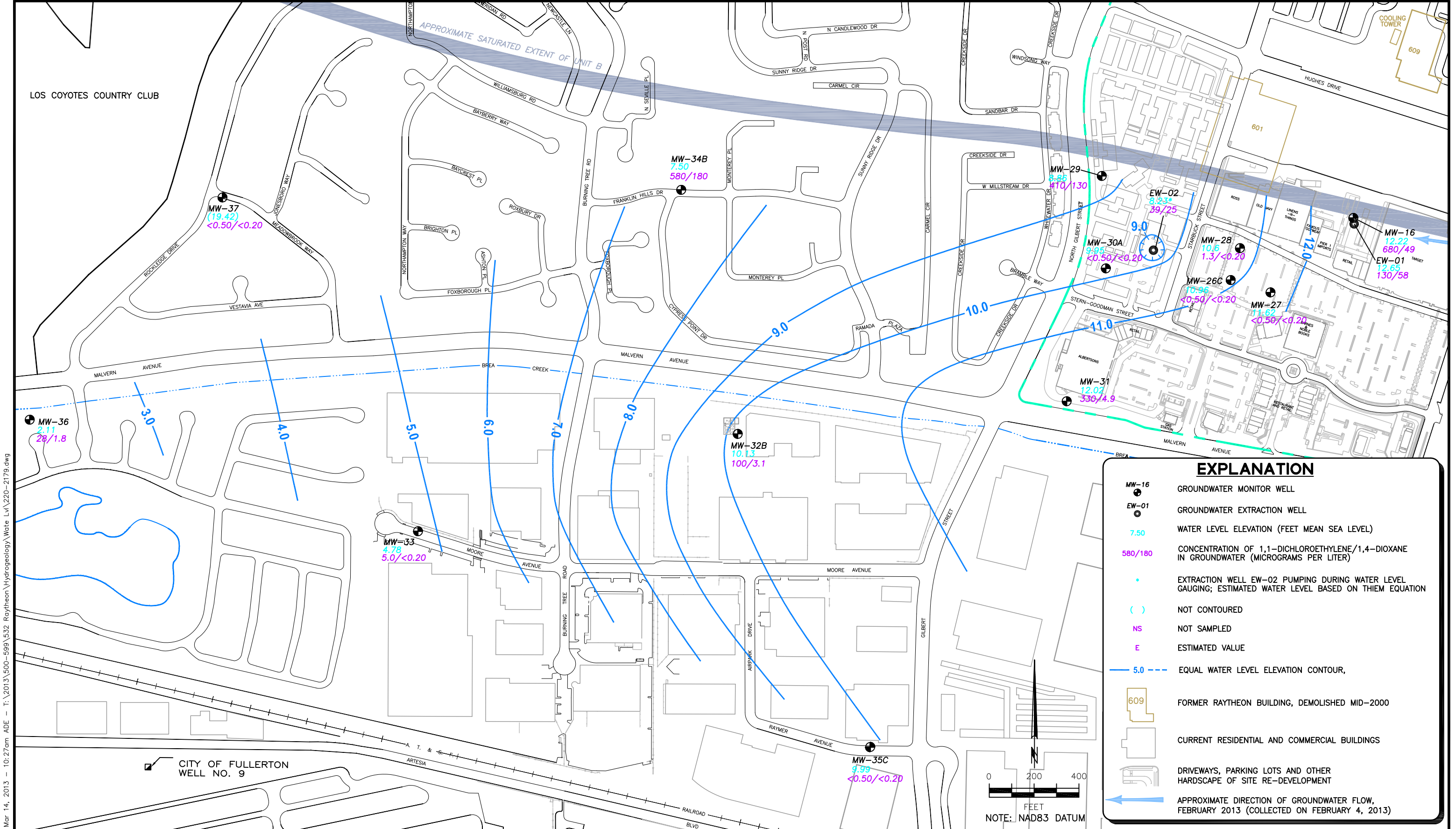
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FIGURE 13B.
WATER LEVEL AND WATER QUALITY UNIT B
AUGUST 2012



Mar 14, 2013 10:27am ADE - T:\2013\500-599\532 Roytheon\Hydrogeology\Wate Lvl\220-2177.dwg

FIGURE 13C.
WATER LEVEL AND WATER QUALITY UNIT B
NOVEMBER 2012



Mar 14, 2013 - 10:27am ADE - T:\2013\500-599\532 Roytheon Hydrogeology\Wate Lvl\220-2179.dwg

FIGURE 13D.
WATER LEVEL AND WATER QUALITY UNIT B
FEBRUARY 2013

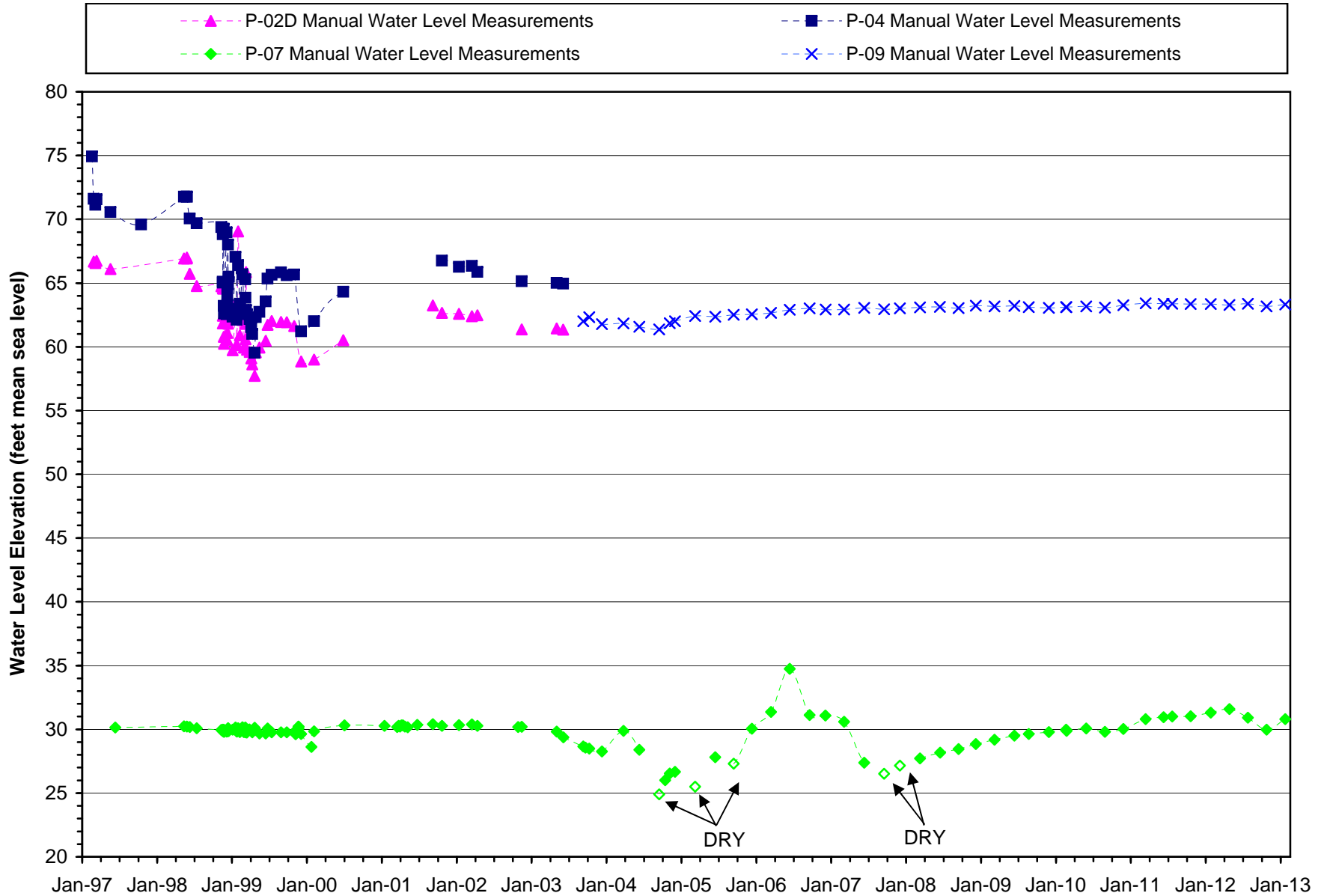


FIGURE 14. PERCHED ZONE WATER LEVELS, CENTRAL PORTION OF SITE

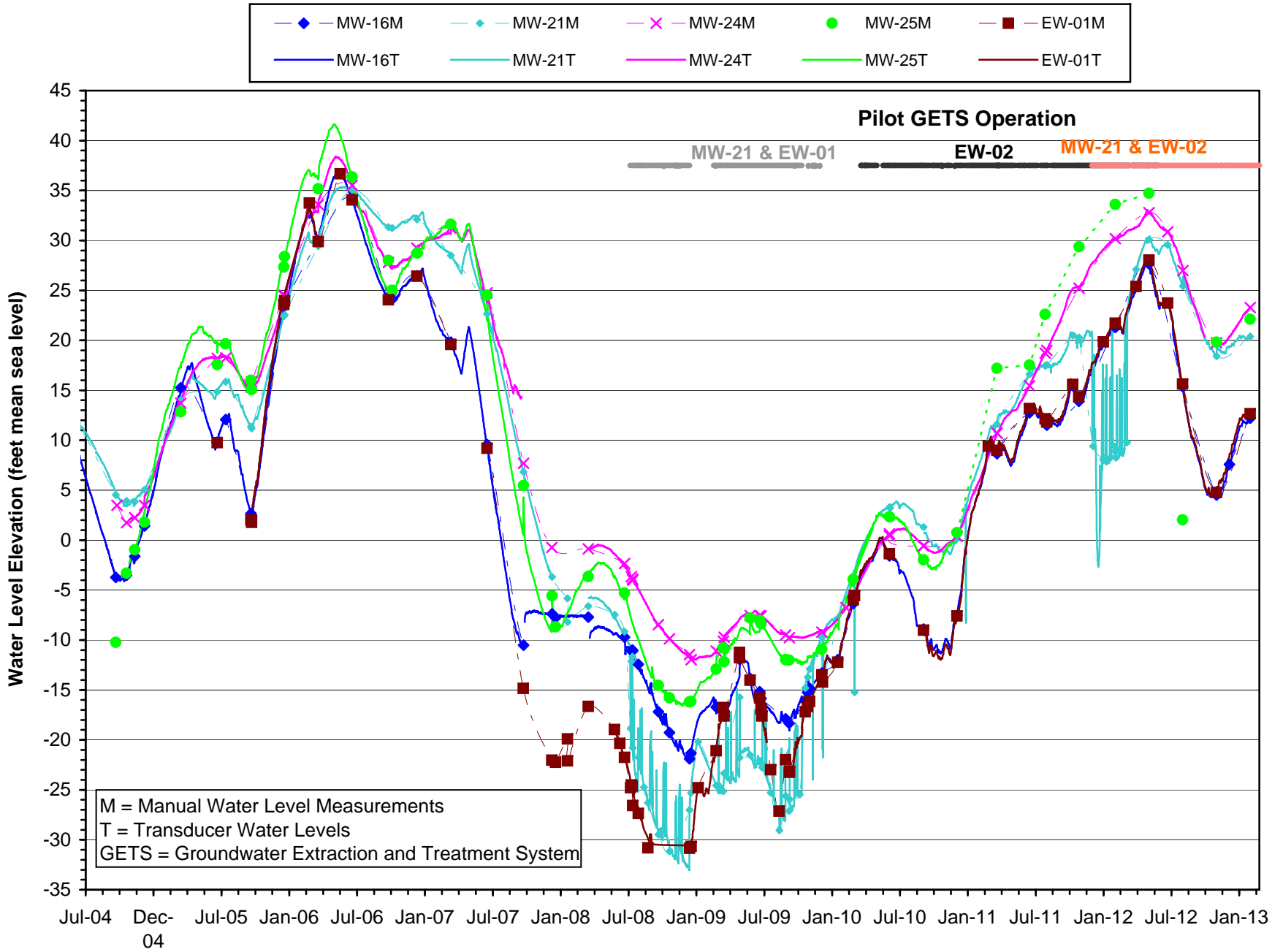
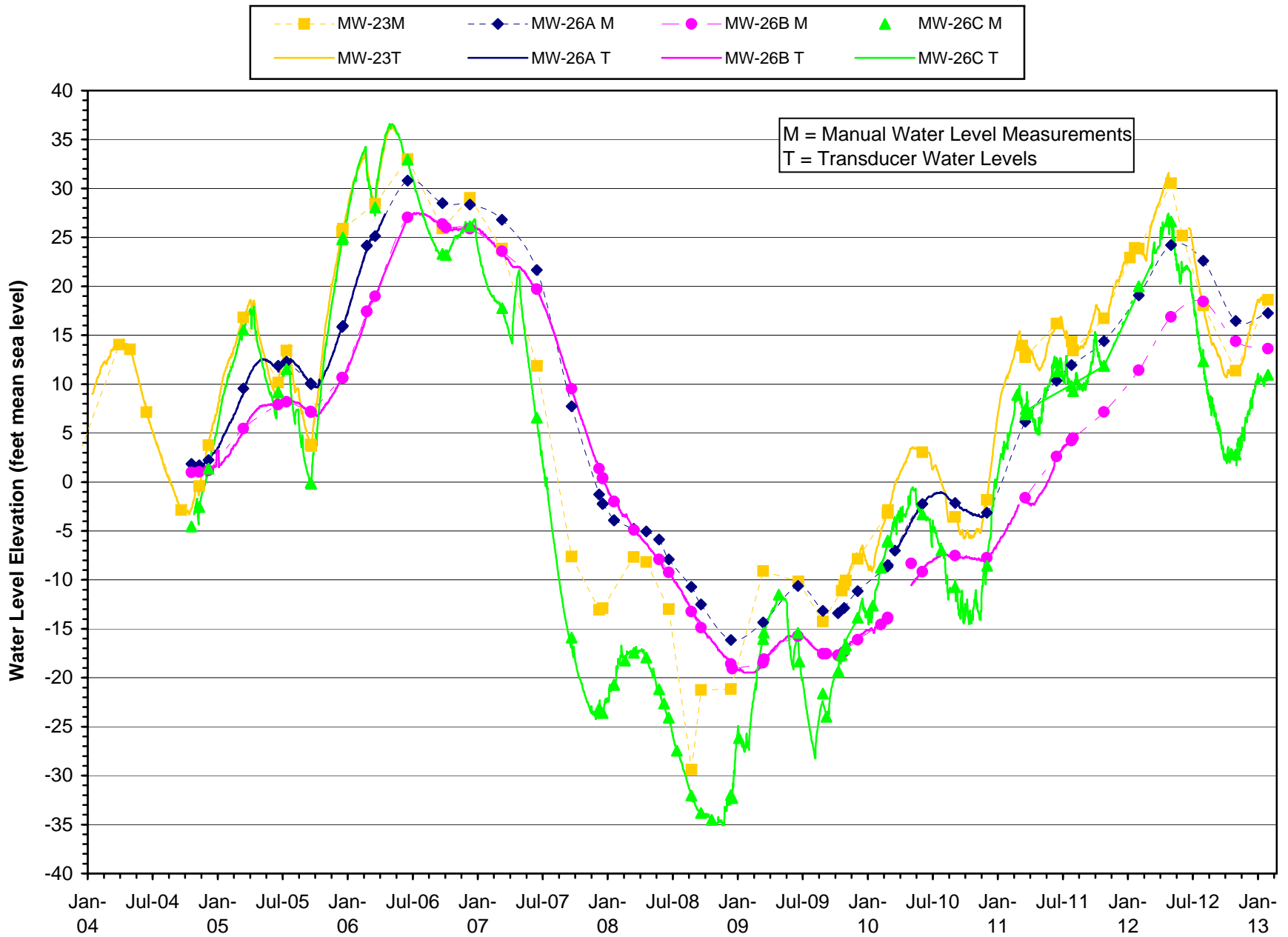
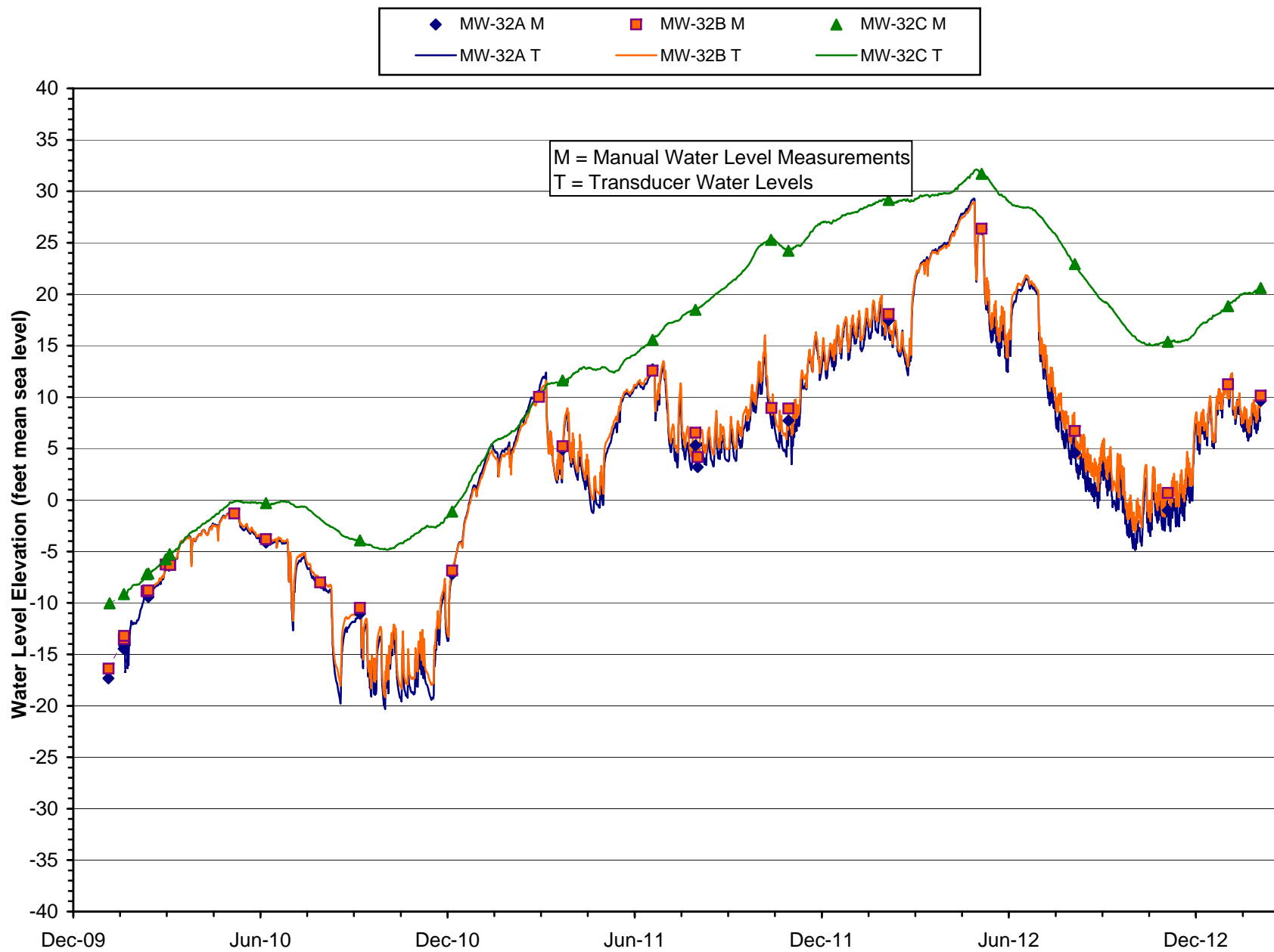


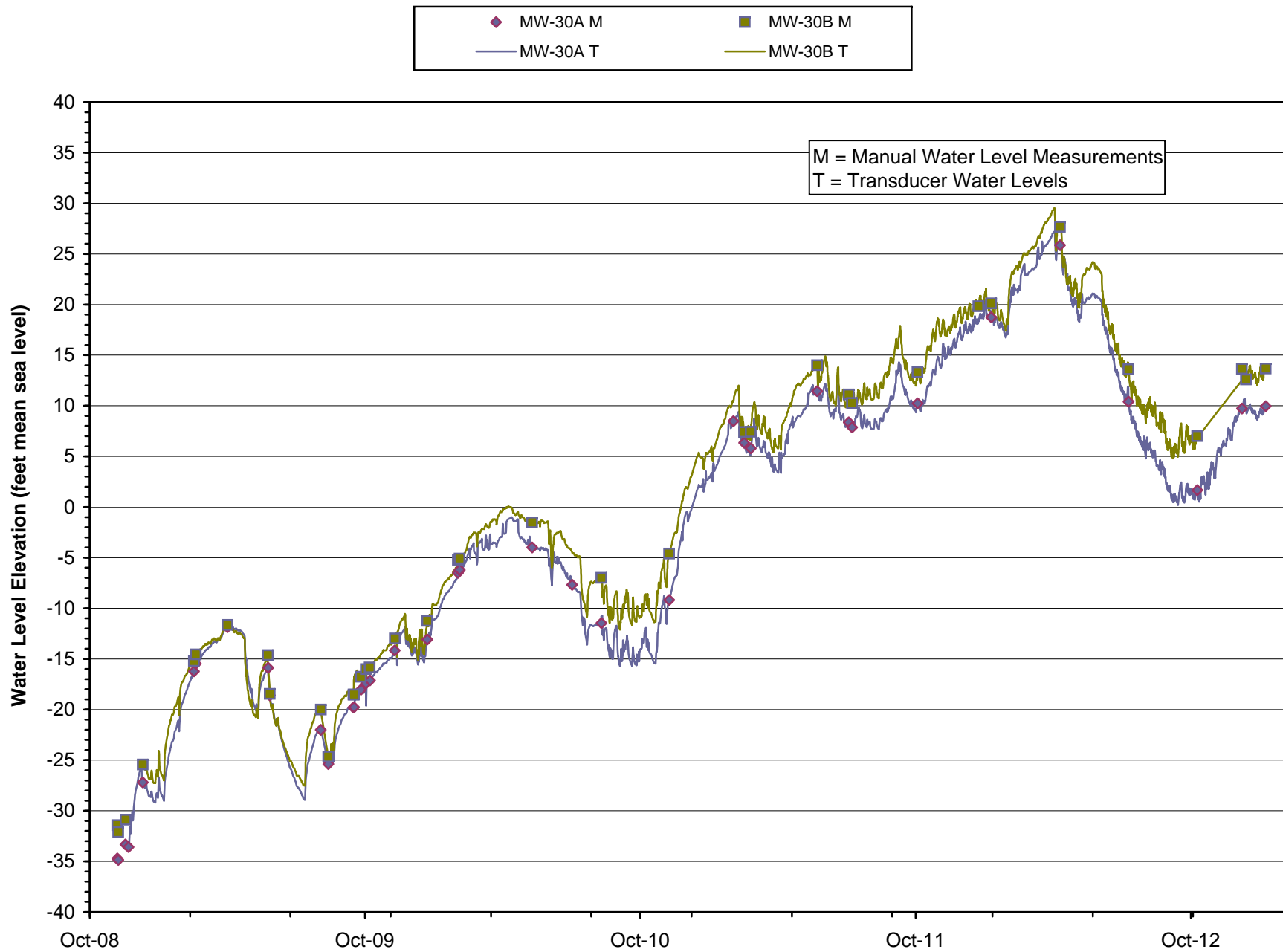
FIGURE 15. REGIONAL GROUNDWATER SYSTEM WATER LEVELS, MONITOR AND EXTRACTION WELL CLUSTER EW-01/MW-16/21/24/25

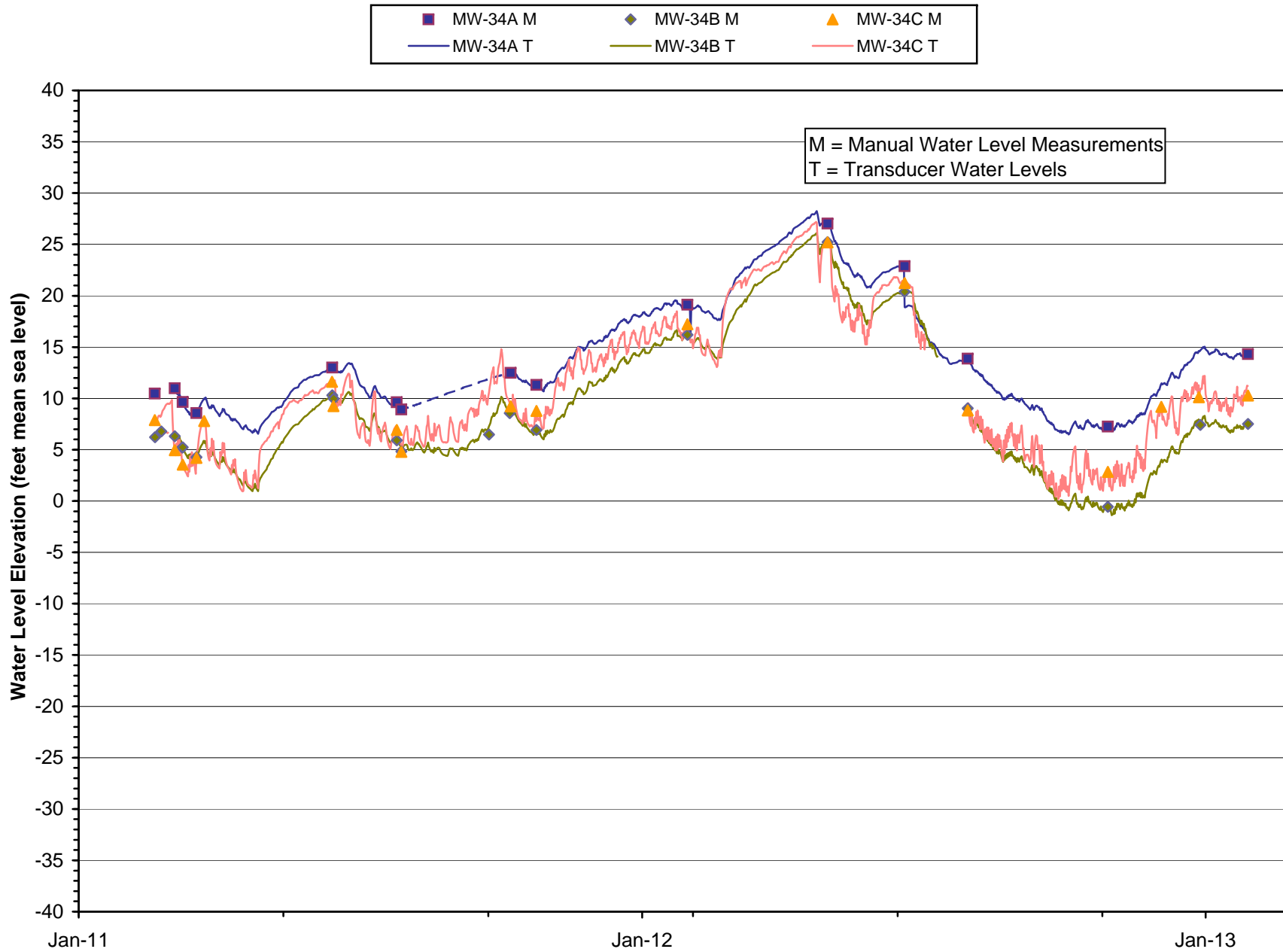


**FIGURE 16. REGIONAL GROUNDWATER SYSTEM WATER LEVELS,
MONITOR WELL CLUSTER MW-23/26A/26B/26C**



**FIGURE 17. REGIONAL GROUNDWATER SYSTEM WATER LEVELS,
NESTED MONITOR WELLS MW-32A/32B/32C**





**FIGURE 19. REGIONAL GROUNDWATER SYSTEM WATER LEVELS,
MONITOR WELL CLUSTER MW-34A/34B/34C**

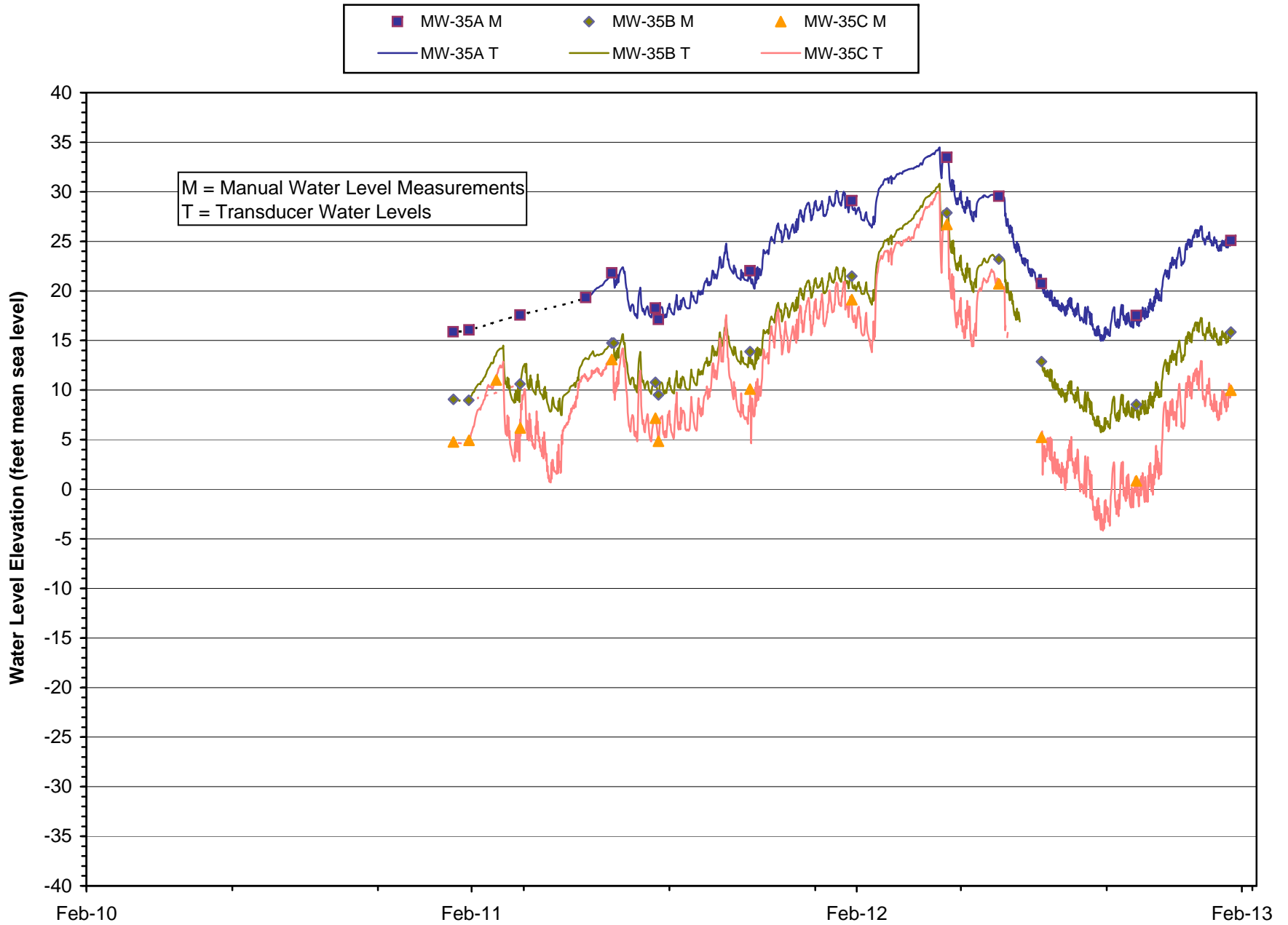
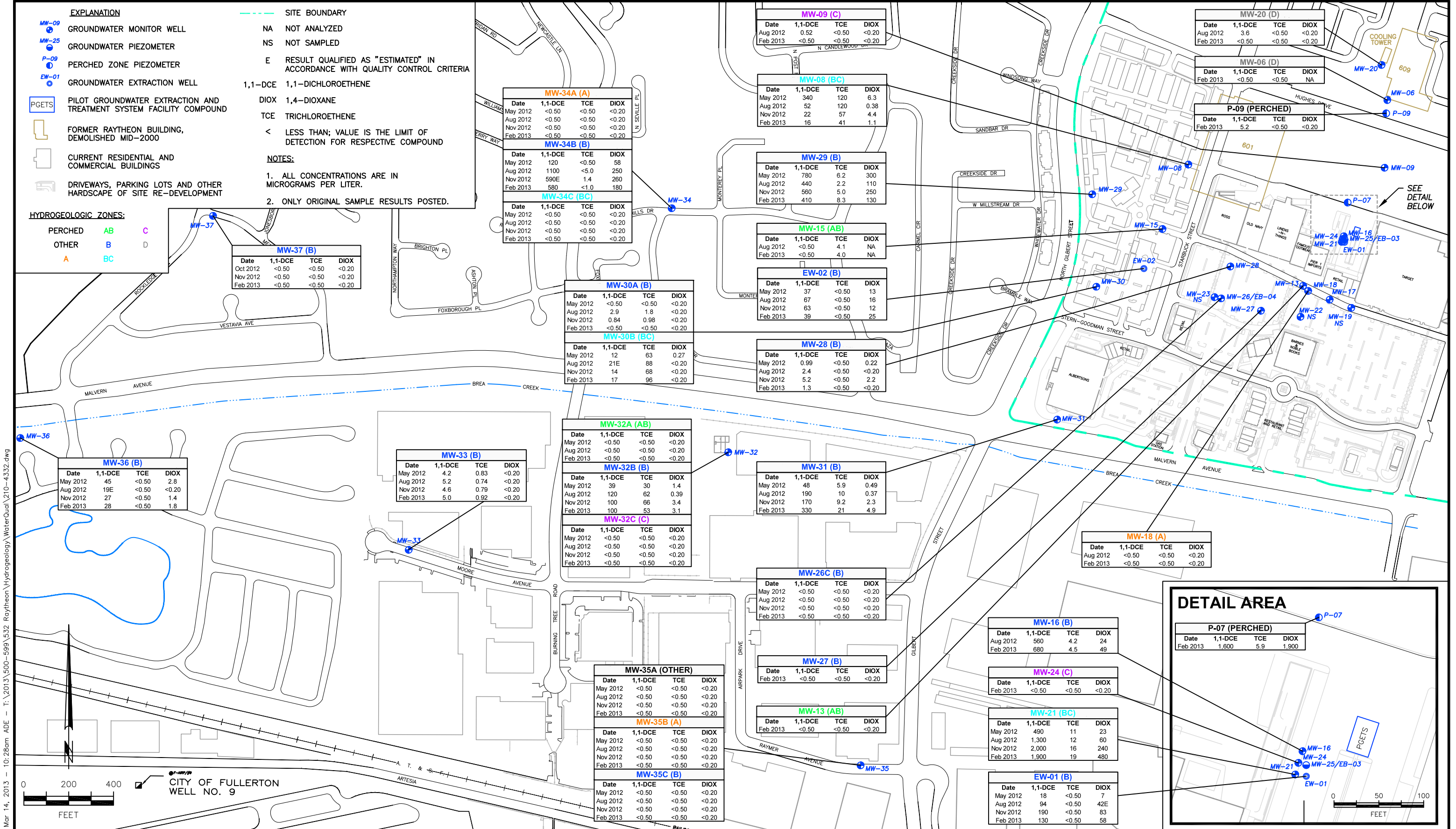
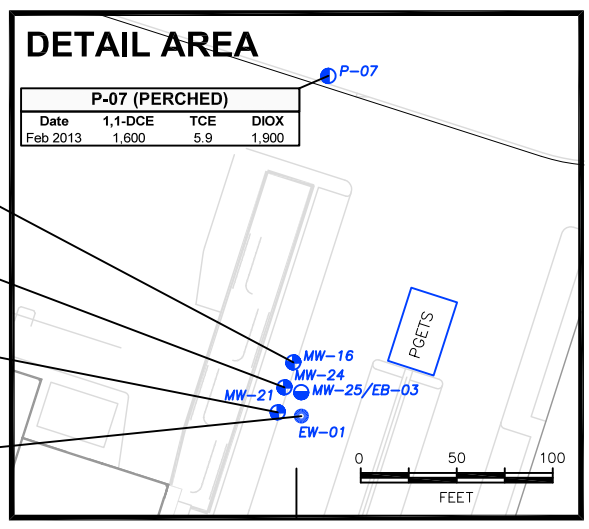


FIGURE 20. REGIONAL GROUNDWATER SYSTEM WATER LEVELS, NESTED MONITOR WELLS MW-35A/35B/35C

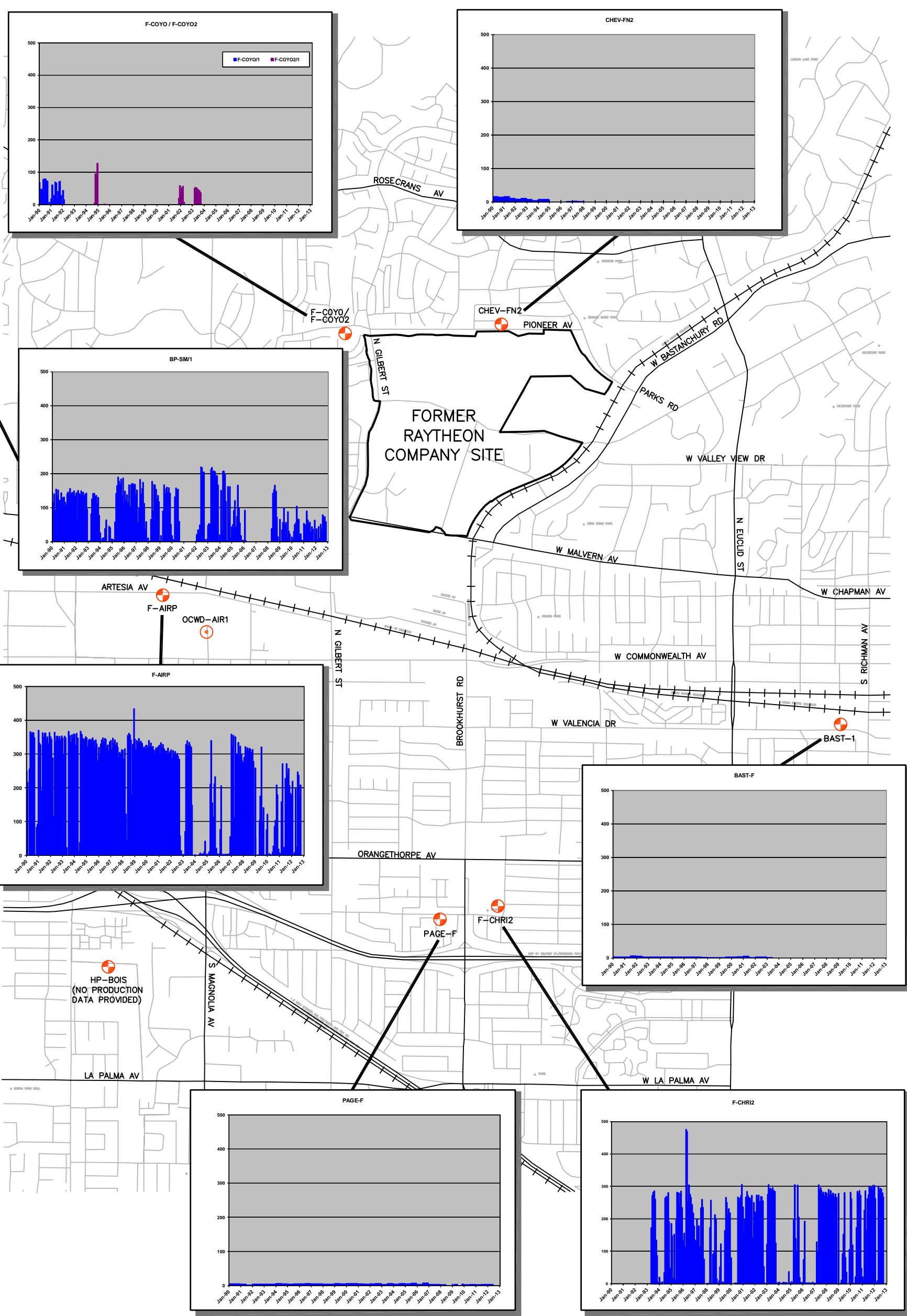


Mar 14, 2013 10:28am ADE - T:\2013\500-599\532 Roytheon Hydrogeology WaterQual\210-4332.dwg

FIGURE 21.
1,1-DICHLOROETHYLENE, TRICHLOROETHYLENE AND 1,4-DIOXANE
IN THE REGIONAL GROUNDWATER SYSTEM MAY 2012 THROUGH FEBRUARY 2013



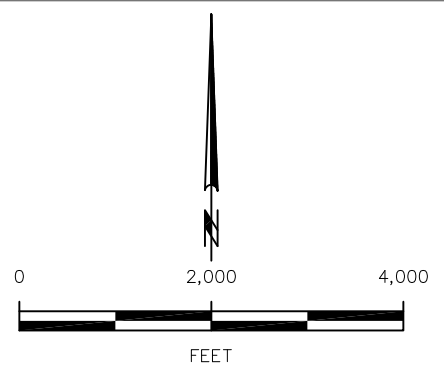
Mar 18, 2013 8:13am ADE - T:\2013\500-595\532_Raytheon\Hydrogeology\H+A_BaseMaps\410-8854.dwg



EXPLANATION

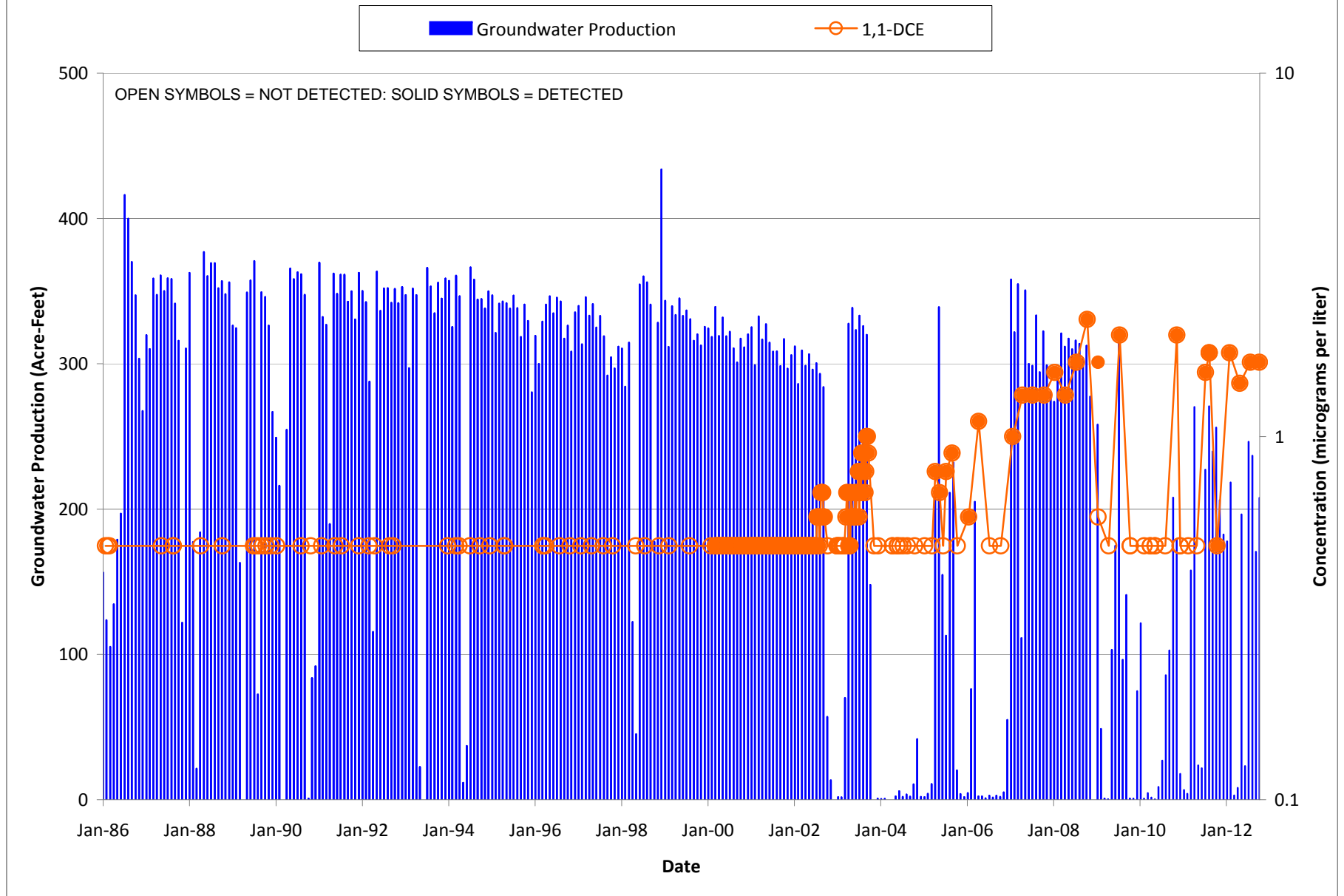
- ACTIVE OR RECENTLY ACTIVE PRODUCTION WELL
- REGIONAL OBSERVATION

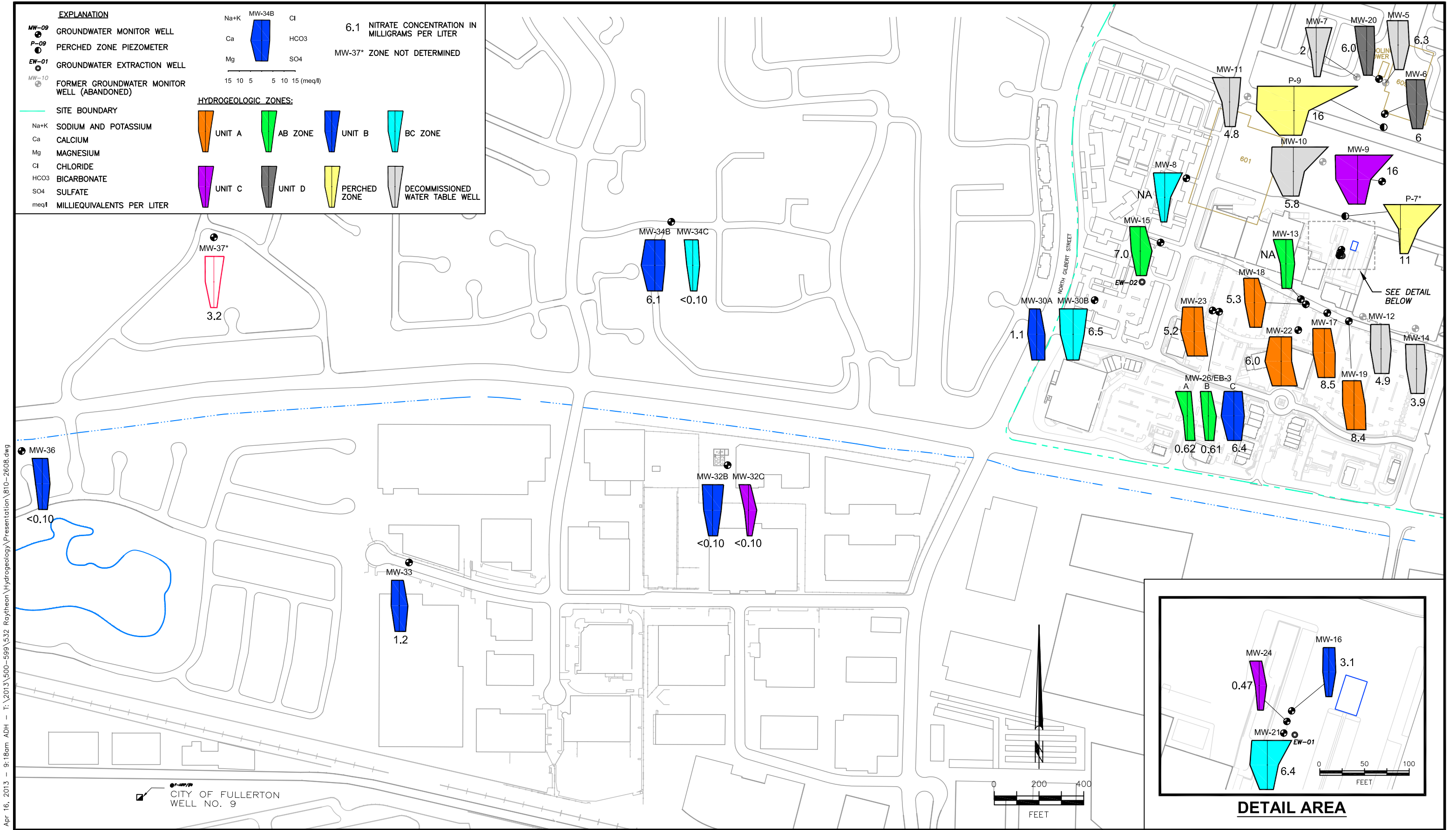
NOTE: GRAPHS INDICATE MONTHLY GROUNDWATER PRODUCTION IN ACRE-FEET



**FIGURE 22.
REGIONAL PRODUCTION WELLS**

FIGURE 23: F-AIRP Well Production and 1,1-Dichloroethylene Concentrations





Apr 16, 2013 9:18am ADH - T: \2013\500-599\532 Raytheon\Hydrogeology\Presentation\810-2608.dwg

FIGURE 24.
NORTHERN PERCHED ZONE AND REGIONAL GROUNDWATER SYSTEM INORGANIC WATER QUALITY

Apr. 16, 2013 - 9:22am ADH - T:\2013\500-599\532 Roytheon\Hydrogeology\H+A BaseMaps\410-8918.dwg

EXPLANATION

- DARK BLUE = UNIT B
- LIGHT BLUE = UNIT BC
- PURPLE = UNIT C
- GRAY = UNIT D
- RED = MW-37

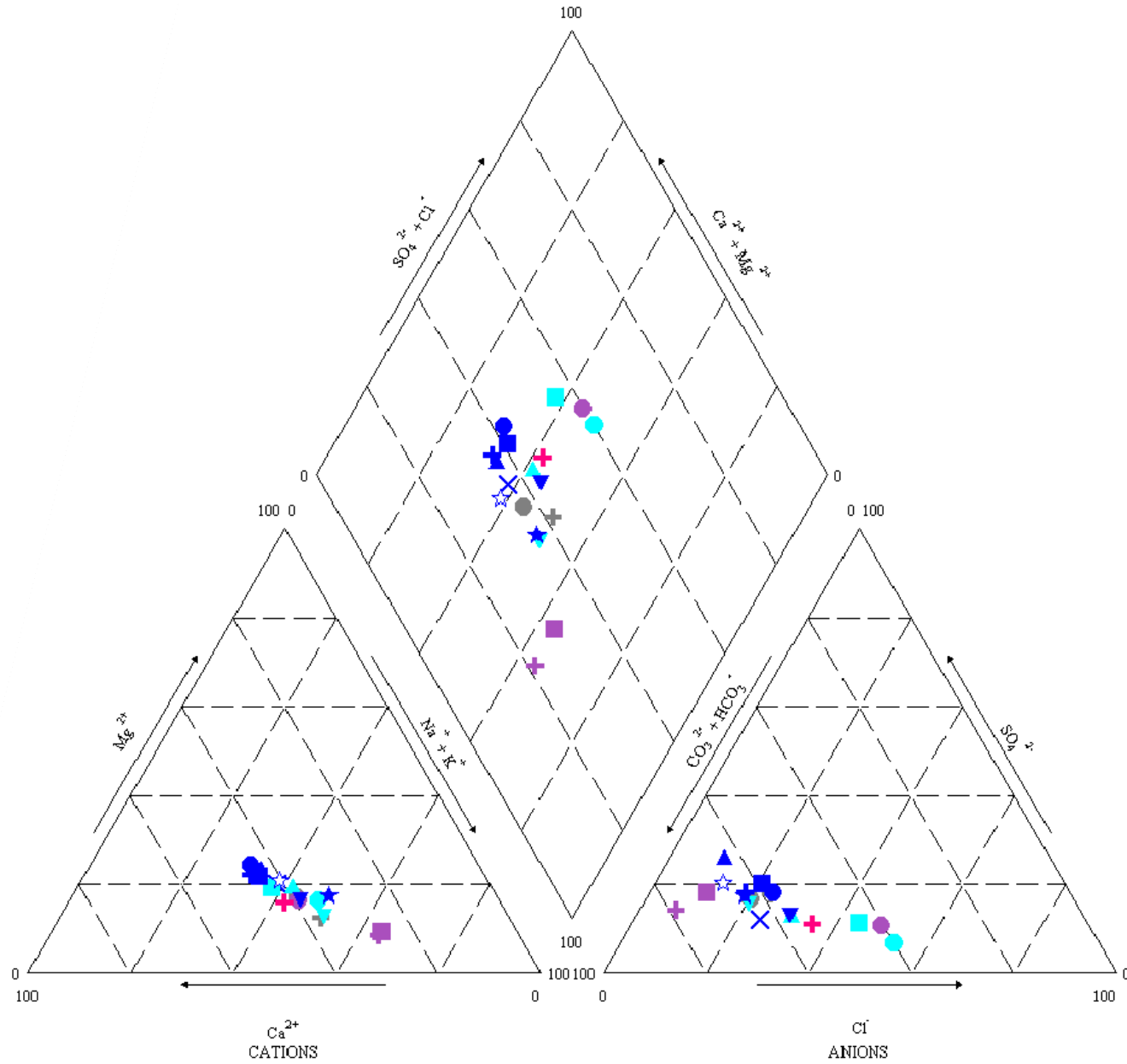
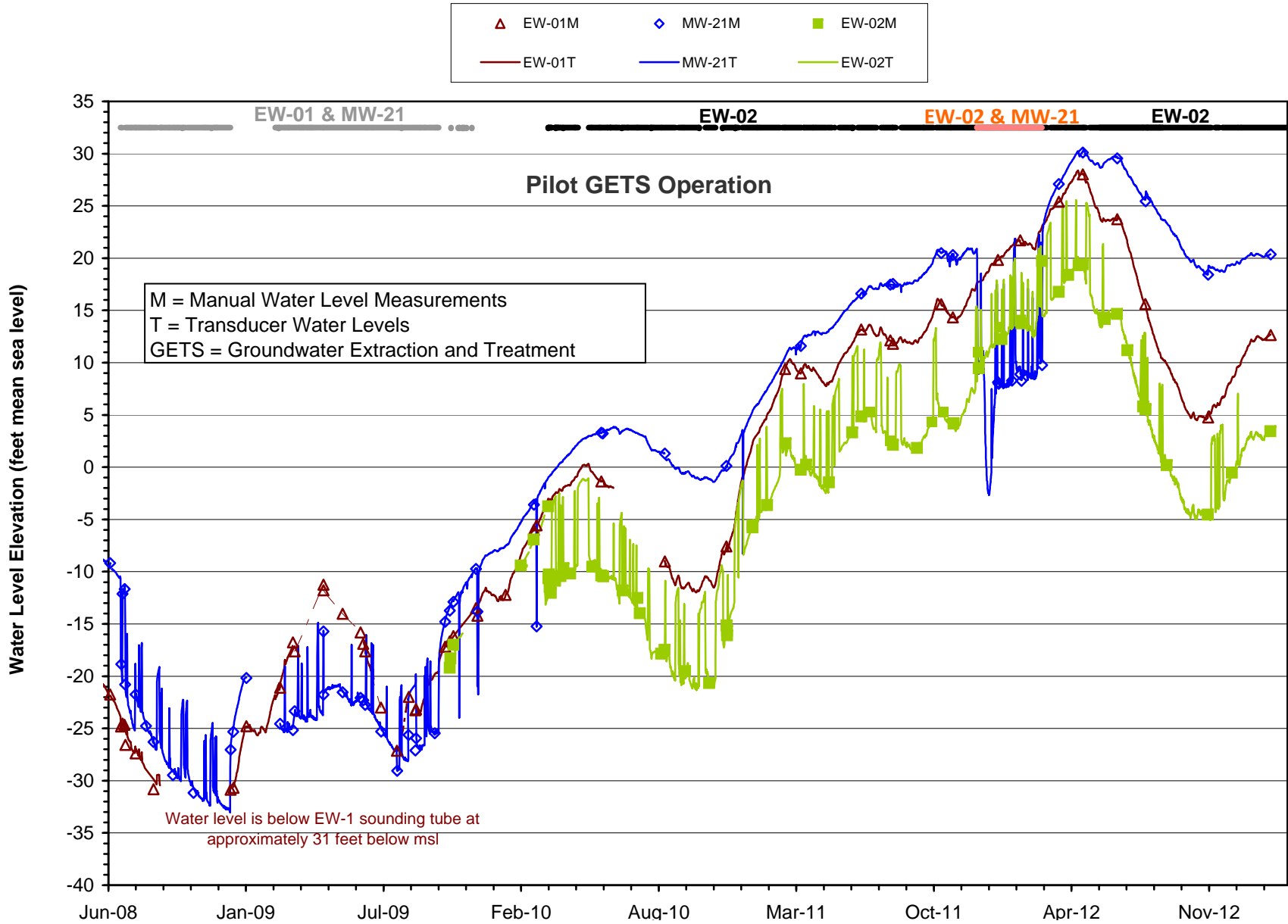


FIGURE 25.
INORGANIC GROUNDWATER COMPOSITION,
UNIT B AND DEEPER (PIPER DIAGRAM)





PILOT GROUNDWATER EXTRACTION AND TREATMENT SYSTEM OPERATION AND EXTRACTION WELL WATER LEVELS

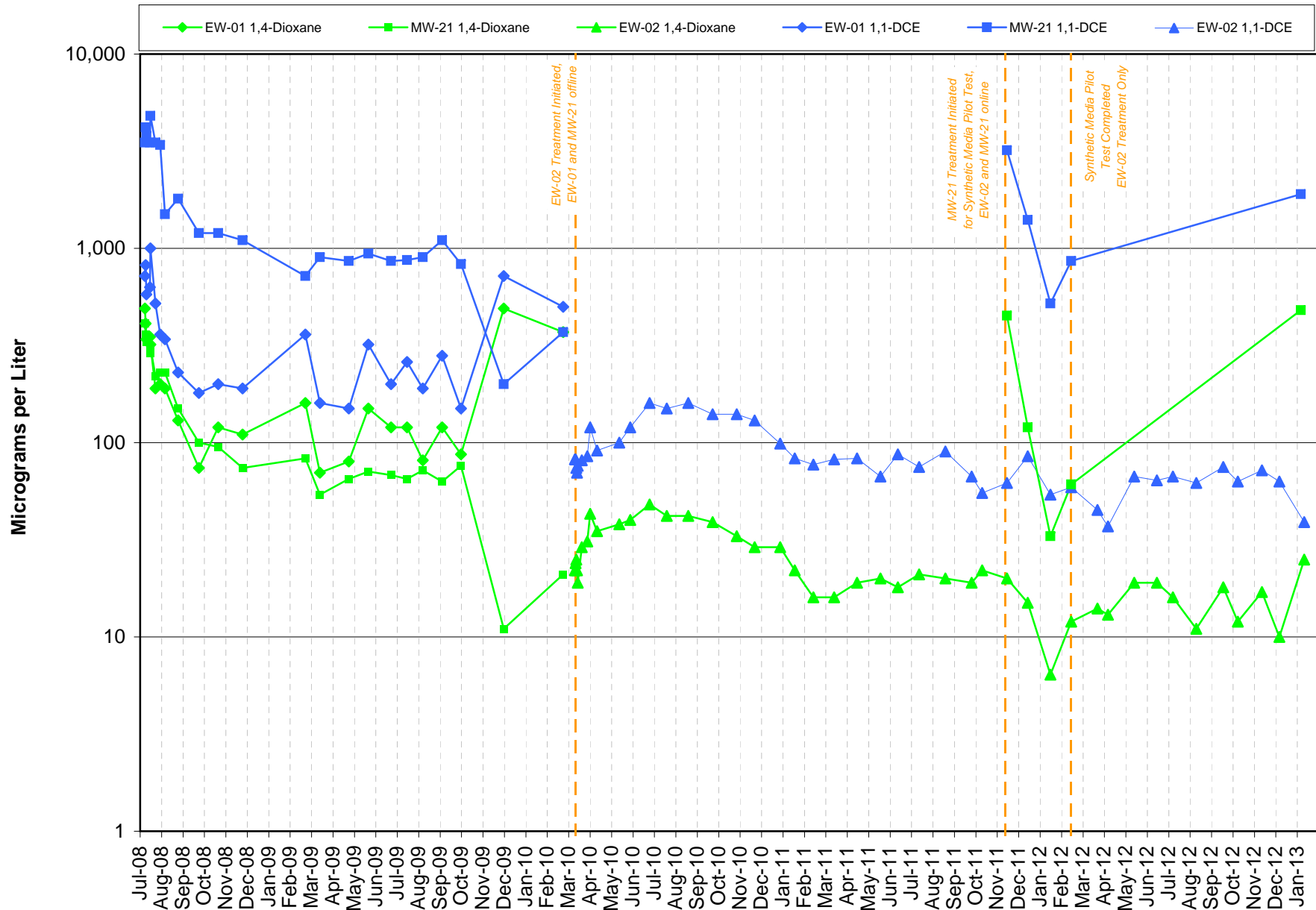
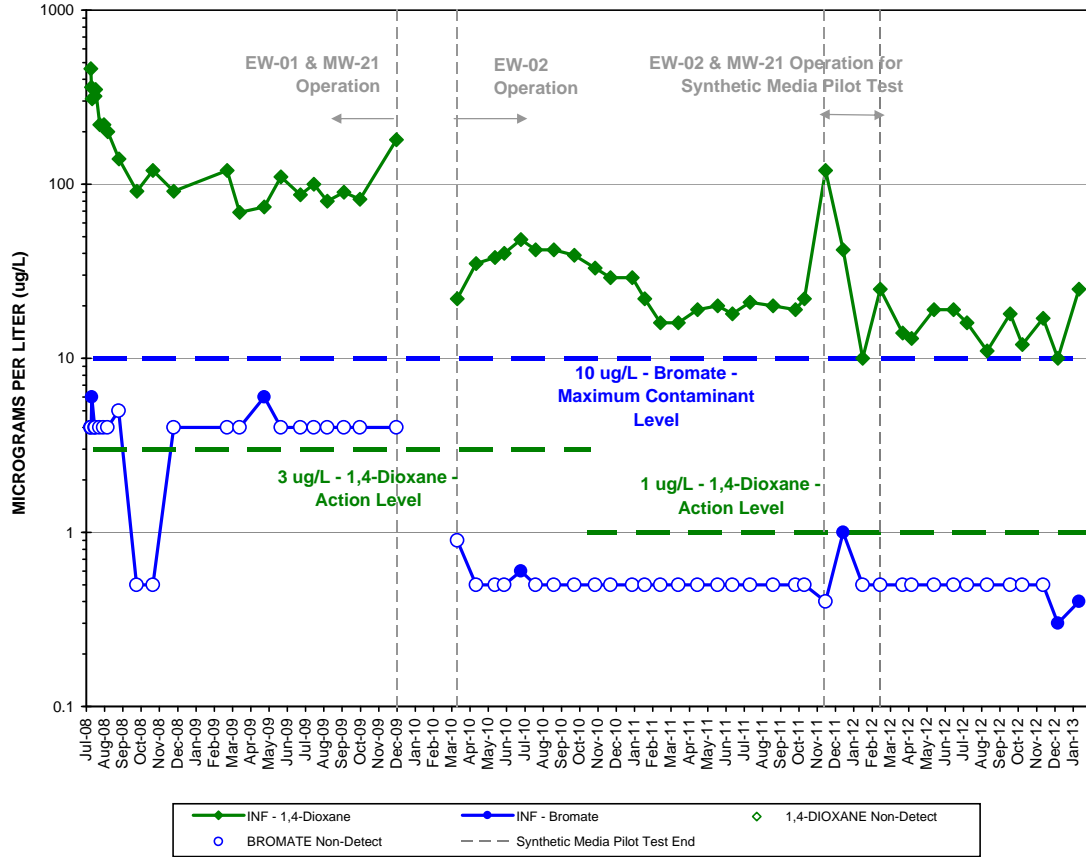


FIGURE 27.
1,1-DICHLOROETHYLENE AND 1,4-DIOXANE IN
EXTRACTION WELLS

Influent (INF) Concentrations



Post-Hipox (POX) Concentrations

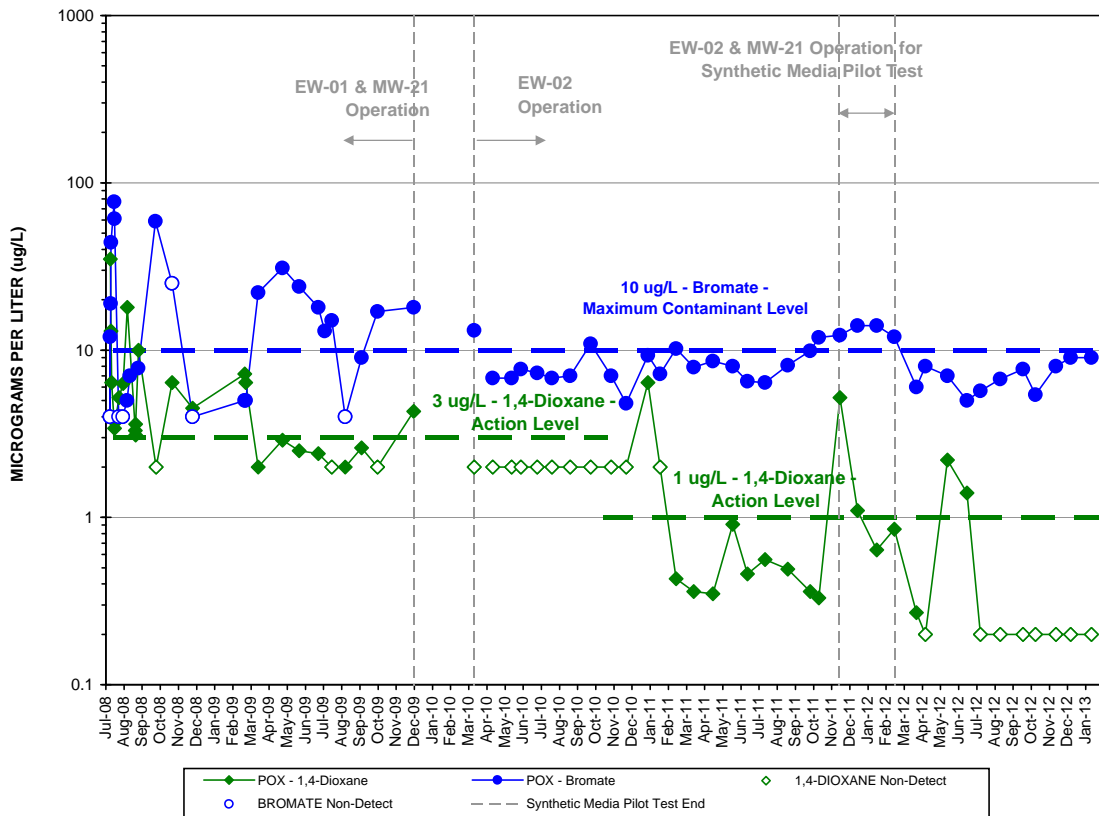


FIGURE 28.

1,4-DIOXANE AND BROMATE IN INFLUENT AND POST-OXIDATION SAMPLES

ug/L = Micrograms per liter

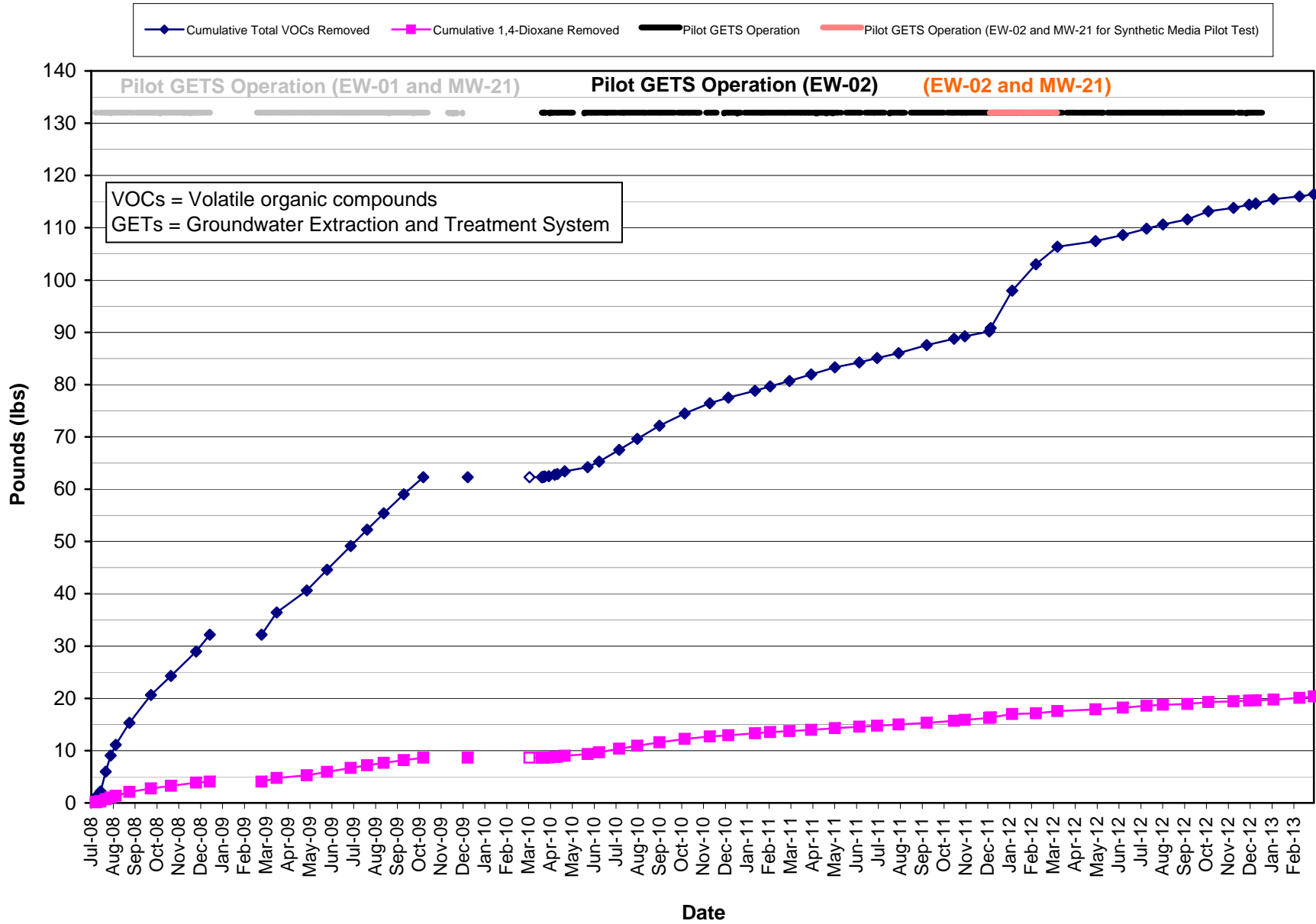


FIGURE 29.

PILOT GROUNDWATER EXTRACTION AND TREATMENT SYSTEM MASS REMOVAL

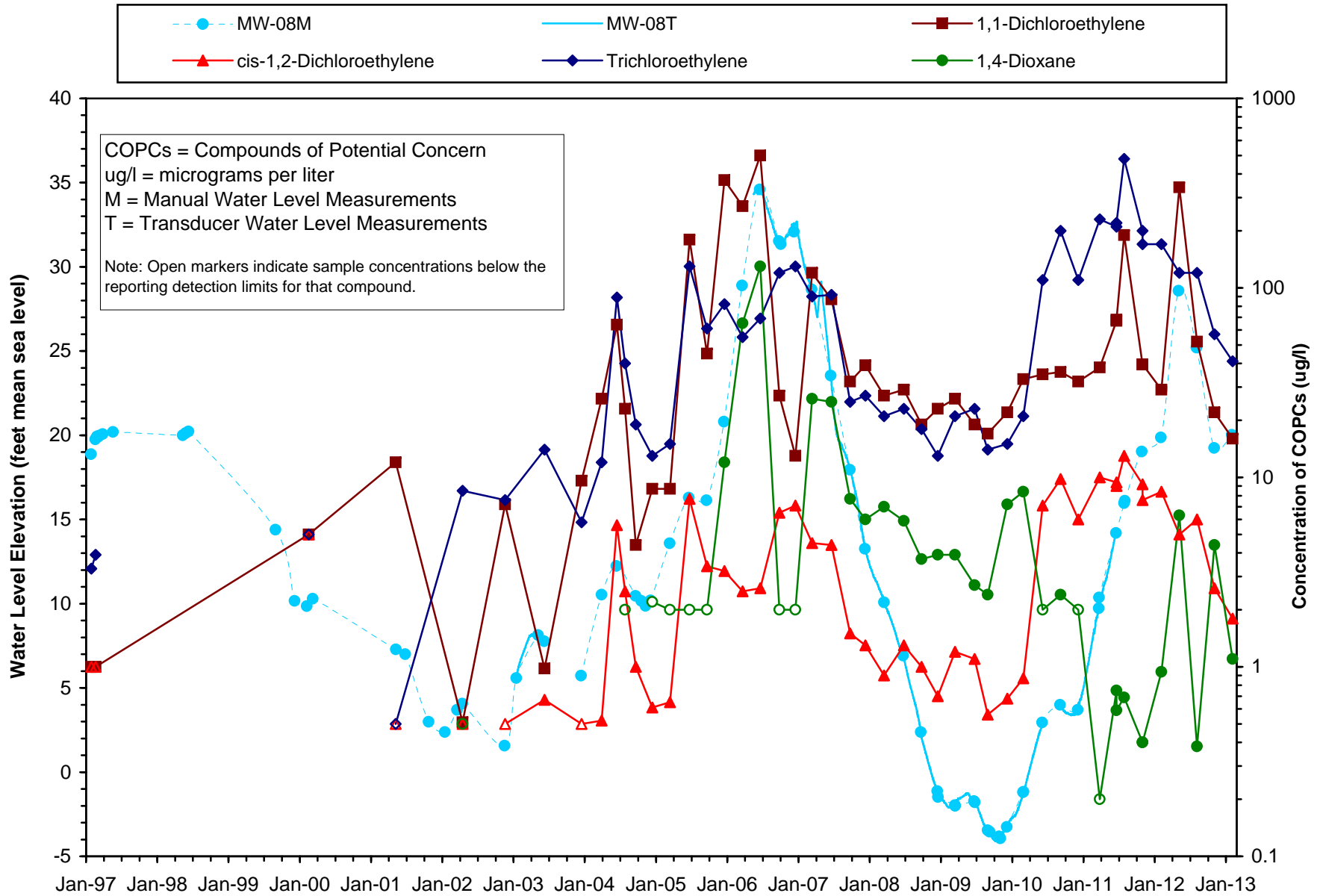


FIGURE 30. WATER LEVEL AND WATER QUALITY, MONITOR WELL MW-08

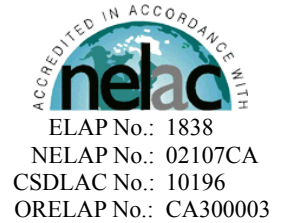
APPENDIX A
LABORATORY ANALYTICAL REPORTS

GROUNDWATER SAMPLING ANALYTICAL RESULTS

APPENDIX A
LABORATORY ANALYTICAL REPORTS
(*SECOND QUARTER 2012*)

May 17, 2012

Steve Netto
Hargis & Associates, Inc.
9171 Towne Centre Drive, Suite 375
San Diego, CA 92122
Tel: (619) 249-3166
Fax: (858) 455-6533



Re: ATL Work Order Number : 1201701
Client Reference : Raytheon, 532.30

Enclosed are the results for sample(s) received on May 08, 2012 by Advanced Technology Laboratories. The sample(s) are tested for the parameters as indicated on the enclosed chain of custody in accordance with applicable laboratory certifications. The laboratory results contained in this report specifically pertains to the sample(s) submitted.

Thank you for the opportunity to serve the needs of your company. If you have any questions, please feel free to contact me or your Project Manager.

Sincerely,

A handwritten signature in black ink, appearing to read "E Rodriguez".

Eddie Rodriguez
Laboratory Director

The cover letter and the case narrative are an integral part of this analytical report and its absence renders the report invalid. The report cannot be reproduced without written permission from the client and Advanced Technology Laboratories.



Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : Raytheon, 532.30

Report To : Steve Netto

Reported : 05/17/2012

SUMMARY OF SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
TB-050712	1201701-01	LAB H2O	5/07/12 16:00	5/08/12 9:38
MW-21	1201701-02	Groundwater	5/07/12 16:15	5/08/12 9:38
MW-2100	1201701-03	Groundwater	5/07/12 16:45	5/08/12 9:38
EW-01	1201701-04	Groundwater	5/07/12 16:32	5/08/12 9:38

CASE NARRATIVE

Sample Receiving / General Comments

Headspace >5-6mm was noted on one vov vial for sample MW-21.



Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : Raytheon, 532.30

Report To : Steve Netto

Reported : 05/17/2012

Client Sample ID TB-050712

Lab ID: 1201701-01

Volatile Organic Compounds by EPA 8260

Analyst: DC

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	0.50	NA	1	B2E0285	05/10/2012	05/10/12 00:00	
1,1,1-Trichloroethane	ND	0.50	NA	1	B2E0285	05/10/2012	05/10/12 00:00	
1,1,2,2-Tetrachloroethane	ND	0.50	NA	1	B2E0285	05/10/2012	05/10/12 00:00	
1,1,2-Trichloroethane	ND	0.50	NA	1	B2E0285	05/10/2012	05/10/12 00:00	
1,1-Dichloroethane	ND	0.50	NA	1	B2E0285	05/10/2012	05/10/12 00:00	
1,1-Dichloroethene	ND	0.50	NA	1	B2E0285	05/10/2012	05/10/12 00:00	
1,1-Dichloropropene	ND	0.50	NA	1	B2E0285	05/10/2012	05/10/12 00:00	
1,2,3-Trichloropropane	ND	0.50	NA	1	B2E0285	05/10/2012	05/10/12 00:00	
1,2,3-Trichlorobenzene	ND	0.50	NA	1	B2E0285	05/10/2012	05/10/12 00:00	
1,2,4-Trichlorobenzene	ND	0.50	NA	1	B2E0285	05/10/2012	05/10/12 00:00	
1,2,4-Trimethylbenzene	ND	0.50	NA	1	B2E0285	05/10/2012	05/10/12 00:00	
1,2-Dibromo-3-chloropropane	ND	0.50	NA	1	B2E0285	05/10/2012	05/10/12 00:00	
1,2-Dibromoethane	ND	0.50	NA	1	B2E0285	05/10/2012	05/10/12 00:00	
1,2-Dichlorobenzene	ND	0.50	NA	1	B2E0285	05/10/2012	05/10/12 00:00	
1,2-Dichloroethane	ND	0.50	NA	1	B2E0285	05/10/2012	05/10/12 00:00	
1,2-Dichloropropane	ND	0.50	NA	1	B2E0285	05/10/2012	05/10/12 00:00	
1,3,5-Trimethylbenzene	ND	0.50	NA	1	B2E0285	05/10/2012	05/10/12 00:00	
1,3-Dichlorobenzene	ND	0.50	NA	1	B2E0285	05/10/2012	05/10/12 00:00	
1,3-Dichloropropane	ND	0.50	NA	1	B2E0285	05/10/2012	05/10/12 00:00	
1,4-Dichlorobenzene	ND	0.50	NA	1	B2E0285	05/10/2012	05/10/12 00:00	
2,2-Dichloropropane	ND	0.50	NA	1	B2E0285	05/10/2012	05/10/12 00:00	
2-Chlorotoluene	ND	0.50	NA	1	B2E0285	05/10/2012	05/10/12 00:00	
4-Chlorotoluene	ND	0.50	NA	1	B2E0285	05/10/2012	05/10/12 00:00	
4-Isopropyltoluene	ND	0.50	NA	1	B2E0285	05/10/2012	05/10/12 00:00	
Benzene	ND	0.50	NA	1	B2E0285	05/10/2012	05/10/12 00:00	
Bromobenzene	ND	0.50	NA	1	B2E0285	05/10/2012	05/10/12 00:00	
Bromodichloromethane	ND	0.50	NA	1	B2E0285	05/10/2012	05/10/12 00:00	
Bromoform	ND	0.50	NA	1	B2E0285	05/10/2012	05/10/12 00:00	
Bromomethane	ND	0.50	NA	1	B2E0285	05/10/2012	05/10/12 00:00	
Carbon tetrachloride	ND	0.50	NA	1	B2E0285	05/10/2012	05/10/12 00:00	
Chlorobenzene	ND	0.50	NA	1	B2E0285	05/10/2012	05/10/12 00:00	
Chloroethane	ND	0.50	NA	1	B2E0285	05/10/2012	05/10/12 00:00	
Chloroform	ND	0.50	NA	1	B2E0285	05/10/2012	05/10/12 00:00	
Chloromethane	ND	0.50	NA	1	B2E0285	05/10/2012	05/10/12 00:00	



Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : Raytheon, 532.30

Report To : Steve Netto

Reported : 05/17/2012

Client Sample ID TB-050712

Lab ID: 1201701-01

Volatile Organic Compounds by EPA 8260

Analyst: DC

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
cis-1,2-Dichloroethene	ND	0.50	NA	1	B2E0285	05/10/2012	05/10/12 00:00	
cis-1,3-Dichloropropene	ND	0.50	NA	1	B2E0285	05/10/2012	05/10/12 00:00	
Dibromochloromethane	ND	0.50	NA	1	B2E0285	05/10/2012	05/10/12 00:00	
Dibromomethane	ND	0.50	NA	1	B2E0285	05/10/2012	05/10/12 00:00	
Dichlorodifluoromethane	ND	0.50	NA	1	B2E0285	05/10/2012	05/10/12 00:00	
Ethylbenzene	ND	0.50	NA	1	B2E0285	05/10/2012	05/10/12 00:00	
Hexachlorobutadiene	ND	0.50	NA	1	B2E0285	05/10/2012	05/10/12 00:00	
Isopropylbenzene	ND	0.50	NA	1	B2E0285	05/10/2012	05/10/12 00:00	
m,p-Xylene	ND	1.0	NA	1	B2E0285	05/10/2012	05/10/12 00:00	
Methylene chloride	ND	1.0	NA	1	B2E0285	05/10/2012	05/10/12 00:00	
n-Butylbenzene	ND	0.50	NA	1	B2E0285	05/10/2012	05/10/12 00:00	
n-Propylbenzene	ND	0.50	NA	1	B2E0285	05/10/2012	05/10/12 00:00	
Naphthalene	ND	0.50	NA	1	B2E0285	05/10/2012	05/10/12 00:00	
o-Xylene	ND	0.50	NA	1	B2E0285	05/10/2012	05/10/12 00:00	
sec-Butylbenzene	ND	0.50	NA	1	B2E0285	05/10/2012	05/10/12 00:00	
Styrene	ND	0.50	NA	1	B2E0285	05/10/2012	05/10/12 00:00	
tert-Butylbenzene	ND	0.50	NA	1	B2E0285	05/10/2012	05/10/12 00:00	
Tetrachloroethene	ND	0.50	NA	1	B2E0285	05/10/2012	05/10/12 00:00	
Toluene	ND	0.50	NA	1	B2E0285	05/10/2012	05/10/12 00:00	
trans-1,2-Dichloroethene	ND	0.50	NA	1	B2E0285	05/10/2012	05/10/12 00:00	
Trichloroethene	ND	0.50	NA	1	B2E0285	05/10/2012	05/10/12 00:00	
Trichlorofluoromethane	ND	0.50	NA	1	B2E0285	05/10/2012	05/10/12 00:00	
Vinyl chloride	ND	0.50	NA	1	B2E0285	05/10/2012	05/10/12 00:00	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>96.2 %</i>		<i>70 - 130</i>		B2E0285	05/10/2012	<i>05/10/12 00:00</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>97.1 %</i>		<i>70 - 130</i>		B2E0285	05/10/2012	<i>05/10/12 00:00</i>	
<i>Surrogate: Dibromofluoromethane</i>	<i>98.6 %</i>		<i>70 - 130</i>		B2E0285	05/10/2012	<i>05/10/12 00:00</i>	
<i>Surrogate: Toluene-d8</i>	<i>98.1 %</i>		<i>70 - 130</i>		B2E0285	05/10/2012	<i>05/10/12 00:00</i>	



Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : Raytheon, 532.30

Report To : Steve Netto

Reported : 05/17/2012

Client Sample ID MW-21

Lab ID: 1201701-02

Volatile Organic Compounds by EPA 8260

Analyst: DC

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	4.0	NA	1	B2E0301	05/10/2012	05/10/12 14:42	D4
1,1,1-Trichloroethane	ND	4.0	NA	1	B2E0301	05/10/2012	05/10/12 14:42	D4
1,1,2,2-Tetrachloroethane	ND	4.0	NA	1	B2E0301	05/10/2012	05/10/12 14:42	D4
1,1,2-Trichloroethane	ND	4.0	NA	1	B2E0301	05/10/2012	05/10/12 14:42	D4
1,1-Dichloroethane	6.5	4.0	NA	1	B2E0301	05/10/2012	05/10/12 14:42	D4
1,1-Dichloroethene	490	4.0	NA	1	B2E0301	05/10/2012	05/10/12 14:42	D4
1,1-Dichloropropene	ND	4.0	NA	1	B2E0301	05/10/2012	05/10/12 14:42	D4
1,2,3-Trichloropropane	ND	4.0	NA	1	B2E0301	05/10/2012	05/10/12 14:42	D4
1,2,3-Trichlorobenzene	ND	4.0	NA	1	B2E0301	05/10/2012	05/10/12 14:42	D4
1,2,4-Trichlorobenzene	ND	4.0	NA	1	B2E0301	05/10/2012	05/10/12 14:42	D4
1,2,4-Trimethylbenzene	ND	4.0	NA	1	B2E0301	05/10/2012	05/10/12 14:42	D4
1,2-Dibromo-3-chloropropane	ND	4.0	NA	1	B2E0301	05/10/2012	05/10/12 14:42	D4
1,2-Dibromoethane	ND	4.0	NA	1	B2E0301	05/10/2012	05/10/12 14:42	D4
1,2-Dichlorobenzene	ND	4.0	NA	1	B2E0301	05/10/2012	05/10/12 14:42	D4
1,2-Dichloroethane	ND	4.0	NA	1	B2E0301	05/10/2012	05/10/12 14:42	D4
1,2-Dichloropropane	ND	4.0	NA	1	B2E0301	05/10/2012	05/10/12 14:42	D4
1,3,5-Trimethylbenzene	ND	4.0	NA	1	B2E0301	05/10/2012	05/10/12 14:42	D4
1,3-Dichlorobenzene	ND	4.0	NA	1	B2E0301	05/10/2012	05/10/12 14:42	D4
1,3-Dichloropropane	ND	4.0	NA	1	B2E0301	05/10/2012	05/10/12 14:42	D4
1,4-Dichlorobenzene	ND	4.0	NA	1	B2E0301	05/10/2012	05/10/12 14:42	D4
2,2-Dichloropropane	ND	4.0	NA	1	B2E0301	05/10/2012	05/10/12 14:42	D4
2-Chlorotoluene	ND	4.0	NA	1	B2E0301	05/10/2012	05/10/12 14:42	D4
4-Chlorotoluene	ND	4.0	NA	1	B2E0301	05/10/2012	05/10/12 14:42	D4
4-Isopropyltoluene	ND	4.0	NA	1	B2E0301	05/10/2012	05/10/12 14:42	D4
Benzene	ND	4.0	NA	1	B2E0301	05/10/2012	05/10/12 14:42	D4
Bromobenzene	ND	4.0	NA	1	B2E0301	05/10/2012	05/10/12 14:42	D4
Bromodichloromethane	ND	4.0	NA	1	B2E0301	05/10/2012	05/10/12 14:42	D4
Bromoform	ND	4.0	NA	1	B2E0301	05/10/2012	05/10/12 14:42	D4
Bromomethane	ND	4.0	NA	1	B2E0301	05/10/2012	05/10/12 14:42	D4
Carbon tetrachloride	ND	4.0	NA	1	B2E0301	05/10/2012	05/10/12 14:42	D4
Chlorobenzene	ND	4.0	NA	1	B2E0301	05/10/2012	05/10/12 14:42	D4
Chloroethane	ND	4.0	NA	1	B2E0301	05/10/2012	05/10/12 14:42	D4
Chloroform	ND	4.0	NA	1	B2E0301	05/10/2012	05/10/12 14:42	D4
Chloromethane	ND	4.0	NA	1	B2E0301	05/10/2012	05/10/12 14:42	D4



Hargis & Associates, Inc.
9171 Towne Centre Drive, Suite 375
San Diego , CA 92122

Project Number : Raytheon, 532.30
Report To : Steve Netto
Reported : 05/17/2012

Client Sample ID MW-21
Lab ID: 1201701-02

Volatile Organic Compounds by EPA 8260

Analyst: DC

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
cis-1,2-Dichloroethene	ND	4.0	NA	1	B2E0301	05/10/2012	05/10/12 14:42	D4
cis-1,3-Dichloropropene	ND	4.0	NA	1	B2E0301	05/10/2012	05/10/12 14:42	D4
Dibromochloromethane	ND	4.0	NA	1	B2E0301	05/10/2012	05/10/12 14:42	D4
Dibromomethane	ND	4.0	NA	1	B2E0301	05/10/2012	05/10/12 14:42	D4
Dichlorodifluoromethane	ND	4.0	NA	1	B2E0301	05/10/2012	05/10/12 14:42	D4
Ethylbenzene	ND	4.0	NA	1	B2E0301	05/10/2012	05/10/12 14:42	D4
Hexachlorobutadiene	ND	4.0	NA	1	B2E0301	05/10/2012	05/10/12 14:42	D4
Isopropylbenzene	ND	4.0	NA	1	B2E0301	05/10/2012	05/10/12 14:42	D4
m,p-Xylene	ND	8.0	NA	1	B2E0301	05/10/2012	05/10/12 14:42	D4
Methylene chloride	ND	8.0	NA	1	B2E0301	05/10/2012	05/10/12 14:42	D4
n-Butylbenzene	ND	4.0	NA	1	B2E0301	05/10/2012	05/10/12 14:42	D4
n-Propylbenzene	ND	4.0	NA	1	B2E0301	05/10/2012	05/10/12 14:42	D4
Naphthalene	ND	4.0	NA	1	B2E0301	05/10/2012	05/10/12 14:42	D4
o-Xylene	ND	4.0	NA	1	B2E0301	05/10/2012	05/10/12 14:42	D4
sec-Butylbenzene	ND	4.0	NA	1	B2E0301	05/10/2012	05/10/12 14:42	D4
Styrene	ND	4.0	NA	1	B2E0301	05/10/2012	05/10/12 14:42	D4
tert-Butylbenzene	ND	4.0	NA	1	B2E0301	05/10/2012	05/10/12 14:42	D4
Tetrachloroethene	ND	4.0	NA	1	B2E0301	05/10/2012	05/10/12 14:42	D4
Toluene	ND	4.0	NA	1	B2E0301	05/10/2012	05/10/12 14:42	D4
trans-1,2-Dichloroethene	ND	4.0	NA	1	B2E0301	05/10/2012	05/10/12 14:42	D4
Trichloroethene	11	4.0	NA	1	B2E0301	05/10/2012	05/10/12 14:42	D4
Trichlorofluoromethane	ND	4.0	NA	1	B2E0301	05/10/2012	05/10/12 14:42	D4
Vinyl chloride	ND	4.0	NA	1	B2E0301	05/10/2012	05/10/12 14:42	D4
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>81.8 %</i>		<i>70 - 130</i>		B2E0301	05/10/2012	<i>05/10/12 14:42</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>98.1 %</i>		<i>70 - 130</i>		B2E0301	05/10/2012	<i>05/10/12 14:42</i>	
<i>Surrogate: Dibromofluoromethane</i>	<i>93.0 %</i>		<i>70 - 130</i>		B2E0301	05/10/2012	<i>05/10/12 14:42</i>	
<i>Surrogate: Toluene-d8</i>	<i>99.5 %</i>		<i>70 - 130</i>		B2E0301	05/10/2012	<i>05/10/12 14:42</i>	



Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : Raytheon, 532.30

Report To : Steve Netto

Reported : 05/17/2012

Client Sample ID MW-21

Lab ID: 1201701-02

1,4-Dioxane by EPA 8270: Isotope Dilution Technique

Analyst: PIL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,4-Dioxane	23	2.0	NA	1	B2E0386	05/14/2012	05/15/12 15:15	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	<i>79.8 %</i>		<i>37 - 93</i>		B2E0386	05/14/2012	<i>05/15/12 15:15</i>	
<i>Surrogate: 2-Fluorobiphenyl</i>	<i>86.0 %</i>		<i>51 - 100</i>		B2E0386	05/14/2012	<i>05/15/12 15:15</i>	
<i>Surrogate: 4-Terphenyl-d14</i>	<i>128 %</i>		<i>58 - 113</i>		B2E0386	05/14/2012	<i>05/15/12 15:15</i>	S8
<i>Surrogate: Nitrobenzene-d5</i>	<i>86.5 %</i>		<i>39 - 95</i>		B2E0386	05/14/2012	<i>05/15/12 15:15</i>	



Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : Raytheon, 532.30

Report To : Steve Netto

Reported : 05/17/2012

Client Sample ID MW-2100

Lab ID: 1201701-03

Volatile Organic Compounds by EPA 8260

Analyst: DC

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	4.0	NA	1	B2E0301	05/10/2012	05/10/12 15:02	D4
1,1,1-Trichloroethane	ND	4.0	NA	1	B2E0301	05/10/2012	05/10/12 15:02	D4
1,1,2,2-Tetrachloroethane	ND	4.0	NA	1	B2E0301	05/10/2012	05/10/12 15:02	D4
1,1,2-Trichloroethane	ND	4.0	NA	1	B2E0301	05/10/2012	05/10/12 15:02	D4
1,1-Dichloroethane	6.3	4.0	NA	1	B2E0301	05/10/2012	05/10/12 15:02	D4
1,1-Dichloroethene	480	4.0	NA	1	B2E0301	05/10/2012	05/10/12 15:02	D4
1,1-Dichloropropene	ND	4.0	NA	1	B2E0301	05/10/2012	05/10/12 15:02	D4
1,2,3-Trichloropropane	ND	4.0	NA	1	B2E0301	05/10/2012	05/10/12 15:02	D4
1,2,3-Trichlorobenzene	ND	4.0	NA	1	B2E0301	05/10/2012	05/10/12 15:02	D4
1,2,4-Trichlorobenzene	ND	4.0	NA	1	B2E0301	05/10/2012	05/10/12 15:02	D4
1,2,4-Trimethylbenzene	ND	4.0	NA	1	B2E0301	05/10/2012	05/10/12 15:02	D4
1,2-Dibromo-3-chloropropane	ND	4.0	NA	1	B2E0301	05/10/2012	05/10/12 15:02	D4
1,2-Dibromoethane	ND	4.0	NA	1	B2E0301	05/10/2012	05/10/12 15:02	D4
1,2-Dichlorobenzene	ND	4.0	NA	1	B2E0301	05/10/2012	05/10/12 15:02	D4
1,2-Dichloroethane	ND	4.0	NA	1	B2E0301	05/10/2012	05/10/12 15:02	D4
1,2-Dichloropropane	ND	4.0	NA	1	B2E0301	05/10/2012	05/10/12 15:02	D4
1,3,5-Trimethylbenzene	ND	4.0	NA	1	B2E0301	05/10/2012	05/10/12 15:02	D4
1,3-Dichlorobenzene	ND	4.0	NA	1	B2E0301	05/10/2012	05/10/12 15:02	D4
1,3-Dichloropropane	ND	4.0	NA	1	B2E0301	05/10/2012	05/10/12 15:02	D4
1,4-Dichlorobenzene	ND	4.0	NA	1	B2E0301	05/10/2012	05/10/12 15:02	D4
2,2-Dichloropropane	ND	4.0	NA	1	B2E0301	05/10/2012	05/10/12 15:02	D4
2-Chlorotoluene	ND	4.0	NA	1	B2E0301	05/10/2012	05/10/12 15:02	D4
4-Chlorotoluene	ND	4.0	NA	1	B2E0301	05/10/2012	05/10/12 15:02	D4
4-Isopropyltoluene	ND	4.0	NA	1	B2E0301	05/10/2012	05/10/12 15:02	D4
Benzene	ND	4.0	NA	1	B2E0301	05/10/2012	05/10/12 15:02	D4
Bromobenzene	ND	4.0	NA	1	B2E0301	05/10/2012	05/10/12 15:02	D4
Bromodichloromethane	ND	4.0	NA	1	B2E0301	05/10/2012	05/10/12 15:02	D4
Bromoform	ND	4.0	NA	1	B2E0301	05/10/2012	05/10/12 15:02	D4
Bromomethane	ND	4.0	NA	1	B2E0301	05/10/2012	05/10/12 15:02	D4
Carbon tetrachloride	ND	4.0	NA	1	B2E0301	05/10/2012	05/10/12 15:02	D4
Chlorobenzene	ND	4.0	NA	1	B2E0301	05/10/2012	05/10/12 15:02	D4
Chloroethane	ND	4.0	NA	1	B2E0301	05/10/2012	05/10/12 15:02	D4
Chloroform	ND	4.0	NA	1	B2E0301	05/10/2012	05/10/12 15:02	D4
Chloromethane	ND	4.0	NA	1	B2E0301	05/10/2012	05/10/12 15:02	D4



Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : Raytheon, 532.30

Report To : Steve Netto

Reported : 05/17/2012

Client Sample ID MW-2100

Lab ID: 1201701-03

Volatile Organic Compounds by EPA 8260

Analyst: DC

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
cis-1,2-Dichloroethene	ND	4.0	NA	1	B2E0301	05/10/2012	05/10/12 15:02	D4
cis-1,3-Dichloropropene	ND	4.0	NA	1	B2E0301	05/10/2012	05/10/12 15:02	D4
Dibromochloromethane	ND	4.0	NA	1	B2E0301	05/10/2012	05/10/12 15:02	D4
Dibromomethane	ND	4.0	NA	1	B2E0301	05/10/2012	05/10/12 15:02	D4
Dichlorodifluoromethane	ND	4.0	NA	1	B2E0301	05/10/2012	05/10/12 15:02	D4
Ethylbenzene	ND	4.0	NA	1	B2E0301	05/10/2012	05/10/12 15:02	D4
Hexachlorobutadiene	ND	4.0	NA	1	B2E0301	05/10/2012	05/10/12 15:02	D4
Isopropylbenzene	ND	4.0	NA	1	B2E0301	05/10/2012	05/10/12 15:02	D4
m,p-Xylene	ND	8.0	NA	1	B2E0301	05/10/2012	05/10/12 15:02	D4
Methylene chloride	ND	8.0	NA	1	B2E0301	05/10/2012	05/10/12 15:02	D4
n-Butylbenzene	ND	4.0	NA	1	B2E0301	05/10/2012	05/10/12 15:02	D4
n-Propylbenzene	ND	4.0	NA	1	B2E0301	05/10/2012	05/10/12 15:02	D4
Naphthalene	ND	4.0	NA	1	B2E0301	05/10/2012	05/10/12 15:02	D4
o-Xylene	ND	4.0	NA	1	B2E0301	05/10/2012	05/10/12 15:02	D4
sec-Butylbenzene	ND	4.0	NA	1	B2E0301	05/10/2012	05/10/12 15:02	D4
Styrene	ND	4.0	NA	1	B2E0301	05/10/2012	05/10/12 15:02	D4
tert-Butylbenzene	ND	4.0	NA	1	B2E0301	05/10/2012	05/10/12 15:02	D4
Tetrachloroethene	ND	4.0	NA	1	B2E0301	05/10/2012	05/10/12 15:02	D4
Toluene	ND	4.0	NA	1	B2E0301	05/10/2012	05/10/12 15:02	D4
trans-1,2-Dichloroethene	ND	4.0	NA	1	B2E0301	05/10/2012	05/10/12 15:02	D4
Trichloroethene	12	4.0	NA	1	B2E0301	05/10/2012	05/10/12 15:02	D4
Trichlorofluoromethane	ND	4.0	NA	1	B2E0301	05/10/2012	05/10/12 15:02	D4
Vinyl chloride	ND	4.0	NA	1	B2E0301	05/10/2012	05/10/12 15:02	D4
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>84.1 %</i>		<i>70 - 130</i>		B2E0301	05/10/2012	<i>05/10/12 15:02</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>100 %</i>		<i>70 - 130</i>		B2E0301	05/10/2012	<i>05/10/12 15:02</i>	
<i>Surrogate: Dibromofluoromethane</i>	<i>94.1 %</i>		<i>70 - 130</i>		B2E0301	05/10/2012	<i>05/10/12 15:02</i>	
<i>Surrogate: Toluene-d8</i>	<i>101 %</i>		<i>70 - 130</i>		B2E0301	05/10/2012	<i>05/10/12 15:02</i>	



Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : Raytheon, 532.30

Report To : Steve Netto

Reported : 05/17/2012

Client Sample ID MW-2100

Lab ID: 1201701-03

1,4-Dioxane by EPA 8270: Isotope Dilution Technique

Analyst: PIL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,4-Dioxane	19	2.0	NA	1	B2E0386	05/14/2012	05/15/12 15:43	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	82.3 %		37 - 93		B2E0386	05/14/2012	05/15/12 15:43	
<i>Surrogate: 2-Fluorobiphenyl</i>	89.4 %		51 - 100		B2E0386	05/14/2012	05/15/12 15:43	
<i>Surrogate: 4-Terphenyl-d14</i>	139 %		58 - 113		B2E0386	05/14/2012	05/15/12 15:43	S8
<i>Surrogate: Nitrobenzene-d5</i>	88.9 %		39 - 95		B2E0386	05/14/2012	05/15/12 15:43	



Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : Raytheon, 532.30

Report To : Steve Netto

Reported : 05/17/2012

Client Sample ID EW-01

Lab ID: 1201701-04

Volatile Organic Compounds by EPA 8260

Analyst: DC

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	0.50	NA	1	B2E0285	05/10/2012	05/10/12 02:42	
1,1,1-Trichloroethane	ND	0.50	NA	1	B2E0285	05/10/2012	05/10/12 02:42	
1,1,2,2-Tetrachloroethane	ND	0.50	NA	1	B2E0285	05/10/2012	05/10/12 02:42	
1,1,2-Trichloroethane	ND	0.50	NA	1	B2E0285	05/10/2012	05/10/12 02:42	
1,1-Dichloroethane	ND	0.50	NA	1	B2E0285	05/10/2012	05/10/12 02:42	
1,1-Dichloroethene	18	0.50	NA	1	B2E0285	05/10/2012	05/10/12 02:42	
1,1-Dichloropropene	ND	0.50	NA	1	B2E0285	05/10/2012	05/10/12 02:42	
1,2,3-Trichloropropane	ND	0.50	NA	1	B2E0285	05/10/2012	05/10/12 02:42	
1,2,3-Trichlorobenzene	ND	0.50	NA	1	B2E0285	05/10/2012	05/10/12 02:42	
1,2,4-Trichlorobenzene	ND	0.50	NA	1	B2E0285	05/10/2012	05/10/12 02:42	
1,2,4-Trimethylbenzene	ND	0.50	NA	1	B2E0285	05/10/2012	05/10/12 02:42	
1,2-Dibromo-3-chloropropane	ND	0.50	NA	1	B2E0285	05/10/2012	05/10/12 02:42	
1,2-Dibromoethane	ND	0.50	NA	1	B2E0285	05/10/2012	05/10/12 02:42	
1,2-Dichlorobenzene	ND	0.50	NA	1	B2E0285	05/10/2012	05/10/12 02:42	
1,2-Dichloroethane	ND	0.50	NA	1	B2E0285	05/10/2012	05/10/12 02:42	
1,2-Dichloropropane	ND	0.50	NA	1	B2E0285	05/10/2012	05/10/12 02:42	
1,3,5-Trimethylbenzene	ND	0.50	NA	1	B2E0285	05/10/2012	05/10/12 02:42	
1,3-Dichlorobenzene	ND	0.50	NA	1	B2E0285	05/10/2012	05/10/12 02:42	
1,3-Dichloropropane	ND	0.50	NA	1	B2E0285	05/10/2012	05/10/12 02:42	
1,4-Dichlorobenzene	ND	0.50	NA	1	B2E0285	05/10/2012	05/10/12 02:42	
2,2-Dichloropropane	ND	0.50	NA	1	B2E0285	05/10/2012	05/10/12 02:42	
2-Chlorotoluene	ND	0.50	NA	1	B2E0285	05/10/2012	05/10/12 02:42	
4-Chlorotoluene	ND	0.50	NA	1	B2E0285	05/10/2012	05/10/12 02:42	
4-Isopropyltoluene	ND	0.50	NA	1	B2E0285	05/10/2012	05/10/12 02:42	
Benzene	ND	0.50	NA	1	B2E0285	05/10/2012	05/10/12 02:42	
Bromobenzene	ND	0.50	NA	1	B2E0285	05/10/2012	05/10/12 02:42	
Bromodichloromethane	ND	0.50	NA	1	B2E0285	05/10/2012	05/10/12 02:42	
Bromoform	ND	0.50	NA	1	B2E0285	05/10/2012	05/10/12 02:42	
Bromomethane	ND	0.50	NA	1	B2E0285	05/10/2012	05/10/12 02:42	
Carbon tetrachloride	ND	0.50	NA	1	B2E0285	05/10/2012	05/10/12 02:42	
Chlorobenzene	ND	0.50	NA	1	B2E0285	05/10/2012	05/10/12 02:42	
Chloroethane	ND	0.50	NA	1	B2E0285	05/10/2012	05/10/12 02:42	
Chloroform	ND	0.50	NA	1	B2E0285	05/10/2012	05/10/12 02:42	
Chloromethane	ND	0.50	NA	1	B2E0285	05/10/2012	05/10/12 02:42	



Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : Raytheon, 532.30

Report To : Steve Netto

Reported : 05/17/2012

Client Sample ID EW-01

Lab ID: 1201701-04

Volatile Organic Compounds by EPA 8260

Analyst: DC

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
cis-1,2-Dichloroethene	ND	0.50	NA	1	B2E0285	05/10/2012	05/10/12 02:42	
cis-1,3-Dichloropropene	ND	0.50	NA	1	B2E0285	05/10/2012	05/10/12 02:42	
Dibromochloromethane	ND	0.50	NA	1	B2E0285	05/10/2012	05/10/12 02:42	
Dibromomethane	ND	0.50	NA	1	B2E0285	05/10/2012	05/10/12 02:42	
Dichlorodifluoromethane	ND	0.50	NA	1	B2E0285	05/10/2012	05/10/12 02:42	
Ethylbenzene	ND	0.50	NA	1	B2E0285	05/10/2012	05/10/12 02:42	
Hexachlorobutadiene	ND	0.50	NA	1	B2E0285	05/10/2012	05/10/12 02:42	
Isopropylbenzene	ND	0.50	NA	1	B2E0285	05/10/2012	05/10/12 02:42	
m,p-Xylene	ND	1.0	NA	1	B2E0285	05/10/2012	05/10/12 02:42	
Methylene chloride	ND	1.0	NA	1	B2E0285	05/10/2012	05/10/12 02:42	
n-Butylbenzene	ND	0.50	NA	1	B2E0285	05/10/2012	05/10/12 02:42	
n-Propylbenzene	ND	0.50	NA	1	B2E0285	05/10/2012	05/10/12 02:42	
Naphthalene	ND	0.50	NA	1	B2E0285	05/10/2012	05/10/12 02:42	
o-Xylene	ND	0.50	NA	1	B2E0285	05/10/2012	05/10/12 02:42	
sec-Butylbenzene	ND	0.50	NA	1	B2E0285	05/10/2012	05/10/12 02:42	
Styrene	ND	0.50	NA	1	B2E0285	05/10/2012	05/10/12 02:42	
tert-Butylbenzene	ND	0.50	NA	1	B2E0285	05/10/2012	05/10/12 02:42	
Tetrachloroethene	0.78	0.50	NA	1	B2E0285	05/10/2012	05/10/12 02:42	
Toluene	ND	0.50	NA	1	B2E0285	05/10/2012	05/10/12 02:42	
trans-1,2-Dichloroethene	ND	0.50	NA	1	B2E0285	05/10/2012	05/10/12 02:42	
Trichloroethene	ND	0.50	NA	1	B2E0285	05/10/2012	05/10/12 02:42	
Trichlorofluoromethane	ND	0.50	NA	1	B2E0285	05/10/2012	05/10/12 02:42	
Vinyl chloride	ND	0.50	NA	1	B2E0285	05/10/2012	05/10/12 02:42	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>99.2 %</i>	<i>70 - 130</i>			B2E0285	05/10/2012	<i>05/10/12 02:42</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>98.5 %</i>	<i>70 - 130</i>			B2E0285	05/10/2012	<i>05/10/12 02:42</i>	
<i>Surrogate: Dibromofluoromethane</i>	<i>101 %</i>	<i>70 - 130</i>			B2E0285	05/10/2012	<i>05/10/12 02:42</i>	
<i>Surrogate: Toluene-d8</i>	<i>101 %</i>	<i>70 - 130</i>			B2E0285	05/10/2012	<i>05/10/12 02:42</i>	



Hargis & Associates, Inc.
9171 Towne Centre Drive, Suite 375
San Diego , CA 92122

Project Number : Raytheon, 532.30
Report To : Steve Netto
Reported : 05/17/2012

Client Sample ID EW-01
Lab ID: 1201701-04

1,4-Dioxane by EPA 8270: Isotope Dilution Technique

Analyst: PIL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,4-Dioxane	7.0	2.0	NA	1	B2E0386	05/14/2012	05/15/12 16:11	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	<i>95.5 %</i>		<i>37 - 93</i>		B2E0386	05/14/2012	<i>05/15/12 16:11</i>	S8
<i>Surrogate: 2-Fluorobiphenyl</i>	<i>101 %</i>		<i>51 - 100</i>		B2E0386	05/14/2012	<i>05/15/12 16:11</i>	S8
<i>Surrogate: 4-Terphenyl-d14</i>	<i>143 %</i>		<i>58 - 113</i>		B2E0386	05/14/2012	<i>05/15/12 16:11</i>	S8
<i>Surrogate: Nitrobenzene-d5</i>	<i>107 %</i>		<i>39 - 95</i>		B2E0386	05/14/2012	<i>05/15/12 16:11</i>	S8



Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : Raytheon, 532.30

Report To : Steve Netto

Reported : 05/17/2012

QUALITY CONTROL SECTION

Volatile Organic Compounds by EPA 8260 - Quality Control

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B2E0285 - MSVOAW_LL

Blank (B2E0285-BLK1)

Prepared: 5/9/2012 Analyzed: 5/9/2012

1,1,1,2-Tetrachloroethane	ND	0.50				NR			
1,1,1-Trichloroethane	ND	0.50				NR			
1,1,2,2-Tetrachloroethane	ND	0.50				NR			
1,1,2-Trichloroethane	ND	0.50				NR			
1,1-Dichloroethane	ND	0.50				NR			
1,1-Dichloroethene	ND	0.50				NR			
1,1-Dichloropropene	ND	0.50				NR			
1,2,3-Trichloropropane	ND	0.50				NR			
1,2,3-Trichlorobenzene	ND	0.50				NR			
1,2,4-Trichlorobenzene	ND	0.50				NR			
1,2,4-Trimethylbenzene	ND	0.50				NR			
1,2-Dibromo-3-chloropropane	ND	0.50				NR			
1,2-Dibromoethane	ND	0.50				NR			
1,2-Dichlorobenzene	ND	0.50				NR			
1,2-Dichloroethane	ND	0.50				NR			
1,2-Dichloropropane	ND	0.50				NR			
1,3,5-Trimethylbenzene	ND	0.50				NR			
1,3-Dichlorobenzene	ND	0.50				NR			
1,3-Dichloropropane	ND	0.50				NR			
1,4-Dichlorobenzene	ND	0.50				NR			
2,2-Dichloropropane	ND	0.50				NR			
2-Chlorotoluene	ND	0.50				NR			
4-Chlorotoluene	ND	0.50				NR			
4-Isopropyltoluene	ND	0.50				NR			
Benzene	ND	0.50				NR			
Bromobenzene	ND	0.50				NR			
Bromodichloromethane	ND	0.50				NR			
Bromoform	ND	0.50				NR			
Bromomethane	ND	0.50				NR			
Carbon tetrachloride	ND	0.50				NR			
Chlorobenzene	ND	0.50				NR			
Chloroethane	ND	0.50				NR			
Chloroform	ND	0.50				NR			
Chloromethane	ND	0.50				NR			
cis-1,2-Dichloroethene	ND	0.50				NR			
cis-1,3-Dichloropropene	ND	0.50				NR			
Dibromochloromethane	ND	0.50				NR			
Dibromomethane	ND	0.50				NR			
Dichlorodifluoromethane	ND	0.50				NR			



Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : Raytheon, 532.30

Report To : Steve Netto

Reported : 05/17/2012

Volatile Organic Compounds by EPA 8260 - Quality Control (cont'd)

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec % Rec	% Rec Limits	RPD RPD	RPD Limit	Notes
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Batch B2E0285 - MSVOAW_LL (continued)

Blank (B2E0285-BLK1) - Continued

Prepared: 5/9/2012 Analyzed: 5/9/2012

Ethylbenzene	ND	0.50						NR	
Hexachlorobutadiene	ND	0.50						NR	
Isopropylbenzene	ND	0.50						NR	
m,p-Xylene	ND	1.0						NR	
Methylene chloride	ND	1.0						NR	
n-Butylbenzene	ND	0.50						NR	
n-Propylbenzene	ND	0.50						NR	
Naphthalene	ND	0.50						NR	
o-Xylene	ND	0.50						NR	
sec-Butylbenzene	ND	0.50						NR	
Styrene	ND	0.50						NR	
tert-Butylbenzene	ND	0.50						NR	
Tetrachloroethene	ND	0.50						NR	
Toluene	ND	0.50						NR	
trans-1,2-Dichloroethene	ND	0.50						NR	
Trichloroethene	ND	0.50						NR	
Trichlorofluoromethane	ND	0.50						NR	
Vinyl chloride	ND	0.50						NR	

Surrogate: 1,2-Dichloroethane-d4	23		25.0		93.9	70 - 130			
Surrogate: 4-Bromofluorobenzene	25		25.0		101	70 - 130			
Surrogate: Dibromofluoromethane	24		25.0		97.9	70 - 130			
Surrogate: Toluene-d8	25		25.0		98.8	70 - 130			

LCS (B2E0285-BS1)

Prepared: 5/9/2012 Analyzed: 5/9/2012

1,1-Dichloroethene	19	0.50	20.0		94.8	70 - 130			
Benzene	41	0.50	40.0		103	70 - 130			
Chlorobenzene	21	0.50	20.0		105	70 - 130			
MTBE	22	0.50	20.0		108	70 - 130			
Toluene	42	0.50	40.0		104	70 - 130			
Trichloroethene	20	0.50	20.0		100	70 - 130			

Surrogate: 1,2-Dichloroethane-d4	25		25.0		99.8	70 - 130			
Surrogate: 4-Bromofluorobenzene	26		25.0		105	70 - 130			
Surrogate: Dibromofluoromethane	25		25.0		101	70 - 130			
Surrogate: Toluene-d8	26		25.0		102	70 - 130			

LCS Dup (B2E0285-BS1)

Prepared: 5/9/2012 Analyzed: 5/9/2012

1,1-Dichloroethene	19	0.50	20.0		95.6	70 - 130	0.735	20	
Benzene	42	0.50	40.0		104	70 - 130	0.628	20	
Chlorobenzene	22	0.50	20.0		108	70 - 130	3.28	20	
MTBE	21	0.50	20.0		107	70 - 130	1.35	20	
Toluene	42	0.50	40.0		105	70 - 130	0.668	20	



Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : Raytheon, 532.30

Report To : Steve Netto

Reported : 05/17/2012

Volatile Organic Compounds by EPA 8260 - Quality Control (cont'd)

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec % Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B2E0285 - MSVOAW_LL (continued)

LCS Dup (B2E0285-BSD1) - Continued

Prepared: 5/9/2012 Analyzed: 5/9/2012

Trichloroethene	20	0.50	20.0		102	70 - 130	1.49	20	
Surrogate: 1,2-Dichloroethane-d4	25		25.0		99.4	70 - 130			
Surrogate: 4-Bromofluorobenzene	27		25.0		107	70 - 130			
Surrogate: Dibromofluoromethane	26		25.0		102	70 - 130			
Surrogate: Toluene-d8	26		25.0		103	70 - 130			

Batch B2E0301 - MSVOAW_LL

Blank (B2E0301-BLK1)

Prepared: 5/10/2012 Analyzed: 5/10/2012

1,1,1,2-Tetrachloroethane	ND	0.50			NR				
1,1,1-Trichloroethane	ND	0.50			NR				
1,1,2,2-Tetrachloroethane	ND	0.50			NR				
1,1,2-Trichloroethane	ND	0.50			NR				
1,1-Dichloroethane	ND	0.50			NR				
1,1-Dichloroethene	ND	0.50			NR				
1,1-Dichloropropene	ND	0.50			NR				
1,2,3-Trichloropropane	ND	0.50			NR				
1,2,3-Trichlorobenzene	ND	0.50			NR				
1,2,4-Trichlorobenzene	ND	0.50			NR				
1,2,4-Trimethylbenzene	ND	0.50			NR				
1,2-Dibromo-3-chloropropane	ND	0.50			NR				
1,2-Dibromoethane	ND	0.50			NR				
1,2-Dichlorobenzene	ND	0.50			NR				
1,2-Dichloroethane	ND	0.50			NR				
1,2-Dichloropropane	ND	0.50			NR				
1,3,5-Trimethylbenzene	ND	0.50			NR				
1,3-Dichlorobenzene	ND	0.50			NR				
1,3-Dichloropropane	ND	0.50			NR				
1,4-Dichlorobenzene	ND	0.50			NR				
2,2-Dichloropropane	ND	0.50			NR				
2-Chlorotoluene	ND	0.50			NR				
4-Chlorotoluene	ND	0.50			NR				
4-Isopropyltoluene	ND	0.50			NR				
Benzene	ND	0.50			NR				
Bromobenzene	ND	0.50			NR				
Bromodichloromethane	ND	0.50			NR				
Bromoform	ND	0.50			NR				
Bromomethane	ND	0.50			NR				
Carbon tetrachloride	ND	0.50			NR				
Chlorobenzene	ND	0.50			NR				
Chloroethane	ND	0.50			NR				



Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : Raytheon, 532.30

Report To : Steve Netto

Reported : 05/17/2012

Volatile Organic Compounds by EPA 8260 - Quality Control (cont'd)

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec % Rec	% Rec Limits	RPD RPD	RPD Limit	Notes
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Batch B2E0301 - MSVOAW_LL (continued)

Blank (B2E0301-BLK1) - Continued

Prepared: 5/10/2012 Analyzed: 5/10/2012

Chloroform	ND	0.50						NR	
Chloromethane	ND	0.50						NR	
cis-1,2-Dichloroethene	ND	0.50						NR	
cis-1,3-Dichloropropene	ND	0.50						NR	
Dibromochloromethane	ND	0.50						NR	
Dibromomethane	ND	0.50						NR	
Dichlorodifluoromethane	ND	0.50						NR	
Ethylbenzene	ND	0.50						NR	
Hexachlorobutadiene	ND	0.50						NR	
Isopropylbenzene	ND	0.50						NR	
m,p-Xylene	ND	1.0						NR	
Methylene chloride	ND	1.0						NR	
n-Butylbenzene	ND	0.50						NR	
n-Propylbenzene	ND	0.50						NR	
Naphthalene	ND	0.50						NR	
o-Xylene	ND	0.50						NR	
sec-Butylbenzene	ND	0.50						NR	
Styrene	ND	0.50						NR	
tert-Butylbenzene	ND	0.50						NR	
Tetrachloroethene	ND	0.50						NR	
Toluene	ND	0.50						NR	
trans-1,2-Dichloroethene	ND	0.50						NR	
Trichloroethene	ND	0.50						NR	
Trichlorofluoromethane	ND	0.50						NR	
Vinyl chloride	ND	0.50						NR	

Surrogate: 1,2-Dichloroethane-d4	28		25.0		112	70 - 130			
Surrogate: 4-Bromofluorobenzene	30		25.0		121	70 - 130			
Surrogate: Dibromofluoromethane	29		25.0		116	70 - 130			
Surrogate: Toluene-d8	30		25.0		120	70 - 130			

LCS (B2E0301-BS1)

Prepared: 5/10/2012 Analyzed: 5/10/2012

1,1-Dichloroethene	20	0.50	20.0		100	70 - 130			
Benzene	42	0.50	40.0		106	70 - 130			
Chlorobenzene	21	0.50	20.0		107	70 - 130			
MTBE	20	0.50	20.0		102	70 - 130			
Toluene	42	0.50	40.0		106	70 - 130			
Trichloroethene	20	0.50	20.0		101	70 - 130			

Surrogate: 1,2-Dichloroethane-d4	25		25.0		100	70 - 130			
Surrogate: 4-Bromofluorobenzene	26		25.0		104	70 - 130			
Surrogate: Dibromofluoromethane	25		25.0		101	70 - 130			
Surrogate: Toluene-d8	26		25.0		103	70 - 130			



Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego, CA 92122

Project Number : Raytheon, 532.30

Report To : Steve Netto

Reported : 05/17/2012

Volatile Organic Compounds by EPA 8260 - Quality Control (cont'd)

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec % Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B2E0301 - MSVOAW_LL (continued)

LCS Dup (B2E0301-BS01)

Prepared: 5/10/2012 Analyzed: 5/10/2012

1,1-Dichloroethene	20	0.50	20.0		102	70 - 130	1.83	20	
Benzene	43	0.50	40.0		107	70 - 130	1.55	20	
Chlorobenzene	22	0.50	20.0		109	70 - 130	1.53	20	
MTBE	21	0.50	20.0		107	70 - 130	5.18	20	
Toluene	43	0.50	40.0		109	70 - 130	2.35	20	
Trichloroethene	22	0.50	20.0		108	70 - 130	6.08	20	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	26		25.0		103	70 - 130			
<i>Surrogate: 4-Bromofluorobenzene</i>	27		25.0		107	70 - 130			
<i>Surrogate: Dibromofluoromethane</i>	26		25.0		104	70 - 130			
<i>Surrogate: Toluene-d8</i>	26		25.0		105	70 - 130			

Matrix Spike (B2E0301-MS1)

Source: 1201715-02

Prepared: 5/10/2012 Analyzed: 5/10/2012

1,1-Dichloroethene	22	0.50	20.0	ND	111	70 - 130			
Benzene	49	0.50	40.0	ND	122	70 - 130			
Chlorobenzene	25	0.50	20.0	ND	124	70 - 130			
MTBE	29	0.50	20.0	ND	146	70 - 130			M2
Toluene	49	0.50	40.0	ND	121	70 - 130			
Trichloroethene	23	0.50	20.0	ND	117	70 - 130			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	29		25.0		114	70 - 130			
<i>Surrogate: 4-Bromofluorobenzene</i>	32		25.0		129	70 - 130			
<i>Surrogate: Dibromofluoromethane</i>	29		25.0		116	70 - 130			
<i>Surrogate: Toluene-d8</i>	30		25.0		122	70 - 130			

Matrix Spike Dup (B2E0301-MSD1)

Source: 1201715-02

Prepared: 5/10/2012 Analyzed: 5/10/2012

1,1-Dichloroethene	22	0.50	20.0	ND	110	70 - 130	0.633	20	
Benzene	45	0.50	40.0	ND	113	70 - 130	7.79	20	
Chlorobenzene	23	0.50	20.0	ND	113	70 - 130	9.39	20	
MTBE	21	0.50	20.0	ND	106	70 - 130	31.2	20	R
Toluene	46	0.50	40.0	ND	114	70 - 130	6.09	20	
Trichloroethene	23	0.50	20.0	ND	113	70 - 130	3.21	20	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	23		25.0		92.7	70 - 130			
<i>Surrogate: 4-Bromofluorobenzene</i>	26		25.0		105	70 - 130			
<i>Surrogate: Dibromofluoromethane</i>	24		25.0		96.8	70 - 130			
<i>Surrogate: Toluene-d8</i>	26		25.0		103	70 - 130			



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 San Diego, CA 92122

Project Number : Raytheon, 532.30
 Report To : Steve Netto
 Reported : 05/17/2012

1,4-Dioxane by EPA 8270: Isotope Dilution Technique - Quality Control

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec % Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B2E0386 - MSSEMI_ISOTOPEDILN

Blank (B2E0386-BLK2)

Prepared: 5/14/2012 Analyzed: 5/15/2012

1,4-Dioxane	ND	2.0			NR				
Surrogate: 1,2-Dichlorobenzene-d4	76		100		76.0	37 - 93			
Surrogate: 2-Fluorobiphenyl	85		100		85.2	51 - 100			
Surrogate: 4-Terphenyl-d14	120		100		118	58 - 113			S1
Surrogate: Nitrobenzene-d5	87		100		86.7	39 - 95			

LCS (B2E0386-BS2)

Prepared: 5/14/2012 Analyzed: 5/15/2012

1,4-Dioxane	100	2.0	100		102	70 - 130			
Surrogate: 1,2-Dichlorobenzene-d4	82		100		81.9	37 - 93			
Surrogate: 2-Fluorobiphenyl	90		100		90.1	51 - 100			
Surrogate: 4-Terphenyl-d14	110		100		110	58 - 113			
Surrogate: Nitrobenzene-d5	90		100		90.2	39 - 95			

Matrix Spike (B2E0386-MS2)

Source: 1201761-04

Prepared: 5/14/2012 Analyzed: 5/15/2012

1,4-Dioxane	160	2.0	100	58	104	0 - 200			
Surrogate: 1,2-Dichlorobenzene-d4	87		100		86.7	37 - 93			
Surrogate: 2-Fluorobiphenyl	89		100		89.2	51 - 100			
Surrogate: 4-Terphenyl-d14	110		100		110	58 - 113			
Surrogate: Nitrobenzene-d5	94		100		94.1	39 - 95			

Matrix Spike Dup (B2E0386-MSD2)

Source: 1201761-04

Prepared: 5/14/2012 Analyzed: 5/15/2012

1,4-Dioxane	150	2.0	100	58	88.6	0 - 200	10.1	200	
Surrogate: 1,2-Dichlorobenzene-d4	86		100		85.8	37 - 93			
Surrogate: 2-Fluorobiphenyl	94		100		93.8	51 - 100			
Surrogate: 4-Terphenyl-d14	110		100		112	58 - 113			
Surrogate: Nitrobenzene-d5	96		100		95.5	39 - 95			S8



Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : Raytheon, 532.30

Report To : Steve Netto

Reported : 05/17/2012

Notes and Definitions

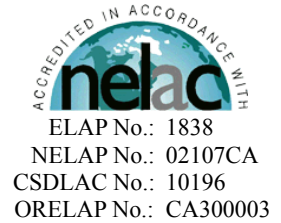
S8	Surrogate recovery was above laboratory acceptance limit. See CAR for details.
S1	Surrogate recovery was above laboratory acceptance limit. No target analyte was detected in the sample.
R	RPD value outside acceptance criteria. Calculation is based on raw values.
M2	Matrix spike recovery outside of acceptance limit due to possible matrix interference. The analytical batch was validated by the laboratory control sample.
D4	Reporting limits adjusted to reflect sample amount analyzed.
ND	Analyte not detected at or above reporting limit
PQL	Practical Quantitation Limit
MDL	Method Detection Limit
NR	Not Reported
RPD	Relative Percent Difference
CA1	CA-NELAP (CDPH)
CA2	CA-ELAP (CDPH)
OR1	OR-NELAP (OSPHL)
TX1	TX-NELAP (TCEQ)

CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST FORM

PROJECT NAME Raytheon		PROJECT No./TASK No. 532.30		SAMPLE CONTAINERS		ANALYSIS REQUESTED		ESTIMATED CONCENTRATION RANGE (ppb) FOR VOAS		SPECIAL HANDLING		LABORATORY INFORMATION																																			
PROJECT MANAGER Steve Netto		Phone No. 858-455-6500										ATL																																			
QA MANAGER		Fax No. 858-455-6533																																													
SAMPLER (SIGNATURE) 		SAMPLER (PRINTED) Amanda Beam																																													
LAB ID	SAMPLE ID	SAMPLE COLLECTION		MATRIX		PRESERVATION					40 ml VOA	1L Amber	VOCS 8260B	1,4-Dioxane 8270 MOD	1,4-Dioxane 8270 SIM	0-10	10-100	100-1,000	1,000-10,000	>10,000	24 TAT	48 TAT	Standard TAT	REMARKS																							
		Date	Time	Soil	Ground water	Surface water	LAB #20	HCl	HNO ₃	NaOH															H ₂ SO ₄	Ice																					
	1301701-01	TB-050712	5/7/12	1600		X	X			X		2		X																																	
	2	MW-21		1615	X		X			X		3		X					X																												
		↓		↓	X					X		1			X																																
	3	MW-2100		1645	X		X			X		3		X					X																												
		↓		↓	X					X		1			X																																
	4	EW-01		1632	X		X			X		3		X					X																												
		↓	5/7/12	↓	X					X		1			X																																
Total number of Containers per analysis:											11	3	Total No. of Containers: <u>14</u>																																		
Relinquished by: 		Date 5/8/12	Received by: 		Date 5/8/12	INSTRUCTIONS																Shipment Method: <u>Carrier Pick up</u>																									
Company H+A		Time 0820	Company ATL		Time 0820	<ol style="list-style-type: none"> Fill out form completely except for shaded areas (lab use only); sign only after verified for completeness. Complete in ballpoint pen. Draw one line through errors, initial and date correction. Indicate number of sample containers in analysis request space; indicate choice with ✓ or x. Note applicable preservatives, special instructions, and deviations from typical environmental samples. Consult project QA documents for specific instructions. 																Send Results to: <u>Steve Netto</u>																									
Relinquished by: 		Date 5/8/12	Received by: 		Date 5/8/12	1. Fill out form completely except for shaded areas (lab use only); sign only after verified for completeness. 2. Complete in ballpoint pen. Draw one line through errors, initial and date correction. 3. Indicate number of sample containers in analysis request space; indicate choice with ✓ or x. 4. Note applicable preservatives, special instructions, and deviations from typical environmental samples. 5. Consult project QA documents for specific instructions.																<input checked="" type="checkbox"/> 9171 TOWNE CENTRE DRIVE, SUITE 375 SAN DIEGO, CA 92122 (858) 455-6500 <input type="checkbox"/> 1640 SOUTH STAPLEY DRIVE, SUITE 124 MESA, AZ 85204 (480) 345-0888 <input type="checkbox"/> 1820 EAST RIVER ROAD, SUITE 220 TUCSON, AZ 85718 (520) 881-7300																									
Company ATL		Time 738	Company ATL		Time 738	Sample Receipt: Temp. @ receipt <u>2-4</u> °C <input type="checkbox"/> No. of containers correct <input checked="" type="checkbox"/> received good condition/cold <input type="checkbox"/> custody seals secure <input checked="" type="checkbox"/> conforms to COC document																Send invoice to San Diego, CA Attn: Accounts Payable																									

May 18, 2012

Steve Netto
Hargis & Associates, Inc.
9171 Towne Centre Drive, Suite 375
San Diego, CA 92122
Tel: (619) 249-3166
Fax: (858) 455-6533



Re: ATL Work Order Number : 1201715
Client Reference : Raytheon, 532.30

Enclosed are the results for sample(s) received on May 08, 2012 by Advanced Technology Laboratories. The sample(s) are tested for the parameters as indicated on the enclosed chain of custody in accordance with applicable laboratory certifications. The laboratory results contained in this report specifically pertains to the sample(s) submitted.

Thank you for the opportunity to serve the needs of your company. If you have any questions, please feel free to contact me or your Project Manager.

Sincerely,

A handwritten signature in black ink, appearing to read "E Rodriguez".

Eddie Rodriguez
Laboratory Director

The cover letter and the case narrative are an integral part of this analytical report and its absence renders the report invalid. The report cannot be reproduced without written permission from the client and Advanced Technology Laboratories.



Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : Raytheon, 532.30

Report To : Steve Netto

Reported : 05/18/2012

SUMMARY OF SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
TB-050812	1201715-01	LAB H2O	5/08/12 8:00	5/08/12 18:05
MW-32A	1201715-02	Groundwater	5/08/12 9:56	5/08/12 18:05
MW-32C	1201715-03	Groundwater	5/08/12 12:47	5/08/12 18:05
MW-32B	1201715-04	Groundwater	5/08/12 14:29	5/08/12 18:05
MW-33	1201715-05	Groundwater	5/08/12 17:11	5/08/12 18:05



Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : Raytheon, 532.30

Report To : Steve Netto

Reported : 05/18/2012

Client Sample ID TB-050812

Lab ID: 1201715-01

Volatile Organic Compounds by EPA 8260

Analyst: DC

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	0.50	NA	1	B2E0285	05/10/2012	05/10/12 00:40	
1,1,1-Trichloroethane	ND	0.50	NA	1	B2E0285	05/10/2012	05/10/12 00:40	
1,1,2,2-Tetrachloroethane	ND	0.50	NA	1	B2E0285	05/10/2012	05/10/12 00:40	
1,1,2-Trichloroethane	ND	0.50	NA	1	B2E0285	05/10/2012	05/10/12 00:40	
1,1-Dichloroethane	ND	0.50	NA	1	B2E0285	05/10/2012	05/10/12 00:40	
1,1-Dichloroethene	ND	0.50	NA	1	B2E0285	05/10/2012	05/10/12 00:40	
1,1-Dichloropropene	ND	0.50	NA	1	B2E0285	05/10/2012	05/10/12 00:40	
1,2,3-Trichloropropane	ND	0.50	NA	1	B2E0285	05/10/2012	05/10/12 00:40	
1,2,3-Trichlorobenzene	ND	0.50	NA	1	B2E0285	05/10/2012	05/10/12 00:40	
1,2,4-Trichlorobenzene	ND	0.50	NA	1	B2E0285	05/10/2012	05/10/12 00:40	
1,2,4-Trimethylbenzene	ND	0.50	NA	1	B2E0285	05/10/2012	05/10/12 00:40	
1,2-Dibromo-3-chloropropane	ND	0.50	NA	1	B2E0285	05/10/2012	05/10/12 00:40	
1,2-Dibromoethane	ND	0.50	NA	1	B2E0285	05/10/2012	05/10/12 00:40	
1,2-Dichlorobenzene	ND	0.50	NA	1	B2E0285	05/10/2012	05/10/12 00:40	
1,2-Dichloroethane	ND	0.50	NA	1	B2E0285	05/10/2012	05/10/12 00:40	
1,2-Dichloropropane	ND	0.50	NA	1	B2E0285	05/10/2012	05/10/12 00:40	
1,3,5-Trimethylbenzene	ND	0.50	NA	1	B2E0285	05/10/2012	05/10/12 00:40	
1,3-Dichlorobenzene	ND	0.50	NA	1	B2E0285	05/10/2012	05/10/12 00:40	
1,3-Dichloropropane	ND	0.50	NA	1	B2E0285	05/10/2012	05/10/12 00:40	
1,4-Dichlorobenzene	ND	0.50	NA	1	B2E0285	05/10/2012	05/10/12 00:40	
2,2-Dichloropropane	ND	0.50	NA	1	B2E0285	05/10/2012	05/10/12 00:40	
2-Chlorotoluene	ND	0.50	NA	1	B2E0285	05/10/2012	05/10/12 00:40	
4-Chlorotoluene	ND	0.50	NA	1	B2E0285	05/10/2012	05/10/12 00:40	
4-Isopropyltoluene	ND	0.50	NA	1	B2E0285	05/10/2012	05/10/12 00:40	
Benzene	ND	0.50	NA	1	B2E0285	05/10/2012	05/10/12 00:40	
Bromobenzene	ND	0.50	NA	1	B2E0285	05/10/2012	05/10/12 00:40	
Bromodichloromethane	ND	0.50	NA	1	B2E0285	05/10/2012	05/10/12 00:40	
Bromoform	ND	0.50	NA	1	B2E0285	05/10/2012	05/10/12 00:40	
Bromomethane	ND	0.50	NA	1	B2E0285	05/10/2012	05/10/12 00:40	
Carbon tetrachloride	ND	0.50	NA	1	B2E0285	05/10/2012	05/10/12 00:40	
Chlorobenzene	ND	0.50	NA	1	B2E0285	05/10/2012	05/10/12 00:40	
Chloroethane	ND	0.50	NA	1	B2E0285	05/10/2012	05/10/12 00:40	
Chloroform	ND	0.50	NA	1	B2E0285	05/10/2012	05/10/12 00:40	
Chloromethane	ND	0.50	NA	1	B2E0285	05/10/2012	05/10/12 00:40	



Hargis & Associates, Inc.
9171 Towne Centre Drive, Suite 375
San Diego , CA 92122

Project Number : Raytheon, 532.30
Report To : Steve Netto
Reported : 05/18/2012

Client Sample ID TB-050812
Lab ID: 1201715-01

Volatile Organic Compounds by EPA 8260

Analyst: DC

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
cis-1,2-Dichloroethene	ND	0.50	NA	1	B2E0285	05/10/2012	05/10/12 00:40	
cis-1,3-Dichloropropene	ND	0.50	NA	1	B2E0285	05/10/2012	05/10/12 00:40	
Dibromochloromethane	ND	0.50	NA	1	B2E0285	05/10/2012	05/10/12 00:40	
Dibromomethane	ND	0.50	NA	1	B2E0285	05/10/2012	05/10/12 00:40	
Dichlorodifluoromethane	ND	0.50	NA	1	B2E0285	05/10/2012	05/10/12 00:40	
Ethylbenzene	ND	0.50	NA	1	B2E0285	05/10/2012	05/10/12 00:40	
Hexachlorobutadiene	ND	0.50	NA	1	B2E0285	05/10/2012	05/10/12 00:40	
Isopropylbenzene	ND	0.50	NA	1	B2E0285	05/10/2012	05/10/12 00:40	
m,p-Xylene	ND	1.0	NA	1	B2E0285	05/10/2012	05/10/12 00:40	
Methylene chloride	ND	1.0	NA	1	B2E0285	05/10/2012	05/10/12 00:40	
n-Butylbenzene	ND	0.50	NA	1	B2E0285	05/10/2012	05/10/12 00:40	
n-Propylbenzene	ND	0.50	NA	1	B2E0285	05/10/2012	05/10/12 00:40	
Naphthalene	ND	0.50	NA	1	B2E0285	05/10/2012	05/10/12 00:40	
o-Xylene	ND	0.50	NA	1	B2E0285	05/10/2012	05/10/12 00:40	
sec-Butylbenzene	ND	0.50	NA	1	B2E0285	05/10/2012	05/10/12 00:40	
Styrene	ND	0.50	NA	1	B2E0285	05/10/2012	05/10/12 00:40	
tert-Butylbenzene	ND	0.50	NA	1	B2E0285	05/10/2012	05/10/12 00:40	
Tetrachloroethene	ND	0.50	NA	1	B2E0285	05/10/2012	05/10/12 00:40	
Toluene	ND	0.50	NA	1	B2E0285	05/10/2012	05/10/12 00:40	
trans-1,2-Dichloroethene	ND	0.50	NA	1	B2E0285	05/10/2012	05/10/12 00:40	
Trichloroethene	ND	0.50	NA	1	B2E0285	05/10/2012	05/10/12 00:40	
Trichlorofluoromethane	ND	0.50	NA	1	B2E0285	05/10/2012	05/10/12 00:40	
Vinyl chloride	ND	0.50	NA	1	B2E0285	05/10/2012	05/10/12 00:40	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>120 %</i>		<i>70 - 130</i>		B2E0285	05/10/2012	<i>05/10/12 00:40</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>122 %</i>		<i>70 - 130</i>		B2E0285	05/10/2012	<i>05/10/12 00:40</i>	
<i>Surrogate: Dibromofluoromethane</i>	<i>122 %</i>		<i>70 - 130</i>		B2E0285	05/10/2012	<i>05/10/12 00:40</i>	
<i>Surrogate: Toluene-d8</i>	<i>122 %</i>		<i>70 - 130</i>		B2E0285	05/10/2012	<i>05/10/12 00:40</i>	



Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : Raytheon, 532.30

Report To : Steve Netto

Reported : 05/18/2012

Client Sample ID MW-32A

Lab ID: 1201715-02

Volatile Organic Compounds by EPA 8260

Analyst: DC

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	0.50	NA	1	B2E0301	05/10/2012	05/10/12 12:00	
1,1,1-Trichloroethane	ND	0.50	NA	1	B2E0301	05/10/2012	05/10/12 12:00	
1,1,2,2-Tetrachloroethane	ND	0.50	NA	1	B2E0301	05/10/2012	05/10/12 12:00	
1,1,2-Trichloroethane	ND	0.50	NA	1	B2E0301	05/10/2012	05/10/12 12:00	
1,1-Dichloroethane	ND	0.50	NA	1	B2E0301	05/10/2012	05/10/12 12:00	
1,1-Dichloroethene	ND	0.50	NA	1	B2E0301	05/10/2012	05/10/12 12:00	
1,1-Dichloropropene	ND	0.50	NA	1	B2E0301	05/10/2012	05/10/12 12:00	
1,2,3-Trichloropropane	ND	0.50	NA	1	B2E0301	05/10/2012	05/10/12 12:00	
1,2,3-Trichlorobenzene	ND	0.50	NA	1	B2E0301	05/10/2012	05/10/12 12:00	
1,2,4-Trichlorobenzene	ND	0.50	NA	1	B2E0301	05/10/2012	05/10/12 12:00	
1,2,4-Trimethylbenzene	ND	0.50	NA	1	B2E0301	05/10/2012	05/10/12 12:00	
1,2-Dibromo-3-chloropropane	ND	0.50	NA	1	B2E0301	05/10/2012	05/10/12 12:00	
1,2-Dibromoethane	ND	0.50	NA	1	B2E0301	05/10/2012	05/10/12 12:00	
1,2-Dichlorobenzene	ND	0.50	NA	1	B2E0301	05/10/2012	05/10/12 12:00	
1,2-Dichloroethane	ND	0.50	NA	1	B2E0301	05/10/2012	05/10/12 12:00	
1,2-Dichloropropane	ND	0.50	NA	1	B2E0301	05/10/2012	05/10/12 12:00	
1,3,5-Trimethylbenzene	ND	0.50	NA	1	B2E0301	05/10/2012	05/10/12 12:00	
1,3-Dichlorobenzene	ND	0.50	NA	1	B2E0301	05/10/2012	05/10/12 12:00	
1,3-Dichloropropane	ND	0.50	NA	1	B2E0301	05/10/2012	05/10/12 12:00	
1,4-Dichlorobenzene	ND	0.50	NA	1	B2E0301	05/10/2012	05/10/12 12:00	
2,2-Dichloropropane	ND	0.50	NA	1	B2E0301	05/10/2012	05/10/12 12:00	
2-Chlorotoluene	ND	0.50	NA	1	B2E0301	05/10/2012	05/10/12 12:00	
4-Chlorotoluene	ND	0.50	NA	1	B2E0301	05/10/2012	05/10/12 12:00	
4-Isopropyltoluene	ND	0.50	NA	1	B2E0301	05/10/2012	05/10/12 12:00	
Benzene	ND	0.50	NA	1	B2E0301	05/10/2012	05/10/12 12:00	
Bromobenzene	ND	0.50	NA	1	B2E0301	05/10/2012	05/10/12 12:00	
Bromodichloromethane	ND	0.50	NA	1	B2E0301	05/10/2012	05/10/12 12:00	
Bromoform	ND	0.50	NA	1	B2E0301	05/10/2012	05/10/12 12:00	
Bromomethane	ND	0.50	NA	1	B2E0301	05/10/2012	05/10/12 12:00	
Carbon tetrachloride	ND	0.50	NA	1	B2E0301	05/10/2012	05/10/12 12:00	
Chlorobenzene	ND	0.50	NA	1	B2E0301	05/10/2012	05/10/12 12:00	
Chloroethane	ND	0.50	NA	1	B2E0301	05/10/2012	05/10/12 12:00	
Chloroform	ND	0.50	NA	1	B2E0301	05/10/2012	05/10/12 12:00	
Chloromethane	ND	0.50	NA	1	B2E0301	05/10/2012	05/10/12 12:00	



Hargis & Associates, Inc.
9171 Towne Centre Drive, Suite 375
San Diego , CA 92122

Project Number : Raytheon, 532.30
Report To : Steve Netto
Reported : 05/18/2012

Client Sample ID MW-32A
Lab ID: 1201715-02

Volatile Organic Compounds by EPA 8260

Analyst: DC

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
cis-1,2-Dichloroethene	ND	0.50	NA	1	B2E0301	05/10/2012	05/10/12 12:00	
cis-1,3-Dichloropropene	ND	0.50	NA	1	B2E0301	05/10/2012	05/10/12 12:00	
Dibromochloromethane	ND	0.50	NA	1	B2E0301	05/10/2012	05/10/12 12:00	
Dibromomethane	ND	0.50	NA	1	B2E0301	05/10/2012	05/10/12 12:00	
Dichlorodifluoromethane	ND	0.50	NA	1	B2E0301	05/10/2012	05/10/12 12:00	
Ethylbenzene	ND	0.50	NA	1	B2E0301	05/10/2012	05/10/12 12:00	
Hexachlorobutadiene	ND	0.50	NA	1	B2E0301	05/10/2012	05/10/12 12:00	
Isopropylbenzene	ND	0.50	NA	1	B2E0301	05/10/2012	05/10/12 12:00	
m,p-Xylene	ND	1.0	NA	1	B2E0301	05/10/2012	05/10/12 12:00	
Methylene chloride	ND	1.0	NA	1	B2E0301	05/10/2012	05/10/12 12:00	
n-Butylbenzene	ND	0.50	NA	1	B2E0301	05/10/2012	05/10/12 12:00	
n-Propylbenzene	ND	0.50	NA	1	B2E0301	05/10/2012	05/10/12 12:00	
Naphthalene	ND	0.50	NA	1	B2E0301	05/10/2012	05/10/12 12:00	
o-Xylene	ND	0.50	NA	1	B2E0301	05/10/2012	05/10/12 12:00	
sec-Butylbenzene	ND	0.50	NA	1	B2E0301	05/10/2012	05/10/12 12:00	
Styrene	ND	0.50	NA	1	B2E0301	05/10/2012	05/10/12 12:00	
tert-Butylbenzene	ND	0.50	NA	1	B2E0301	05/10/2012	05/10/12 12:00	
Tetrachloroethene	ND	0.50	NA	1	B2E0301	05/10/2012	05/10/12 12:00	
Toluene	ND	0.50	NA	1	B2E0301	05/10/2012	05/10/12 12:00	
trans-1,2-Dichloroethene	ND	0.50	NA	1	B2E0301	05/10/2012	05/10/12 12:00	
Trichloroethene	ND	0.50	NA	1	B2E0301	05/10/2012	05/10/12 12:00	
Trichlorofluoromethane	ND	0.50	NA	1	B2E0301	05/10/2012	05/10/12 12:00	
Vinyl chloride	ND	0.50	NA	1	B2E0301	05/10/2012	05/10/12 12:00	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>110 %</i>	<i>70 - 130</i>			B2E0301	05/10/2012	<i>05/10/12 12:00</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>116 %</i>	<i>70 - 130</i>			B2E0301	05/10/2012	<i>05/10/12 12:00</i>	
<i>Surrogate: Dibromofluoromethane</i>	<i>113 %</i>	<i>70 - 130</i>			B2E0301	05/10/2012	<i>05/10/12 12:00</i>	
<i>Surrogate: Toluene-d8</i>	<i>115 %</i>	<i>70 - 130</i>			B2E0301	05/10/2012	<i>05/10/12 12:00</i>	



Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : Raytheon, 532.30

Report To : Steve Netto

Reported : 05/18/2012

Client Sample ID MW-32A

Lab ID: 1201715-02

1,4-Dioxane by EPA 8270/SIM: Isotope Dilution Technique

Analyst: PIL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,4-Dioxane	ND	0.20	0.13	1	B2E0430	05/15/2012	05/16/12 13:12	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	<i>93.2 %</i>		<i>36 - 107</i>		B2E0430	05/15/2012	<i>05/16/12 13:12</i>	
<i>Surrogate: 2-Fluorobiphenyl</i>	<i>84.4 %</i>		<i>42 - 120</i>		B2E0430	05/15/2012	<i>05/16/12 13:12</i>	
<i>Surrogate: 4-Terphenyl-d14</i>	<i>101 %</i>		<i>67 - 142</i>		B2E0430	05/15/2012	<i>05/16/12 13:12</i>	
<i>Surrogate: Nitrobenzene-d5</i>	<i>71.4 %</i>		<i>36 - 130</i>		B2E0430	05/15/2012	<i>05/16/12 13:12</i>	



Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : Raytheon, 532.30

Report To : Steve Netto

Reported : 05/18/2012

Client Sample ID MW-32C

Lab ID: 1201715-03

Volatile Organic Compounds by EPA 8260

Analyst: DC

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	0.50	NA	1	B2E0285	05/10/2012	05/10/12 03:02	
1,1,1-Trichloroethane	ND	0.50	NA	1	B2E0285	05/10/2012	05/10/12 03:02	
1,1,2,2-Tetrachloroethane	ND	0.50	NA	1	B2E0285	05/10/2012	05/10/12 03:02	
1,1,2-Trichloroethane	ND	0.50	NA	1	B2E0285	05/10/2012	05/10/12 03:02	
1,1-Dichloroethane	ND	0.50	NA	1	B2E0285	05/10/2012	05/10/12 03:02	
1,1-Dichloroethene	ND	0.50	NA	1	B2E0285	05/10/2012	05/10/12 03:02	
1,1-Dichloropropene	ND	0.50	NA	1	B2E0285	05/10/2012	05/10/12 03:02	
1,2,3-Trichloropropane	ND	0.50	NA	1	B2E0285	05/10/2012	05/10/12 03:02	
1,2,3-Trichlorobenzene	ND	0.50	NA	1	B2E0285	05/10/2012	05/10/12 03:02	
1,2,4-Trichlorobenzene	ND	0.50	NA	1	B2E0285	05/10/2012	05/10/12 03:02	
1,2,4-Trimethylbenzene	ND	0.50	NA	1	B2E0285	05/10/2012	05/10/12 03:02	
1,2-Dibromo-3-chloropropane	ND	0.50	NA	1	B2E0285	05/10/2012	05/10/12 03:02	
1,2-Dibromoethane	ND	0.50	NA	1	B2E0285	05/10/2012	05/10/12 03:02	
1,2-Dichlorobenzene	ND	0.50	NA	1	B2E0285	05/10/2012	05/10/12 03:02	
1,2-Dichloroethane	ND	0.50	NA	1	B2E0285	05/10/2012	05/10/12 03:02	
1,2-Dichloropropane	ND	0.50	NA	1	B2E0285	05/10/2012	05/10/12 03:02	
1,3,5-Trimethylbenzene	ND	0.50	NA	1	B2E0285	05/10/2012	05/10/12 03:02	
1,3-Dichlorobenzene	ND	0.50	NA	1	B2E0285	05/10/2012	05/10/12 03:02	
1,3-Dichloropropane	ND	0.50	NA	1	B2E0285	05/10/2012	05/10/12 03:02	
1,4-Dichlorobenzene	ND	0.50	NA	1	B2E0285	05/10/2012	05/10/12 03:02	
2,2-Dichloropropane	ND	0.50	NA	1	B2E0285	05/10/2012	05/10/12 03:02	
2-Chlorotoluene	ND	0.50	NA	1	B2E0285	05/10/2012	05/10/12 03:02	
4-Chlorotoluene	ND	0.50	NA	1	B2E0285	05/10/2012	05/10/12 03:02	
4-Isopropyltoluene	ND	0.50	NA	1	B2E0285	05/10/2012	05/10/12 03:02	
Benzene	ND	0.50	NA	1	B2E0285	05/10/2012	05/10/12 03:02	
Bromobenzene	ND	0.50	NA	1	B2E0285	05/10/2012	05/10/12 03:02	
Bromodichloromethane	ND	0.50	NA	1	B2E0285	05/10/2012	05/10/12 03:02	
Bromoform	ND	0.50	NA	1	B2E0285	05/10/2012	05/10/12 03:02	
Bromomethane	ND	0.50	NA	1	B2E0285	05/10/2012	05/10/12 03:02	
Carbon tetrachloride	ND	0.50	NA	1	B2E0285	05/10/2012	05/10/12 03:02	
Chlorobenzene	ND	0.50	NA	1	B2E0285	05/10/2012	05/10/12 03:02	
Chloroethane	ND	0.50	NA	1	B2E0285	05/10/2012	05/10/12 03:02	
Chloroform	ND	0.50	NA	1	B2E0285	05/10/2012	05/10/12 03:02	
Chloromethane	ND	0.50	NA	1	B2E0285	05/10/2012	05/10/12 03:02	



Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : Raytheon, 532.30

Report To : Steve Netto

Reported : 05/18/2012

Client Sample ID MW-32C

Lab ID: 1201715-03

Volatile Organic Compounds by EPA 8260

Analyst: DC

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
cis-1,2-Dichloroethene	ND	0.50	NA	1	B2E0285	05/10/2012	05/10/12 03:02	
cis-1,3-Dichloropropene	ND	0.50	NA	1	B2E0285	05/10/2012	05/10/12 03:02	
Dibromochloromethane	ND	0.50	NA	1	B2E0285	05/10/2012	05/10/12 03:02	
Dibromomethane	ND	0.50	NA	1	B2E0285	05/10/2012	05/10/12 03:02	
Dichlorodifluoromethane	ND	0.50	NA	1	B2E0285	05/10/2012	05/10/12 03:02	
Ethylbenzene	ND	0.50	NA	1	B2E0285	05/10/2012	05/10/12 03:02	
Hexachlorobutadiene	ND	0.50	NA	1	B2E0285	05/10/2012	05/10/12 03:02	
Isopropylbenzene	ND	0.50	NA	1	B2E0285	05/10/2012	05/10/12 03:02	
m,p-Xylene	ND	1.0	NA	1	B2E0285	05/10/2012	05/10/12 03:02	
Methylene chloride	ND	1.0	NA	1	B2E0285	05/10/2012	05/10/12 03:02	
n-Butylbenzene	ND	0.50	NA	1	B2E0285	05/10/2012	05/10/12 03:02	
n-Propylbenzene	ND	0.50	NA	1	B2E0285	05/10/2012	05/10/12 03:02	
Naphthalene	ND	0.50	NA	1	B2E0285	05/10/2012	05/10/12 03:02	
o-Xylene	ND	0.50	NA	1	B2E0285	05/10/2012	05/10/12 03:02	
sec-Butylbenzene	ND	0.50	NA	1	B2E0285	05/10/2012	05/10/12 03:02	
Styrene	ND	0.50	NA	1	B2E0285	05/10/2012	05/10/12 03:02	
tert-Butylbenzene	ND	0.50	NA	1	B2E0285	05/10/2012	05/10/12 03:02	
Tetrachloroethene	0.56	0.50	NA	1	B2E0285	05/10/2012	05/10/12 03:02	
Toluene	ND	0.50	NA	1	B2E0285	05/10/2012	05/10/12 03:02	
trans-1,2-Dichloroethene	ND	0.50	NA	1	B2E0285	05/10/2012	05/10/12 03:02	
Trichloroethene	ND	0.50	NA	1	B2E0285	05/10/2012	05/10/12 03:02	
Trichlorofluoromethane	ND	0.50	NA	1	B2E0285	05/10/2012	05/10/12 03:02	
Vinyl chloride	ND	0.50	NA	1	B2E0285	05/10/2012	05/10/12 03:02	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>101 %</i>	<i>70 - 130</i>			B2E0285	05/10/2012	<i>05/10/12 03:02</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>99.8 %</i>	<i>70 - 130</i>			B2E0285	05/10/2012	<i>05/10/12 03:02</i>	
<i>Surrogate: Dibromofluoromethane</i>	<i>101 %</i>	<i>70 - 130</i>			B2E0285	05/10/2012	<i>05/10/12 03:02</i>	
<i>Surrogate: Toluene-d8</i>	<i>100 %</i>	<i>70 - 130</i>			B2E0285	05/10/2012	<i>05/10/12 03:02</i>	



Hargis & Associates, Inc.
9171 Towne Centre Drive, Suite 375
San Diego , CA 92122

Project Number : Raytheon, 532.30
Report To : Steve Netto
Reported : 05/18/2012

Client Sample ID MW-32C
Lab ID: 1201715-03

1,4-Dioxane by EPA 8270/SIM: Isotope Dilution Technique

Analyst: PIL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,4-Dioxane	ND	0.20	0.13	1	B2E0430	05/15/2012	05/16/12 13:42	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	86.9 %		36 - 107		B2E0430	05/15/2012	05/16/12 13:42	
<i>Surrogate: 2-Fluorobiphenyl</i>	77.0 %		42 - 120		B2E0430	05/15/2012	05/16/12 13:42	
<i>Surrogate: 4-Terphenyl-d14</i>	93.5 %		67 - 142		B2E0430	05/15/2012	05/16/12 13:42	
<i>Surrogate: Nitrobenzene-d5</i>	67.0 %		36 - 130		B2E0430	05/15/2012	05/16/12 13:42	



Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : Raytheon, 532.30

Report To : Steve Netto

Reported : 05/18/2012

Client Sample ID MW-32B

Lab ID: 1201715-04

Volatile Organic Compounds by EPA 8260

Analyst: DC

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	0.50	NA	1	B2E0343	05/11/2012	05/11/12 14:03	
1,1,1-Trichloroethane	ND	0.50	NA	1	B2E0343	05/11/2012	05/11/12 14:03	
1,1,2,2-Tetrachloroethane	ND	0.50	NA	1	B2E0343	05/11/2012	05/11/12 14:03	
1,1,2-Trichloroethane	ND	0.50	NA	1	B2E0343	05/11/2012	05/11/12 14:03	
1,1-Dichloroethane	ND	0.50	NA	1	B2E0343	05/11/2012	05/11/12 14:03	
1,1-Dichloroethene	39	0.50	NA	1	B2E0343	05/11/2012	05/11/12 14:03	
1,1-Dichloropropene	ND	0.50	NA	1	B2E0343	05/11/2012	05/11/12 14:03	
1,2,3-Trichloropropane	ND	0.50	NA	1	B2E0343	05/11/2012	05/11/12 14:03	
1,2,3-Trichlorobenzene	ND	0.50	NA	1	B2E0343	05/11/2012	05/11/12 14:03	
1,2,4-Trichlorobenzene	ND	0.50	NA	1	B2E0343	05/11/2012	05/11/12 14:03	
1,2,4-Trimethylbenzene	ND	0.50	NA	1	B2E0343	05/11/2012	05/11/12 14:03	
1,2-Dibromo-3-chloropropane	ND	0.50	NA	1	B2E0343	05/11/2012	05/11/12 14:03	
1,2-Dibromoethane	ND	0.50	NA	1	B2E0343	05/11/2012	05/11/12 14:03	
1,2-Dichlorobenzene	ND	0.50	NA	1	B2E0343	05/11/2012	05/11/12 14:03	
1,2-Dichloroethane	ND	0.50	NA	1	B2E0343	05/11/2012	05/11/12 14:03	
1,2-Dichloropropane	ND	0.50	NA	1	B2E0343	05/11/2012	05/11/12 14:03	
1,3,5-Trimethylbenzene	ND	0.50	NA	1	B2E0343	05/11/2012	05/11/12 14:03	
1,3-Dichlorobenzene	ND	0.50	NA	1	B2E0343	05/11/2012	05/11/12 14:03	
1,3-Dichloropropane	ND	0.50	NA	1	B2E0343	05/11/2012	05/11/12 14:03	
1,4-Dichlorobenzene	ND	0.50	NA	1	B2E0343	05/11/2012	05/11/12 14:03	
2,2-Dichloropropane	ND	0.50	NA	1	B2E0343	05/11/2012	05/11/12 14:03	
2-Chlorotoluene	ND	0.50	NA	1	B2E0343	05/11/2012	05/11/12 14:03	
4-Chlorotoluene	ND	0.50	NA	1	B2E0343	05/11/2012	05/11/12 14:03	
4-Isopropyltoluene	ND	0.50	NA	1	B2E0343	05/11/2012	05/11/12 14:03	
Benzene	ND	0.50	NA	1	B2E0343	05/11/2012	05/11/12 14:03	
Bromobenzene	ND	0.50	NA	1	B2E0343	05/11/2012	05/11/12 14:03	
Bromodichloromethane	ND	0.50	NA	1	B2E0343	05/11/2012	05/11/12 14:03	
Bromoform	ND	0.50	NA	1	B2E0343	05/11/2012	05/11/12 14:03	
Bromomethane	ND	0.50	NA	1	B2E0343	05/11/2012	05/11/12 14:03	
Carbon tetrachloride	ND	0.50	NA	1	B2E0343	05/11/2012	05/11/12 14:03	
Chlorobenzene	ND	0.50	NA	1	B2E0343	05/11/2012	05/11/12 14:03	
Chloroethane	ND	0.50	NA	1	B2E0343	05/11/2012	05/11/12 14:03	
Chloroform	ND	0.50	NA	1	B2E0343	05/11/2012	05/11/12 14:03	
Chloromethane	ND	0.50	NA	1	B2E0343	05/11/2012	05/11/12 14:03	



Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : Raytheon, 532.30

Report To : Steve Netto

Reported : 05/18/2012

Client Sample ID MW-32B

Lab ID: 1201715-04

Volatile Organic Compounds by EPA 8260

Analyst: DC

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
cis-1,2-Dichloroethene	2.8	0.50	NA	1	B2E0343	05/11/2012	05/11/12 14:03	
cis-1,3-Dichloropropene	ND	0.50	NA	1	B2E0343	05/11/2012	05/11/12 14:03	
Dibromochloromethane	ND	0.50	NA	1	B2E0343	05/11/2012	05/11/12 14:03	
Dibromomethane	ND	0.50	NA	1	B2E0343	05/11/2012	05/11/12 14:03	
Dichlorodifluoromethane	ND	0.50	NA	1	B2E0343	05/11/2012	05/11/12 14:03	
Ethylbenzene	ND	0.50	NA	1	B2E0343	05/11/2012	05/11/12 14:03	
Hexachlorobutadiene	ND	0.50	NA	1	B2E0343	05/11/2012	05/11/12 14:03	
Isopropylbenzene	ND	0.50	NA	1	B2E0343	05/11/2012	05/11/12 14:03	
m,p-Xylene	ND	1.0	NA	1	B2E0343	05/11/2012	05/11/12 14:03	
Methylene chloride	ND	1.0	NA	1	B2E0343	05/11/2012	05/11/12 14:03	
n-Butylbenzene	ND	0.50	NA	1	B2E0343	05/11/2012	05/11/12 14:03	
n-Propylbenzene	ND	0.50	NA	1	B2E0343	05/11/2012	05/11/12 14:03	
Naphthalene	ND	0.50	NA	1	B2E0343	05/11/2012	05/11/12 14:03	
o-Xylene	ND	0.50	NA	1	B2E0343	05/11/2012	05/11/12 14:03	
sec-Butylbenzene	ND	0.50	NA	1	B2E0343	05/11/2012	05/11/12 14:03	
Styrene	ND	0.50	NA	1	B2E0343	05/11/2012	05/11/12 14:03	
tert-Butylbenzene	ND	0.50	NA	1	B2E0343	05/11/2012	05/11/12 14:03	
Tetrachloroethene	ND	0.50	NA	1	B2E0343	05/11/2012	05/11/12 14:03	
Toluene	ND	0.50	NA	1	B2E0343	05/11/2012	05/11/12 14:03	
trans-1,2-Dichloroethene	ND	0.50	NA	1	B2E0343	05/11/2012	05/11/12 14:03	
Trichloroethene	30	0.50	NA	1	B2E0343	05/11/2012	05/11/12 14:03	
Trichlorofluoromethane	ND	0.50	NA	1	B2E0343	05/11/2012	05/11/12 14:03	
Vinyl chloride	ND	0.50	NA	1	B2E0343	05/11/2012	05/11/12 14:03	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>99.2 %</i>		<i>70 - 130</i>		B2E0343	05/11/2012	<i>05/11/12 14:03</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>115 %</i>		<i>70 - 130</i>		B2E0343	05/11/2012	<i>05/11/12 14:03</i>	
<i>Surrogate: Dibromofluoromethane</i>	<i>110 %</i>		<i>70 - 130</i>		B2E0343	05/11/2012	<i>05/11/12 14:03</i>	
<i>Surrogate: Toluene-d8</i>	<i>113 %</i>		<i>70 - 130</i>		B2E0343	05/11/2012	<i>05/11/12 14:03</i>	



Hargis & Associates, Inc.
9171 Towne Centre Drive, Suite 375
San Diego , CA 92122

Project Number : Raytheon, 532.30
Report To : Steve Netto
Reported : 05/18/2012

Client Sample ID MW-32B
Lab ID: 1201715-04

1,4-Dioxane by EPA 8270/SIM: Isotope Dilution Technique

Analyst: PIL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,4-Dioxane	1.4	0.20	0.13	1	B2E0430	05/15/2012	05/16/12 14:11	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	<i>86.1 %</i>		<i>36 - 107</i>		B2E0430	05/15/2012	<i>05/16/12 14:11</i>	
<i>Surrogate: 2-Fluorobiphenyl</i>	<i>80.4 %</i>		<i>42 - 120</i>		B2E0430	05/15/2012	<i>05/16/12 14:11</i>	
<i>Surrogate: 4-Terphenyl-d14</i>	<i>96.6 %</i>		<i>67 - 142</i>		B2E0430	05/15/2012	<i>05/16/12 14:11</i>	
<i>Surrogate: Nitrobenzene-d5</i>	<i>69.4 %</i>		<i>36 - 130</i>		B2E0430	05/15/2012	<i>05/16/12 14:11</i>	



Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : Raytheon, 532.30

Report To : Steve Netto

Reported : 05/18/2012

Client Sample ID MW-33

Lab ID: 1201715-05

Volatile Organic Compounds by EPA 8260

Analyst: DC

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	0.50	NA	1	B2E0285	05/10/2012	05/10/12 03:22	
1,1,1-Trichloroethane	ND	0.50	NA	1	B2E0285	05/10/2012	05/10/12 03:22	
1,1,2,2-Tetrachloroethane	ND	0.50	NA	1	B2E0285	05/10/2012	05/10/12 03:22	
1,1,2-Trichloroethane	ND	0.50	NA	1	B2E0285	05/10/2012	05/10/12 03:22	
1,1-Dichloroethane	ND	0.50	NA	1	B2E0285	05/10/2012	05/10/12 03:22	
1,1-Dichloroethene	4.2	0.50	NA	1	B2E0285	05/10/2012	05/10/12 03:22	
1,1-Dichloropropene	ND	0.50	NA	1	B2E0285	05/10/2012	05/10/12 03:22	
1,2,3-Trichloropropane	ND	0.50	NA	1	B2E0285	05/10/2012	05/10/12 03:22	
1,2,3-Trichlorobenzene	ND	0.50	NA	1	B2E0285	05/10/2012	05/10/12 03:22	
1,2,4-Trichlorobenzene	ND	0.50	NA	1	B2E0285	05/10/2012	05/10/12 03:22	
1,2,4-Trimethylbenzene	ND	0.50	NA	1	B2E0285	05/10/2012	05/10/12 03:22	
1,2-Dibromo-3-chloropropane	ND	0.50	NA	1	B2E0285	05/10/2012	05/10/12 03:22	
1,2-Dibromoethane	ND	0.50	NA	1	B2E0285	05/10/2012	05/10/12 03:22	
1,2-Dichlorobenzene	ND	0.50	NA	1	B2E0285	05/10/2012	05/10/12 03:22	
1,2-Dichloroethane	ND	0.50	NA	1	B2E0285	05/10/2012	05/10/12 03:22	
1,2-Dichloropropane	ND	0.50	NA	1	B2E0285	05/10/2012	05/10/12 03:22	
1,3,5-Trimethylbenzene	ND	0.50	NA	1	B2E0285	05/10/2012	05/10/12 03:22	
1,3-Dichlorobenzene	ND	0.50	NA	1	B2E0285	05/10/2012	05/10/12 03:22	
1,3-Dichloropropane	ND	0.50	NA	1	B2E0285	05/10/2012	05/10/12 03:22	
1,4-Dichlorobenzene	ND	0.50	NA	1	B2E0285	05/10/2012	05/10/12 03:22	
2,2-Dichloropropane	ND	0.50	NA	1	B2E0285	05/10/2012	05/10/12 03:22	
2-Chlorotoluene	ND	0.50	NA	1	B2E0285	05/10/2012	05/10/12 03:22	
4-Chlorotoluene	ND	0.50	NA	1	B2E0285	05/10/2012	05/10/12 03:22	
4-Isopropyltoluene	ND	0.50	NA	1	B2E0285	05/10/2012	05/10/12 03:22	
Benzene	ND	0.50	NA	1	B2E0285	05/10/2012	05/10/12 03:22	
Bromobenzene	ND	0.50	NA	1	B2E0285	05/10/2012	05/10/12 03:22	
Bromodichloromethane	ND	0.50	NA	1	B2E0285	05/10/2012	05/10/12 03:22	
Bromoform	ND	0.50	NA	1	B2E0285	05/10/2012	05/10/12 03:22	
Bromomethane	ND	0.50	NA	1	B2E0285	05/10/2012	05/10/12 03:22	
Carbon tetrachloride	ND	0.50	NA	1	B2E0285	05/10/2012	05/10/12 03:22	
Chlorobenzene	ND	0.50	NA	1	B2E0285	05/10/2012	05/10/12 03:22	
Chloroethane	ND	0.50	NA	1	B2E0285	05/10/2012	05/10/12 03:22	
Chloroform	ND	0.50	NA	1	B2E0285	05/10/2012	05/10/12 03:22	
Chloromethane	ND	0.50	NA	1	B2E0285	05/10/2012	05/10/12 03:22	



Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : Raytheon, 532.30

Report To : Steve Netto

Reported : 05/18/2012

Client Sample ID MW-33

Lab ID: 1201715-05

Volatile Organic Compounds by EPA 8260

Analyst: DC

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
cis-1,2-Dichloroethene	ND	0.50	NA	1	B2E0285	05/10/2012	05/10/12 03:22	
cis-1,3-Dichloropropene	ND	0.50	NA	1	B2E0285	05/10/2012	05/10/12 03:22	
Dibromochloromethane	ND	0.50	NA	1	B2E0285	05/10/2012	05/10/12 03:22	
Dibromomethane	ND	0.50	NA	1	B2E0285	05/10/2012	05/10/12 03:22	
Dichlorodifluoromethane	ND	0.50	NA	1	B2E0285	05/10/2012	05/10/12 03:22	
Ethylbenzene	ND	0.50	NA	1	B2E0285	05/10/2012	05/10/12 03:22	
Hexachlorobutadiene	ND	0.50	NA	1	B2E0285	05/10/2012	05/10/12 03:22	
Isopropylbenzene	ND	0.50	NA	1	B2E0285	05/10/2012	05/10/12 03:22	
m,p-Xylene	ND	1.0	NA	1	B2E0285	05/10/2012	05/10/12 03:22	
Methylene chloride	ND	1.0	NA	1	B2E0285	05/10/2012	05/10/12 03:22	
n-Butylbenzene	ND	0.50	NA	1	B2E0285	05/10/2012	05/10/12 03:22	
n-Propylbenzene	ND	0.50	NA	1	B2E0285	05/10/2012	05/10/12 03:22	
Naphthalene	ND	0.50	NA	1	B2E0285	05/10/2012	05/10/12 03:22	
o-Xylene	ND	0.50	NA	1	B2E0285	05/10/2012	05/10/12 03:22	
sec-Butylbenzene	ND	0.50	NA	1	B2E0285	05/10/2012	05/10/12 03:22	
Styrene	ND	0.50	NA	1	B2E0285	05/10/2012	05/10/12 03:22	
tert-Butylbenzene	ND	0.50	NA	1	B2E0285	05/10/2012	05/10/12 03:22	
Tetrachloroethene	ND	0.50	NA	1	B2E0285	05/10/2012	05/10/12 03:22	
Toluene	ND	0.50	NA	1	B2E0285	05/10/2012	05/10/12 03:22	
trans-1,2-Dichloroethene	ND	0.50	NA	1	B2E0285	05/10/2012	05/10/12 03:22	
Trichloroethene	0.83	0.50	NA	1	B2E0285	05/10/2012	05/10/12 03:22	
Trichlorofluoromethane	ND	0.50	NA	1	B2E0285	05/10/2012	05/10/12 03:22	
Vinyl chloride	ND	0.50	NA	1	B2E0285	05/10/2012	05/10/12 03:22	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>102 %</i>		<i>70 - 130</i>		B2E0285	05/10/2012	<i>05/10/12 03:22</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>99.8 %</i>		<i>70 - 130</i>		B2E0285	05/10/2012	<i>05/10/12 03:22</i>	
<i>Surrogate: Dibromofluoromethane</i>	<i>105 %</i>		<i>70 - 130</i>		B2E0285	05/10/2012	<i>05/10/12 03:22</i>	
<i>Surrogate: Toluene-d8</i>	<i>101 %</i>		<i>70 - 130</i>		B2E0285	05/10/2012	<i>05/10/12 03:22</i>	



Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego, CA 92122

Project Number : Raytheon, 532.30

Report To : Steve Netto

Reported : 05/18/2012

Client Sample ID MW-33

Lab ID: 1201715-05

1,4-Dioxane by EPA 8270/SIM: Isotope Dilution Technique

Analyst: PIL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,4-Dioxane	ND	0.20	0.13	1	B2E0430	05/15/2012	05/16/12 14:39	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	<i>74.9 %</i>		<i>36 - 107</i>		B2E0430	05/15/2012	<i>05/16/12 14:39</i>	
<i>Surrogate: 2-Fluorobiphenyl</i>	<i>66.1 %</i>		<i>42 - 120</i>		B2E0430	05/15/2012	<i>05/16/12 14:39</i>	
<i>Surrogate: 4-Terphenyl-d14</i>	<i>91.5 %</i>		<i>67 - 142</i>		B2E0430	05/15/2012	<i>05/16/12 14:39</i>	
<i>Surrogate: Nitrobenzene-d5</i>	<i>60.9 %</i>		<i>36 - 130</i>		B2E0430	05/15/2012	<i>05/16/12 14:39</i>	



Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : Raytheon, 532.30

Report To : Steve Netto

Reported : 05/18/2012

QUALITY CONTROL SECTION

Volatile Organic Compounds by EPA 8260 - Quality Control

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B2E0285 - MSVOAW_LL

Blank (B2E0285-BLK1)

Prepared: 5/9/2012 Analyzed: 5/9/2012

1,1,1,2-Tetrachloroethane	ND	0.50				NR			
1,1,1-Trichloroethane	ND	0.50				NR			
1,1,2,2-Tetrachloroethane	ND	0.50				NR			
1,1,2-Trichloroethane	ND	0.50				NR			
1,1-Dichloroethane	ND	0.50				NR			
1,1-Dichloroethene	ND	0.50				NR			
1,1-Dichloropropene	ND	0.50				NR			
1,2,3-Trichloropropane	ND	0.50				NR			
1,2,3-Trichlorobenzene	ND	0.50				NR			
1,2,4-Trichlorobenzene	ND	0.50				NR			
1,2,4-Trimethylbenzene	ND	0.50				NR			
1,2-Dibromo-3-chloropropane	ND	0.50				NR			
1,2-Dibromoethane	ND	0.50				NR			
1,2-Dichlorobenzene	ND	0.50				NR			
1,2-Dichloroethane	ND	0.50				NR			
1,2-Dichloropropane	ND	0.50				NR			
1,3,5-Trimethylbenzene	ND	0.50				NR			
1,3-Dichlorobenzene	ND	0.50				NR			
1,3-Dichloropropane	ND	0.50				NR			
1,4-Dichlorobenzene	ND	0.50				NR			
2,2-Dichloropropane	ND	0.50				NR			
2-Chlorotoluene	ND	0.50				NR			
4-Chlorotoluene	ND	0.50				NR			
4-Isopropyltoluene	ND	0.50				NR			
Benzene	ND	0.50				NR			
Bromobenzene	ND	0.50				NR			
Bromodichloromethane	ND	0.50				NR			
Bromoform	ND	0.50				NR			
Bromomethane	ND	0.50				NR			
Carbon tetrachloride	ND	0.50				NR			
Chlorobenzene	ND	0.50				NR			
Chloroethane	ND	0.50				NR			
Chloroform	ND	0.50				NR			
Chloromethane	ND	0.50				NR			
cis-1,2-Dichloroethene	ND	0.50				NR			
cis-1,3-Dichloropropene	ND	0.50				NR			
Dibromochloromethane	ND	0.50				NR			
Dibromomethane	ND	0.50				NR			
Dichlorodifluoromethane	ND	0.50				NR			



Hargis & Associates, Inc.

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Volatile Organic Compounds by EPA 8260 - Quality Control (cont'd)

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec % Rec	% Rec Limits	RPD RPD	RPD Limit	Notes
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Batch B2E0285 - MSVOAW_LL (continued)

Blank (B2E0285-BLK1) - Continued

Prepared: 5/9/2012 Analyzed: 5/9/2012

Ethylbenzene	ND	0.50						NR	
Hexachlorobutadiene	ND	0.50						NR	
Isopropylbenzene	ND	0.50						NR	
m,p-Xylene	ND	1.0						NR	
Methylene chloride	ND	1.0						NR	
n-Butylbenzene	ND	0.50						NR	
n-Propylbenzene	ND	0.50						NR	
Naphthalene	ND	0.50						NR	
o-Xylene	ND	0.50						NR	
sec-Butylbenzene	ND	0.50						NR	
Styrene	ND	0.50						NR	
tert-Butylbenzene	ND	0.50						NR	
Tetrachloroethene	ND	0.50						NR	
Toluene	ND	0.50						NR	
trans-1,2-Dichloroethene	ND	0.50						NR	
Trichloroethene	ND	0.50						NR	
Trichlorofluoromethane	ND	0.50						NR	
Vinyl chloride	ND	0.50						NR	

Surrogate: 1,2-Dichloroethane-d4	23		25.0		93.9	70 - 130			
Surrogate: 4-Bromofluorobenzene	25		25.0		101	70 - 130			
Surrogate: Dibromofluoromethane	24		25.0		97.9	70 - 130			
Surrogate: Toluene-d8	25		25.0		98.8	70 - 130			

LCS (B2E0285-BS1)

Prepared: 5/9/2012 Analyzed: 5/9/2012

1,1-Dichloroethene	19	0.50	20.0		94.8	70 - 130			
Benzene	41	0.50	40.0		103	70 - 130			
Chlorobenzene	21	0.50	20.0		105	70 - 130			
MTBE	22	0.50	20.0		108	70 - 130			
Toluene	42	0.50	40.0		104	70 - 130			
Trichloroethene	20	0.50	20.0		100	70 - 130			

Surrogate: 1,2-Dichloroethane-d4	25		25.0		99.8	70 - 130			
Surrogate: 4-Bromofluorobenzene	26		25.0		105	70 - 130			
Surrogate: Dibromofluoromethane	25		25.0		101	70 - 130			
Surrogate: Toluene-d8	26		25.0		102	70 - 130			

LCS Dup (B2E0285-BS1)

Prepared: 5/9/2012 Analyzed: 5/9/2012

1,1-Dichloroethene	19	0.50	20.0		95.6	70 - 130	0.735	20	
Benzene	42	0.50	40.0		104	70 - 130	0.628	20	
Chlorobenzene	22	0.50	20.0		108	70 - 130	3.28	20	
MTBE	21	0.50	20.0		107	70 - 130	1.35	20	
Toluene	42	0.50	40.0		105	70 - 130	0.668	20	



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Volatile Organic Compounds by EPA 8260 - Quality Control (cont'd)

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec % Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B2E0285 - MSVOAW_LL (continued)

LCS Dup (B2E0285-BSD1) - Continued

Prepared: 5/9/2012 Analyzed: 5/9/2012

Trichloroethene	20	0.50	20.0		102	70 - 130	1.49	20	
Surrogate: 1,2-Dichloroethane-d4	25		25.0		99.4	70 - 130			
Surrogate: 4-Bromofluorobenzene	27		25.0		107	70 - 130			
Surrogate: Dibromofluoromethane	26		25.0		102	70 - 130			
Surrogate: Toluene-d8	26		25.0		103	70 - 130			

Batch B2E0301 - MSVOAW_LL

Blank (B2E0301-BLK1)

Prepared: 5/10/2012 Analyzed: 5/10/2012

1,1,1,2-Tetrachloroethane	ND	0.50			NR				
1,1,1-Trichloroethane	ND	0.50			NR				
1,1,2,2-Tetrachloroethane	ND	0.50			NR				
1,1,2-Trichloroethane	ND	0.50			NR				
1,1-Dichloroethane	ND	0.50			NR				
1,1-Dichloroethene	ND	0.50			NR				
1,1-Dichloropropene	ND	0.50			NR				
1,2,3-Trichloropropane	ND	0.50			NR				
1,2,3-Trichlorobenzene	ND	0.50			NR				
1,2,4-Trichlorobenzene	ND	0.50			NR				
1,2,4-Trimethylbenzene	ND	0.50			NR				
1,2-Dibromo-3-chloropropane	ND	0.50			NR				
1,2-Dibromoethane	ND	0.50			NR				
1,2-Dichlorobenzene	ND	0.50			NR				
1,2-Dichloroethane	ND	0.50			NR				
1,2-Dichloropropane	ND	0.50			NR				
1,3,5-Trimethylbenzene	ND	0.50			NR				
1,3-Dichlorobenzene	ND	0.50			NR				
1,3-Dichloropropane	ND	0.50			NR				
1,4-Dichlorobenzene	ND	0.50			NR				
2,2-Dichloropropane	ND	0.50			NR				
2-Chlorotoluene	ND	0.50			NR				
4-Chlorotoluene	ND	0.50			NR				
4-Isopropyltoluene	ND	0.50			NR				
Benzene	ND	0.50			NR				
Bromobenzene	ND	0.50			NR				
Bromodichloromethane	ND	0.50			NR				
Bromoform	ND	0.50			NR				
Bromomethane	ND	0.50			NR				
Carbon tetrachloride	ND	0.50			NR				
Chlorobenzene	ND	0.50			NR				
Chloroethane	ND	0.50			NR				



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Volatile Organic Compounds by EPA 8260 - Quality Control (cont'd)

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec % Rec	% Rec Limits	RPD RPD	RPD Limit	Notes
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Batch B2E0301 - MSVOAW_LL (continued)

Blank (B2E0301-BLK1) - Continued

Prepared: 5/10/2012 Analyzed: 5/10/2012

Chloroform	ND	0.50						NR	
Chloromethane	ND	0.50						NR	
cis-1,2-Dichloroethene	ND	0.50						NR	
cis-1,3-Dichloropropene	ND	0.50						NR	
Dibromochloromethane	ND	0.50						NR	
Dibromomethane	ND	0.50						NR	
Dichlorodifluoromethane	ND	0.50						NR	
Ethylbenzene	ND	0.50						NR	
Hexachlorobutadiene	ND	0.50						NR	
Isopropylbenzene	ND	0.50						NR	
m,p-Xylene	ND	1.0						NR	
Methylene chloride	ND	1.0						NR	
n-Butylbenzene	ND	0.50						NR	
n-Propylbenzene	ND	0.50						NR	
Naphthalene	ND	0.50						NR	
o-Xylene	ND	0.50						NR	
sec-Butylbenzene	ND	0.50						NR	
Styrene	ND	0.50						NR	
tert-Butylbenzene	ND	0.50						NR	
Tetrachloroethene	ND	0.50						NR	
Toluene	ND	0.50						NR	
trans-1,2-Dichloroethene	ND	0.50						NR	
Trichloroethene	ND	0.50						NR	
Trichlorofluoromethane	ND	0.50						NR	
Vinyl chloride	ND	0.50						NR	

Surrogate: 1,2-Dichloroethane-d4	28		25.0		112	70 - 130			
Surrogate: 4-Bromofluorobenzene	30		25.0		121	70 - 130			
Surrogate: Dibromofluoromethane	29		25.0		116	70 - 130			
Surrogate: Toluene-d8	30		25.0		120	70 - 130			

LCS (B2E0301-BS1)

Prepared: 5/10/2012 Analyzed: 5/10/2012

1,1-Dichloroethene	20	0.50	20.0		100	70 - 130			
Benzene	42	0.50	40.0		106	70 - 130			
Chlorobenzene	21	0.50	20.0		107	70 - 130			
MTBE	20	0.50	20.0		102	70 - 130			
Toluene	42	0.50	40.0		106	70 - 130			
Trichloroethene	20	0.50	20.0		101	70 - 130			

Surrogate: 1,2-Dichloroethane-d4	25		25.0		100	70 - 130			
Surrogate: 4-Bromofluorobenzene	26		25.0		104	70 - 130			
Surrogate: Dibromofluoromethane	25		25.0		101	70 - 130			
Surrogate: Toluene-d8	26		25.0		103	70 - 130			



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Volatile Organic Compounds by EPA 8260 - Quality Control (cont'd)

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec % Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B2E0301 - MSVOAW_LL (continued)

LCS Dup (B2E0301-BSD1)

Prepared: 5/10/2012 Analyzed: 5/10/2012

1,1-Dichloroethene	20	0.50	20.0		102	70 - 130	1.83	20	
Benzene	43	0.50	40.0		107	70 - 130	1.55	20	
Chlorobenzene	22	0.50	20.0		109	70 - 130	1.53	20	
MTBE	21	0.50	20.0		107	70 - 130	5.18	20	
Toluene	43	0.50	40.0		109	70 - 130	2.35	20	
Trichloroethene	22	0.50	20.0		108	70 - 130	6.08	20	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	26		25.0		103	70 - 130			
<i>Surrogate: 4-Bromofluorobenzene</i>	27		25.0		107	70 - 130			
<i>Surrogate: Dibromofluoromethane</i>	26		25.0		104	70 - 130			
<i>Surrogate: Toluene-d8</i>	26		25.0		105	70 - 130			

Matrix Spike (B2E0301-MS1)

Source: 1201715-02

Prepared: 5/10/2012 Analyzed: 5/10/2012

1,1-Dichloroethene	22	0.50	20.0	ND	111	70 - 130			
Benzene	49	0.50	40.0	ND	122	70 - 130			
Chlorobenzene	25	0.50	20.0	ND	124	70 - 130			
MTBE	29	0.50	20.0	ND	146	70 - 130			M2
Toluene	49	0.50	40.0	ND	121	70 - 130			
Trichloroethene	23	0.50	20.0	ND	117	70 - 130			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	29		25.0		114	70 - 130			
<i>Surrogate: 4-Bromofluorobenzene</i>	32		25.0		129	70 - 130			
<i>Surrogate: Dibromofluoromethane</i>	29		25.0		116	70 - 130			
<i>Surrogate: Toluene-d8</i>	30		25.0		122	70 - 130			

Matrix Spike Dup (B2E0301-MSD1)

Source: 1201715-02

Prepared: 5/10/2012 Analyzed: 5/10/2012

1,1-Dichloroethene	22	0.50	20.0	ND	110	70 - 130	0.633	20	
Benzene	45	0.50	40.0	ND	113	70 - 130	7.79	20	
Chlorobenzene	23	0.50	20.0	ND	113	70 - 130	9.39	20	
MTBE	21	0.50	20.0	ND	106	70 - 130	31.2	20	R
Toluene	46	0.50	40.0	ND	114	70 - 130	6.09	20	
Trichloroethene	23	0.50	20.0	ND	113	70 - 130	3.21	20	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	23		25.0		92.7	70 - 130			
<i>Surrogate: 4-Bromofluorobenzene</i>	26		25.0		105	70 - 130			
<i>Surrogate: Dibromofluoromethane</i>	24		25.0		96.8	70 - 130			
<i>Surrogate: Toluene-d8</i>	26		25.0		103	70 - 130			

Batch B2E0343 - MSVOAW_LL

Blank (B2E0343-BLK1)

Prepared: 5/11/2012 Analyzed: 5/11/2012

1,1,1,2-Tetrachloroethane	ND	0.50			NR				
1,1,1-Trichloroethane	ND	0.50			NR				
1,1,2,2-Tetrachloroethane	ND	0.50			NR				



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Volatile Organic Compounds by EPA 8260 - Quality Control (cont'd)

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec % Rec	Limits	RPD	RPD Limit	Notes
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Batch B2E0343 - MSVOAW_LL (continued)

Blank (B2E0343-BLK1) - Continued

Prepared: 5/11/2012 Analyzed: 5/11/2012

1,1,2-Trichloroethane	ND	0.50			NR				
1,1-Dichloroethane	ND	0.50			NR				
1,1-Dichloroethene	ND	0.50			NR				
1,1-Dichloropropene	ND	0.50			NR				
1,2,3-Trichloropropane	ND	0.50			NR				
1,2,3-Trichlorobenzene	ND	0.50			NR				
1,2,4-Trichlorobenzene	ND	0.50			NR				
1,2,4-Trimethylbenzene	ND	0.50			NR				
1,2-Dibromo-3-chloropropane	ND	0.50			NR				
1,2-Dibromoethane	ND	0.50			NR				
1,2-Dichlorobenzene	ND	0.50			NR				
1,2-Dichloroethane	ND	0.50			NR				
1,2-Dichloropropane	ND	0.50			NR				
1,3,5-Trimethylbenzene	ND	0.50			NR				
1,3-Dichlorobenzene	ND	0.50			NR				
1,3-Dichloropropane	ND	0.50			NR				
1,4-Dichlorobenzene	ND	0.50			NR				
2,2-Dichloropropane	ND	0.50			NR				
2-Chlorotoluene	ND	0.50			NR				
4-Chlorotoluene	ND	0.50			NR				
4-Isopropyltoluene	ND	0.50			NR				
Benzene	ND	0.50			NR				
Bromobenzene	ND	0.50			NR				
Bromodichloromethane	ND	0.50			NR				
Bromoform	ND	0.50			NR				
Bromomethane	ND	0.50			NR				
Carbon tetrachloride	ND	0.50			NR				
Chlorobenzene	ND	0.50			NR				
Chloroethane	ND	0.50			NR				
Chloroform	ND	0.50			NR				
Chloromethane	ND	0.50			NR				
cis-1,2-Dichloroethene	ND	0.50			NR				
cis-1,3-Dichloropropene	ND	0.50			NR				
Dibromochloromethane	ND	0.50			NR				
Dibromomethane	ND	0.50			NR				
Dichlorodifluoromethane	ND	0.50			NR				
Ethylbenzene	ND	0.50			NR				
Hexachlorobutadiene	ND	0.50			NR				
Isopropylbenzene	ND	0.50			NR				
m,p-Xylene	ND	1.0			NR				
Methylene chloride	ND	1.0			NR				
n-Butylbenzene	ND	0.50			NR				



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Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec % Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B2E0343 - MSVOAW_LL (continued)

Blank (B2E0343-BLK1) - Continued

Prepared: 5/11/2012 Analyzed: 5/11/2012

n-Propylbenzene	ND	0.50			NR				
Naphthalene	ND	0.50			NR				
o-Xylene	ND	0.50			NR				
sec-Butylbenzene	ND	0.50			NR				
Styrene	ND	0.50			NR				
tert-Butylbenzene	ND	0.50			NR				
Tetrachloroethene	ND	0.50			NR				
Toluene	ND	0.50			NR				
trans-1,2-Dichloroethene	ND	0.50			NR				
Trichloroethene	ND	0.50			NR				
Trichlorofluoromethane	ND	0.50			NR				
Vinyl chloride	ND	0.50			NR				

<i>Surrogate: 1,2-Dichloroethane-d4</i>	24		25.0		97.0	70 - 130			
<i>Surrogate: 4-Bromofluorobenzene</i>	30		25.0		120	70 - 130			
<i>Surrogate: Dibromofluoromethane</i>	28		25.0		112	70 - 130			
<i>Surrogate: Toluene-d8</i>	30		25.0		122	70 - 130			

LCS (B2E0343-BS1)

Prepared: 5/11/2012 Analyzed: 5/11/2012

1,1-Dichloroethene	19	0.50	20.0		93.2	70 - 130			
Benzene	41	0.50	40.0		104	70 - 130			
Chlorobenzene	21	0.50	20.0		107	70 - 130			
MTBE	20	0.50	20.0		102	70 - 130			
Toluene	42	0.50	40.0		106	70 - 130			
Trichloroethene	21	0.50	20.0		104	70 - 130			

<i>Surrogate: 1,2-Dichloroethane-d4</i>	23		25.0		92.1	70 - 130			
<i>Surrogate: 4-Bromofluorobenzene</i>	26		25.0		103	70 - 130			
<i>Surrogate: Dibromofluoromethane</i>	25		25.0		98.0	70 - 130			
<i>Surrogate: Toluene-d8</i>	25		25.0		102	70 - 130			

LCS Dup (B2E0343-BSD1)

Prepared: 5/11/2012 Analyzed: 5/11/2012

1,1-Dichloroethene	19	0.50	20.0		95.0	70 - 130	1.97	20	
Benzene	42	0.50	40.0		105	70 - 130	1.44	20	
Chlorobenzene	22	0.50	20.0		108	70 - 130	0.186	20	
MTBE	21	0.50	20.0		104	70 - 130	1.31	20	
Toluene	43	0.50	40.0		108	70 - 130	2.02	20	
Trichloroethene	21	0.50	20.0		104	70 - 130	0.434	20	

<i>Surrogate: 1,2-Dichloroethane-d4</i>	23		25.0		92.0	70 - 130			
<i>Surrogate: 4-Bromofluorobenzene</i>	25		25.0		101	70 - 130			
<i>Surrogate: Dibromofluoromethane</i>	25		25.0		98.4	70 - 130			
<i>Surrogate: Toluene-d8</i>	26		25.0		102	70 - 130			



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Volatile Organic Compounds by EPA 8260 - Quality Control (cont'd)

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec % Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B2E0343 - MSVOAW_LL (continued)

Matrix Spike (B2E0343-MS1)

Source: 1201713-04

Prepared: 5/11/2012 Analyzed: 5/11/2012

1,1-Dichloroethene	41	0.50	20.0	ND	204	70 - 130			M2
Benzene	67	0.50	40.0	0.56	166	70 - 130			M2
Chlorobenzene	78	0.50	20.0	31	235	70 - 130			M2
MTBE	43	0.50	20.0	ND	214	70 - 130			M2
Toluene	70	0.50	40.0	ND	174	70 - 130			M2
Trichloroethene	46	0.50	20.0	ND	229	70 - 130			M2
<i>Surrogate: 1,2-Dichloroethane-d4</i>	26		25.0		106	70 - 130			
<i>Surrogate: 4-Bromofluorobenzene</i>	32		25.0		126	70 - 130			
<i>Surrogate: Dibromofluoromethane</i>	28		25.0		111	70 - 130			
<i>Surrogate: Toluene-d8</i>	31		25.0		123	70 - 130			

Matrix Spike Dup (B2E0343-MSD1)

Source: 1201713-04

Prepared: 5/11/2012 Analyzed: 5/11/2012

1,1-Dichloroethene	37	0.50	20.0	ND	184	70 - 130	10.8	20	M2
Benzene	61	0.50	40.0	0.56	152	70 - 130	8.71	20	M2
Chlorobenzene	73	0.50	20.0	31	208	70 - 130	7.19	20	M2
MTBE	40	0.50	20.0	ND	202	70 - 130	5.50	20	M2
Toluene	64	0.50	40.0	ND	159	70 - 130	9.27	20	M2
Trichloroethene	42	0.50	20.0	ND	211	70 - 130	8.41	20	M2
<i>Surrogate: 1,2-Dichloroethane-d4</i>	22		25.0		86.1	70 - 130			
<i>Surrogate: 4-Bromofluorobenzene</i>	25		25.0		102	70 - 130			
<i>Surrogate: Dibromofluoromethane</i>	22		25.0		89.9	70 - 130			
<i>Surrogate: Toluene-d8</i>	25		25.0		99.4	70 - 130			



Hargis & Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122

Project Number : Raytheon, 532.30
 Report To : Steve Netto
 Reported : 05/18/2012

1,4-Dioxane by EPA 8270/SIM: Isotope Dilution Technique - Quality Control

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec % Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B2E0430 - MSSEMI_ISOTOPEDILN

Blank (B2E0430-BLK1)

Prepared: 5/15/2012 Analyzed: 5/16/2012

1,4-Dioxane	ND	0.20			NR				
Surrogate: 1,2-Dichlorobenzene-d4	0.89		1.00		89.2	36 - 107			
Surrogate: 2-Fluorobiphenyl	0.79		1.00		79.1	42 - 120			
Surrogate: 4-Terphenyl-d14	0.96		1.00		96.1	67 - 142			
Surrogate: Nitrobenzene-d5	0.51		1.00		51.1	36 - 130			

LCS (B2E0430-BS1)

Prepared: 5/15/2012 Analyzed: 5/16/2012

1,4-Dioxane	1.0	0.20	1.00		101	70 - 130			
Surrogate: 1,2-Dichlorobenzene-d4	0.93		1.00		93.3	36 - 107			
Surrogate: 2-Fluorobiphenyl	0.80		1.00		79.8	42 - 120			
Surrogate: 4-Terphenyl-d14	0.88		1.00		88.2	67 - 142			
Surrogate: Nitrobenzene-d5	0.59		1.00		58.8	36 - 130			

Matrix Spike (B2E0430-MS1)

Source: 1201715-02

Prepared: 5/15/2012 Analyzed: 5/16/2012

1,4-Dioxane	0.98	0.20	1.00	ND	98.5	70 - 130			
Surrogate: 1,2-Dichlorobenzene-d4	0.91		1.00		91.0	36 - 107			
Surrogate: 2-Fluorobiphenyl	0.78		1.00		77.6	42 - 120			
Surrogate: 4-Terphenyl-d14	0.85		1.00		85.4	67 - 142			
Surrogate: Nitrobenzene-d5	0.60		1.00		60.4	36 - 130			

Matrix Spike Dup (B2E0430-MSD1)

Source: 1201715-02

Prepared: 5/15/2012 Analyzed: 5/16/2012

1,4-Dioxane	0.96	0.20	1.00	ND	95.9	70 - 130	2.65	20	
Surrogate: 1,2-Dichlorobenzene-d4	0.92		1.00		92.1	36 - 107			
Surrogate: 2-Fluorobiphenyl	0.76		1.00		76.0	42 - 120			
Surrogate: 4-Terphenyl-d14	0.78		1.00		78.2	67 - 142			
Surrogate: Nitrobenzene-d5	0.65		1.00		64.9	36 - 130			



Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : Raytheon, 532.30

Report To : Steve Netto

Reported : 05/18/2012

Notes and Definitions

R	RPD value outside acceptance criteria. Calculation is based on raw values.
M2	Matrix spike recovery outside of acceptance limit due to possible matrix interference. The analytical batch was validated by the laboratory control sample.
ND	Analyte not detected at or above reporting limit
PQL	Practical Quantitation Limit
MDL	Method Detection Limit
NR	Not Reported
RPD	Relative Percent Difference
CA1	CA-NELAP (CDPH)
CA2	CA-ELAP (CDPH)
OR1	OR-NELAP (OSPHL)
TX1	TX-NELAP (TCEQ)

CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST FORM

DATE 5/8/12 PAGE 1 OF 1

PROJECT NAME Raytheon				PROJECT No./TASK No. 532.30				SAMPLE CONTAINERS				ANALYSIS REQUESTED				ESTIMATED CONCENTRATION RANGE (ppb) FOR VOAS				SPECIAL HANDLING				LABORATORY INFORMATION													
PROJECT MANAGER Steve Netto				Phone No. 858-455-6500																																	
QA MANAGER				Fax No. 858-455-6533																																	
SAMPLER (SIGNATURE) <i>[Signature]</i>				SAMPLER (PRINTED) Daniel Mora Amanda Beam																																	
LAB ID	SAMPLE ID	SAMPLE COLLECTION		MATRIX			PRESERVATION																														
		Date	Time	Soil	Ground-water	Surface water	LAB H ₂ O	HCl	HNO ₃	NaOH	H ₂ SO ₄	Ice	40 ml VOA	1L Amber		VOCs 8260B	1,4-Dioxane 8270 M0D	1,4-Dioxane 8270 SIM			0-10	10-100	100-1,000	1,000-10,000	>10,000	24 TAT	48 TAT	Standard TAT	MS & MSD collected	REMARKS							
120715-01	TB-050812	5/8/12	800				X	X			X	2			X						X																
2	MW-32A		956	X			X			X		3			X						X														6VOAS		
	↓		956	X						X		1					X																		6VOAS + 2x1L		
3	MW-32C		1247	X				X		X		3			X						X														2x1L mb		
	↓		1247	X						X		1					X																				
4	MW-32B		1429	X				X		X		3			X						X																
	↓			X						X		1					X																				
5	MW-33		1711	X				X		X		3			X						X																
	↓		1711	X						X		1					X																				
Total number of Containers per analysis:												14	4													Total No. of Containers: (18) + 8 = 26											

Relinquished by: <i>[Signature]</i> HA Company	Date 5/8/12 Time 1720	Received by: <i>[Signature]</i> ATL Company	Date 5/8/12 Time 1720
Relinquished by: <i>[Signature]</i> ATL Company	Date 5/8/12 Time 1805	Received by: <i>[Signature]</i> SPR Company	Date 5/8/12 Time 1805

INSTRUCTIONS

- Fill out form completely except for shaded areas (lab use only); sign only after verified for completeness.
- Complete in ballpoint pen. Draw one line through errors, initial and date correction.
- Indicate number of sample containers in analysis request space; indicate choice with ✓ or x.
- Note applicable preservatives, special instructions, and deviations from typical environmental samples.
- Consult project QA documents for specific instructions.

Sample Receipt:

Temp. @ receipt 4.7 °C

No. of containers correct received good condition/cold

custody seals secure conforms to COC document

Shipment Method: Carrier Pick Up

Send Results to: Steve Netto

9171 TOWNE CENTRE DRIVE, SUITE 375
SAN DIEGO, CA 92122 (858) 455-6500

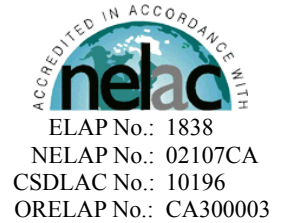
1640 SOUTH STAPLEY DRIVE, SUITE 124
MESA, AZ 85204 (480) 345-0888

1820 EAST RIVER ROAD, SUITE 220
TUCSON, AZ 85718 (520) 881-7300

Send invoice to San Diego, CA
Attn: Accounts Payable

May 21, 2012

Steve Netto
Hargis & Associates, Inc.
9171 Towne Centre Drive, Suite 375
San Diego, CA 92122
Tel: (619) 249-3166
Fax: (858) 455-6533



Re: ATL Work Order Number : 1201735
Client Reference : Raytheon, 532.30

Enclosed are the results for sample(s) received on May 09, 2012 by Advanced Technology Laboratories. The sample(s) are tested for the parameters as indicated on the enclosed chain of custody in accordance with applicable laboratory certifications. The laboratory results contained in this report specifically pertains to the sample(s) submitted.

Thank you for the opportunity to serve the needs of your company. If you have any questions, please feel free to contact me or your Project Manager.

Sincerely,

A handwritten signature in black ink, appearing to read "E Rodriguez".

Eddie Rodriguez
Laboratory Director

The cover letter and the case narrative are an integral part of this analytical report and its absence renders the report invalid. The report cannot be reproduced without written permission from the client and Advanced Technology Laboratories.



Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : Raytheon, 532.30

Report To : Steve Netto

Reported : 05/21/2012

SUMMARY OF SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
TB-050912	1201735-01	LAB H2O	5/09/12 7:00	5/09/12 17:50
MW-35A	1201735-02	Groundwater	5/09/12 9:57	5/09/12 17:50
MW-35B	1201735-03	Groundwater	5/09/12 10:56	5/09/12 17:50
MW-35C	1201735-04	Groundwater	5/09/12 12:29	5/09/12 17:50
MW-26C	1201735-05	Groundwater	5/09/12 16:12	5/09/12 17:50



Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : Raytheon, 532.30

Report To : Steve Netto

Reported : 05/21/2012

Client Sample ID TB-050912

Lab ID: 1201735-01

Volatile Organic Compounds by EPA 8260

Analyst: DC

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	0.50	NA	1	B2E0366	05/12/2012	05/12/12 01:28	
1,1,1-Trichloroethane	ND	0.50	NA	1	B2E0366	05/12/2012	05/12/12 01:28	
1,1,2,2-Tetrachloroethane	ND	0.50	NA	1	B2E0366	05/12/2012	05/12/12 01:28	
1,1,2-Trichloroethane	ND	0.50	NA	1	B2E0366	05/12/2012	05/12/12 01:28	
1,1-Dichloroethane	ND	0.50	NA	1	B2E0366	05/12/2012	05/12/12 01:28	
1,1-Dichloroethene	ND	0.50	NA	1	B2E0366	05/12/2012	05/12/12 01:28	
1,1-Dichloropropene	ND	0.50	NA	1	B2E0366	05/12/2012	05/12/12 01:28	
1,2,3-Trichloropropane	ND	0.50	NA	1	B2E0366	05/12/2012	05/12/12 01:28	
1,2,3-Trichlorobenzene	ND	0.50	NA	1	B2E0366	05/12/2012	05/12/12 01:28	
1,2,4-Trichlorobenzene	ND	0.50	NA	1	B2E0366	05/12/2012	05/12/12 01:28	
1,2,4-Trimethylbenzene	ND	0.50	NA	1	B2E0366	05/12/2012	05/12/12 01:28	
1,2-Dibromo-3-chloropropane	ND	0.50	NA	1	B2E0366	05/12/2012	05/12/12 01:28	
1,2-Dibromoethane	ND	0.50	NA	1	B2E0366	05/12/2012	05/12/12 01:28	
1,2-Dichlorobenzene	ND	0.50	NA	1	B2E0366	05/12/2012	05/12/12 01:28	
1,2-Dichloroethane	ND	0.50	NA	1	B2E0366	05/12/2012	05/12/12 01:28	
1,2-Dichloropropane	ND	0.50	NA	1	B2E0366	05/12/2012	05/12/12 01:28	
1,3,5-Trimethylbenzene	ND	0.50	NA	1	B2E0366	05/12/2012	05/12/12 01:28	
1,3-Dichlorobenzene	ND	0.50	NA	1	B2E0366	05/12/2012	05/12/12 01:28	
1,3-Dichloropropane	ND	0.50	NA	1	B2E0366	05/12/2012	05/12/12 01:28	
1,4-Dichlorobenzene	ND	0.50	NA	1	B2E0366	05/12/2012	05/12/12 01:28	
2,2-Dichloropropane	ND	0.50	NA	1	B2E0366	05/12/2012	05/12/12 01:28	
2-Chlorotoluene	ND	0.50	NA	1	B2E0366	05/12/2012	05/12/12 01:28	
4-Chlorotoluene	ND	0.50	NA	1	B2E0366	05/12/2012	05/12/12 01:28	
4-Isopropyltoluene	ND	0.50	NA	1	B2E0366	05/12/2012	05/12/12 01:28	
Benzene	ND	0.50	NA	1	B2E0366	05/12/2012	05/12/12 01:28	
Bromobenzene	ND	0.50	NA	1	B2E0366	05/12/2012	05/12/12 01:28	
Bromodichloromethane	ND	0.50	NA	1	B2E0366	05/12/2012	05/12/12 01:28	
Bromoform	ND	0.50	NA	1	B2E0366	05/12/2012	05/12/12 01:28	
Bromomethane	ND	0.50	NA	1	B2E0366	05/12/2012	05/12/12 01:28	
Carbon tetrachloride	ND	0.50	NA	1	B2E0366	05/12/2012	05/12/12 01:28	
Chlorobenzene	ND	0.50	NA	1	B2E0366	05/12/2012	05/12/12 01:28	
Chloroethane	ND	0.50	NA	1	B2E0366	05/12/2012	05/12/12 01:28	
Chloroform	ND	0.50	NA	1	B2E0366	05/12/2012	05/12/12 01:28	
Chloromethane	ND	0.50	NA	1	B2E0366	05/12/2012	05/12/12 01:28	



Hargis & Associates, Inc.
9171 Towne Centre Drive, Suite 375
San Diego , CA 92122

Project Number : Raytheon, 532.30
Report To : Steve Netto
Reported : 05/21/2012

Client Sample ID TB-050912
Lab ID: 1201735-01

Volatile Organic Compounds by EPA 8260

Analyst: DC

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
cis-1,2-Dichloroethene	ND	0.50	NA	1	B2E0366	05/12/2012	05/12/12 01:28	
cis-1,3-Dichloropropene	ND	0.50	NA	1	B2E0366	05/12/2012	05/12/12 01:28	
Dibromochloromethane	ND	0.50	NA	1	B2E0366	05/12/2012	05/12/12 01:28	
Dibromomethane	ND	0.50	NA	1	B2E0366	05/12/2012	05/12/12 01:28	
Dichlorodifluoromethane	ND	0.50	NA	1	B2E0366	05/12/2012	05/12/12 01:28	
Ethylbenzene	ND	0.50	NA	1	B2E0366	05/12/2012	05/12/12 01:28	
Hexachlorobutadiene	ND	0.50	NA	1	B2E0366	05/12/2012	05/12/12 01:28	
Isopropylbenzene	ND	0.50	NA	1	B2E0366	05/12/2012	05/12/12 01:28	
m,p-Xylene	ND	1.0	NA	1	B2E0366	05/12/2012	05/12/12 01:28	
Methylene chloride	ND	1.0	NA	1	B2E0366	05/12/2012	05/12/12 01:28	
n-Butylbenzene	ND	0.50	NA	1	B2E0366	05/12/2012	05/12/12 01:28	
n-Propylbenzene	ND	0.50	NA	1	B2E0366	05/12/2012	05/12/12 01:28	
Naphthalene	ND	0.50	NA	1	B2E0366	05/12/2012	05/12/12 01:28	
o-Xylene	ND	0.50	NA	1	B2E0366	05/12/2012	05/12/12 01:28	
sec-Butylbenzene	ND	0.50	NA	1	B2E0366	05/12/2012	05/12/12 01:28	
Styrene	ND	0.50	NA	1	B2E0366	05/12/2012	05/12/12 01:28	
tert-Butylbenzene	ND	0.50	NA	1	B2E0366	05/12/2012	05/12/12 01:28	
Tetrachloroethene	ND	0.50	NA	1	B2E0366	05/12/2012	05/12/12 01:28	
Toluene	ND	0.50	NA	1	B2E0366	05/12/2012	05/12/12 01:28	
trans-1,2-Dichloroethene	ND	0.50	NA	1	B2E0366	05/12/2012	05/12/12 01:28	
Trichloroethene	ND	0.50	NA	1	B2E0366	05/12/2012	05/12/12 01:28	
Trichlorofluoromethane	ND	0.50	NA	1	B2E0366	05/12/2012	05/12/12 01:28	
Vinyl chloride	ND	0.50	NA	1	B2E0366	05/12/2012	05/12/12 01:28	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>91.4 %</i>		<i>70 - 130</i>		B2E0366	05/12/2012	<i>05/12/12 01:28</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>96.1 %</i>		<i>70 - 130</i>		B2E0366	05/12/2012	<i>05/12/12 01:28</i>	
<i>Surrogate: Dibromofluoromethane</i>	<i>95.6 %</i>		<i>70 - 130</i>		B2E0366	05/12/2012	<i>05/12/12 01:28</i>	
<i>Surrogate: Toluene-d8</i>	<i>96.6 %</i>		<i>70 - 130</i>		B2E0366	05/12/2012	<i>05/12/12 01:28</i>	



Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : Raytheon, 532.30

Report To : Steve Netto

Reported : 05/21/2012

Client Sample ID MW-35A

Lab ID: 1201735-02

Volatile Organic Compounds by EPA 8260

Analyst: DC

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	0.50	NA	1	B2E0366	05/12/2012	05/12/12 01:48	
1,1,1-Trichloroethane	ND	0.50	NA	1	B2E0366	05/12/2012	05/12/12 01:48	
1,1,2,2-Tetrachloroethane	ND	0.50	NA	1	B2E0366	05/12/2012	05/12/12 01:48	
1,1,2-Trichloroethane	ND	0.50	NA	1	B2E0366	05/12/2012	05/12/12 01:48	
1,1-Dichloroethane	ND	0.50	NA	1	B2E0366	05/12/2012	05/12/12 01:48	
1,1-Dichloroethene	ND	0.50	NA	1	B2E0366	05/12/2012	05/12/12 01:48	
1,1-Dichloropropene	ND	0.50	NA	1	B2E0366	05/12/2012	05/12/12 01:48	
1,2,3-Trichloropropane	ND	0.50	NA	1	B2E0366	05/12/2012	05/12/12 01:48	
1,2,3-Trichlorobenzene	ND	0.50	NA	1	B2E0366	05/12/2012	05/12/12 01:48	
1,2,4-Trichlorobenzene	ND	0.50	NA	1	B2E0366	05/12/2012	05/12/12 01:48	
1,2,4-Trimethylbenzene	ND	0.50	NA	1	B2E0366	05/12/2012	05/12/12 01:48	
1,2-Dibromo-3-chloropropane	ND	0.50	NA	1	B2E0366	05/12/2012	05/12/12 01:48	
1,2-Dibromoethane	ND	0.50	NA	1	B2E0366	05/12/2012	05/12/12 01:48	
1,2-Dichlorobenzene	ND	0.50	NA	1	B2E0366	05/12/2012	05/12/12 01:48	
1,2-Dichloroethane	ND	0.50	NA	1	B2E0366	05/12/2012	05/12/12 01:48	
1,2-Dichloropropane	ND	0.50	NA	1	B2E0366	05/12/2012	05/12/12 01:48	
1,3,5-Trimethylbenzene	ND	0.50	NA	1	B2E0366	05/12/2012	05/12/12 01:48	
1,3-Dichlorobenzene	ND	0.50	NA	1	B2E0366	05/12/2012	05/12/12 01:48	
1,3-Dichloropropane	ND	0.50	NA	1	B2E0366	05/12/2012	05/12/12 01:48	
1,4-Dichlorobenzene	ND	0.50	NA	1	B2E0366	05/12/2012	05/12/12 01:48	
2,2-Dichloropropane	ND	0.50	NA	1	B2E0366	05/12/2012	05/12/12 01:48	
2-Chlorotoluene	ND	0.50	NA	1	B2E0366	05/12/2012	05/12/12 01:48	
4-Chlorotoluene	ND	0.50	NA	1	B2E0366	05/12/2012	05/12/12 01:48	
4-Isopropyltoluene	ND	0.50	NA	1	B2E0366	05/12/2012	05/12/12 01:48	
Benzene	ND	0.50	NA	1	B2E0366	05/12/2012	05/12/12 01:48	
Bromobenzene	ND	0.50	NA	1	B2E0366	05/12/2012	05/12/12 01:48	
Bromodichloromethane	ND	0.50	NA	1	B2E0366	05/12/2012	05/12/12 01:48	
Bromoform	ND	0.50	NA	1	B2E0366	05/12/2012	05/12/12 01:48	
Bromomethane	ND	0.50	NA	1	B2E0366	05/12/2012	05/12/12 01:48	
Carbon tetrachloride	ND	0.50	NA	1	B2E0366	05/12/2012	05/12/12 01:48	
Chlorobenzene	ND	0.50	NA	1	B2E0366	05/12/2012	05/12/12 01:48	
Chloroethane	ND	0.50	NA	1	B2E0366	05/12/2012	05/12/12 01:48	
Chloroform	2.1	0.50	NA	1	B2E0366	05/12/2012	05/12/12 01:48	
Chloromethane	ND	0.50	NA	1	B2E0366	05/12/2012	05/12/12 01:48	



Hargis & Associates, Inc.
9171 Towne Centre Drive, Suite 375
San Diego , CA 92122

Project Number : Raytheon, 532.30
Report To : Steve Netto
Reported : 05/21/2012

Client Sample ID MW-35A
Lab ID: 1201735-02

Volatile Organic Compounds by EPA 8260

Analyst: DC

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
cis-1,2-Dichloroethene	ND	0.50	NA	1	B2E0366	05/12/2012	05/12/12 01:48	
cis-1,3-Dichloropropene	ND	0.50	NA	1	B2E0366	05/12/2012	05/12/12 01:48	
Dibromochloromethane	ND	0.50	NA	1	B2E0366	05/12/2012	05/12/12 01:48	
Dibromomethane	ND	0.50	NA	1	B2E0366	05/12/2012	05/12/12 01:48	
Dichlorodifluoromethane	ND	0.50	NA	1	B2E0366	05/12/2012	05/12/12 01:48	
Ethylbenzene	ND	0.50	NA	1	B2E0366	05/12/2012	05/12/12 01:48	
Hexachlorobutadiene	ND	0.50	NA	1	B2E0366	05/12/2012	05/12/12 01:48	
Isopropylbenzene	ND	0.50	NA	1	B2E0366	05/12/2012	05/12/12 01:48	
m,p-Xylene	ND	1.0	NA	1	B2E0366	05/12/2012	05/12/12 01:48	
Methylene chloride	ND	1.0	NA	1	B2E0366	05/12/2012	05/12/12 01:48	
n-Butylbenzene	ND	0.50	NA	1	B2E0366	05/12/2012	05/12/12 01:48	
n-Propylbenzene	ND	0.50	NA	1	B2E0366	05/12/2012	05/12/12 01:48	
Naphthalene	ND	0.50	NA	1	B2E0366	05/12/2012	05/12/12 01:48	
o-Xylene	ND	0.50	NA	1	B2E0366	05/12/2012	05/12/12 01:48	
sec-Butylbenzene	ND	0.50	NA	1	B2E0366	05/12/2012	05/12/12 01:48	
Styrene	ND	0.50	NA	1	B2E0366	05/12/2012	05/12/12 01:48	
tert-Butylbenzene	ND	0.50	NA	1	B2E0366	05/12/2012	05/12/12 01:48	
Tetrachloroethene	ND	0.50	NA	1	B2E0366	05/12/2012	05/12/12 01:48	
Toluene	ND	0.50	NA	1	B2E0366	05/12/2012	05/12/12 01:48	
trans-1,2-Dichloroethene	ND	0.50	NA	1	B2E0366	05/12/2012	05/12/12 01:48	
Trichloroethene	ND	0.50	NA	1	B2E0366	05/12/2012	05/12/12 01:48	
Trichlorofluoromethane	ND	0.50	NA	1	B2E0366	05/12/2012	05/12/12 01:48	
Vinyl chloride	ND	0.50	NA	1	B2E0366	05/12/2012	05/12/12 01:48	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>114 %</i>	<i>70 - 130</i>			B2E0366	05/12/2012	<i>05/12/12 01:48</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>116 %</i>	<i>70 - 130</i>			B2E0366	05/12/2012	<i>05/12/12 01:48</i>	
<i>Surrogate: Dibromofluoromethane</i>	<i>116 %</i>	<i>70 - 130</i>			B2E0366	05/12/2012	<i>05/12/12 01:48</i>	
<i>Surrogate: Toluene-d8</i>	<i>117 %</i>	<i>70 - 130</i>			B2E0366	05/12/2012	<i>05/12/12 01:48</i>	



Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego, CA 92122

Project Number : Raytheon, 532.30

Report To : Steve Netto

Reported : 05/21/2012

Client Sample ID MW-35A

Lab ID: 1201735-02

1,4-Dioxane by EPA 8270/SIM: Isotope Dilution Technique

Analyst: PIL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,4-Dioxane	ND	0.20	0.13	1	B2E0430	05/15/2012	05/16/12 15:07	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	<i>89.4 %</i>		<i>36 - 107</i>		B2E0430	05/15/2012	<i>05/16/12 15:07</i>	
<i>Surrogate: 2-Fluorobiphenyl</i>	<i>80.8 %</i>		<i>42 - 120</i>		B2E0430	05/15/2012	<i>05/16/12 15:07</i>	
<i>Surrogate: 4-Terphenyl-d14</i>	<i>97.1 %</i>		<i>67 - 142</i>		B2E0430	05/15/2012	<i>05/16/12 15:07</i>	
<i>Surrogate: Nitrobenzene-d5</i>	<i>72.1 %</i>		<i>36 - 130</i>		B2E0430	05/15/2012	<i>05/16/12 15:07</i>	



Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : Raytheon, 532.30

Report To : Steve Netto

Reported : 05/21/2012

Client Sample ID MW-35B

Lab ID: 1201735-03

Volatile Organic Compounds by EPA 8260

Analyst: DC

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	0.50	NA	1	B2E0366	05/12/2012	05/12/12 02:09	
1,1,1-Trichloroethane	ND	0.50	NA	1	B2E0366	05/12/2012	05/12/12 02:09	
1,1,2,2-Tetrachloroethane	ND	0.50	NA	1	B2E0366	05/12/2012	05/12/12 02:09	
1,1,2-Trichloroethane	ND	0.50	NA	1	B2E0366	05/12/2012	05/12/12 02:09	
1,1-Dichloroethane	ND	0.50	NA	1	B2E0366	05/12/2012	05/12/12 02:09	
1,1-Dichloroethene	ND	0.50	NA	1	B2E0366	05/12/2012	05/12/12 02:09	
1,1-Dichloropropene	ND	0.50	NA	1	B2E0366	05/12/2012	05/12/12 02:09	
1,2,3-Trichloropropane	ND	0.50	NA	1	B2E0366	05/12/2012	05/12/12 02:09	
1,2,3-Trichlorobenzene	ND	0.50	NA	1	B2E0366	05/12/2012	05/12/12 02:09	
1,2,4-Trichlorobenzene	ND	0.50	NA	1	B2E0366	05/12/2012	05/12/12 02:09	
1,2,4-Trimethylbenzene	ND	0.50	NA	1	B2E0366	05/12/2012	05/12/12 02:09	
1,2-Dibromo-3-chloropropane	ND	0.50	NA	1	B2E0366	05/12/2012	05/12/12 02:09	
1,2-Dibromoethane	ND	0.50	NA	1	B2E0366	05/12/2012	05/12/12 02:09	
1,2-Dichlorobenzene	ND	0.50	NA	1	B2E0366	05/12/2012	05/12/12 02:09	
1,2-Dichloroethane	ND	0.50	NA	1	B2E0366	05/12/2012	05/12/12 02:09	
1,2-Dichloropropane	ND	0.50	NA	1	B2E0366	05/12/2012	05/12/12 02:09	
1,3,5-Trimethylbenzene	ND	0.50	NA	1	B2E0366	05/12/2012	05/12/12 02:09	
1,3-Dichlorobenzene	ND	0.50	NA	1	B2E0366	05/12/2012	05/12/12 02:09	
1,3-Dichloropropane	ND	0.50	NA	1	B2E0366	05/12/2012	05/12/12 02:09	
1,4-Dichlorobenzene	ND	0.50	NA	1	B2E0366	05/12/2012	05/12/12 02:09	
2,2-Dichloropropane	ND	0.50	NA	1	B2E0366	05/12/2012	05/12/12 02:09	
2-Chlorotoluene	ND	0.50	NA	1	B2E0366	05/12/2012	05/12/12 02:09	
4-Chlorotoluene	ND	0.50	NA	1	B2E0366	05/12/2012	05/12/12 02:09	
4-Isopropyltoluene	ND	0.50	NA	1	B2E0366	05/12/2012	05/12/12 02:09	
Benzene	ND	0.50	NA	1	B2E0366	05/12/2012	05/12/12 02:09	
Bromobenzene	ND	0.50	NA	1	B2E0366	05/12/2012	05/12/12 02:09	
Bromodichloromethane	ND	0.50	NA	1	B2E0366	05/12/2012	05/12/12 02:09	
Bromoform	ND	0.50	NA	1	B2E0366	05/12/2012	05/12/12 02:09	
Bromomethane	ND	0.50	NA	1	B2E0366	05/12/2012	05/12/12 02:09	
Carbon tetrachloride	ND	0.50	NA	1	B2E0366	05/12/2012	05/12/12 02:09	
Chlorobenzene	ND	0.50	NA	1	B2E0366	05/12/2012	05/12/12 02:09	
Chloroethane	ND	0.50	NA	1	B2E0366	05/12/2012	05/12/12 02:09	
Chloroform	ND	0.50	NA	1	B2E0366	05/12/2012	05/12/12 02:09	
Chloromethane	ND	0.50	NA	1	B2E0366	05/12/2012	05/12/12 02:09	



Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : Raytheon, 532.30

Report To : Steve Netto

Reported : 05/21/2012

Client Sample ID MW-35B

Lab ID: 1201735-03

Volatile Organic Compounds by EPA 8260

Analyst: DC

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
cis-1,2-Dichloroethene	ND	0.50	NA	1	B2E0366	05/12/2012	05/12/12 02:09	
cis-1,3-Dichloropropene	ND	0.50	NA	1	B2E0366	05/12/2012	05/12/12 02:09	
Dibromochloromethane	ND	0.50	NA	1	B2E0366	05/12/2012	05/12/12 02:09	
Dibromomethane	ND	0.50	NA	1	B2E0366	05/12/2012	05/12/12 02:09	
Dichlorodifluoromethane	ND	0.50	NA	1	B2E0366	05/12/2012	05/12/12 02:09	
Ethylbenzene	ND	0.50	NA	1	B2E0366	05/12/2012	05/12/12 02:09	
Hexachlorobutadiene	ND	0.50	NA	1	B2E0366	05/12/2012	05/12/12 02:09	
Isopropylbenzene	ND	0.50	NA	1	B2E0366	05/12/2012	05/12/12 02:09	
m,p-Xylene	ND	1.0	NA	1	B2E0366	05/12/2012	05/12/12 02:09	
Methylene chloride	ND	1.0	NA	1	B2E0366	05/12/2012	05/12/12 02:09	
n-Butylbenzene	ND	0.50	NA	1	B2E0366	05/12/2012	05/12/12 02:09	
n-Propylbenzene	ND	0.50	NA	1	B2E0366	05/12/2012	05/12/12 02:09	
Naphthalene	ND	0.50	NA	1	B2E0366	05/12/2012	05/12/12 02:09	
o-Xylene	ND	0.50	NA	1	B2E0366	05/12/2012	05/12/12 02:09	
sec-Butylbenzene	ND	0.50	NA	1	B2E0366	05/12/2012	05/12/12 02:09	
Styrene	ND	0.50	NA	1	B2E0366	05/12/2012	05/12/12 02:09	
tert-Butylbenzene	ND	0.50	NA	1	B2E0366	05/12/2012	05/12/12 02:09	
Tetrachloroethene	ND	0.50	NA	1	B2E0366	05/12/2012	05/12/12 02:09	
Toluene	ND	0.50	NA	1	B2E0366	05/12/2012	05/12/12 02:09	
trans-1,2-Dichloroethene	ND	0.50	NA	1	B2E0366	05/12/2012	05/12/12 02:09	
Trichloroethene	ND	0.50	NA	1	B2E0366	05/12/2012	05/12/12 02:09	
Trichlorofluoromethane	ND	0.50	NA	1	B2E0366	05/12/2012	05/12/12 02:09	
Vinyl chloride	ND	0.50	NA	1	B2E0366	05/12/2012	05/12/12 02:09	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>119 %</i>		<i>70 - 130</i>		B2E0366	05/12/2012	<i>05/12/12 02:09</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>123 %</i>		<i>70 - 130</i>		B2E0366	05/12/2012	<i>05/12/12 02:09</i>	
<i>Surrogate: Dibromofluoromethane</i>	<i>123 %</i>		<i>70 - 130</i>		B2E0366	05/12/2012	<i>05/12/12 02:09</i>	
<i>Surrogate: Toluene-d8</i>	<i>122 %</i>		<i>70 - 130</i>		B2E0366	05/12/2012	<i>05/12/12 02:09</i>	



Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : Raytheon, 532.30

Report To : Steve Netto

Reported : 05/21/2012

Client Sample ID MW-35B

Lab ID: 1201735-03

1,4-Dioxane by EPA 8270/SIM: Isotope Dilution Technique

Analyst: PIL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,4-Dioxane	ND	0.20	0.13	1	B2E0430	05/15/2012	05/16/12 15:35	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	89.2 %		36 - 107		B2E0430	05/15/2012	05/16/12 15:35	
<i>Surrogate: 2-Fluorobiphenyl</i>	79.6 %		42 - 120		B2E0430	05/15/2012	05/16/12 15:35	
<i>Surrogate: 4-Terphenyl-d14</i>	94.3 %		67 - 142		B2E0430	05/15/2012	05/16/12 15:35	
<i>Surrogate: Nitrobenzene-d5</i>	70.5 %		36 - 130		B2E0430	05/15/2012	05/16/12 15:35	



Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : Raytheon, 532.30

Report To : Steve Netto

Reported : 05/21/2012

Client Sample ID MW-35C

Lab ID: 1201735-04

Volatile Organic Compounds by EPA 8260

Analyst: DC

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	0.50	NA	1	B2E0366	05/12/2012	05/12/12 02:29	
1,1,1-Trichloroethane	ND	0.50	NA	1	B2E0366	05/12/2012	05/12/12 02:29	
1,1,2,2-Tetrachloroethane	ND	0.50	NA	1	B2E0366	05/12/2012	05/12/12 02:29	
1,1,2-Trichloroethane	ND	0.50	NA	1	B2E0366	05/12/2012	05/12/12 02:29	
1,1-Dichloroethane	ND	0.50	NA	1	B2E0366	05/12/2012	05/12/12 02:29	
1,1-Dichloroethene	ND	0.50	NA	1	B2E0366	05/12/2012	05/12/12 02:29	
1,1-Dichloropropene	ND	0.50	NA	1	B2E0366	05/12/2012	05/12/12 02:29	
1,2,3-Trichloropropane	ND	0.50	NA	1	B2E0366	05/12/2012	05/12/12 02:29	
1,2,3-Trichlorobenzene	ND	0.50	NA	1	B2E0366	05/12/2012	05/12/12 02:29	
1,2,4-Trichlorobenzene	ND	0.50	NA	1	B2E0366	05/12/2012	05/12/12 02:29	
1,2,4-Trimethylbenzene	ND	0.50	NA	1	B2E0366	05/12/2012	05/12/12 02:29	
1,2-Dibromo-3-chloropropane	ND	0.50	NA	1	B2E0366	05/12/2012	05/12/12 02:29	
1,2-Dibromoethane	ND	0.50	NA	1	B2E0366	05/12/2012	05/12/12 02:29	
1,2-Dichlorobenzene	ND	0.50	NA	1	B2E0366	05/12/2012	05/12/12 02:29	
1,2-Dichloroethane	ND	0.50	NA	1	B2E0366	05/12/2012	05/12/12 02:29	
1,2-Dichloropropane	ND	0.50	NA	1	B2E0366	05/12/2012	05/12/12 02:29	
1,3,5-Trimethylbenzene	ND	0.50	NA	1	B2E0366	05/12/2012	05/12/12 02:29	
1,3-Dichlorobenzene	ND	0.50	NA	1	B2E0366	05/12/2012	05/12/12 02:29	
1,3-Dichloropropane	ND	0.50	NA	1	B2E0366	05/12/2012	05/12/12 02:29	
1,4-Dichlorobenzene	ND	0.50	NA	1	B2E0366	05/12/2012	05/12/12 02:29	
2,2-Dichloropropane	ND	0.50	NA	1	B2E0366	05/12/2012	05/12/12 02:29	
2-Chlorotoluene	ND	0.50	NA	1	B2E0366	05/12/2012	05/12/12 02:29	
4-Chlorotoluene	ND	0.50	NA	1	B2E0366	05/12/2012	05/12/12 02:29	
4-Isopropyltoluene	ND	0.50	NA	1	B2E0366	05/12/2012	05/12/12 02:29	
Benzene	ND	0.50	NA	1	B2E0366	05/12/2012	05/12/12 02:29	
Bromobenzene	ND	0.50	NA	1	B2E0366	05/12/2012	05/12/12 02:29	
Bromodichloromethane	ND	0.50	NA	1	B2E0366	05/12/2012	05/12/12 02:29	
Bromoform	ND	0.50	NA	1	B2E0366	05/12/2012	05/12/12 02:29	
Bromomethane	ND	0.50	NA	1	B2E0366	05/12/2012	05/12/12 02:29	
Carbon tetrachloride	ND	0.50	NA	1	B2E0366	05/12/2012	05/12/12 02:29	
Chlorobenzene	ND	0.50	NA	1	B2E0366	05/12/2012	05/12/12 02:29	
Chloroethane	ND	0.50	NA	1	B2E0366	05/12/2012	05/12/12 02:29	
Chloroform	ND	0.50	NA	1	B2E0366	05/12/2012	05/12/12 02:29	
Chloromethane	ND	0.50	NA	1	B2E0366	05/12/2012	05/12/12 02:29	



Hargis & Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego , CA 92122

Project Number : Raytheon, 532.30
 Report To : Steve Netto
 Reported : 05/21/2012

Client Sample ID MW-35C
Lab ID: 1201735-04

Volatile Organic Compounds by EPA 8260

Analyst: DC

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
cis-1,2-Dichloroethene	ND	0.50	NA	1	B2E0366	05/12/2012	05/12/12 02:29	
cis-1,3-Dichloropropene	ND	0.50	NA	1	B2E0366	05/12/2012	05/12/12 02:29	
Dibromochloromethane	ND	0.50	NA	1	B2E0366	05/12/2012	05/12/12 02:29	
Dibromomethane	ND	0.50	NA	1	B2E0366	05/12/2012	05/12/12 02:29	
Dichlorodifluoromethane	ND	0.50	NA	1	B2E0366	05/12/2012	05/12/12 02:29	
Ethylbenzene	ND	0.50	NA	1	B2E0366	05/12/2012	05/12/12 02:29	
Hexachlorobutadiene	ND	0.50	NA	1	B2E0366	05/12/2012	05/12/12 02:29	
Isopropylbenzene	ND	0.50	NA	1	B2E0366	05/12/2012	05/12/12 02:29	
m,p-Xylene	ND	1.0	NA	1	B2E0366	05/12/2012	05/12/12 02:29	
Methylene chloride	ND	1.0	NA	1	B2E0366	05/12/2012	05/12/12 02:29	
n-Butylbenzene	ND	0.50	NA	1	B2E0366	05/12/2012	05/12/12 02:29	
n-Propylbenzene	ND	0.50	NA	1	B2E0366	05/12/2012	05/12/12 02:29	
Naphthalene	ND	0.50	NA	1	B2E0366	05/12/2012	05/12/12 02:29	
o-Xylene	ND	0.50	NA	1	B2E0366	05/12/2012	05/12/12 02:29	
sec-Butylbenzene	ND	0.50	NA	1	B2E0366	05/12/2012	05/12/12 02:29	
Styrene	ND	0.50	NA	1	B2E0366	05/12/2012	05/12/12 02:29	
tert-Butylbenzene	ND	0.50	NA	1	B2E0366	05/12/2012	05/12/12 02:29	
Tetrachloroethene	ND	0.50	NA	1	B2E0366	05/12/2012	05/12/12 02:29	
Toluene	ND	0.50	NA	1	B2E0366	05/12/2012	05/12/12 02:29	
trans-1,2-Dichloroethene	ND	0.50	NA	1	B2E0366	05/12/2012	05/12/12 02:29	
Trichloroethene	ND	0.50	NA	1	B2E0366	05/12/2012	05/12/12 02:29	
Trichlorofluoromethane	ND	0.50	NA	1	B2E0366	05/12/2012	05/12/12 02:29	
Vinyl chloride	ND	0.50	NA	1	B2E0366	05/12/2012	05/12/12 02:29	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>120 %</i>		<i>70 - 130</i>		B2E0366	05/12/2012	<i>05/12/12 02:29</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>121 %</i>		<i>70 - 130</i>		B2E0366	05/12/2012	<i>05/12/12 02:29</i>	
<i>Surrogate: Dibromofluoromethane</i>	<i>123 %</i>		<i>70 - 130</i>		B2E0366	05/12/2012	<i>05/12/12 02:29</i>	
<i>Surrogate: Toluene-d8</i>	<i>122 %</i>		<i>70 - 130</i>		B2E0366	05/12/2012	<i>05/12/12 02:29</i>	



Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : Raytheon, 532.30

Report To : Steve Netto

Reported : 05/21/2012

Client Sample ID MW-35C

Lab ID: 1201735-04

1,4-Dioxane by EPA 8270/SIM: Isotope Dilution Technique

Analyst: PIL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,4-Dioxane	ND	0.20	0.13	1	B2E0430	05/15/2012	05/16/12 16:05	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	<i>87.6 %</i>		<i>36 - 107</i>		B2E0430	05/15/2012	<i>05/16/12 16:05</i>	
<i>Surrogate: 2-Fluorobiphenyl</i>	<i>76.3 %</i>		<i>42 - 120</i>		B2E0430	05/15/2012	<i>05/16/12 16:05</i>	
<i>Surrogate: 4-Terphenyl-d14</i>	<i>98.9 %</i>		<i>67 - 142</i>		B2E0430	05/15/2012	<i>05/16/12 16:05</i>	
<i>Surrogate: Nitrobenzene-d5</i>	<i>69.1 %</i>		<i>36 - 130</i>		B2E0430	05/15/2012	<i>05/16/12 16:05</i>	



Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : Raytheon, 532.30

Report To : Steve Netto

Reported : 05/21/2012

Client Sample ID MW-26C

Lab ID: 1201735-05

Volatile Organic Compounds by EPA 8260

Analyst: DC

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	0.50	NA	1	B2E0366	05/12/2012	05/12/12 02:49	
1,1,1-Trichloroethane	ND	0.50	NA	1	B2E0366	05/12/2012	05/12/12 02:49	
1,1,2,2-Tetrachloroethane	ND	0.50	NA	1	B2E0366	05/12/2012	05/12/12 02:49	
1,1,2-Trichloroethane	ND	0.50	NA	1	B2E0366	05/12/2012	05/12/12 02:49	
1,1-Dichloroethane	ND	0.50	NA	1	B2E0366	05/12/2012	05/12/12 02:49	
1,1-Dichloroethene	ND	0.50	NA	1	B2E0366	05/12/2012	05/12/12 02:49	
1,1-Dichloropropene	ND	0.50	NA	1	B2E0366	05/12/2012	05/12/12 02:49	
1,2,3-Trichloropropane	ND	0.50	NA	1	B2E0366	05/12/2012	05/12/12 02:49	
1,2,3-Trichlorobenzene	ND	0.50	NA	1	B2E0366	05/12/2012	05/12/12 02:49	
1,2,4-Trichlorobenzene	ND	0.50	NA	1	B2E0366	05/12/2012	05/12/12 02:49	
1,2,4-Trimethylbenzene	ND	0.50	NA	1	B2E0366	05/12/2012	05/12/12 02:49	
1,2-Dibromo-3-chloropropane	ND	0.50	NA	1	B2E0366	05/12/2012	05/12/12 02:49	
1,2-Dibromoethane	ND	0.50	NA	1	B2E0366	05/12/2012	05/12/12 02:49	
1,2-Dichlorobenzene	ND	0.50	NA	1	B2E0366	05/12/2012	05/12/12 02:49	
1,2-Dichloroethane	ND	0.50	NA	1	B2E0366	05/12/2012	05/12/12 02:49	
1,2-Dichloropropane	ND	0.50	NA	1	B2E0366	05/12/2012	05/12/12 02:49	
1,3,5-Trimethylbenzene	ND	0.50	NA	1	B2E0366	05/12/2012	05/12/12 02:49	
1,3-Dichlorobenzene	ND	0.50	NA	1	B2E0366	05/12/2012	05/12/12 02:49	
1,3-Dichloropropane	ND	0.50	NA	1	B2E0366	05/12/2012	05/12/12 02:49	
1,4-Dichlorobenzene	ND	0.50	NA	1	B2E0366	05/12/2012	05/12/12 02:49	
2,2-Dichloropropane	ND	0.50	NA	1	B2E0366	05/12/2012	05/12/12 02:49	
2-Chlorotoluene	ND	0.50	NA	1	B2E0366	05/12/2012	05/12/12 02:49	
4-Chlorotoluene	ND	0.50	NA	1	B2E0366	05/12/2012	05/12/12 02:49	
4-Isopropyltoluene	ND	0.50	NA	1	B2E0366	05/12/2012	05/12/12 02:49	
Benzene	ND	0.50	NA	1	B2E0366	05/12/2012	05/12/12 02:49	
Bromobenzene	ND	0.50	NA	1	B2E0366	05/12/2012	05/12/12 02:49	
Bromodichloromethane	ND	0.50	NA	1	B2E0366	05/12/2012	05/12/12 02:49	
Bromoform	ND	0.50	NA	1	B2E0366	05/12/2012	05/12/12 02:49	
Bromomethane	ND	0.50	NA	1	B2E0366	05/12/2012	05/12/12 02:49	
Carbon tetrachloride	ND	0.50	NA	1	B2E0366	05/12/2012	05/12/12 02:49	
Chlorobenzene	ND	0.50	NA	1	B2E0366	05/12/2012	05/12/12 02:49	
Chloroethane	ND	0.50	NA	1	B2E0366	05/12/2012	05/12/12 02:49	
Chloroform	ND	0.50	NA	1	B2E0366	05/12/2012	05/12/12 02:49	
Chloromethane	ND	0.50	NA	1	B2E0366	05/12/2012	05/12/12 02:49	



Hargis & Associates, Inc.
9171 Towne Centre Drive, Suite 375
San Diego , CA 92122

Project Number : Raytheon, 532.30
Report To : Steve Netto
Reported : 05/21/2012

Client Sample ID MW-26C
Lab ID: 1201735-05

Volatile Organic Compounds by EPA 8260

Analyst: DC

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
cis-1,2-Dichloroethene	ND	0.50	NA	1	B2E0366	05/12/2012	05/12/12 02:49	
cis-1,3-Dichloropropene	ND	0.50	NA	1	B2E0366	05/12/2012	05/12/12 02:49	
Dibromochloromethane	ND	0.50	NA	1	B2E0366	05/12/2012	05/12/12 02:49	
Dibromomethane	ND	0.50	NA	1	B2E0366	05/12/2012	05/12/12 02:49	
Dichlorodifluoromethane	ND	0.50	NA	1	B2E0366	05/12/2012	05/12/12 02:49	
Ethylbenzene	ND	0.50	NA	1	B2E0366	05/12/2012	05/12/12 02:49	
Hexachlorobutadiene	ND	0.50	NA	1	B2E0366	05/12/2012	05/12/12 02:49	
Isopropylbenzene	ND	0.50	NA	1	B2E0366	05/12/2012	05/12/12 02:49	
m,p-Xylene	ND	1.0	NA	1	B2E0366	05/12/2012	05/12/12 02:49	
Methylene chloride	ND	1.0	NA	1	B2E0366	05/12/2012	05/12/12 02:49	
n-Butylbenzene	ND	0.50	NA	1	B2E0366	05/12/2012	05/12/12 02:49	
n-Propylbenzene	ND	0.50	NA	1	B2E0366	05/12/2012	05/12/12 02:49	
Naphthalene	ND	0.50	NA	1	B2E0366	05/12/2012	05/12/12 02:49	
o-Xylene	ND	0.50	NA	1	B2E0366	05/12/2012	05/12/12 02:49	
sec-Butylbenzene	ND	0.50	NA	1	B2E0366	05/12/2012	05/12/12 02:49	
Styrene	ND	0.50	NA	1	B2E0366	05/12/2012	05/12/12 02:49	
tert-Butylbenzene	ND	0.50	NA	1	B2E0366	05/12/2012	05/12/12 02:49	
Tetrachloroethene	ND	0.50	NA	1	B2E0366	05/12/2012	05/12/12 02:49	
Toluene	6.6	0.50	NA	1	B2E0366	05/12/2012	05/12/12 02:49	
trans-1,2-Dichloroethene	ND	0.50	NA	1	B2E0366	05/12/2012	05/12/12 02:49	
Trichloroethene	ND	0.50	NA	1	B2E0366	05/12/2012	05/12/12 02:49	
Trichlorofluoromethane	ND	0.50	NA	1	B2E0366	05/12/2012	05/12/12 02:49	
Vinyl chloride	ND	0.50	NA	1	B2E0366	05/12/2012	05/12/12 02:49	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>96.6 %</i>		<i>70 - 130</i>		B2E0366	05/12/2012	<i>05/12/12 02:49</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>94.6 %</i>		<i>70 - 130</i>		B2E0366	05/12/2012	<i>05/12/12 02:49</i>	
<i>Surrogate: Dibromofluoromethane</i>	<i>99.0 %</i>		<i>70 - 130</i>		B2E0366	05/12/2012	<i>05/12/12 02:49</i>	
<i>Surrogate: Toluene-d8</i>	<i>96.7 %</i>		<i>70 - 130</i>		B2E0366	05/12/2012	<i>05/12/12 02:49</i>	



Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : Raytheon, 532.30

Report To : Steve Netto

Reported : 05/21/2012

Client Sample ID MW-26C

Lab ID: 1201735-05

1,4-Dioxane by EPA 8270/SIM: Isotope Dilution Technique

Analyst: PIL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,4-Dioxane	ND	0.20	0.13	1	B2E0430	05/15/2012	05/16/12 16:34	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	86.4 %		36 - 107		B2E0430	05/15/2012	05/16/12 16:34	
<i>Surrogate: 2-Fluorobiphenyl</i>	76.9 %		42 - 120		B2E0430	05/15/2012	05/16/12 16:34	
<i>Surrogate: 4-Terphenyl-d14</i>	96.1 %		67 - 142		B2E0430	05/15/2012	05/16/12 16:34	
<i>Surrogate: Nitrobenzene-d5</i>	71.6 %		36 - 130		B2E0430	05/15/2012	05/16/12 16:34	



Hargis & Associates, Inc.

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San Diego , CA 92122

Project Number : Raytheon, 532.30

Report To : Steve Netto

Reported : 05/21/2012

QUALITY CONTROL SECTION

Volatile Organic Compounds by EPA 8260 - Quality Control

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B2E0366 - MSVOAW_LL

Blank (B2E0366-BLK1)

Prepared: 5/11/2012 Analyzed: 5/11/2012

1,1,1,2-Tetrachloroethane	ND	0.50			NR
1,1,1-Trichloroethane	ND	0.50			NR
1,1,2,2-Tetrachloroethane	ND	0.50			NR
1,1,2-Trichloroethane	ND	0.50			NR
1,1-Dichloroethane	ND	0.50			NR
1,1-Dichloroethene	ND	0.50			NR
1,1-Dichloropropene	ND	0.50			NR
1,2,3-Trichloropropane	ND	0.50			NR
1,2,3-Trichlorobenzene	ND	0.50			NR
1,2,4-Trichlorobenzene	ND	0.50			NR
1,2,4-Trimethylbenzene	ND	0.50			NR
1,2-Dibromo-3-chloropropane	ND	0.50			NR
1,2-Dibromoethane	ND	0.50			NR
1,2-Dichlorobenzene	ND	0.50			NR
1,2-Dichloroethane	ND	0.50			NR
1,2-Dichloropropane	ND	0.50			NR
1,3,5-Trimethylbenzene	ND	0.50			NR
1,3-Dichlorobenzene	ND	0.50			NR
1,3-Dichloropropane	ND	0.50			NR
1,4-Dichlorobenzene	ND	0.50			NR
2,2-Dichloropropane	ND	0.50			NR
2-Chlorotoluene	ND	0.50			NR
4-Chlorotoluene	ND	0.50			NR
4-Isopropyltoluene	ND	0.50			NR
Benzene	ND	0.50			NR
Bromobenzene	ND	0.50			NR
Bromodichloromethane	ND	0.50			NR
Bromoform	ND	0.50			NR
Bromomethane	ND	0.50			NR
Carbon tetrachloride	ND	0.50			NR
Chlorobenzene	ND	0.50			NR
Chloroethane	ND	0.50			NR
Chloroform	ND	0.50			NR
Chloromethane	ND	0.50			NR
cis-1,2-Dichloroethene	ND	0.50			NR
cis-1,3-Dichloropropene	ND	0.50			NR
Dibromochloromethane	ND	0.50			NR
Dibromomethane	ND	0.50			NR
Dichlorodifluoromethane	ND	0.50			NR



Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : Raytheon, 532.30

Report To : Steve Netto

Reported : 05/21/2012

Volatile Organic Compounds by EPA 8260 - Quality Control (cont'd)

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec % Rec	% Rec Limits	RPD RPD	RPD Limit	Notes
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Batch B2E0366 - MSVOAW_LL (continued)

Blank (B2E0366-BLK1) - Continued

Prepared: 5/11/2012 Analyzed: 5/11/2012

Ethylbenzene	ND	0.50						NR	
Hexachlorobutadiene	ND	0.50						NR	
Isopropylbenzene	ND	0.50						NR	
m,p-Xylene	ND	1.0						NR	
Methylene chloride	ND	1.0						NR	
n-Butylbenzene	ND	0.50						NR	
n-Propylbenzene	ND	0.50						NR	
Naphthalene	ND	0.50						NR	
o-Xylene	ND	0.50						NR	
sec-Butylbenzene	ND	0.50						NR	
Styrene	ND	0.50						NR	
tert-Butylbenzene	ND	0.50						NR	
Tetrachloroethene	ND	0.50						NR	
Toluene	ND	0.50						NR	
trans-1,2-Dichloroethene	ND	0.50						NR	
Trichloroethene	ND	0.50						NR	
Trichlorofluoromethane	ND	0.50						NR	
Vinyl chloride	ND	0.50						NR	

<i>Surrogate: 1,2-Dichloroethane-d4</i>	27		25.0		109	70 - 130			
<i>Surrogate: 4-Bromofluorobenzene</i>	31		25.0		122	70 - 130			
<i>Surrogate: Dibromofluoromethane</i>	29		25.0		116	70 - 130			
<i>Surrogate: Toluene-d8</i>	30		25.0		121	70 - 130			

LCS (B2E0366-BS1)

Prepared: 5/11/2012 Analyzed: 5/11/2012

1,1-Dichloroethene	21	0.50	20.0		104	70 - 130			
Benzene	43	0.50	40.0		108	70 - 130			
Chlorobenzene	22	0.50	20.0		110	70 - 130			
MTBE	21	0.50	20.0		104	70 - 130			
Toluene	44	0.50	40.0		110	70 - 130			
Trichloroethene	21	0.50	20.0		107	70 - 130			

<i>Surrogate: 1,2-Dichloroethane-d4</i>	24		25.0		97.9	70 - 130			
<i>Surrogate: 4-Bromofluorobenzene</i>	26		25.0		102	70 - 130			
<i>Surrogate: Dibromofluoromethane</i>	25		25.0		101	70 - 130			
<i>Surrogate: Toluene-d8</i>	26		25.0		103	70 - 130			

LCS Dup (B2E0366-BS1)

Prepared: 5/11/2012 Analyzed: 5/11/2012

1,1-Dichloroethene	19	0.50	20.0		94.5	70 - 130	9.14	20	
Benzene	42	0.50	40.0		106	70 - 130	1.81	20	
Chlorobenzene	22	0.50	20.0		108	70 - 130	1.19	20	
MTBE	21	0.50	20.0		105	70 - 130	1.10	20	
Toluene	43	0.50	40.0		107	70 - 130	2.03	20	



Hargis & Associates, Inc.

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San Diego, CA 92122

Project Number : Raytheon, 532.30

Report To : Steve Netto

Reported : 05/21/2012

Volatile Organic Compounds by EPA 8260 - Quality Control (cont'd)

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B2E0366 - MSVOAW_LL (continued)

LCS Dup (B2E0366-BSD1) - Continued

Prepared: 5/11/2012 Analyzed: 5/11/2012

Trichloroethene	20	0.50	20.0		102	70 - 130	3.92	20	
Surrogate: 1,2-Dichloroethane-d4	24		25.0		95.2	70 - 130			
Surrogate: 4-Bromofluorobenzene	25		25.0		101	70 - 130			
Surrogate: Dibromofluoromethane	25		25.0		100	70 - 130			
Surrogate: Toluene-d8	25		25.0		102	70 - 130			

Matrix Spike (B2E0366-MS1)

Source: 1201735-05

Prepared: 5/12/2012 Analyzed: 5/12/2012

1,1-Dichloroethene	15	0.50	20.0	ND	76.8	70 - 130			
Benzene	30	0.50	40.0	ND	74.6	70 - 130			
Chlorobenzene	14	0.50	20.0	ND	71.5	70 - 130			
MTBE	13	0.50	20.0	ND	67.1	70 - 130			
Toluene	36	0.50	40.0	6.6	74.1	70 - 130			
Trichloroethene	14	0.50	20.0	ND	70.4	70 - 130			
Surrogate: 1,2-Dichloroethane-d4	23		25.0		92.8	70 - 130			
Surrogate: 4-Bromofluorobenzene	24		25.0		96.8	70 - 130			
Surrogate: Dibromofluoromethane	23		25.0		93.6	70 - 130			
Surrogate: Toluene-d8	23		25.0		93.9	70 - 130			

Matrix Spike Dup (B2E0366-MSD1)

Source: 1201735-05

Prepared: 5/12/2012 Analyzed: 5/12/2012

1,1-Dichloroethene	23	0.50	20.0	ND	116	70 - 130	40.4	20	R
Benzene	49	0.50	40.0	ND	122	70 - 130	47.9	20	R
Chlorobenzene	24	0.50	20.0	ND	120	70 - 130	50.6	20	R
MTBE	27	0.50	20.0	ND	133	70 - 130	65.8	20	M2, R
Toluene	54	0.50	40.0	6.6	119	70 - 130	39.5	20	R
Trichloroethene	23	0.50	20.0	ND	114	70 - 130	47.7	20	R
Surrogate: 1,2-Dichloroethane-d4	28		25.0		113	70 - 130			
Surrogate: 4-Bromofluorobenzene	31		25.0		124	70 - 130			
Surrogate: Dibromofluoromethane	29		25.0		116	70 - 130			
Surrogate: Toluene-d8	30		25.0		119	70 - 130			



Hargis & Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122

Project Number : Raytheon, 532.30
 Report To : Steve Netto
 Reported : 05/21/2012

1,4-Dioxane by EPA 8270/SIM: Isotope Dilution Technique - Quality Control

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec % Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B2E0430 - MSSEMI_ISOTOPEDILN

Blank (B2E0430-BLK1)

Prepared: 5/15/2012 Analyzed: 5/16/2012

1,4-Dioxane	ND	0.20			NR				
Surrogate: 1,2-Dichlorobenzene-d4	0.89		1.00		89.2	36 - 107			
Surrogate: 2-Fluorobiphenyl	0.79		1.00		79.1	42 - 120			
Surrogate: 4-Terphenyl-d14	0.96		1.00		96.1	67 - 142			
Surrogate: Nitrobenzene-d5	0.51		1.00		51.1	36 - 130			

LCS (B2E0430-BS1)

Prepared: 5/15/2012 Analyzed: 5/16/2012

1,4-Dioxane	1.0	0.20	1.00		101	70 - 130			
Surrogate: 1,2-Dichlorobenzene-d4	0.93		1.00		93.3	36 - 107			
Surrogate: 2-Fluorobiphenyl	0.80		1.00		79.8	42 - 120			
Surrogate: 4-Terphenyl-d14	0.88		1.00		88.2	67 - 142			
Surrogate: Nitrobenzene-d5	0.59		1.00		58.8	36 - 130			

Matrix Spike (B2E0430-MS1)

Source: 1201715-02

Prepared: 5/15/2012 Analyzed: 5/16/2012

1,4-Dioxane	0.98	0.20	1.00	ND	98.5	70 - 130			
Surrogate: 1,2-Dichlorobenzene-d4	0.91		1.00		91.0	36 - 107			
Surrogate: 2-Fluorobiphenyl	0.78		1.00		77.6	42 - 120			
Surrogate: 4-Terphenyl-d14	0.85		1.00		85.4	67 - 142			
Surrogate: Nitrobenzene-d5	0.60		1.00		60.4	36 - 130			

Matrix Spike Dup (B2E0430-MSD1)

Source: 1201715-02

Prepared: 5/15/2012 Analyzed: 5/16/2012

1,4-Dioxane	0.96	0.20	1.00	ND	95.9	70 - 130	2.65	20	
Surrogate: 1,2-Dichlorobenzene-d4	0.92		1.00		92.1	36 - 107			
Surrogate: 2-Fluorobiphenyl	0.76		1.00		76.0	42 - 120			
Surrogate: 4-Terphenyl-d14	0.78		1.00		78.2	67 - 142			
Surrogate: Nitrobenzene-d5	0.65		1.00		64.9	36 - 130			



Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : Raytheon, 532.30

Report To : Steve Netto

Reported : 05/21/2012

Notes and Definitions

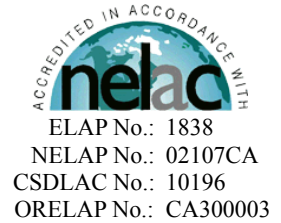
R	RPD value outside acceptance criteria. Calculation is based on raw values.
M2	Matrix spike recovery outside of acceptance limit due to possible matrix interference. The analytical batch was validated by the laboratory control sample.
ND	Analyte not detected at or above reporting limit
PQL	Practical Quantitation Limit
MDL	Method Detection Limit
NR	Not Reported
RPD	Relative Percent Difference
CA1	CA-NELAP (CDPH)
CA2	CA-ELAP (CDPH)
OR1	OR-NELAP (OSPHL)
TX1	TX-NELAP (TCEQ)

CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST FORM

PROJECT NAME		PROJECT No./TASK No.		SAMPLE CONTAINERS		ANALYSIS REQUESTED		ESTIMATED CONCENTRATION RANGE (ppb) FOR VOAS		SPECIAL HANDLING		LABORATORY INFORMATION												
Raytheon		532.30																						
PROJECT MANAGER Steve Netto		Phone No. 858-455-6500																						
QA MANAGER		Fax No. 858-455-6533																						
SAMPLER (SIGNATURE)		SAMPLER (PRINTED) Daniel Mora																						
		Amanda Beam																						
LAB ID	SAMPLE ID	SAMPLE COLLECTION		MATRIX		PRESERVATION		40 ml VOA	1L Amber	VOCs 8260B	1,4-Dioxane 8270 MOD	1,4-Dioxane 8270 SIM	8-10	10-100	100-1,000	1,000-10,000	>10,000	24 TAT	48 TRT	Standard TAT	MS & MSDENRATED	REMARKS		
		Date	Time	Soil	Ground-water	Surface water	LAB H ₂ O																HCl	HNO ₃	NaOH	H_{2}SO_{4}	Ice
	1201795-01	TB-USC912	5/19/12	7:00			X	X																
	2	MW-35A		9:57	X			X																
		↓		↓	X			X																
	3	MW-35B		10:56	X			X				X												
		↓		↓	X			X				X												
	4	MW-35C		12:29	X			X				X												
		↓		↓	X			X				X												
	5	MW-26C		16:12	X			X				X												6 VOAS
		↓		↓	X			X				X												2 1L Ambers
Total number of Containers per analysis:								14														Total No. of Containers: 10 + 8 = 18		
Relinquished by:		Date: 5/19/12	Received by:		Date: 5/19/12	INSTRUCTIONS														Shipment Method: <u>Owner pick up</u>				
Company: H+A, INC		Time: 17:15	Company: ATL		Time: 17:15	1. Fill out form completely except for shaded areas (lab use only); sign only after verified for completeness.														Send Results to: <u>Steve Netto</u>				
						2. Complete in ballpoint pen. Draw one line through errors, initial and date correction.														<input checked="" type="checkbox"/> 9171 TOWNE CENTRE DRIVE, SUITE 375 SAN DIEGO, CA 92122 (858) 455-6500				
Relinquished by:		Date: 5/19/12	Received by:		Date: 5/19/12	3. Indicate number of sample containers in analysis request space; indicate choice with ✓ or x.														<input type="checkbox"/> 1640 SOUTH STAPLEY DRIVE, SUITE 124 MESA, AZ 85204 (480) 345-0888				
Company: ATL		Time: 17:50	Company: ATL		Time: 17:50	4. Note applicable preservatives, special instructions, and deviations from typical environmental samples.														<input type="checkbox"/> 1820 EAST RIVER ROAD, SUITE 220 TUCSON, AZ 85718 (520) 881-7300				
						5. Consult project QA documents for specific instructions.														Send invoice to San Diego, CA Attn: Accounts Payable				
						Sample Receipt:																		
						<input type="checkbox"/> No. of containers correct																		
						<input type="checkbox"/> custody seals secure																		

May 22, 2012

Steve Netto
Hargis & Associates, Inc.
9171 Towne Centre Drive, Suite 375
San Diego, CA 92122
Tel: (619) 249-3166
Fax: (858) 455-6533



Re: ATL Work Order Number : 1201761
Client Reference : Raytheon, 532.30

Enclosed are the results for sample(s) received on May 10, 2012 by Advanced Technology Laboratories. The sample(s) are tested for the parameters as indicated on the enclosed chain of custody in accordance with applicable laboratory certifications. The laboratory results contained in this report specifically pertains to the sample(s) submitted.

Thank you for the opportunity to serve the needs of your company. If you have any questions, please feel free to contact me or your Project Manager.

Sincerely,

A handwritten signature in black ink, appearing to be "E. Rodriguez".

Eddie Rodriguez
Laboratory Director

The cover letter and the case narrative are an integral part of this analytical report and its absence renders the report invalid. The report cannot be reproduced without written permission from the client and Advanced Technology Laboratories.



Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : Raytheon, 532.30

Report To : Steve Netto

Reported : 05/22/2012

SUMMARY OF SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
TB-051012A	1201761-01	LAB H2O	5/10/12 7:00	5/10/12 17:00
MW-34C	1201761-02	Groundwater	5/10/12 9:42	5/10/12 17:00
MW-34A	1201761-03	Groundwater	5/10/12 10:20	5/10/12 17:00
MW-34B	1201761-04	Groundwater	5/10/12 10:55	5/10/12 17:00
MW-36	1201761-05	Groundwater	5/10/12 15:37	5/10/12 17:00



Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : Raytheon, 532.30

Report To : Steve Netto

Reported : 05/22/2012

Client Sample ID TB-051012A

Lab ID: 1201761-01

Volatile Organic Compounds by EPA 8260

Analyst: DC

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	0.50	NA	1	B2E0539	05/18/2012	05/18/12 13:17	
1,1,1-Trichloroethane	ND	0.50	NA	1	B2E0539	05/18/2012	05/18/12 13:17	
1,1,2,2-Tetrachloroethane	ND	0.50	NA	1	B2E0539	05/18/2012	05/18/12 13:17	
1,1,2-Trichloroethane	ND	0.50	NA	1	B2E0539	05/18/2012	05/18/12 13:17	
1,1-Dichloroethane	ND	0.50	NA	1	B2E0539	05/18/2012	05/18/12 13:17	
1,1-Dichloroethene	ND	0.50	NA	1	B2E0539	05/18/2012	05/18/12 13:17	
1,1-Dichloropropene	ND	0.50	NA	1	B2E0539	05/18/2012	05/18/12 13:17	
1,2,3-Trichloropropane	ND	0.50	NA	1	B2E0539	05/18/2012	05/18/12 13:17	
1,2,3-Trichlorobenzene	ND	0.50	NA	1	B2E0539	05/18/2012	05/18/12 13:17	
1,2,4-Trichlorobenzene	ND	0.50	NA	1	B2E0539	05/18/2012	05/18/12 13:17	
1,2,4-Trimethylbenzene	ND	0.50	NA	1	B2E0539	05/18/2012	05/18/12 13:17	
1,2-Dibromo-3-chloropropane	ND	0.50	NA	1	B2E0539	05/18/2012	05/18/12 13:17	
1,2-Dibromoethane	ND	0.50	NA	1	B2E0539	05/18/2012	05/18/12 13:17	
1,2-Dichlorobenzene	ND	0.50	NA	1	B2E0539	05/18/2012	05/18/12 13:17	
1,2-Dichloroethane	ND	0.50	NA	1	B2E0539	05/18/2012	05/18/12 13:17	
1,2-Dichloropropane	ND	0.50	NA	1	B2E0539	05/18/2012	05/18/12 13:17	
1,3,5-Trimethylbenzene	ND	0.50	NA	1	B2E0539	05/18/2012	05/18/12 13:17	
1,3-Dichlorobenzene	ND	0.50	NA	1	B2E0539	05/18/2012	05/18/12 13:17	
1,3-Dichloropropane	ND	0.50	NA	1	B2E0539	05/18/2012	05/18/12 13:17	
1,4-Dichlorobenzene	ND	0.50	NA	1	B2E0539	05/18/2012	05/18/12 13:17	
2,2-Dichloropropane	ND	0.50	NA	1	B2E0539	05/18/2012	05/18/12 13:17	
2-Chlorotoluene	ND	0.50	NA	1	B2E0539	05/18/2012	05/18/12 13:17	
4-Chlorotoluene	ND	0.50	NA	1	B2E0539	05/18/2012	05/18/12 13:17	
4-Isopropyltoluene	ND	0.50	NA	1	B2E0539	05/18/2012	05/18/12 13:17	
Benzene	ND	0.50	NA	1	B2E0539	05/18/2012	05/18/12 13:17	
Bromobenzene	ND	0.50	NA	1	B2E0539	05/18/2012	05/18/12 13:17	
Bromodichloromethane	ND	0.50	NA	1	B2E0539	05/18/2012	05/18/12 13:17	
Bromoform	ND	0.50	NA	1	B2E0539	05/18/2012	05/18/12 13:17	
Bromomethane	ND	0.50	NA	1	B2E0539	05/18/2012	05/18/12 13:17	
Carbon tetrachloride	ND	0.50	NA	1	B2E0539	05/18/2012	05/18/12 13:17	
Chlorobenzene	ND	0.50	NA	1	B2E0539	05/18/2012	05/18/12 13:17	
Chloroethane	ND	0.50	NA	1	B2E0539	05/18/2012	05/18/12 13:17	
Chloroform	ND	0.50	NA	1	B2E0539	05/18/2012	05/18/12 13:17	
Chloromethane	ND	0.50	NA	1	B2E0539	05/18/2012	05/18/12 13:17	



Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : Raytheon, 532.30

Report To : Steve Netto

Reported : 05/22/2012

Client Sample ID TB-051012A

Lab ID: 1201761-01

Volatile Organic Compounds by EPA 8260

Analyst: DC

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
cis-1,2-Dichloroethene	ND	0.50	NA	1	B2E0539	05/18/2012	05/18/12 13:17	
cis-1,3-Dichloropropene	ND	0.50	NA	1	B2E0539	05/18/2012	05/18/12 13:17	
Dibromochloromethane	ND	0.50	NA	1	B2E0539	05/18/2012	05/18/12 13:17	
Dibromomethane	ND	0.50	NA	1	B2E0539	05/18/2012	05/18/12 13:17	
Dichlorodifluoromethane	ND	0.50	NA	1	B2E0539	05/18/2012	05/18/12 13:17	
Ethylbenzene	ND	0.50	NA	1	B2E0539	05/18/2012	05/18/12 13:17	
Hexachlorobutadiene	ND	0.50	NA	1	B2E0539	05/18/2012	05/18/12 13:17	
Isopropylbenzene	ND	0.50	NA	1	B2E0539	05/18/2012	05/18/12 13:17	
m,p-Xylene	ND	1.0	NA	1	B2E0539	05/18/2012	05/18/12 13:17	
Methylene chloride	ND	1.0	NA	1	B2E0539	05/18/2012	05/18/12 13:17	
n-Butylbenzene	ND	0.50	NA	1	B2E0539	05/18/2012	05/18/12 13:17	
n-Propylbenzene	ND	0.50	NA	1	B2E0539	05/18/2012	05/18/12 13:17	
Naphthalene	ND	0.50	NA	1	B2E0539	05/18/2012	05/18/12 13:17	
o-Xylene	ND	0.50	NA	1	B2E0539	05/18/2012	05/18/12 13:17	
sec-Butylbenzene	ND	0.50	NA	1	B2E0539	05/18/2012	05/18/12 13:17	
Styrene	ND	0.50	NA	1	B2E0539	05/18/2012	05/18/12 13:17	
tert-Butylbenzene	ND	0.50	NA	1	B2E0539	05/18/2012	05/18/12 13:17	
Tetrachloroethene	ND	0.50	NA	1	B2E0539	05/18/2012	05/18/12 13:17	
Toluene	ND	0.50	NA	1	B2E0539	05/18/2012	05/18/12 13:17	
trans-1,2-Dichloroethene	ND	0.50	NA	1	B2E0539	05/18/2012	05/18/12 13:17	
Trichloroethene	ND	0.50	NA	1	B2E0539	05/18/2012	05/18/12 13:17	
Trichlorofluoromethane	ND	0.50	NA	1	B2E0539	05/18/2012	05/18/12 13:17	
Vinyl chloride	ND	0.50	NA	1	B2E0539	05/18/2012	05/18/12 13:17	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>78.8 %</i>		<i>70 - 130</i>		B2E0539	05/18/2012	<i>05/18/12 13:17</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>95.9 %</i>		<i>70 - 130</i>		B2E0539	05/18/2012	<i>05/18/12 13:17</i>	
<i>Surrogate: Dibromofluoromethane</i>	<i>90.9 %</i>		<i>70 - 130</i>		B2E0539	05/18/2012	<i>05/18/12 13:17</i>	
<i>Surrogate: Toluene-d8</i>	<i>95.8 %</i>		<i>70 - 130</i>		B2E0539	05/18/2012	<i>05/18/12 13:17</i>	



Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : Raytheon, 532.30

Report To : Steve Netto

Reported : 05/22/2012

Client Sample ID MW-34C

Lab ID: 1201761-02

Volatile Organic Compounds by EPA 8260

Analyst: DC

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	0.50	NA	1	B2E0539	05/18/2012	05/18/12 13:38	
1,1,1-Trichloroethane	ND	0.50	NA	1	B2E0539	05/18/2012	05/18/12 13:38	
1,1,2,2-Tetrachloroethane	ND	0.50	NA	1	B2E0539	05/18/2012	05/18/12 13:38	
1,1,2-Trichloroethane	ND	0.50	NA	1	B2E0539	05/18/2012	05/18/12 13:38	
1,1-Dichloroethane	ND	0.50	NA	1	B2E0539	05/18/2012	05/18/12 13:38	
1,1-Dichloroethene	ND	0.50	NA	1	B2E0539	05/18/2012	05/18/12 13:38	
1,1-Dichloropropene	ND	0.50	NA	1	B2E0539	05/18/2012	05/18/12 13:38	
1,2,3-Trichloropropane	ND	0.50	NA	1	B2E0539	05/18/2012	05/18/12 13:38	
1,2,3-Trichlorobenzene	ND	0.50	NA	1	B2E0539	05/18/2012	05/18/12 13:38	
1,2,4-Trichlorobenzene	ND	0.50	NA	1	B2E0539	05/18/2012	05/18/12 13:38	
1,2,4-Trimethylbenzene	ND	0.50	NA	1	B2E0539	05/18/2012	05/18/12 13:38	
1,2-Dibromo-3-chloropropane	ND	0.50	NA	1	B2E0539	05/18/2012	05/18/12 13:38	
1,2-Dibromoethane	ND	0.50	NA	1	B2E0539	05/18/2012	05/18/12 13:38	
1,2-Dichlorobenzene	ND	0.50	NA	1	B2E0539	05/18/2012	05/18/12 13:38	
1,2-Dichloroethane	ND	0.50	NA	1	B2E0539	05/18/2012	05/18/12 13:38	
1,2-Dichloropropane	ND	0.50	NA	1	B2E0539	05/18/2012	05/18/12 13:38	
1,3,5-Trimethylbenzene	ND	0.50	NA	1	B2E0539	05/18/2012	05/18/12 13:38	
1,3-Dichlorobenzene	ND	0.50	NA	1	B2E0539	05/18/2012	05/18/12 13:38	
1,3-Dichloropropane	ND	0.50	NA	1	B2E0539	05/18/2012	05/18/12 13:38	
1,4-Dichlorobenzene	ND	0.50	NA	1	B2E0539	05/18/2012	05/18/12 13:38	
2,2-Dichloropropane	ND	0.50	NA	1	B2E0539	05/18/2012	05/18/12 13:38	
2-Chlorotoluene	ND	0.50	NA	1	B2E0539	05/18/2012	05/18/12 13:38	
4-Chlorotoluene	ND	0.50	NA	1	B2E0539	05/18/2012	05/18/12 13:38	
4-Isopropyltoluene	ND	0.50	NA	1	B2E0539	05/18/2012	05/18/12 13:38	
Benzene	ND	0.50	NA	1	B2E0539	05/18/2012	05/18/12 13:38	
Bromobenzene	ND	0.50	NA	1	B2E0539	05/18/2012	05/18/12 13:38	
Bromodichloromethane	ND	0.50	NA	1	B2E0539	05/18/2012	05/18/12 13:38	
Bromoform	ND	0.50	NA	1	B2E0539	05/18/2012	05/18/12 13:38	
Bromomethane	ND	0.50	NA	1	B2E0539	05/18/2012	05/18/12 13:38	
Carbon tetrachloride	ND	0.50	NA	1	B2E0539	05/18/2012	05/18/12 13:38	
Chlorobenzene	ND	0.50	NA	1	B2E0539	05/18/2012	05/18/12 13:38	
Chloroethane	ND	0.50	NA	1	B2E0539	05/18/2012	05/18/12 13:38	
Chloroform	ND	0.50	NA	1	B2E0539	05/18/2012	05/18/12 13:38	
Chloromethane	ND	0.50	NA	1	B2E0539	05/18/2012	05/18/12 13:38	



Hargis & Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego , CA 92122

Project Number : Raytheon, 532.30
 Report To : Steve Netto
 Reported : 05/22/2012

Client Sample ID MW-34C
Lab ID: 1201761-02

Volatile Organic Compounds by EPA 8260

Analyst: DC

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
cis-1,2-Dichloroethene	ND	0.50	NA	1	B2E0539	05/18/2012	05/18/12 13:38	
cis-1,3-Dichloropropene	ND	0.50	NA	1	B2E0539	05/18/2012	05/18/12 13:38	
Dibromochloromethane	ND	0.50	NA	1	B2E0539	05/18/2012	05/18/12 13:38	
Dibromomethane	ND	0.50	NA	1	B2E0539	05/18/2012	05/18/12 13:38	
Dichlorodifluoromethane	ND	0.50	NA	1	B2E0539	05/18/2012	05/18/12 13:38	
Ethylbenzene	ND	0.50	NA	1	B2E0539	05/18/2012	05/18/12 13:38	
Hexachlorobutadiene	ND	0.50	NA	1	B2E0539	05/18/2012	05/18/12 13:38	
Isopropylbenzene	ND	0.50	NA	1	B2E0539	05/18/2012	05/18/12 13:38	
m,p-Xylene	ND	1.0	NA	1	B2E0539	05/18/2012	05/18/12 13:38	
Methylene chloride	ND	1.0	NA	1	B2E0539	05/18/2012	05/18/12 13:38	
n-Butylbenzene	ND	0.50	NA	1	B2E0539	05/18/2012	05/18/12 13:38	
n-Propylbenzene	ND	0.50	NA	1	B2E0539	05/18/2012	05/18/12 13:38	
Naphthalene	ND	0.50	NA	1	B2E0539	05/18/2012	05/18/12 13:38	
o-Xylene	ND	0.50	NA	1	B2E0539	05/18/2012	05/18/12 13:38	
sec-Butylbenzene	ND	0.50	NA	1	B2E0539	05/18/2012	05/18/12 13:38	
Styrene	ND	0.50	NA	1	B2E0539	05/18/2012	05/18/12 13:38	
tert-Butylbenzene	ND	0.50	NA	1	B2E0539	05/18/2012	05/18/12 13:38	
Tetrachloroethene	ND	0.50	NA	1	B2E0539	05/18/2012	05/18/12 13:38	
Toluene	ND	0.50	NA	1	B2E0539	05/18/2012	05/18/12 13:38	
trans-1,2-Dichloroethene	ND	0.50	NA	1	B2E0539	05/18/2012	05/18/12 13:38	
Trichloroethene	ND	0.50	NA	1	B2E0539	05/18/2012	05/18/12 13:38	
Trichlorofluoromethane	ND	0.50	NA	1	B2E0539	05/18/2012	05/18/12 13:38	
Vinyl chloride	ND	0.50	NA	1	B2E0539	05/18/2012	05/18/12 13:38	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>88.8 %</i>		<i>70 - 130</i>		B2E0539	05/18/2012	<i>05/18/12 13:38</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>104 %</i>		<i>70 - 130</i>		B2E0539	05/18/2012	<i>05/18/12 13:38</i>	
<i>Surrogate: Dibromofluoromethane</i>	<i>98.5 %</i>		<i>70 - 130</i>		B2E0539	05/18/2012	<i>05/18/12 13:38</i>	
<i>Surrogate: Toluene-d8</i>	<i>104 %</i>		<i>70 - 130</i>		B2E0539	05/18/2012	<i>05/18/12 13:38</i>	



Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : Raytheon, 532.30

Report To : Steve Netto

Reported : 05/22/2012

Client Sample ID MW-34C

Lab ID: 1201761-02

1,4-Dioxane by EPA 8270/SIM: Isotope Dilution Technique

Analyst: PIL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,4-Dioxane	ND	0.20	NA	1	B2E0430	05/15/2012	05/16/12 17:03	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	<i>96.8 %</i>		<i>36 - 107</i>		B2E0430	05/15/2012	<i>05/16/12 17:03</i>	
<i>Surrogate: 2-Fluorobiphenyl</i>	<i>81.2 %</i>		<i>42 - 120</i>		B2E0430	05/15/2012	<i>05/16/12 17:03</i>	
<i>Surrogate: 4-Terphenyl-d14</i>	<i>104 %</i>		<i>67 - 142</i>		B2E0430	05/15/2012	<i>05/16/12 17:03</i>	
<i>Surrogate: Nitrobenzene-d5</i>	<i>81.5 %</i>		<i>36 - 130</i>		B2E0430	05/15/2012	<i>05/16/12 17:03</i>	



Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : Raytheon, 532.30

Report To : Steve Netto

Reported : 05/22/2012

Client Sample ID MW-34A

Lab ID: 1201761-03

Volatile Organic Compounds by EPA 8260

Analyst: DC

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	0.50	NA	1	B2E0539	05/18/2012	05/18/12 13:58	
1,1,1-Trichloroethane	ND	0.50	NA	1	B2E0539	05/18/2012	05/18/12 13:58	
1,1,2,2-Tetrachloroethane	ND	0.50	NA	1	B2E0539	05/18/2012	05/18/12 13:58	
1,1,2-Trichloroethane	ND	0.50	NA	1	B2E0539	05/18/2012	05/18/12 13:58	
1,1-Dichloroethane	ND	0.50	NA	1	B2E0539	05/18/2012	05/18/12 13:58	
1,1-Dichloroethene	ND	0.50	NA	1	B2E0539	05/18/2012	05/18/12 13:58	
1,1-Dichloropropene	ND	0.50	NA	1	B2E0539	05/18/2012	05/18/12 13:58	
1,2,3-Trichloropropane	ND	0.50	NA	1	B2E0539	05/18/2012	05/18/12 13:58	
1,2,3-Trichlorobenzene	ND	0.50	NA	1	B2E0539	05/18/2012	05/18/12 13:58	
1,2,4-Trichlorobenzene	ND	0.50	NA	1	B2E0539	05/18/2012	05/18/12 13:58	
1,2,4-Trimethylbenzene	ND	0.50	NA	1	B2E0539	05/18/2012	05/18/12 13:58	
1,2-Dibromo-3-chloropropane	ND	0.50	NA	1	B2E0539	05/18/2012	05/18/12 13:58	
1,2-Dibromoethane	ND	0.50	NA	1	B2E0539	05/18/2012	05/18/12 13:58	
1,2-Dichlorobenzene	ND	0.50	NA	1	B2E0539	05/18/2012	05/18/12 13:58	
1,2-Dichloroethane	ND	0.50	NA	1	B2E0539	05/18/2012	05/18/12 13:58	
1,2-Dichloropropane	ND	0.50	NA	1	B2E0539	05/18/2012	05/18/12 13:58	
1,3,5-Trimethylbenzene	ND	0.50	NA	1	B2E0539	05/18/2012	05/18/12 13:58	
1,3-Dichlorobenzene	ND	0.50	NA	1	B2E0539	05/18/2012	05/18/12 13:58	
1,3-Dichloropropane	ND	0.50	NA	1	B2E0539	05/18/2012	05/18/12 13:58	
1,4-Dichlorobenzene	ND	0.50	NA	1	B2E0539	05/18/2012	05/18/12 13:58	
2,2-Dichloropropane	ND	0.50	NA	1	B2E0539	05/18/2012	05/18/12 13:58	
2-Chlorotoluene	ND	0.50	NA	1	B2E0539	05/18/2012	05/18/12 13:58	
4-Chlorotoluene	ND	0.50	NA	1	B2E0539	05/18/2012	05/18/12 13:58	
4-Isopropyltoluene	ND	0.50	NA	1	B2E0539	05/18/2012	05/18/12 13:58	
Benzene	ND	0.50	NA	1	B2E0539	05/18/2012	05/18/12 13:58	
Bromobenzene	ND	0.50	NA	1	B2E0539	05/18/2012	05/18/12 13:58	
Bromodichloromethane	ND	0.50	NA	1	B2E0539	05/18/2012	05/18/12 13:58	
Bromoform	ND	0.50	NA	1	B2E0539	05/18/2012	05/18/12 13:58	
Bromomethane	ND	0.50	NA	1	B2E0539	05/18/2012	05/18/12 13:58	
Carbon tetrachloride	ND	0.50	NA	1	B2E0539	05/18/2012	05/18/12 13:58	
Chlorobenzene	ND	0.50	NA	1	B2E0539	05/18/2012	05/18/12 13:58	
Chloroethane	ND	0.50	NA	1	B2E0539	05/18/2012	05/18/12 13:58	
Chloroform	ND	0.50	NA	1	B2E0539	05/18/2012	05/18/12 13:58	
Chloromethane	ND	0.50	NA	1	B2E0539	05/18/2012	05/18/12 13:58	



Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego, CA 92122

Project Number : Raytheon, 532.30

Report To : Steve Netto

Reported : 05/22/2012

Client Sample ID MW-34A

Lab ID: 1201761-03

Volatile Organic Compounds by EPA 8260

Analyst: DC

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
cis-1,2-Dichloroethene	ND	0.50	NA	1	B2E0539	05/18/2012	05/18/12 13:58	
cis-1,3-Dichloropropene	ND	0.50	NA	1	B2E0539	05/18/2012	05/18/12 13:58	
Dibromochloromethane	ND	0.50	NA	1	B2E0539	05/18/2012	05/18/12 13:58	
Dibromomethane	ND	0.50	NA	1	B2E0539	05/18/2012	05/18/12 13:58	
Dichlorodifluoromethane	ND	0.50	NA	1	B2E0539	05/18/2012	05/18/12 13:58	
Ethylbenzene	ND	0.50	NA	1	B2E0539	05/18/2012	05/18/12 13:58	
Hexachlorobutadiene	ND	0.50	NA	1	B2E0539	05/18/2012	05/18/12 13:58	
Isopropylbenzene	ND	0.50	NA	1	B2E0539	05/18/2012	05/18/12 13:58	
m,p-Xylene	ND	1.0	NA	1	B2E0539	05/18/2012	05/18/12 13:58	
Methylene chloride	ND	1.0	NA	1	B2E0539	05/18/2012	05/18/12 13:58	
n-Butylbenzene	ND	0.50	NA	1	B2E0539	05/18/2012	05/18/12 13:58	
n-Propylbenzene	ND	0.50	NA	1	B2E0539	05/18/2012	05/18/12 13:58	
Naphthalene	ND	0.50	NA	1	B2E0539	05/18/2012	05/18/12 13:58	
o-Xylene	ND	0.50	NA	1	B2E0539	05/18/2012	05/18/12 13:58	
sec-Butylbenzene	ND	0.50	NA	1	B2E0539	05/18/2012	05/18/12 13:58	
Styrene	ND	0.50	NA	1	B2E0539	05/18/2012	05/18/12 13:58	
tert-Butylbenzene	ND	0.50	NA	1	B2E0539	05/18/2012	05/18/12 13:58	
Tetrachloroethene	ND	0.50	NA	1	B2E0539	05/18/2012	05/18/12 13:58	
Toluene	ND	0.50	NA	1	B2E0539	05/18/2012	05/18/12 13:58	
trans-1,2-Dichloroethene	ND	0.50	NA	1	B2E0539	05/18/2012	05/18/12 13:58	
Trichloroethene	ND	0.50	NA	1	B2E0539	05/18/2012	05/18/12 13:58	
Trichlorofluoromethane	1.1	0.50	NA	1	B2E0539	05/18/2012	05/18/12 13:58	
Vinyl chloride	ND	0.50	NA	1	B2E0539	05/18/2012	05/18/12 13:58	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>99.2 %</i>		<i>70 - 130</i>		B2E0539	05/18/2012	<i>05/18/12 13:58</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>119 %</i>		<i>70 - 130</i>		B2E0539	05/18/2012	<i>05/18/12 13:58</i>	
<i>Surrogate: Dibromofluoromethane</i>	<i>111 %</i>		<i>70 - 130</i>		B2E0539	05/18/2012	<i>05/18/12 13:58</i>	
<i>Surrogate: Toluene-d8</i>	<i>118 %</i>		<i>70 - 130</i>		B2E0539	05/18/2012	<i>05/18/12 13:58</i>	



Hargis & Associates, Inc.
9171 Towne Centre Drive, Suite 375
San Diego , CA 92122

Project Number : Raytheon, 532.30
Report To : Steve Netto
Reported : 05/22/2012

Client Sample ID MW-34A
Lab ID: 1201761-03

1,4-Dioxane by EPA 8270/SIM: Isotope Dilution Technique

Analyst: PIL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,4-Dioxane	ND	0.20	NA	1	B2E0430	05/15/2012	05/16/12 17:31	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	<i>91.4 %</i>		<i>36 - 107</i>		B2E0430	05/15/2012	<i>05/16/12 17:31</i>	
<i>Surrogate: 2-Fluorobiphenyl</i>	<i>78.6 %</i>		<i>42 - 120</i>		B2E0430	05/15/2012	<i>05/16/12 17:31</i>	
<i>Surrogate: 4-Terphenyl-d14</i>	<i>96.6 %</i>		<i>67 - 142</i>		B2E0430	05/15/2012	<i>05/16/12 17:31</i>	
<i>Surrogate: Nitrobenzene-d5</i>	<i>74.0 %</i>		<i>36 - 130</i>		B2E0430	05/15/2012	<i>05/16/12 17:31</i>	



Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : Raytheon, 532.30

Report To : Steve Netto

Reported : 05/22/2012

Client Sample ID MW-34B

Lab ID: 1201761-04

Volatile Organic Compounds by EPA 8260

Analyst: DC

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	0.50	NA	1	B2E0614	05/21/2012	05/21/12 12:37	
1,1,1-Trichloroethane	ND	0.50	NA	1	B2E0614	05/21/2012	05/21/12 12:37	
1,1,2,2-Tetrachloroethane	ND	0.50	NA	1	B2E0614	05/21/2012	05/21/12 12:37	
1,1,2-Trichloroethane	0.60	0.50	NA	1	B2E0614	05/21/2012	05/21/12 12:37	
1,1-Dichloroethane	2.3	0.50	NA	1	B2E0614	05/21/2012	05/21/12 12:37	
1,1-Dichloroethene	120	5.0	NA	1	B2E0539	05/18/2012	05/18/12 18:42	D4
1,1-Dichloropropene	ND	0.50	NA	1	B2E0614	05/21/2012	05/21/12 12:37	
1,2,3-Trichloropropane	ND	0.50	NA	1	B2E0614	05/21/2012	05/21/12 12:37	
1,2,3-Trichlorobenzene	ND	0.50	NA	1	B2E0614	05/21/2012	05/21/12 12:37	
1,2,4-Trichlorobenzene	ND	0.50	NA	1	B2E0614	05/21/2012	05/21/12 12:37	
1,2,4-Trimethylbenzene	ND	0.50	NA	1	B2E0614	05/21/2012	05/21/12 12:37	
1,2-Dibromo-3-chloropropane	ND	0.50	NA	1	B2E0614	05/21/2012	05/21/12 12:37	
1,2-Dibromoethane	ND	0.50	NA	1	B2E0614	05/21/2012	05/21/12 12:37	
1,2-Dichlorobenzene	ND	0.50	NA	1	B2E0614	05/21/2012	05/21/12 12:37	
1,2-Dichloroethane	ND	0.50	NA	1	B2E0614	05/21/2012	05/21/12 12:37	
1,2-Dichloropropane	ND	0.50	NA	1	B2E0614	05/21/2012	05/21/12 12:37	
1,3,5-Trimethylbenzene	ND	0.50	NA	1	B2E0614	05/21/2012	05/21/12 12:37	
1,3-Dichlorobenzene	ND	0.50	NA	1	B2E0614	05/21/2012	05/21/12 12:37	
1,3-Dichloropropane	ND	0.50	NA	1	B2E0614	05/21/2012	05/21/12 12:37	
1,4-Dichlorobenzene	ND	0.50	NA	1	B2E0614	05/21/2012	05/21/12 12:37	
2,2-Dichloropropane	ND	0.50	NA	1	B2E0614	05/21/2012	05/21/12 12:37	
2-Chlorotoluene	ND	0.50	NA	1	B2E0614	05/21/2012	05/21/12 12:37	
4-Chlorotoluene	ND	0.50	NA	1	B2E0614	05/21/2012	05/21/12 12:37	
4-Isopropyltoluene	ND	0.50	NA	1	B2E0614	05/21/2012	05/21/12 12:37	
Benzene	ND	0.50	NA	1	B2E0614	05/21/2012	05/21/12 12:37	
Bromobenzene	ND	0.50	NA	1	B2E0614	05/21/2012	05/21/12 12:37	
Bromodichloromethane	ND	0.50	NA	1	B2E0614	05/21/2012	05/21/12 12:37	
Bromoform	ND	0.50	NA	1	B2E0614	05/21/2012	05/21/12 12:37	
Bromomethane	ND	0.50	NA	1	B2E0614	05/21/2012	05/21/12 12:37	
Carbon tetrachloride	ND	0.50	NA	1	B2E0614	05/21/2012	05/21/12 12:37	
Chlorobenzene	ND	0.50	NA	1	B2E0614	05/21/2012	05/21/12 12:37	
Chloroethane	ND	0.50	NA	1	B2E0614	05/21/2012	05/21/12 12:37	
Chloroform	ND	0.50	NA	1	B2E0614	05/21/2012	05/21/12 12:37	
Chloromethane	ND	0.50	NA	1	B2E0614	05/21/2012	05/21/12 12:37	



Hargis & Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego , CA 92122

Project Number : Raytheon, 532.30
 Report To : Steve Netto
 Reported : 05/22/2012

Client Sample ID MW-34B
Lab ID: 1201761-04

Volatile Organic Compounds by EPA 8260

Analyst: DC

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
cis-1,2-Dichloroethene	ND	0.50	NA	1	B2E0614	05/21/2012	05/21/12 12:37	
cis-1,3-Dichloropropene	ND	0.50	NA	1	B2E0614	05/21/2012	05/21/12 12:37	
Dibromochloromethane	ND	0.50	NA	1	B2E0614	05/21/2012	05/21/12 12:37	
Dibromomethane	ND	0.50	NA	1	B2E0614	05/21/2012	05/21/12 12:37	
Dichlorodifluoromethane	ND	0.50	NA	1	B2E0614	05/21/2012	05/21/12 12:37	
Ethylbenzene	ND	0.50	NA	1	B2E0614	05/21/2012	05/21/12 12:37	
Hexachlorobutadiene	ND	0.50	NA	1	B2E0614	05/21/2012	05/21/12 12:37	
Isopropylbenzene	ND	0.50	NA	1	B2E0614	05/21/2012	05/21/12 12:37	
m,p-Xylene	ND	1.0	NA	1	B2E0614	05/21/2012	05/21/12 12:37	
Methylene chloride	ND	1.0	NA	1	B2E0614	05/21/2012	05/21/12 12:37	
n-Butylbenzene	ND	0.50	NA	1	B2E0614	05/21/2012	05/21/12 12:37	
n-Propylbenzene	ND	0.50	NA	1	B2E0614	05/21/2012	05/21/12 12:37	
Naphthalene	ND	0.50	NA	1	B2E0614	05/21/2012	05/21/12 12:37	
o-Xylene	ND	0.50	NA	1	B2E0614	05/21/2012	05/21/12 12:37	
sec-Butylbenzene	ND	0.50	NA	1	B2E0614	05/21/2012	05/21/12 12:37	
Styrene	ND	0.50	NA	1	B2E0614	05/21/2012	05/21/12 12:37	
tert-Butylbenzene	ND	0.50	NA	1	B2E0614	05/21/2012	05/21/12 12:37	
Tetrachloroethene	ND	0.50	NA	1	B2E0614	05/21/2012	05/21/12 12:37	
Toluene	ND	0.50	NA	1	B2E0614	05/21/2012	05/21/12 12:37	
trans-1,2-Dichloroethene	ND	0.50	NA	1	B2E0614	05/21/2012	05/21/12 12:37	
Trichloroethene	ND	0.50	NA	1	B2E0614	05/21/2012	05/21/12 12:37	
Trichlorofluoromethane	ND	0.50	NA	1	B2E0614	05/21/2012	05/21/12 12:37	
Vinyl chloride	ND	0.50	NA	1	B2E0614	05/21/2012	05/21/12 12:37	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>108 %</i>	<i>70 - 130</i>			B2E0539	05/18/2012	<i>05/18/12 18:42</i>	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>105 %</i>	<i>70 - 130</i>			B2E0614	05/21/2012	<i>05/21/12 12:37</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>118 %</i>	<i>70 - 130</i>			B2E0539	05/18/2012	<i>05/18/12 18:42</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>106 %</i>	<i>70 - 130</i>			B2E0614	05/21/2012	<i>05/21/12 12:37</i>	
<i>Surrogate: Dibromofluoromethane</i>	<i>107 %</i>	<i>70 - 130</i>			B2E0614	05/21/2012	<i>05/21/12 12:37</i>	
<i>Surrogate: Dibromofluoromethane</i>	<i>117 %</i>	<i>70 - 130</i>			B2E0539	05/18/2012	<i>05/18/12 18:42</i>	
<i>Surrogate: Toluene-d8</i>	<i>105 %</i>	<i>70 - 130</i>			B2E0614	05/21/2012	<i>05/21/12 12:37</i>	
<i>Surrogate: Toluene-d8</i>	<i>118 %</i>	<i>70 - 130</i>			B2E0539	05/18/2012	<i>05/18/12 18:42</i>	



Hargis & Associates, Inc.
9171 Towne Centre Drive, Suite 375
San Diego , CA 92122

Project Number : Raytheon, 532.30
Report To : Steve Netto
Reported : 05/22/2012

Client Sample ID MW-34B
Lab ID: 1201761-04

1,4-Dioxane by EPA 8270: Isotope Dilution Technique

Analyst: PIL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,4-Dioxane	58	2.0	NA	1	B2E0386	05/14/2012	05/15/12 16:39	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	<i>84.8 %</i>		<i>37 - 93</i>		B2E0386	05/14/2012	<i>05/15/12 16:39</i>	
<i>Surrogate: 2-Fluorobiphenyl</i>	<i>95.3 %</i>		<i>51 - 100</i>		B2E0386	05/14/2012	<i>05/15/12 16:39</i>	
<i>Surrogate: 4-Terphenyl-d14</i>	<i>133 %</i>		<i>58 - 113</i>		B2E0386	05/14/2012	<i>05/15/12 16:39</i>	S8
<i>Surrogate: Nitrobenzene-d5</i>	<i>92.4 %</i>		<i>39 - 95</i>		B2E0386	05/14/2012	<i>05/15/12 16:39</i>	



Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : Raytheon, 532.30

Report To : Steve Netto

Reported : 05/22/2012

Client Sample ID MW-36

Lab ID: 1201761-05

Volatile Organic Compounds by EPA 8260

Analyst: DC

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	0.50	NA	1	B2E0539	05/18/2012	05/18/12 14:18	
1,1,1-Trichloroethane	ND	0.50	NA	1	B2E0539	05/18/2012	05/18/12 14:18	
1,1,2,2-Tetrachloroethane	ND	0.50	NA	1	B2E0539	05/18/2012	05/18/12 14:18	
1,1,2-Trichloroethane	ND	0.50	NA	1	B2E0539	05/18/2012	05/18/12 14:18	
1,1-Dichloroethane	0.52	0.50	NA	1	B2E0539	05/18/2012	05/18/12 14:18	
1,1-Dichloroethene	45	0.50	NA	1	B2E0539	05/18/2012	05/18/12 14:18	
1,1-Dichloropropene	ND	0.50	NA	1	B2E0539	05/18/2012	05/18/12 14:18	
1,2,3-Trichloropropane	ND	0.50	NA	1	B2E0539	05/18/2012	05/18/12 14:18	
1,2,3-Trichlorobenzene	ND	0.50	NA	1	B2E0539	05/18/2012	05/18/12 14:18	
1,2,4-Trichlorobenzene	ND	0.50	NA	1	B2E0539	05/18/2012	05/18/12 14:18	
1,2,4-Trimethylbenzene	ND	0.50	NA	1	B2E0539	05/18/2012	05/18/12 14:18	
1,2-Dibromo-3-chloropropane	ND	0.50	NA	1	B2E0539	05/18/2012	05/18/12 14:18	
1,2-Dibromoethane	ND	0.50	NA	1	B2E0539	05/18/2012	05/18/12 14:18	
1,2-Dichlorobenzene	ND	0.50	NA	1	B2E0539	05/18/2012	05/18/12 14:18	
1,2-Dichloroethane	ND	0.50	NA	1	B2E0539	05/18/2012	05/18/12 14:18	
1,2-Dichloropropane	ND	0.50	NA	1	B2E0539	05/18/2012	05/18/12 14:18	
1,3,5-Trimethylbenzene	ND	0.50	NA	1	B2E0539	05/18/2012	05/18/12 14:18	
1,3-Dichlorobenzene	ND	0.50	NA	1	B2E0539	05/18/2012	05/18/12 14:18	
1,3-Dichloropropane	ND	0.50	NA	1	B2E0539	05/18/2012	05/18/12 14:18	
1,4-Dichlorobenzene	ND	0.50	NA	1	B2E0539	05/18/2012	05/18/12 14:18	
2,2-Dichloropropane	ND	0.50	NA	1	B2E0539	05/18/2012	05/18/12 14:18	
2-Chlorotoluene	ND	0.50	NA	1	B2E0539	05/18/2012	05/18/12 14:18	
4-Chlorotoluene	ND	0.50	NA	1	B2E0539	05/18/2012	05/18/12 14:18	
4-Isopropyltoluene	ND	0.50	NA	1	B2E0539	05/18/2012	05/18/12 14:18	
Benzene	ND	0.50	NA	1	B2E0539	05/18/2012	05/18/12 14:18	
Bromobenzene	ND	0.50	NA	1	B2E0539	05/18/2012	05/18/12 14:18	
Bromodichloromethane	ND	0.50	NA	1	B2E0539	05/18/2012	05/18/12 14:18	
Bromoform	ND	0.50	NA	1	B2E0539	05/18/2012	05/18/12 14:18	
Bromomethane	ND	0.50	NA	1	B2E0539	05/18/2012	05/18/12 14:18	
Carbon tetrachloride	ND	0.50	NA	1	B2E0539	05/18/2012	05/18/12 14:18	
Chlorobenzene	ND	0.50	NA	1	B2E0539	05/18/2012	05/18/12 14:18	
Chloroethane	ND	0.50	NA	1	B2E0539	05/18/2012	05/18/12 14:18	
Chloroform	ND	0.50	NA	1	B2E0539	05/18/2012	05/18/12 14:18	
Chloromethane	ND	0.50	NA	1	B2E0539	05/18/2012	05/18/12 14:18	



Hargis & Associates, Inc.
9171 Towne Centre Drive, Suite 375
San Diego, CA 92122

Project Number : Raytheon, 532.30
Report To : Steve Netto
Reported : 05/22/2012

Client Sample ID MW-36
Lab ID: 1201761-05

Volatile Organic Compounds by EPA 8260

Analyst: DC

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
cis-1,2-Dichloroethene	ND	0.50	NA	1	B2E0539	05/18/2012	05/18/12 14:18	
cis-1,3-Dichloropropene	ND	0.50	NA	1	B2E0539	05/18/2012	05/18/12 14:18	
Dibromochloromethane	ND	0.50	NA	1	B2E0539	05/18/2012	05/18/12 14:18	
Dibromomethane	ND	0.50	NA	1	B2E0539	05/18/2012	05/18/12 14:18	
Dichlorodifluoromethane	ND	0.50	NA	1	B2E0539	05/18/2012	05/18/12 14:18	
Ethylbenzene	ND	0.50	NA	1	B2E0539	05/18/2012	05/18/12 14:18	
Hexachlorobutadiene	ND	0.50	NA	1	B2E0539	05/18/2012	05/18/12 14:18	
Isopropylbenzene	ND	0.50	NA	1	B2E0539	05/18/2012	05/18/12 14:18	
m,p-Xylene	ND	1.0	NA	1	B2E0539	05/18/2012	05/18/12 14:18	
Methylene chloride	ND	1.0	NA	1	B2E0539	05/18/2012	05/18/12 14:18	
n-Butylbenzene	ND	0.50	NA	1	B2E0539	05/18/2012	05/18/12 14:18	
n-Propylbenzene	ND	0.50	NA	1	B2E0539	05/18/2012	05/18/12 14:18	
Naphthalene	ND	0.50	NA	1	B2E0539	05/18/2012	05/18/12 14:18	
o-Xylene	ND	0.50	NA	1	B2E0539	05/18/2012	05/18/12 14:18	
sec-Butylbenzene	ND	0.50	NA	1	B2E0539	05/18/2012	05/18/12 14:18	
Styrene	ND	0.50	NA	1	B2E0539	05/18/2012	05/18/12 14:18	
tert-Butylbenzene	ND	0.50	NA	1	B2E0539	05/18/2012	05/18/12 14:18	
Tetrachloroethene	ND	0.50	NA	1	B2E0539	05/18/2012	05/18/12 14:18	
Toluene	1.1	0.50	NA	1	B2E0539	05/18/2012	05/18/12 14:18	
trans-1,2-Dichloroethene	ND	0.50	NA	1	B2E0539	05/18/2012	05/18/12 14:18	
Trichloroethene	ND	0.50	NA	1	B2E0539	05/18/2012	05/18/12 14:18	
Trichlorofluoromethane	ND	0.50	NA	1	B2E0539	05/18/2012	05/18/12 14:18	
Vinyl chloride	ND	0.50	NA	1	B2E0539	05/18/2012	05/18/12 14:18	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>103 %</i>		<i>70 - 130</i>		B2E0539	05/18/2012	<i>05/18/12 14:18</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>118 %</i>		<i>70 - 130</i>		B2E0539	05/18/2012	<i>05/18/12 14:18</i>	
<i>Surrogate: Dibromofluoromethane</i>	<i>113 %</i>		<i>70 - 130</i>		B2E0539	05/18/2012	<i>05/18/12 14:18</i>	
<i>Surrogate: Toluene-d8</i>	<i>117 %</i>		<i>70 - 130</i>		B2E0539	05/18/2012	<i>05/18/12 14:18</i>	



Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : Raytheon, 532.30

Report To : Steve Netto

Reported : 05/22/2012

Client Sample ID MW-36

Lab ID: 1201761-05

1,4-Dioxane by EPA 8270/SIM: Isotope Dilution Technique

Analyst: PIL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,4-Dioxane	2.8	0.20	NA	1	B2E0430	05/15/2012	05/16/12 18:00	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	<i>95.3 %</i>		<i>36 - 107</i>		B2E0430	05/15/2012	<i>05/16/12 18:00</i>	
<i>Surrogate: 2-Fluorobiphenyl</i>	<i>76.5 %</i>		<i>42 - 120</i>		B2E0430	05/15/2012	<i>05/16/12 18:00</i>	
<i>Surrogate: 4-Terphenyl-d14</i>	<i>96.7 %</i>		<i>67 - 142</i>		B2E0430	05/15/2012	<i>05/16/12 18:00</i>	
<i>Surrogate: Nitrobenzene-d5</i>	<i>74.9 %</i>		<i>36 - 130</i>		B2E0430	05/15/2012	<i>05/16/12 18:00</i>	



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San Diego , CA 92122

Project Number : Raytheon, 532.30

Report To : Steve Netto

Reported : 05/22/2012

QUALITY CONTROL SECTION

Volatile Organic Compounds by EPA 8260 - Quality Control

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B2E0539 - MSVOAW_LL

Blank (B2E0539-BLK1)

Prepared: 5/18/2012 Analyzed: 5/18/2012

1,1,1,2-Tetrachloroethane	ND	0.50				NR			
1,1,1-Trichloroethane	ND	0.50				NR			
1,1,2,2-Tetrachloroethane	ND	0.50				NR			
1,1,2-Trichloroethane	ND	0.50				NR			
1,1-Dichloroethane	ND	0.50				NR			
1,1-Dichloroethene	ND	0.50				NR			
1,1-Dichloropropene	ND	0.50				NR			
1,2,3-Trichloropropane	ND	0.50				NR			
1,2,3-Trichlorobenzene	ND	0.50				NR			
1,2,4-Trichlorobenzene	ND	0.50				NR			
1,2,4-Trimethylbenzene	ND	0.50				NR			
1,2-Dibromo-3-chloropropane	ND	0.50				NR			
1,2-Dibromoethane	ND	0.50				NR			
1,2-Dichlorobenzene	ND	0.50				NR			
1,2-Dichloroethane	ND	0.50				NR			
1,2-Dichloropropane	ND	0.50				NR			
1,3,5-Trimethylbenzene	ND	0.50				NR			
1,3-Dichlorobenzene	ND	0.50				NR			
1,3-Dichloropropane	ND	0.50				NR			
1,4-Dichlorobenzene	ND	0.50				NR			
2,2-Dichloropropane	ND	0.50				NR			
2-Chlorotoluene	ND	0.50				NR			
4-Chlorotoluene	ND	0.50				NR			
4-Isopropyltoluene	ND	0.50				NR			
Benzene	ND	0.50				NR			
Bromobenzene	ND	0.50				NR			
Bromodichloromethane	ND	0.50				NR			
Bromoform	ND	0.50				NR			
Bromomethane	ND	0.50				NR			
Carbon tetrachloride	ND	0.50				NR			
Chlorobenzene	ND	0.50				NR			
Chloroethane	ND	0.50				NR			
Chloroform	ND	0.50				NR			
Chloromethane	ND	0.50				NR			
cis-1,2-Dichloroethene	ND	0.50				NR			
cis-1,3-Dichloropropene	ND	0.50				NR			
Dibromochloromethane	ND	0.50				NR			
Dibromomethane	ND	0.50				NR			
Dichlorodifluoromethane	ND	0.50				NR			



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 San Diego , CA 92122

Project Number : Raytheon, 532.30
 Report To : Steve Netto
 Reported : 05/22/2012

Volatile Organic Compounds by EPA 8260 - Quality Control (cont'd)

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec % Rec	% Rec Limits	RPD RPD	RPD Limit	Notes
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Batch B2E0539 - MSVOAW_LL (continued)

Blank (B2E0539-BLK1) - Continued

Prepared: 5/18/2012 Analyzed: 5/18/2012

Ethylbenzene	ND	0.50						NR	
Hexachlorobutadiene	ND	0.50						NR	
Isopropylbenzene	ND	0.50						NR	
m,p-Xylene	ND	1.0						NR	
Methylene chloride	ND	1.0						NR	
n-Butylbenzene	ND	0.50						NR	
n-Propylbenzene	ND	0.50						NR	
Naphthalene	ND	0.50						NR	
o-Xylene	ND	0.50						NR	
sec-Butylbenzene	ND	0.50						NR	
Styrene	ND	0.50						NR	
tert-Butylbenzene	ND	0.50						NR	
Tetrachloroethene	ND	0.50						NR	
Toluene	ND	0.50						NR	
trans-1,2-Dichloroethene	ND	0.50						NR	
Trichloroethene	ND	0.50						NR	
Trichlorofluoromethane	ND	0.50						NR	
Vinyl chloride	ND	0.50						NR	

Surrogate: 1,2-Dichloroethane-d4	24		25.0		95.0			70 - 130	
Surrogate: 4-Bromofluorobenzene	30		25.0		118			70 - 130	
Surrogate: Dibromofluoromethane	27		25.0		109			70 - 130	
Surrogate: Toluene-d8	30		25.0		118			70 - 130	

LCS (B2E0539-BS1)

Prepared: 5/18/2012 Analyzed: 5/18/2012

1,1-Dichloroethene	17	0.50	20.0		85.6			70 - 130	
Benzene	41	0.50	40.0		104			70 - 130	
Chlorobenzene	21	0.50	20.0		107			70 - 130	
MTBE	21	0.50	20.0		104			70 - 130	
Toluene	42	0.50	40.0		106			70 - 130	
Trichloroethene	20	0.50	20.0		100			70 - 130	

Surrogate: 1,2-Dichloroethane-d4	21		25.0		83.8			70 - 130	
Surrogate: 4-Bromofluorobenzene	24		25.0		94.9			70 - 130	
Surrogate: Dibromofluoromethane	23		25.0		92.0			70 - 130	
Surrogate: Toluene-d8	24		25.0		95.8			70 - 130	

LCS Dup (B2E0539-BS1)

Prepared: 5/18/2012 Analyzed: 5/18/2012

1,1-Dichloroethene	17	0.50	20.0		86.8	70 - 130	1.33	20	
Benzene	42	0.50	40.0		105	70 - 130	1.44	20	
Chlorobenzene	22	0.50	20.0		108	70 - 130	1.02	20	
MTBE	21	0.50	20.0		107	70 - 130	3.41	20	
Toluene	43	0.50	40.0		107	70 - 130	0.470	20	



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Report To : Steve Netto

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Volatile Organic Compounds by EPA 8260 - Quality Control (cont'd)

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec % Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B2E0539 - MSVOAW_LL (continued)

LCS Dup (B2E0539-BSD1) - Continued

Prepared: 5/18/2012 Analyzed: 5/18/2012

Trichloroethene	20	0.50	20.0		102	70 - 130	1.38	20	
Surrogate: 1,2-Dichloroethane-d4	21		25.0		83.7	70 - 130			
Surrogate: 4-Bromofluorobenzene	23		25.0		93.2	70 - 130			
Surrogate: Dibromofluoromethane	23		25.0		91.1	70 - 130			
Surrogate: Toluene-d8	24		25.0		95.8	70 - 130			

Matrix Spike (B2E0539-MS1)

Source: 1201761-02

Prepared: 5/18/2012 Analyzed: 5/18/2012

1,1-Dichloroethene	20	0.50	20.0	ND	101	70 - 130			
Benzene	46	0.50	40.0	ND	115	70 - 130			
Chlorobenzene	23	0.50	20.0	ND	116	70 - 130			
MTBE	23	0.50	20.0	ND	114	70 - 130			
Toluene	47	0.50	40.0	ND	118	70 - 130			
Trichloroethene	23	0.50	20.0	ND	116	70 - 130			
Surrogate: 1,2-Dichloroethane-d4	25		25.0		98.9	70 - 130			
Surrogate: 4-Bromofluorobenzene	30		25.0		121	70 - 130			
Surrogate: Dibromofluoromethane	27		25.0		109	70 - 130			
Surrogate: Toluene-d8	30		25.0		118	70 - 130			

Matrix Spike Dup (B2E0539-MSD1)

Source: 1201761-02

Prepared: 5/18/2012 Analyzed: 5/18/2012

1,1-Dichloroethene	19	0.50	20.0	ND	94.0	70 - 130	6.99	20	
Benzene	44	0.50	40.0	ND	110	70 - 130	4.09	20	
Chlorobenzene	22	0.50	20.0	ND	112	70 - 130	3.52	20	
MTBE	22	0.50	20.0	ND	108	70 - 130	4.87	20	
Toluene	45	0.50	40.0	ND	112	70 - 130	5.00	20	
Trichloroethene	22	0.50	20.0	ND	110	70 - 130	5.23	20	
Surrogate: 1,2-Dichloroethane-d4	24		25.0		94.7	70 - 130			
Surrogate: 4-Bromofluorobenzene	30		25.0		120	70 - 130			
Surrogate: Dibromofluoromethane	27		25.0		107	70 - 130			
Surrogate: Toluene-d8	30		25.0		118	70 - 130			

Batch B2E0614 - MSVOAW_LL

Blank (B2E0614-BLK1)

Prepared: 5/21/2012 Analyzed: 5/21/2012

1,1,1,2-Tetrachloroethane	ND	0.50			NR				
1,1,1-Trichloroethane	ND	0.50			NR				
1,1,2,2-Tetrachloroethane	ND	0.50			NR				
1,1,2-Trichloroethane	ND	0.50			NR				
1,1-Dichloroethane	ND	0.50			NR				
1,1-Dichloroethene	ND	0.50			NR				
1,1-Dichloropropene	ND	0.50			NR				
1,2,3-Trichloropropane	ND	0.50			NR				



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Volatile Organic Compounds by EPA 8260 - Quality Control (cont'd)

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec % Rec	Limits	RPD	RPD Limit	Notes
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Batch B2E0614 - MSVOAW_LL (continued)

Blank (B2E0614-BLK1) - Continued

Prepared: 5/21/2012 Analyzed: 5/21/2012

1,2,3-Trichlorobenzene	ND	0.50			NR				
1,2,4-Trichlorobenzene	ND	0.50			NR				
1,2,4-Trimethylbenzene	ND	0.50			NR				
1,2-Dibromo-3-chloropropane	ND	0.50			NR				
1,2-Dibromoethane	ND	0.50			NR				
1,2-Dichlorobenzene	ND	0.50			NR				
1,2-Dichloroethane	ND	0.50			NR				
1,2-Dichloropropane	ND	0.50			NR				
1,3,5-Trimethylbenzene	ND	0.50			NR				
1,3-Dichlorobenzene	ND	0.50			NR				
1,3-Dichloropropane	ND	0.50			NR				
1,4-Dichlorobenzene	ND	0.50			NR				
2,2-Dichloropropane	ND	0.50			NR				
2-Chlorotoluene	ND	0.50			NR				
4-Chlorotoluene	ND	0.50			NR				
4-Isopropyltoluene	ND	0.50			NR				
Benzene	ND	0.50			NR				
Bromobenzene	ND	0.50			NR				
Bromodichloromethane	ND	0.50			NR				
Bromoform	ND	0.50			NR				
Bromomethane	ND	0.50			NR				
Carbon tetrachloride	ND	0.50			NR				
Chlorobenzene	ND	0.50			NR				
Chloroethane	ND	0.50			NR				
Chloroform	ND	0.50			NR				
Chloromethane	ND	0.50			NR				
cis-1,2-Dichloroethene	ND	0.50			NR				
cis-1,3-Dichloropropene	ND	0.50			NR				
Dibromochloromethane	ND	0.50			NR				
Dibromomethane	ND	0.50			NR				
Dichlorodifluoromethane	ND	0.50			NR				
Ethylbenzene	ND	0.50			NR				
Hexachlorobutadiene	ND	0.50			NR				
Isopropylbenzene	ND	0.50			NR				
m,p-Xylene	ND	1.0			NR				
Methylene chloride	ND	1.0			NR				
n-Butylbenzene	ND	0.50			NR				
n-Propylbenzene	ND	0.50			NR				
Naphthalene	ND	0.50			NR				
o-Xylene	ND	0.50			NR				
sec-Butylbenzene	ND	0.50			NR				
Styrene	ND	0.50			NR				



Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : Raytheon, 532.30

Report To : Steve Netto

Reported : 05/22/2012

Volatile Organic Compounds by EPA 8260 - Quality Control (cont'd)

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec % Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B2E0614 - MSVOAW_LL (continued)

Blank (B2E0614-BLK1) - Continued

Prepared: 5/21/2012 Analyzed: 5/21/2012

tert-Butylbenzene	ND	0.50			NR				
Tetrachloroethene	ND	0.50			NR				
Toluene	ND	0.50			NR				
trans-1,2-Dichloroethene	ND	0.50			NR				
Trichloroethene	ND	0.50			NR				
Trichlorofluoromethane	ND	0.50			NR				
Vinyl chloride	ND	0.50			NR				
<i>Surrogate: 1,2-Dichloroethane-d4</i>	28		25.0		111	70 - 130			
<i>Surrogate: 4-Bromofluorobenzene</i>	30		25.0		119	70 - 130			
<i>Surrogate: Dibromofluoromethane</i>	29		25.0		118	70 - 130			
<i>Surrogate: Toluene-d8</i>	29		25.0		116	70 - 130			

LCS (B2E0614-BS1)

Prepared: 5/21/2012 Analyzed: 5/21/2012

1,1-Dichloroethene	19	0.50	20.0		95.2	70 - 130			
Benzene	43	0.50	40.0		107	70 - 130			
Chlorobenzene	21	0.50	20.0		105	70 - 130			
MTBE	20	0.50	20.0		101	70 - 130			
Toluene	43	0.50	40.0		106	70 - 130			
Trichloroethene	20	0.50	20.0		97.8	70 - 130			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	22		25.0		89.3	70 - 130			
<i>Surrogate: 4-Bromofluorobenzene</i>	23		25.0		93.2	70 - 130			
<i>Surrogate: Dibromofluoromethane</i>	23		25.0		91.4	70 - 130			
<i>Surrogate: Toluene-d8</i>	24		25.0		94.2	70 - 130			

LCS Dup (B2E0614-BSD1)

Prepared: 5/21/2012 Analyzed: 5/21/2012

1,1-Dichloroethene	21	0.50	20.0		103	70 - 130	8.21	20	
Benzene	45	0.50	40.0		113	70 - 130	5.03	20	
Chlorobenzene	22	0.50	20.0		110	70 - 130	4.79	20	
MTBE	22	0.50	20.0		108	70 - 130	6.42	20	
Toluene	45	0.50	40.0		112	70 - 130	5.35	20	
Trichloroethene	21	0.50	20.0		106	70 - 130	7.63	20	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	23		25.0		90.8	70 - 130			
<i>Surrogate: 4-Bromofluorobenzene</i>	24		25.0		94.8	70 - 130			
<i>Surrogate: Dibromofluoromethane</i>	23		25.0		92.0	70 - 130			
<i>Surrogate: Toluene-d8</i>	24		25.0		94.7	70 - 130			



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 San Diego, CA 92122

Project Number : Raytheon, 532.30
 Report To : Steve Netto
 Reported : 05/22/2012

1,4-Dioxane by EPA 8270: Isotope Dilution Technique - Quality Control

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec % Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B2E0386 - MSSEMI_ISOTOPEDILN

Blank (B2E0386-BLK2)

Prepared: 5/14/2012 Analyzed: 5/15/2012

1,4-Dioxane	ND	2.0			NR				
Surrogate: 1,2-Dichlorobenzene-d4	76		100		76.0	37 - 93			
Surrogate: 2-Fluorobiphenyl	85		100		85.2	51 - 100			
Surrogate: 4-Terphenyl-d14	120		100		118	58 - 113			S1
Surrogate: Nitrobenzene-d5	87		100		86.7	39 - 95			

LCS (B2E0386-BS2)

Prepared: 5/14/2012 Analyzed: 5/15/2012

1,4-Dioxane	100	2.0	100		102	70 - 130			
Surrogate: 1,2-Dichlorobenzene-d4	82		100		81.9	37 - 93			
Surrogate: 2-Fluorobiphenyl	90		100		90.1	51 - 100			
Surrogate: 4-Terphenyl-d14	110		100		110	58 - 113			
Surrogate: Nitrobenzene-d5	90		100		90.2	39 - 95			

Matrix Spike (B2E0386-MS2)

Source: 1201761-04

Prepared: 5/14/2012 Analyzed: 5/15/2012

1,4-Dioxane	160	2.0	100	58	104	0 - 200			
Surrogate: 1,2-Dichlorobenzene-d4	87		100		86.7	37 - 93			
Surrogate: 2-Fluorobiphenyl	89		100		89.2	51 - 100			
Surrogate: 4-Terphenyl-d14	110		100		110	58 - 113			
Surrogate: Nitrobenzene-d5	94		100		94.1	39 - 95			

Matrix Spike Dup (B2E0386-MSD2)

Source: 1201761-04

Prepared: 5/14/2012 Analyzed: 5/15/2012

1,4-Dioxane	150	2.0	100	58	88.6	0 - 200	10.1	200	
Surrogate: 1,2-Dichlorobenzene-d4	86		100		85.8	37 - 93			
Surrogate: 2-Fluorobiphenyl	94		100		93.8	51 - 100			
Surrogate: 4-Terphenyl-d14	110		100		112	58 - 113			
Surrogate: Nitrobenzene-d5	96		100		95.5	39 - 95			S8



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Project Number : Raytheon, 532.30
 Report To : Steve Netto
 Reported : 05/22/2012

1,4-Dioxane by EPA 8270/SIM: Isotope Dilution Technique - Quality Control

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec % Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B2E0430 - MSSEMI_ISOTOPEDILN

Blank (B2E0430-BLK1)

Prepared: 5/15/2012 Analyzed: 5/16/2012

1,4-Dioxane	ND	0.20			NR				
Surrogate: 1,2-Dichlorobenzene-d4	0.89		1.00		89.2	36 - 107			
Surrogate: 2-Fluorobiphenyl	0.79		1.00		79.1	42 - 120			
Surrogate: 4-Terphenyl-d14	0.96		1.00		96.1	67 - 142			
Surrogate: Nitrobenzene-d5	0.51		1.00		51.1	36 - 130			

LCS (B2E0430-BS1)

Prepared: 5/15/2012 Analyzed: 5/16/2012

1,4-Dioxane	1.0	0.20	1.00		101	70 - 130			
Surrogate: 1,2-Dichlorobenzene-d4	0.93		1.00		93.3	36 - 107			
Surrogate: 2-Fluorobiphenyl	0.80		1.00		79.8	42 - 120			
Surrogate: 4-Terphenyl-d14	0.88		1.00		88.2	67 - 142			
Surrogate: Nitrobenzene-d5	0.59		1.00		58.8	36 - 130			

Matrix Spike (B2E0430-MS1)

Source: 1201715-02

Prepared: 5/15/2012 Analyzed: 5/16/2012

1,4-Dioxane	0.98	0.20	1.00	ND	98.5	70 - 130			
Surrogate: 1,2-Dichlorobenzene-d4	0.91		1.00		91.0	36 - 107			
Surrogate: 2-Fluorobiphenyl	0.78		1.00		77.6	42 - 120			
Surrogate: 4-Terphenyl-d14	0.85		1.00		85.4	67 - 142			
Surrogate: Nitrobenzene-d5	0.60		1.00		60.4	36 - 130			

Matrix Spike Dup (B2E0430-MSD1)

Source: 1201715-02

Prepared: 5/15/2012 Analyzed: 5/16/2012

1,4-Dioxane	0.96	0.20	1.00	ND	95.9	70 - 130	2.65	20	
Surrogate: 1,2-Dichlorobenzene-d4	0.92		1.00		92.1	36 - 107			
Surrogate: 2-Fluorobiphenyl	0.76		1.00		76.0	42 - 120			
Surrogate: 4-Terphenyl-d14	0.78		1.00		78.2	67 - 142			
Surrogate: Nitrobenzene-d5	0.65		1.00		64.9	36 - 130			



Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : Raytheon, 532.30

Report To : Steve Netto

Reported : 05/22/2012

Notes and Definitions

- S8 Surrogate recovery was above laboratory acceptance limit. See CAR for details.
- S1 Surrogate recovery was above laboratory acceptance limit. No target analyte was detected in the sample.
- D4 Reporting limits adjusted to reflect sample amount analyzed.
- ND Analyte not detected at or above reporting limit
- PQL Practical Quantitation Limit
- MDL Method Detection Limit
- NR Not Reported
- RPD Relative Percent Difference
- CA1 CA-NELAP (CDPH)
- CA2 CA-ELAP (CDPH)
- OR1 OR-NELAP (OSPHL)
- TX1 TX-NELAP (TCEQ)

PROJECT NAME		PROJECT No./TASK No.		SAMPLE CONTAINERS		ANALYSIS REQUESTED		ESTIMATED CONCENTRATION RANGE (ppb) FOR VOAS		SPECIAL HANDLING		LABORATORY INFORMATION					
Raytheon		532.30										ATL ATTN: RACHELLE AVRATA					
PROJECT MANAGER Steve Netto		Phone No. 858-455-6500															
QA MANAGER		Fax No. 858-455-6533															
SAMPLER (SIGNATURE) <i>Daniel Mora</i>		SAMPLER (PRINTED) Daniel Mora Amanda Beam															
LAB ID	SAMPLE ID	SAMPLE COLLECTION		MATRIX		PRESERVATION		40 ml VOA	1L Amber	VOCs 8260B	1,4-Dioxane 8270 MOD	1,4-Dioxane 8270 STI	0110 101#00	100-1,000 1,000-10,000 >10,000	24 TAT 48 TAT	Standard TAT MSD collected MS collected	REMARKS
		Date	Time	Soil Ground-water Surface water	LAB#	HCl HNO3 NaOH H2SO4 Ice											
1201706-01	TB-051012A	5/10/12	700		X	X		X					X				
2	MW-34C		942	X		X		X					X				
	↓		↓	X					1		X						
3	MW-34A		1026	X		X		X					X				
	↓		↓	X					1		X						
4	MW-34B		1055	X		X		X					X				
	↓		↓	X					1	X					X	X	2 x 1L Amber
5	MW-36		1537	X		X		X					X				
	↓		↓						1		X						

Total number of Containers per analysis: 14 4 Total No. of Containers: 20

Relinquished by: *[Signature]*
Date: 5/10/12
Time: 1700
Company: H+A, INC

Received by: *[Signature]*
Date: 5/10/12
Time: 1700
Company: ATL

INSTRUCTIONS

- Fill out form completely except for shaded areas (lab use only); sign only after verified for completeness.
- Complete in ballpoint pen. Draw one line through errors, initial and date correction.
- Indicate number of sample containers in analysis request space; indicate choice with ✓ or x.
- Note applicable preservatives, special instructions, and deviations from typical environmental samples.
- Consult project QA documents for specific instructions.

Shipment Method: Carrier pick up
Send Results to: Steve Netto

9171 TOWNE CENTRE DRIVE, SUITE 375
SAN DIEGO, CA 92122 (858) 455-6500

1640 SOUTH STAPLEY DRIVE, SUITE 124
MESA, AZ 85204 (480) 345-0888

1820 EAST RIVER ROAD, SUITE 220
TUCSON, AZ 85718 (520) 881-7300

Relinquished by: *[Signature]*
Date: 5/10/12
Time: 1800
Company: ATL

Received by: *[Signature]*
Date: 5/10/12
Time: 1800
Company: ATL

Sample Receipt: Temp. @ receipt 21.5 °C

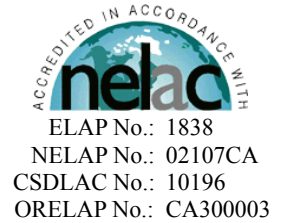
No. of containers correct received good condition/cold

custody seals secure conforms to COC document

Send invoice to San Diego, CA
Attn: Accounts Payable

May 22, 2012

Steve Netto
Hargis & Associates, Inc.
9171 Towne Centre Drive, Suite 375
San Diego, CA 92122
Tel: (619) 249-3166
Fax: (858) 455-6533



Re: ATL Work Order Number : 1201771
Client Reference : Raytheon, 532.30

Enclosed are the results for sample(s) received on May 11, 2012 by Advanced Technology Laboratories. The sample(s) are tested for the parameters as indicated on the enclosed chain of custody in accordance with applicable laboratory certifications. The laboratory results contained in this report specifically pertains to the sample(s) submitted.

Thank you for the opportunity to serve the needs of your company. If you have any questions, please feel free to contact me or your Project Manager.

Sincerely,

A handwritten signature in black ink, appearing to be "E. Rodriguez".

Eddie Rodriguez
Laboratory Director

The cover letter and the case narrative are an integral part of this analytical report and its absence renders the report invalid. The report cannot be reproduced without written permission from the client and Advanced Technology Laboratories.



Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : Raytheon, 532.30

Report To : Steve Netto

Reported : 05/22/2012

SUMMARY OF SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MW-30A	1201771-01	Groundwater	5/10/12 17:32	5/11/12 15:47
MW-30B	1201771-02	Groundwater	5/10/12 18:09	5/11/12 15:47
TB-051112	1201771-03	Lab H2O	5/11/12 6:00	5/11/12 15:47
MW-28	1201771-04	Groundwater	5/11/12 7:27	5/11/12 15:47
MW-29	1201771-05	Groundwater	5/11/12 8:16	5/11/12 15:47
MW-2900	1201771-06	Groundwater	5/11/12 8:36	5/11/12 15:47
MW-31	1201771-07	Groundwater	5/11/12 9:10	5/11/12 15:47
MW-08	1201771-08	Groundwater	5/11/12 13:16	5/11/12 15:47
RB-051112	1201771-09	Lab H2O	5/11/12 12:40	5/11/12 15:47



Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : Raytheon, 532.30

Report To : Steve Netto

Reported : 05/22/2012

Client Sample ID MW-30A

Lab ID: 1201771-01

Volatile Organic Compounds by EPA 8260

Analyst: DC

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 01:29	
1,1,1-Trichloroethane	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 01:29	
1,1,2,2-Tetrachloroethane	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 01:29	
1,1,2-Trichloroethane	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 01:29	
1,1-Dichloroethane	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 01:29	
1,1-Dichloroethene	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 01:29	
1,1-Dichloropropene	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 01:29	
1,2,3-Trichloropropane	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 01:29	
1,2,3-Trichlorobenzene	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 01:29	
1,2,4-Trichlorobenzene	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 01:29	
1,2,4-Trimethylbenzene	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 01:29	
1,2-Dibromo-3-chloropropane	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 01:29	
1,2-Dibromoethane	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 01:29	
1,2-Dichlorobenzene	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 01:29	
1,2-Dichloroethane	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 01:29	
1,2-Dichloropropane	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 01:29	
1,3,5-Trimethylbenzene	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 01:29	
1,3-Dichlorobenzene	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 01:29	
1,3-Dichloropropane	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 01:29	
1,4-Dichlorobenzene	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 01:29	
2,2-Dichloropropane	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 01:29	
2-Chlorotoluene	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 01:29	
4-Chlorotoluene	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 01:29	
4-Isopropyltoluene	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 01:29	
Benzene	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 01:29	
Bromobenzene	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 01:29	
Bromodichloromethane	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 01:29	
Bromoform	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 01:29	
Bromomethane	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 01:29	
Carbon tetrachloride	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 01:29	
Chlorobenzene	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 01:29	
Chloroethane	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 01:29	
Chloroform	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 01:29	
Chloromethane	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 01:29	



Hargis & Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego , CA 92122

Project Number : Raytheon, 532.30
 Report To : Steve Netto
 Reported : 05/22/2012

Client Sample ID MW-30A
Lab ID: 1201771-01

Volatile Organic Compounds by EPA 8260

Analyst: DC

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
cis-1,2-Dichloroethene	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 01:29	
cis-1,3-Dichloropropene	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 01:29	
Dibromochloromethane	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 01:29	
Dibromomethane	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 01:29	
Dichlorodifluoromethane	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 01:29	
Ethylbenzene	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 01:29	
Hexachlorobutadiene	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 01:29	
Isopropylbenzene	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 01:29	
m,p-Xylene	ND	1.0	NA	1	B2E0530	05/18/2012	05/18/12 01:29	
Methylene chloride	ND	1.0	NA	1	B2E0530	05/18/2012	05/18/12 01:29	
n-Butylbenzene	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 01:29	
n-Propylbenzene	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 01:29	
Naphthalene	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 01:29	
o-Xylene	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 01:29	
sec-Butylbenzene	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 01:29	
Styrene	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 01:29	
tert-Butylbenzene	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 01:29	
Tetrachloroethene	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 01:29	
Toluene	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 01:29	
trans-1,2-Dichloroethene	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 01:29	
Trichloroethene	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 01:29	
Trichlorofluoromethane	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 01:29	
Vinyl chloride	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 01:29	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>114 %</i>	<i>70 - 130</i>			B2E0530	05/18/2012	<i>05/18/12 01:29</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>119 %</i>	<i>70 - 130</i>			B2E0530	05/18/2012	<i>05/18/12 01:29</i>	
<i>Surrogate: Dibromofluoromethane</i>	<i>120 %</i>	<i>70 - 130</i>			B2E0530	05/18/2012	<i>05/18/12 01:29</i>	
<i>Surrogate: Toluene-d8</i>	<i>117 %</i>	<i>70 - 130</i>			B2E0530	05/18/2012	<i>05/18/12 01:29</i>	



Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego, CA 92122

Project Number : Raytheon, 532.30

Report To : Steve Netto

Reported : 05/22/2012

Client Sample ID MW-30A

Lab ID: 1201771-01

1,4-Dioxane by EPA 8270/SIM: Isotope Dilution Technique

Analyst: PIL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,4-Dioxane	ND	0.20	NA	1	B2E0430	05/15/2012	05/16/12 18:30	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	<i>67.7 %</i>		<i>36 - 107</i>		B2E0430	05/15/2012	<i>05/16/12 18:30</i>	
<i>Surrogate: 2-Fluorobiphenyl</i>	<i>51.1 %</i>		<i>42 - 120</i>		B2E0430	05/15/2012	<i>05/16/12 18:30</i>	
<i>Surrogate: 4-Terphenyl-d14</i>	<i>85.1 %</i>		<i>67 - 142</i>		B2E0430	05/15/2012	<i>05/16/12 18:30</i>	
<i>Surrogate: Nitrobenzene-d5</i>	<i>56.6 %</i>		<i>36 - 130</i>		B2E0430	05/15/2012	<i>05/16/12 18:30</i>	



Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : Raytheon, 532.30

Report To : Steve Netto

Reported : 05/22/2012

Client Sample ID MW-30B

Lab ID: 1201771-02

Volatile Organic Compounds by EPA 8260

Analyst: DC

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 02:30	
1,1,1-Trichloroethane	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 02:30	
1,1,2,2-Tetrachloroethane	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 02:30	
1,1,2-Trichloroethane	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 02:30	
1,1-Dichloroethane	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 02:30	
1,1-Dichloroethene	12	0.50	NA	1	B2E0530	05/18/2012	05/18/12 02:30	
1,1-Dichloropropene	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 02:30	
1,2,3-Trichloropropane	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 02:30	
1,2,3-Trichlorobenzene	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 02:30	
1,2,4-Trichlorobenzene	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 02:30	
1,2,4-Trimethylbenzene	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 02:30	
1,2-Dibromo-3-chloropropane	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 02:30	
1,2-Dibromoethane	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 02:30	
1,2-Dichlorobenzene	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 02:30	
1,2-Dichloroethane	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 02:30	
1,2-Dichloropropane	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 02:30	
1,3,5-Trimethylbenzene	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 02:30	
1,3-Dichlorobenzene	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 02:30	
1,3-Dichloropropane	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 02:30	
1,4-Dichlorobenzene	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 02:30	
2,2-Dichloropropane	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 02:30	
2-Chlorotoluene	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 02:30	
4-Chlorotoluene	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 02:30	
4-Isopropyltoluene	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 02:30	
Benzene	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 02:30	
Bromobenzene	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 02:30	
Bromodichloromethane	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 02:30	
Bromoform	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 02:30	
Bromomethane	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 02:30	
Carbon tetrachloride	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 02:30	
Chlorobenzene	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 02:30	
Chloroethane	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 02:30	
Chloroform	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 02:30	
Chloromethane	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 02:30	



Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : Raytheon, 532.30

Report To : Steve Netto

Reported : 05/22/2012

Client Sample ID MW-30B

Lab ID: 1201771-02

Volatile Organic Compounds by EPA 8260

Analyst: DC

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
cis-1,2-Dichloroethene	3.8	0.50	NA	1	B2E0530	05/18/2012	05/18/12 02:30	
cis-1,3-Dichloropropene	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 02:30	
Dibromochloromethane	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 02:30	
Dibromomethane	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 02:30	
Dichlorodifluoromethane	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 02:30	
Ethylbenzene	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 02:30	
Hexachlorobutadiene	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 02:30	
Isopropylbenzene	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 02:30	
m,p-Xylene	ND	1.0	NA	1	B2E0530	05/18/2012	05/18/12 02:30	
Methylene chloride	ND	1.0	NA	1	B2E0530	05/18/2012	05/18/12 02:30	
n-Butylbenzene	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 02:30	
n-Propylbenzene	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 02:30	
Naphthalene	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 02:30	
o-Xylene	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 02:30	
sec-Butylbenzene	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 02:30	
Styrene	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 02:30	
tert-Butylbenzene	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 02:30	
Tetrachloroethene	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 02:30	
Toluene	1.8	0.50	NA	1	B2E0530	05/18/2012	05/18/12 02:30	
trans-1,2-Dichloroethene	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 02:30	
Trichloroethene	63	0.50	NA	1	B2E0530	05/18/2012	05/18/12 02:30	
Trichlorofluoromethane	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 02:30	
Vinyl chloride	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 02:30	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>114 %</i>		<i>70 - 130</i>		B2E0530	05/18/2012	<i>05/18/12 02:30</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>116 %</i>		<i>70 - 130</i>		B2E0530	05/18/2012	<i>05/18/12 02:30</i>	
<i>Surrogate: Dibromofluoromethane</i>	<i>120 %</i>		<i>70 - 130</i>		B2E0530	05/18/2012	<i>05/18/12 02:30</i>	
<i>Surrogate: Toluene-d8</i>	<i>111 %</i>		<i>70 - 130</i>		B2E0530	05/18/2012	<i>05/18/12 02:30</i>	



Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego, CA 92122

Project Number : Raytheon, 532.30

Report To : Steve Netto

Reported : 05/22/2012

Client Sample ID MW-30B

Lab ID: 1201771-02

1,4-Dioxane by EPA 8270/SIM: Isotope Dilution Technique

Analyst: PIL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,4-Dioxane	0.27	0.20	NA	1	B2E0430	05/15/2012	05/16/12 18:59	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	<i>63.9 %</i>		<i>36 - 107</i>		B2E0430	05/15/2012	<i>05/16/12 18:59</i>	
<i>Surrogate: 2-Fluorobiphenyl</i>	<i>54.8 %</i>		<i>42 - 120</i>		B2E0430	05/15/2012	<i>05/16/12 18:59</i>	
<i>Surrogate: 4-Terphenyl-d14</i>	<i>80.3 %</i>		<i>67 - 142</i>		B2E0430	05/15/2012	<i>05/16/12 18:59</i>	
<i>Surrogate: Nitrobenzene-d5</i>	<i>60.7 %</i>		<i>36 - 130</i>		B2E0430	05/15/2012	<i>05/16/12 18:59</i>	



Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : Raytheon, 532.30

Report To : Steve Netto

Reported : 05/22/2012

Client Sample ID TB-051112

Lab ID: 1201771-03

Volatile Organic Compounds by EPA 8260

Analyst: DC

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 01:50	
1,1,1-Trichloroethane	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 01:50	
1,1,2,2-Tetrachloroethane	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 01:50	
1,1,2-Trichloroethane	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 01:50	
1,1-Dichloroethane	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 01:50	
1,1-Dichloroethene	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 01:50	
1,1-Dichloropropene	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 01:50	
1,2,3-Trichloropropane	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 01:50	
1,2,3-Trichlorobenzene	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 01:50	
1,2,4-Trichlorobenzene	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 01:50	
1,2,4-Trimethylbenzene	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 01:50	
1,2-Dibromo-3-chloropropane	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 01:50	
1,2-Dibromoethane	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 01:50	
1,2-Dichlorobenzene	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 01:50	
1,2-Dichloroethane	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 01:50	
1,2-Dichloropropane	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 01:50	
1,3,5-Trimethylbenzene	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 01:50	
1,3-Dichlorobenzene	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 01:50	
1,3-Dichloropropane	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 01:50	
1,4-Dichlorobenzene	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 01:50	
2,2-Dichloropropane	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 01:50	
2-Chlorotoluene	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 01:50	
4-Chlorotoluene	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 01:50	
4-Isopropyltoluene	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 01:50	
Benzene	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 01:50	
Bromobenzene	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 01:50	
Bromodichloromethane	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 01:50	
Bromoform	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 01:50	
Bromomethane	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 01:50	
Carbon tetrachloride	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 01:50	
Chlorobenzene	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 01:50	
Chloroethane	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 01:50	
Chloroform	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 01:50	
Chloromethane	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 01:50	



Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : Raytheon, 532.30

Report To : Steve Netto

Reported : 05/22/2012

Client Sample ID TB-051112

Lab ID: 1201771-03

Volatile Organic Compounds by EPA 8260

Analyst: DC

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
cis-1,2-Dichloroethene	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 01:50	
cis-1,3-Dichloropropene	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 01:50	
Dibromochloromethane	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 01:50	
Dibromomethane	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 01:50	
Dichlorodifluoromethane	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 01:50	
Ethylbenzene	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 01:50	
Hexachlorobutadiene	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 01:50	
Isopropylbenzene	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 01:50	
m,p-Xylene	ND	1.0	NA	1	B2E0530	05/18/2012	05/18/12 01:50	
Methylene chloride	ND	1.0	NA	1	B2E0530	05/18/2012	05/18/12 01:50	
n-Butylbenzene	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 01:50	
n-Propylbenzene	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 01:50	
Naphthalene	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 01:50	
o-Xylene	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 01:50	
sec-Butylbenzene	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 01:50	
Styrene	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 01:50	
tert-Butylbenzene	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 01:50	
Tetrachloroethene	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 01:50	
Toluene	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 01:50	
trans-1,2-Dichloroethene	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 01:50	
Trichloroethene	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 01:50	
Trichlorofluoromethane	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 01:50	
Vinyl chloride	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 01:50	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>115 %</i>	<i>70 - 130</i>			B2E0530	05/18/2012	<i>05/18/12 01:50</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>120 %</i>	<i>70 - 130</i>			B2E0530	05/18/2012	<i>05/18/12 01:50</i>	
<i>Surrogate: Dibromofluoromethane</i>	<i>121 %</i>	<i>70 - 130</i>			B2E0530	05/18/2012	<i>05/18/12 01:50</i>	
<i>Surrogate: Toluene-d8</i>	<i>120 %</i>	<i>70 - 130</i>			B2E0530	05/18/2012	<i>05/18/12 01:50</i>	



Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : Raytheon, 532.30

Report To : Steve Netto

Reported : 05/22/2012

Client Sample ID MW-28

Lab ID: 1201771-04

Volatile Organic Compounds by EPA 8260

Analyst: DC

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 00:49	
1,1,1-Trichloroethane	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 00:49	
1,1,2,2-Tetrachloroethane	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 00:49	
1,1,2-Trichloroethane	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 00:49	
1,1-Dichloroethane	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 00:49	
1,1-Dichloroethene	0.99	0.50	NA	1	B2E0530	05/18/2012	05/18/12 00:49	
1,1-Dichloropropene	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 00:49	
1,2,3-Trichloropropane	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 00:49	
1,2,3-Trichlorobenzene	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 00:49	
1,2,4-Trichlorobenzene	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 00:49	
1,2,4-Trimethylbenzene	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 00:49	
1,2-Dibromo-3-chloropropane	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 00:49	
1,2-Dibromoethane	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 00:49	
1,2-Dichlorobenzene	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 00:49	
1,2-Dichloroethane	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 00:49	
1,2-Dichloropropane	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 00:49	
1,3,5-Trimethylbenzene	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 00:49	
1,3-Dichlorobenzene	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 00:49	
1,3-Dichloropropane	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 00:49	
1,4-Dichlorobenzene	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 00:49	
2,2-Dichloropropane	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 00:49	
2-Chlorotoluene	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 00:49	
4-Chlorotoluene	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 00:49	
4-Isopropyltoluene	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 00:49	
Benzene	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 00:49	
Bromobenzene	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 00:49	
Bromodichloromethane	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 00:49	
Bromoform	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 00:49	
Bromomethane	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 00:49	
Carbon tetrachloride	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 00:49	
Chlorobenzene	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 00:49	
Chloroethane	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 00:49	
Chloroform	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 00:49	
Chloromethane	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 00:49	



Hargis & Associates, Inc.
9171 Towne Centre Drive, Suite 375
San Diego , CA 92122

Project Number : Raytheon, 532.30
Report To : Steve Netto
Reported : 05/22/2012

Client Sample ID MW-28
Lab ID: 1201771-04

Volatile Organic Compounds by EPA 8260

Analyst: DC

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
cis-1,2-Dichloroethene	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 00:49	
cis-1,3-Dichloropropene	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 00:49	
Dibromochloromethane	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 00:49	
Dibromomethane	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 00:49	
Dichlorodifluoromethane	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 00:49	
Ethylbenzene	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 00:49	
Hexachlorobutadiene	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 00:49	
Isopropylbenzene	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 00:49	
m,p-Xylene	ND	1.0	NA	1	B2E0530	05/18/2012	05/18/12 00:49	
Methylene chloride	ND	1.0	NA	1	B2E0530	05/18/2012	05/18/12 00:49	
n-Butylbenzene	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 00:49	
n-Propylbenzene	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 00:49	
Naphthalene	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 00:49	
o-Xylene	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 00:49	
sec-Butylbenzene	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 00:49	
Styrene	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 00:49	
tert-Butylbenzene	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 00:49	
Tetrachloroethene	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 00:49	
Toluene	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 00:49	
trans-1,2-Dichloroethene	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 00:49	
Trichloroethene	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 00:49	
Trichlorofluoromethane	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 00:49	
Vinyl chloride	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 00:49	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>112 %</i>		<i>70 - 130</i>		B2E0530	05/18/2012	<i>05/18/12 00:49</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>119 %</i>		<i>70 - 130</i>		B2E0530	05/18/2012	<i>05/18/12 00:49</i>	
<i>Surrogate: Dibromofluoromethane</i>	<i>119 %</i>		<i>70 - 130</i>		B2E0530	05/18/2012	<i>05/18/12 00:49</i>	
<i>Surrogate: Toluene-d8</i>	<i>117 %</i>		<i>70 - 130</i>		B2E0530	05/18/2012	<i>05/18/12 00:49</i>	



Hargis & Associates, Inc.
9171 Towne Centre Drive, Suite 375
San Diego , CA 92122

Project Number : Raytheon, 532.30
Report To : Steve Netto
Reported : 05/22/2012

Client Sample ID MW-28
Lab ID: 1201771-04

1,4-Dioxane by EPA 8270/SIM: Isotope Dilution Technique

Analyst: PIL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,4-Dioxane	0.22	0.20	NA	1	B2E0430	05/15/2012	05/16/12 19:27	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	82.8 %		36 - 107		B2E0430	05/15/2012	05/16/12 19:27	
<i>Surrogate: 2-Fluorobiphenyl</i>	73.1 %		42 - 120		B2E0430	05/15/2012	05/16/12 19:27	
<i>Surrogate: 4-Terphenyl-d14</i>	97.3 %		67 - 142		B2E0430	05/15/2012	05/16/12 19:27	
<i>Surrogate: Nitrobenzene-d5</i>	69.5 %		36 - 130		B2E0430	05/15/2012	05/16/12 19:27	



Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : Raytheon, 532.30

Report To : Steve Netto

Reported : 05/22/2012

Client Sample ID MW-29

Lab ID: 1201771-05

Volatile Organic Compounds by EPA 8260

Analyst: DC

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	4.0	NA	1	B2E0539	05/18/2012	05/18/12 19:23	D4
1,1,1-Trichloroethane	ND	4.0	NA	1	B2E0539	05/18/2012	05/18/12 19:23	D4
1,1,2,2-Tetrachloroethane	ND	4.0	NA	1	B2E0539	05/18/2012	05/18/12 19:23	D4
1,1,2-Trichloroethane	ND	4.0	NA	1	B2E0539	05/18/2012	05/18/12 19:23	D4
1,1-Dichloroethane	8.3	4.0	NA	1	B2E0539	05/18/2012	05/18/12 19:23	D4
1,1-Dichloroethene	780	5.0	NA	1	B2E0530	05/18/2012	05/18/12 05:12	D4
1,1-Dichloropropene	ND	4.0	NA	1	B2E0539	05/18/2012	05/18/12 19:23	D4
1,2,3-Trichloropropane	ND	4.0	NA	1	B2E0539	05/18/2012	05/18/12 19:23	D4
1,2,3-Trichlorobenzene	ND	4.0	NA	1	B2E0539	05/18/2012	05/18/12 19:23	D4
1,2,4-Trichlorobenzene	ND	4.0	NA	1	B2E0539	05/18/2012	05/18/12 19:23	D4
1,2,4-Trimethylbenzene	ND	4.0	NA	1	B2E0539	05/18/2012	05/18/12 19:23	D4
1,2-Dibromo-3-chloropropane	ND	4.0	NA	1	B2E0539	05/18/2012	05/18/12 19:23	D4
1,2-Dibromoethane	ND	4.0	NA	1	B2E0539	05/18/2012	05/18/12 19:23	D4
1,2-Dichlorobenzene	ND	4.0	NA	1	B2E0539	05/18/2012	05/18/12 19:23	D4
1,2-Dichloroethane	ND	4.0	NA	1	B2E0539	05/18/2012	05/18/12 19:23	D4
1,2-Dichloropropane	ND	4.0	NA	1	B2E0539	05/18/2012	05/18/12 19:23	D4
1,3,5-Trimethylbenzene	ND	4.0	NA	1	B2E0539	05/18/2012	05/18/12 19:23	D4
1,3-Dichlorobenzene	ND	4.0	NA	1	B2E0539	05/18/2012	05/18/12 19:23	D4
1,3-Dichloropropane	ND	4.0	NA	1	B2E0539	05/18/2012	05/18/12 19:23	D4
1,4-Dichlorobenzene	ND	4.0	NA	1	B2E0539	05/18/2012	05/18/12 19:23	D4
2,2-Dichloropropane	ND	4.0	NA	1	B2E0539	05/18/2012	05/18/12 19:23	D4
2-Chlorotoluene	ND	4.0	NA	1	B2E0539	05/18/2012	05/18/12 19:23	D4
4-Chlorotoluene	ND	4.0	NA	1	B2E0539	05/18/2012	05/18/12 19:23	D4
4-Isopropyltoluene	ND	4.0	NA	1	B2E0539	05/18/2012	05/18/12 19:23	D4
Benzene	ND	4.0	NA	1	B2E0539	05/18/2012	05/18/12 19:23	D4
Bromobenzene	ND	4.0	NA	1	B2E0539	05/18/2012	05/18/12 19:23	D4
Bromodichloromethane	ND	4.0	NA	1	B2E0539	05/18/2012	05/18/12 19:23	D4
Bromoform	ND	4.0	NA	1	B2E0539	05/18/2012	05/18/12 19:23	D4
Bromomethane	ND	4.0	NA	1	B2E0539	05/18/2012	05/18/12 19:23	D4
Carbon tetrachloride	ND	4.0	NA	1	B2E0539	05/18/2012	05/18/12 19:23	D4
Chlorobenzene	ND	4.0	NA	1	B2E0539	05/18/2012	05/18/12 19:23	D4
Chloroethane	ND	4.0	NA	1	B2E0539	05/18/2012	05/18/12 19:23	D4
Chloroform	ND	4.0	NA	1	B2E0539	05/18/2012	05/18/12 19:23	D4
Chloromethane	ND	4.0	NA	1	B2E0539	05/18/2012	05/18/12 19:23	D4



Hargis & Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego , CA 92122

Project Number : Raytheon, 532.30
 Report To : Steve Netto
 Reported : 05/22/2012

Client Sample ID MW-29
Lab ID: 1201771-05

Volatile Organic Compounds by EPA 8260

Analyst: DC

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
cis-1,2-Dichloroethene	ND	4.0	NA	1	B2E0539	05/18/2012	05/18/12 19:23	D4
cis-1,3-Dichloropropene	ND	4.0	NA	1	B2E0539	05/18/2012	05/18/12 19:23	D4
Dibromochloromethane	ND	4.0	NA	1	B2E0539	05/18/2012	05/18/12 19:23	D4
Dibromomethane	ND	4.0	NA	1	B2E0539	05/18/2012	05/18/12 19:23	D4
Dichlorodifluoromethane	ND	4.0	NA	1	B2E0539	05/18/2012	05/18/12 19:23	D4
Ethylbenzene	ND	4.0	NA	1	B2E0539	05/18/2012	05/18/12 19:23	D4
Hexachlorobutadiene	ND	4.0	NA	1	B2E0539	05/18/2012	05/18/12 19:23	D4
Isopropylbenzene	ND	4.0	NA	1	B2E0539	05/18/2012	05/18/12 19:23	D4
m,p-Xylene	ND	8.0	NA	1	B2E0539	05/18/2012	05/18/12 19:23	D4
Methylene chloride	ND	8.0	NA	1	B2E0539	05/18/2012	05/18/12 19:23	D4
n-Butylbenzene	ND	4.0	NA	1	B2E0539	05/18/2012	05/18/12 19:23	D4
n-Propylbenzene	ND	4.0	NA	1	B2E0539	05/18/2012	05/18/12 19:23	D4
Naphthalene	ND	4.0	NA	1	B2E0539	05/18/2012	05/18/12 19:23	D4
o-Xylene	ND	4.0	NA	1	B2E0539	05/18/2012	05/18/12 19:23	D4
sec-Butylbenzene	ND	4.0	NA	1	B2E0539	05/18/2012	05/18/12 19:23	D4
Styrene	ND	4.0	NA	1	B2E0539	05/18/2012	05/18/12 19:23	D4
tert-Butylbenzene	ND	4.0	NA	1	B2E0539	05/18/2012	05/18/12 19:23	D4
Tetrachloroethene	5.7	4.0	NA	1	B2E0539	05/18/2012	05/18/12 19:23	D4
Toluene	ND	4.0	NA	1	B2E0539	05/18/2012	05/18/12 19:23	D4
trans-1,2-Dichloroethene	ND	4.0	NA	1	B2E0539	05/18/2012	05/18/12 19:23	D4
Trichloroethene	6.2	4.0	NA	1	B2E0539	05/18/2012	05/18/12 19:23	D4
Trichlorofluoromethane	ND	4.0	NA	1	B2E0539	05/18/2012	05/18/12 19:23	D4
Vinyl chloride	ND	4.0	NA	1	B2E0539	05/18/2012	05/18/12 19:23	D4
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>109 %</i>		<i>70 - 130</i>		B2E0539	05/18/2012	<i>05/18/12 19:23</i>	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>103 %</i>		<i>70 - 130</i>		B2E0530	05/18/2012	<i>05/18/12 05:12</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>117 %</i>		<i>70 - 130</i>		B2E0539	05/18/2012	<i>05/18/12 19:23</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>110 %</i>		<i>70 - 130</i>		B2E0530	05/18/2012	<i>05/18/12 05:12</i>	
<i>Surrogate: Dibromofluoromethane</i>	<i>111 %</i>		<i>70 - 130</i>		B2E0530	05/18/2012	<i>05/18/12 05:12</i>	
<i>Surrogate: Dibromofluoromethane</i>	<i>117 %</i>		<i>70 - 130</i>		B2E0539	05/18/2012	<i>05/18/12 19:23</i>	
<i>Surrogate: Toluene-d8</i>	<i>111 %</i>		<i>70 - 130</i>		B2E0530	05/18/2012	<i>05/18/12 05:12</i>	
<i>Surrogate: Toluene-d8</i>	<i>118 %</i>		<i>70 - 130</i>		B2E0539	05/18/2012	<i>05/18/12 19:23</i>	



Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : Raytheon, 532.30

Report To : Steve Netto

Reported : 05/22/2012

Client Sample ID MW-29

Lab ID: 1201771-05

1,4-Dioxane by EPA 8270: Isotope Dilution Technique

Analyst: PIL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,4-Dioxane	300	2.0	NA	1	B2E0386	05/14/2012	05/15/12 17:37	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	<i>75.5 %</i>		<i>37 - 93</i>		B2E0386	05/14/2012	<i>05/15/12 17:37</i>	
<i>Surrogate: 2-Fluorobiphenyl</i>	<i>84.6 %</i>		<i>51 - 100</i>		B2E0386	05/14/2012	<i>05/15/12 17:37</i>	
<i>Surrogate: 4-Terphenyl-d14</i>	<i>129 %</i>		<i>58 - 113</i>		B2E0386	05/14/2012	<i>05/15/12 17:37</i>	S8
<i>Surrogate: Nitrobenzene-d5</i>	<i>81.0 %</i>		<i>39 - 95</i>		B2E0386	05/14/2012	<i>05/15/12 17:37</i>	



Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : Raytheon, 532.30

Report To : Steve Netto

Reported : 05/22/2012

Client Sample ID MW-2900

Lab ID: 1201771-06

Volatile Organic Compounds by EPA 8260

Analyst: DC

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	5.0	NA	1	B2E0530	05/18/2012	05/18/12 05:33	D4
1,1,1-Trichloroethane	ND	5.0	NA	1	B2E0530	05/18/2012	05/18/12 05:33	D4
1,1,2,2-Tetrachloroethane	ND	5.0	NA	1	B2E0530	05/18/2012	05/18/12 05:33	D4
1,1,2-Trichloroethane	ND	5.0	NA	1	B2E0530	05/18/2012	05/18/12 05:33	D4
1,1-Dichloroethane	8.5	5.0	NA	1	B2E0530	05/18/2012	05/18/12 05:33	D4
1,1-Dichloroethene	830	5.0	NA	1	B2E0530	05/18/2012	05/18/12 05:33	D4
1,1-Dichloropropene	ND	5.0	NA	1	B2E0530	05/18/2012	05/18/12 05:33	D4
1,2,3-Trichloropropane	ND	5.0	NA	1	B2E0530	05/18/2012	05/18/12 05:33	D4
1,2,3-Trichlorobenzene	ND	5.0	NA	1	B2E0530	05/18/2012	05/18/12 05:33	D4
1,2,4-Trichlorobenzene	ND	5.0	NA	1	B2E0530	05/18/2012	05/18/12 05:33	D4
1,2,4-Trimethylbenzene	ND	5.0	NA	1	B2E0530	05/18/2012	05/18/12 05:33	D4
1,2-Dibromo-3-chloropropane	ND	5.0	NA	1	B2E0530	05/18/2012	05/18/12 05:33	D4
1,2-Dibromoethane	ND	5.0	NA	1	B2E0530	05/18/2012	05/18/12 05:33	D4
1,2-Dichlorobenzene	ND	5.0	NA	1	B2E0530	05/18/2012	05/18/12 05:33	D4
1,2-Dichloroethane	ND	5.0	NA	1	B2E0530	05/18/2012	05/18/12 05:33	D4
1,2-Dichloropropane	ND	5.0	NA	1	B2E0530	05/18/2012	05/18/12 05:33	D4
1,3,5-Trimethylbenzene	ND	5.0	NA	1	B2E0530	05/18/2012	05/18/12 05:33	D4
1,3-Dichlorobenzene	ND	5.0	NA	1	B2E0530	05/18/2012	05/18/12 05:33	D4
1,3-Dichloropropane	ND	5.0	NA	1	B2E0530	05/18/2012	05/18/12 05:33	D4
1,4-Dichlorobenzene	ND	5.0	NA	1	B2E0530	05/18/2012	05/18/12 05:33	D4
2,2-Dichloropropane	ND	5.0	NA	1	B2E0530	05/18/2012	05/18/12 05:33	D4
2-Chlorotoluene	ND	5.0	NA	1	B2E0530	05/18/2012	05/18/12 05:33	D4
4-Chlorotoluene	ND	5.0	NA	1	B2E0530	05/18/2012	05/18/12 05:33	D4
4-Isopropyltoluene	ND	5.0	NA	1	B2E0530	05/18/2012	05/18/12 05:33	D4
Benzene	ND	5.0	NA	1	B2E0530	05/18/2012	05/18/12 05:33	D4
Bromobenzene	ND	5.0	NA	1	B2E0530	05/18/2012	05/18/12 05:33	D4
Bromodichloromethane	ND	5.0	NA	1	B2E0530	05/18/2012	05/18/12 05:33	D4
Bromoform	ND	5.0	NA	1	B2E0530	05/18/2012	05/18/12 05:33	D4
Bromomethane	ND	5.0	NA	1	B2E0530	05/18/2012	05/18/12 05:33	D4
Carbon tetrachloride	ND	5.0	NA	1	B2E0530	05/18/2012	05/18/12 05:33	D4
Chlorobenzene	ND	5.0	NA	1	B2E0530	05/18/2012	05/18/12 05:33	D4
Chloroethane	ND	5.0	NA	1	B2E0530	05/18/2012	05/18/12 05:33	D4
Chloroform	ND	5.0	NA	1	B2E0530	05/18/2012	05/18/12 05:33	D4
Chloromethane	ND	5.0	NA	1	B2E0530	05/18/2012	05/18/12 05:33	D4



Hargis & Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122

Project Number : Raytheon, 532.30
 Report To : Steve Netto
 Reported : 05/22/2012

Client Sample ID MW-2900
Lab ID: 1201771-06

Volatile Organic Compounds by EPA 8260

Analyst: DC

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
cis-1,2-Dichloroethene	ND	5.0	NA	1	B2E0530	05/18/2012	05/18/12 05:33	D4
cis-1,3-Dichloropropene	ND	5.0	NA	1	B2E0530	05/18/2012	05/18/12 05:33	D4
Dibromochloromethane	ND	5.0	NA	1	B2E0530	05/18/2012	05/18/12 05:33	D4
Dibromomethane	ND	5.0	NA	1	B2E0530	05/18/2012	05/18/12 05:33	D4
Dichlorodifluoromethane	ND	5.0	NA	1	B2E0530	05/18/2012	05/18/12 05:33	D4
Ethylbenzene	ND	5.0	NA	1	B2E0530	05/18/2012	05/18/12 05:33	D4
Hexachlorobutadiene	ND	5.0	NA	1	B2E0530	05/18/2012	05/18/12 05:33	D4
Isopropylbenzene	ND	5.0	NA	1	B2E0530	05/18/2012	05/18/12 05:33	D4
m,p-Xylene	ND	10	NA	1	B2E0530	05/18/2012	05/18/12 05:33	D4
Methylene chloride	ND	10	NA	1	B2E0530	05/18/2012	05/18/12 05:33	D4
n-Butylbenzene	ND	5.0	NA	1	B2E0530	05/18/2012	05/18/12 05:33	D4
n-Propylbenzene	ND	5.0	NA	1	B2E0530	05/18/2012	05/18/12 05:33	D4
Naphthalene	ND	5.0	NA	1	B2E0530	05/18/2012	05/18/12 05:33	D4
o-Xylene	ND	5.0	NA	1	B2E0530	05/18/2012	05/18/12 05:33	D4
sec-Butylbenzene	ND	5.0	NA	1	B2E0530	05/18/2012	05/18/12 05:33	D4
Styrene	ND	5.0	NA	1	B2E0530	05/18/2012	05/18/12 05:33	D4
tert-Butylbenzene	ND	5.0	NA	1	B2E0530	05/18/2012	05/18/12 05:33	D4
Tetrachloroethene	ND	5.0	NA	1	B2E0530	05/18/2012	05/18/12 05:33	D4
Toluene	ND	5.0	NA	1	B2E0530	05/18/2012	05/18/12 05:33	D4
trans-1,2-Dichloroethene	ND	5.0	NA	1	B2E0530	05/18/2012	05/18/12 05:33	D4
Trichloroethene	5.3	5.0	NA	1	B2E0530	05/18/2012	05/18/12 05:33	D4
Trichlorofluoromethane	ND	5.0	NA	1	B2E0530	05/18/2012	05/18/12 05:33	D4
Vinyl chloride	ND	5.0	NA	1	B2E0530	05/18/2012	05/18/12 05:33	D4
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>114 %</i>		<i>70 - 130</i>		B2E0530	05/18/2012	<i>05/18/12 05:33</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>118 %</i>		<i>70 - 130</i>		B2E0530	05/18/2012	<i>05/18/12 05:33</i>	
<i>Surrogate: Dibromofluoromethane</i>	<i>121 %</i>		<i>70 - 130</i>		B2E0530	05/18/2012	<i>05/18/12 05:33</i>	
<i>Surrogate: Toluene-d8</i>	<i>117 %</i>		<i>70 - 130</i>		B2E0530	05/18/2012	<i>05/18/12 05:33</i>	



Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : Raytheon, 532.30

Report To : Steve Netto

Reported : 05/22/2012

Client Sample ID MW-2900

Lab ID: 1201771-06

1,4-Dioxane by EPA 8270: Isotope Dilution Technique

Analyst: PIL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,4-Dioxane	280	2.0	NA	1	B2E0386	05/14/2012	05/15/12 18:05	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	<i>81.2 %</i>		<i>37 - 93</i>		B2E0386	05/14/2012	<i>05/15/12 18:05</i>	
<i>Surrogate: 2-Fluorobiphenyl</i>	<i>91.6 %</i>		<i>51 - 100</i>		B2E0386	05/14/2012	<i>05/15/12 18:05</i>	
<i>Surrogate: 4-Terphenyl-d14</i>	<i>126 %</i>		<i>58 - 113</i>		B2E0386	05/14/2012	<i>05/15/12 18:05</i>	S8
<i>Surrogate: Nitrobenzene-d5</i>	<i>85.0 %</i>		<i>39 - 95</i>		B2E0386	05/14/2012	<i>05/15/12 18:05</i>	



Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : Raytheon, 532.30

Report To : Steve Netto

Reported : 05/22/2012

Client Sample ID MW-31

Lab ID: 1201771-07

Volatile Organic Compounds by EPA 8260

Analyst: DC

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 02:50	
1,1,1-Trichloroethane	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 02:50	
1,1,2,2-Tetrachloroethane	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 02:50	
1,1,2-Trichloroethane	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 02:50	
1,1-Dichloroethane	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 02:50	
1,1-Dichloroethene	48	0.50	NA	1	B2E0530	05/18/2012	05/18/12 02:50	
1,1-Dichloropropene	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 02:50	
1,2,3-Trichloropropane	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 02:50	
1,2,3-Trichlorobenzene	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 02:50	
1,2,4-Trichlorobenzene	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 02:50	
1,2,4-Trimethylbenzene	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 02:50	
1,2-Dibromo-3-chloropropane	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 02:50	
1,2-Dibromoethane	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 02:50	
1,2-Dichlorobenzene	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 02:50	
1,2-Dichloroethane	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 02:50	
1,2-Dichloropropane	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 02:50	
1,3,5-Trimethylbenzene	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 02:50	
1,3-Dichlorobenzene	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 02:50	
1,3-Dichloropropane	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 02:50	
1,4-Dichlorobenzene	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 02:50	
2,2-Dichloropropane	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 02:50	
2-Chlorotoluene	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 02:50	
4-Chlorotoluene	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 02:50	
4-Isopropyltoluene	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 02:50	
Benzene	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 02:50	
Bromobenzene	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 02:50	
Bromodichloromethane	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 02:50	
Bromoform	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 02:50	
Bromomethane	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 02:50	
Carbon tetrachloride	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 02:50	
Chlorobenzene	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 02:50	
Chloroethane	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 02:50	
Chloroform	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 02:50	
Chloromethane	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 02:50	



Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : Raytheon, 532.30

Report To : Steve Netto

Reported : 05/22/2012

Client Sample ID MW-31

Lab ID: 1201771-07

Volatile Organic Compounds by EPA 8260

Analyst: DC

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
cis-1,2-Dichloroethene	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 02:50	
cis-1,3-Dichloropropene	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 02:50	
Dibromochloromethane	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 02:50	
Dibromomethane	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 02:50	
Dichlorodifluoromethane	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 02:50	
Ethylbenzene	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 02:50	
Hexachlorobutadiene	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 02:50	
Isopropylbenzene	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 02:50	
m,p-Xylene	ND	1.0	NA	1	B2E0530	05/18/2012	05/18/12 02:50	
Methylene chloride	ND	1.0	NA	1	B2E0530	05/18/2012	05/18/12 02:50	
n-Butylbenzene	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 02:50	
n-Propylbenzene	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 02:50	
Naphthalene	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 02:50	
o-Xylene	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 02:50	
sec-Butylbenzene	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 02:50	
Styrene	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 02:50	
tert-Butylbenzene	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 02:50	
Tetrachloroethene	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 02:50	
Toluene	0.75	0.50	NA	1	B2E0530	05/18/2012	05/18/12 02:50	
trans-1,2-Dichloroethene	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 02:50	
Trichloroethene	5.9	0.50	NA	1	B2E0530	05/18/2012	05/18/12 02:50	
Trichlorofluoromethane	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 02:50	
Vinyl chloride	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 02:50	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>118 %</i>		<i>70 - 130</i>		B2E0530	05/18/2012	<i>05/18/12 02:50</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>118 %</i>		<i>70 - 130</i>		B2E0530	05/18/2012	<i>05/18/12 02:50</i>	
<i>Surrogate: Dibromofluoromethane</i>	<i>122 %</i>		<i>70 - 130</i>		B2E0530	05/18/2012	<i>05/18/12 02:50</i>	
<i>Surrogate: Toluene-d8</i>	<i>115 %</i>		<i>70 - 130</i>		B2E0530	05/18/2012	<i>05/18/12 02:50</i>	



Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego, CA 92122

Project Number : Raytheon, 532.30

Report To : Steve Netto

Reported : 05/22/2012

Client Sample ID MW-31

Lab ID: 1201771-07

1,4-Dioxane by EPA 8270/SIM: Isotope Dilution Technique

Analyst: PIL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,4-Dioxane	0.49	0.20	NA	1	B2E0430	05/15/2012	05/16/12 19:56	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	<i>78.5 %</i>		<i>36 - 107</i>		B2E0430	05/15/2012	<i>05/16/12 19:56</i>	
<i>Surrogate: 2-Fluorobiphenyl</i>	<i>65.4 %</i>		<i>42 - 120</i>		B2E0430	05/15/2012	<i>05/16/12 19:56</i>	
<i>Surrogate: 4-Terphenyl-d14</i>	<i>92.7 %</i>		<i>67 - 142</i>		B2E0430	05/15/2012	<i>05/16/12 19:56</i>	
<i>Surrogate: Nitrobenzene-d5</i>	<i>75.4 %</i>		<i>36 - 130</i>		B2E0430	05/15/2012	<i>05/16/12 19:56</i>	



Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : Raytheon, 532.30

Report To : Steve Netto

Reported : 05/22/2012

Client Sample ID MW-08

Lab ID: 1201771-08

Volatile Organic Compounds by EPA 8260

Analyst: DC

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	1.0	NA	1	B2E0539	05/18/2012	05/18/12 19:46	D4
1,1,1-Trichloroethane	ND	1.0	NA	1	B2E0539	05/18/2012	05/18/12 19:46	D4
1,1,2,2-Tetrachloroethane	ND	1.0	NA	1	B2E0539	05/18/2012	05/18/12 19:46	D4
1,1,2-Trichloroethane	ND	1.0	NA	1	B2E0539	05/18/2012	05/18/12 19:46	D4
1,1-Dichloroethane	1.4	1.0	NA	1	B2E0539	05/18/2012	05/18/12 19:46	D4
1,1-Dichloroethene	340	5.0	NA	1	B2E0530	05/18/2012	05/18/12 05:53	D4
1,1-Dichloropropene	ND	1.0	NA	1	B2E0539	05/18/2012	05/18/12 19:46	D4
1,2,3-Trichloropropane	ND	1.0	NA	1	B2E0539	05/18/2012	05/18/12 19:46	D4
1,2,3-Trichlorobenzene	ND	1.0	NA	1	B2E0539	05/18/2012	05/18/12 19:46	D4
1,2,4-Trichlorobenzene	ND	1.0	NA	1	B2E0539	05/18/2012	05/18/12 19:46	D4
1,2,4-Trimethylbenzene	ND	1.0	NA	1	B2E0539	05/18/2012	05/18/12 19:46	D4
1,2-Dibromo-3-chloropropane	ND	1.0	NA	1	B2E0539	05/18/2012	05/18/12 19:46	D4
1,2-Dibromoethane	ND	1.0	NA	1	B2E0539	05/18/2012	05/18/12 19:46	D4
1,2-Dichlorobenzene	ND	1.0	NA	1	B2E0539	05/18/2012	05/18/12 19:46	D4
1,2-Dichloroethane	ND	1.0	NA	1	B2E0539	05/18/2012	05/18/12 19:46	D4
1,2-Dichloropropane	ND	1.0	NA	1	B2E0539	05/18/2012	05/18/12 19:46	D4
1,3,5-Trimethylbenzene	ND	1.0	NA	1	B2E0539	05/18/2012	05/18/12 19:46	D4
1,3-Dichlorobenzene	ND	1.0	NA	1	B2E0539	05/18/2012	05/18/12 19:46	D4
1,3-Dichloropropane	ND	1.0	NA	1	B2E0539	05/18/2012	05/18/12 19:46	D4
1,4-Dichlorobenzene	ND	1.0	NA	1	B2E0539	05/18/2012	05/18/12 19:46	D4
2,2-Dichloropropane	ND	1.0	NA	1	B2E0539	05/18/2012	05/18/12 19:46	D4
2-Chlorotoluene	ND	1.0	NA	1	B2E0539	05/18/2012	05/18/12 19:46	D4
4-Chlorotoluene	ND	1.0	NA	1	B2E0539	05/18/2012	05/18/12 19:46	D4
4-Isopropyltoluene	ND	1.0	NA	1	B2E0539	05/18/2012	05/18/12 19:46	D4
Benzene	ND	1.0	NA	1	B2E0539	05/18/2012	05/18/12 19:46	D4
Bromobenzene	ND	1.0	NA	1	B2E0539	05/18/2012	05/18/12 19:46	D4
Bromodichloromethane	ND	1.0	NA	1	B2E0539	05/18/2012	05/18/12 19:46	D4
Bromoform	ND	1.0	NA	1	B2E0539	05/18/2012	05/18/12 19:46	D4
Bromomethane	ND	1.0	NA	1	B2E0539	05/18/2012	05/18/12 19:46	D4
Carbon tetrachloride	ND	1.0	NA	1	B2E0539	05/18/2012	05/18/12 19:46	D4
Chlorobenzene	ND	1.0	NA	1	B2E0539	05/18/2012	05/18/12 19:46	D4
Chloroethane	ND	1.0	NA	1	B2E0539	05/18/2012	05/18/12 19:46	D4
Chloroform	ND	1.0	NA	1	B2E0539	05/18/2012	05/18/12 19:46	D4
Chloromethane	ND	1.0	NA	1	B2E0539	05/18/2012	05/18/12 19:46	D4



Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : Raytheon, 532.30

Report To : Steve Netto

Reported : 05/22/2012

Client Sample ID MW-08

Lab ID: 1201771-08

Volatile Organic Compounds by EPA 8260

Analyst: DC

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
cis-1,2-Dichloroethene	5.0	1.0	NA	1	B2E0539	05/18/2012	05/18/12 19:46	D4
cis-1,3-Dichloropropene	ND	1.0	NA	1	B2E0539	05/18/2012	05/18/12 19:46	D4
Dibromochloromethane	ND	1.0	NA	1	B2E0539	05/18/2012	05/18/12 19:46	D4
Dibromomethane	ND	1.0	NA	1	B2E0539	05/18/2012	05/18/12 19:46	D4
Dichlorodifluoromethane	ND	1.0	NA	1	B2E0539	05/18/2012	05/18/12 19:46	D4
Ethylbenzene	ND	1.0	NA	1	B2E0539	05/18/2012	05/18/12 19:46	D4
Hexachlorobutadiene	ND	1.0	NA	1	B2E0539	05/18/2012	05/18/12 19:46	D4
Isopropylbenzene	ND	1.0	NA	1	B2E0539	05/18/2012	05/18/12 19:46	D4
m,p-Xylene	ND	2.0	NA	1	B2E0539	05/18/2012	05/18/12 19:46	D4
Methylene chloride	ND	2.0	NA	1	B2E0539	05/18/2012	05/18/12 19:46	D4
n-Butylbenzene	ND	1.0	NA	1	B2E0539	05/18/2012	05/18/12 19:46	D4
n-Propylbenzene	ND	1.0	NA	1	B2E0539	05/18/2012	05/18/12 19:46	D4
Naphthalene	ND	1.0	NA	1	B2E0539	05/18/2012	05/18/12 19:46	D4
o-Xylene	ND	1.0	NA	1	B2E0539	05/18/2012	05/18/12 19:46	D4
sec-Butylbenzene	ND	1.0	NA	1	B2E0539	05/18/2012	05/18/12 19:46	D4
Styrene	ND	1.0	NA	1	B2E0539	05/18/2012	05/18/12 19:46	D4
tert-Butylbenzene	ND	1.0	NA	1	B2E0539	05/18/2012	05/18/12 19:46	D4
Tetrachloroethene	1.1	1.0	NA	1	B2E0539	05/18/2012	05/18/12 19:46	D4
Toluene	ND	1.0	NA	1	B2E0539	05/18/2012	05/18/12 19:46	D4
trans-1,2-Dichloroethene	ND	1.0	NA	1	B2E0539	05/18/2012	05/18/12 19:46	D4
Trichloroethene	120	1.0	NA	1	B2E0539	05/18/2012	05/18/12 19:46	D4
Trichlorofluoromethane	ND	1.0	NA	1	B2E0539	05/18/2012	05/18/12 19:46	D4
Vinyl chloride	ND	1.0	NA	1	B2E0539	05/18/2012	05/18/12 19:46	D4
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>114 %</i>		<i>70 - 130</i>		B2E0530	05/18/2012	<i>05/18/12 05:53</i>	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>106 %</i>		<i>70 - 130</i>		B2E0539	05/18/2012	<i>05/18/12 19:46</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>117 %</i>		<i>70 - 130</i>		B2E0530	05/18/2012	<i>05/18/12 05:53</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>116 %</i>		<i>70 - 130</i>		B2E0539	05/18/2012	<i>05/18/12 19:46</i>	
<i>Surrogate: Dibromofluoromethane</i>	<i>115 %</i>		<i>70 - 130</i>		B2E0539	05/18/2012	<i>05/18/12 19:46</i>	
<i>Surrogate: Dibromofluoromethane</i>	<i>118 %</i>		<i>70 - 130</i>		B2E0530	05/18/2012	<i>05/18/12 05:53</i>	
<i>Surrogate: Toluene-d8</i>	<i>112 %</i>		<i>70 - 130</i>		B2E0539	05/18/2012	<i>05/18/12 19:46</i>	
<i>Surrogate: Toluene-d8</i>	<i>114 %</i>		<i>70 - 130</i>		B2E0530	05/18/2012	<i>05/18/12 05:53</i>	



Hargis & Associates, Inc.
9171 Towne Centre Drive, Suite 375
San Diego, CA 92122

Project Number : Raytheon, 532.30
Report To : Steve Netto
Reported : 05/22/2012

Client Sample ID MW-08
Lab ID: 1201771-08

1,4-Dioxane by EPA 8270/SIM: Isotope Dilution Technique

Analyst: PIL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,4-Dioxane	6.3	0.20	NA	1	B2E0430	05/15/2012	05/16/12 20:26	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	86.4 %		36 - 107		B2E0430	05/15/2012	05/16/12 20:26	
<i>Surrogate: 2-Fluorobiphenyl</i>	78.1 %		42 - 120		B2E0430	05/15/2012	05/16/12 20:26	
<i>Surrogate: 4-Terphenyl-d14</i>	90.6 %		67 - 142		B2E0430	05/15/2012	05/16/12 20:26	
<i>Surrogate: Nitrobenzene-d5</i>	78.2 %		36 - 130		B2E0430	05/15/2012	05/16/12 20:26	



Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : Raytheon, 532.30

Report To : Steve Netto

Reported : 05/22/2012

Client Sample ID RB-051112

Lab ID: 1201771-09

Volatile Organic Compounds by EPA 8260

Analyst: DC

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 02:10	
1,1,1-Trichloroethane	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 02:10	
1,1,2,2-Tetrachloroethane	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 02:10	
1,1,2-Trichloroethane	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 02:10	
1,1-Dichloroethane	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 02:10	
1,1-Dichloroethene	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 02:10	
1,1-Dichloropropene	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 02:10	
1,2,3-Trichloropropane	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 02:10	
1,2,3-Trichlorobenzene	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 02:10	
1,2,4-Trichlorobenzene	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 02:10	
1,2,4-Trimethylbenzene	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 02:10	
1,2-Dibromo-3-chloropropane	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 02:10	
1,2-Dibromoethane	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 02:10	
1,2-Dichlorobenzene	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 02:10	
1,2-Dichloroethane	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 02:10	
1,2-Dichloropropane	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 02:10	
1,3,5-Trimethylbenzene	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 02:10	
1,3-Dichlorobenzene	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 02:10	
1,3-Dichloropropane	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 02:10	
1,4-Dichlorobenzene	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 02:10	
2,2-Dichloropropane	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 02:10	
2-Chlorotoluene	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 02:10	
4-Chlorotoluene	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 02:10	
4-Isopropyltoluene	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 02:10	
Benzene	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 02:10	
Bromobenzene	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 02:10	
Bromodichloromethane	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 02:10	
Bromoform	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 02:10	
Bromomethane	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 02:10	
Carbon tetrachloride	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 02:10	
Chlorobenzene	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 02:10	
Chloroethane	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 02:10	
Chloroform	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 02:10	
Chloromethane	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 02:10	



Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : Raytheon, 532.30

Report To : Steve Netto

Reported : 05/22/2012

Client Sample ID RB-051112

Lab ID: 1201771-09

Volatile Organic Compounds by EPA 8260

Analyst: DC

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
cis-1,2-Dichloroethene	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 02:10	
cis-1,3-Dichloropropene	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 02:10	
Dibromochloromethane	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 02:10	
Dibromomethane	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 02:10	
Dichlorodifluoromethane	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 02:10	
Ethylbenzene	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 02:10	
Hexachlorobutadiene	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 02:10	
Isopropylbenzene	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 02:10	
m,p-Xylene	ND	1.0	NA	1	B2E0530	05/18/2012	05/18/12 02:10	
Methylene chloride	ND	1.0	NA	1	B2E0530	05/18/2012	05/18/12 02:10	
n-Butylbenzene	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 02:10	
n-Propylbenzene	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 02:10	
Naphthalene	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 02:10	
o-Xylene	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 02:10	
sec-Butylbenzene	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 02:10	
Styrene	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 02:10	
tert-Butylbenzene	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 02:10	
Tetrachloroethene	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 02:10	
Toluene	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 02:10	
trans-1,2-Dichloroethene	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 02:10	
Trichloroethene	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 02:10	
Trichlorofluoromethane	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 02:10	
Vinyl chloride	ND	0.50	NA	1	B2E0530	05/18/2012	05/18/12 02:10	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>108 %</i>	<i>70 - 130</i>			B2E0530	05/18/2012	<i>05/18/12 02:10</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>106 %</i>	<i>70 - 130</i>			B2E0530	05/18/2012	<i>05/18/12 02:10</i>	
<i>Surrogate: Dibromofluoromethane</i>	<i>111 %</i>	<i>70 - 130</i>			B2E0530	05/18/2012	<i>05/18/12 02:10</i>	
<i>Surrogate: Toluene-d8</i>	<i>107 %</i>	<i>70 - 130</i>			B2E0530	05/18/2012	<i>05/18/12 02:10</i>	



Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : Raytheon, 532.30

Report To : Steve Netto

Reported : 05/22/2012

Client Sample ID RB-051112

Lab ID: 1201771-09

1,4-Dioxane by EPA 8270: Isotope Dilution Technique

Analyst: PIL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,4-Dioxane	ND	2.0	NA	1	B2E0386	05/14/2012	05/15/12 18:34	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	<i>87.9 %</i>		<i>37 - 93</i>		B2E0386	05/14/2012	<i>05/15/12 18:34</i>	
<i>Surrogate: 2-Fluorobiphenyl</i>	<i>103 %</i>		<i>51 - 100</i>		B2E0386	05/14/2012	<i>05/15/12 18:34</i>	S1
<i>Surrogate: 4-Terphenyl-d14</i>	<i>137 %</i>		<i>58 - 113</i>		B2E0386	05/14/2012	<i>05/15/12 18:34</i>	S1
<i>Surrogate: Nitrobenzene-d5</i>	<i>102 %</i>		<i>39 - 95</i>		B2E0386	05/14/2012	<i>05/15/12 18:34</i>	S1



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 San Diego , CA 92122

Project Number : Raytheon, 532.30
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 Reported : 05/22/2012

QUALITY CONTROL SECTION

Volatile Organic Compounds by EPA 8260 - Quality Control

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B2E0530 - MSVOAW_LL

Blank (B2E0530-BLK1)

Prepared: 5/18/2012 Analyzed: 5/18/2012

1,1,1,2-Tetrachloroethane	ND	0.50				NR			
1,1,1-Trichloroethane	ND	0.50				NR			
1,1,2,2-Tetrachloroethane	ND	0.50				NR			
1,1,2-Trichloroethane	ND	0.50				NR			
1,1-Dichloroethane	ND	0.50				NR			
1,1-Dichloroethene	ND	0.50				NR			
1,1-Dichloropropene	ND	0.50				NR			
1,2,3-Trichloropropane	ND	0.50				NR			
1,2,3-Trichlorobenzene	ND	0.50				NR			
1,2,4-Trichlorobenzene	ND	0.50				NR			
1,2,4-Trimethylbenzene	ND	0.50				NR			
1,2-Dibromo-3-chloropropane	ND	0.50				NR			
1,2-Dibromoethane	ND	0.50				NR			
1,2-Dichlorobenzene	ND	0.50				NR			
1,2-Dichloroethane	ND	0.50				NR			
1,2-Dichloropropane	ND	0.50				NR			
1,3,5-Trimethylbenzene	ND	0.50				NR			
1,3-Dichlorobenzene	ND	0.50				NR			
1,3-Dichloropropane	ND	0.50				NR			
1,4-Dichlorobenzene	ND	0.50				NR			
2,2-Dichloropropane	ND	0.50				NR			
2-Chlorotoluene	ND	0.50				NR			
4-Chlorotoluene	ND	0.50				NR			
4-Isopropyltoluene	ND	0.50				NR			
Benzene	ND	0.50				NR			
Bromobenzene	ND	0.50				NR			
Bromodichloromethane	ND	0.50				NR			
Bromoform	ND	0.50				NR			
Bromomethane	ND	0.50				NR			
Carbon tetrachloride	ND	0.50				NR			
Chlorobenzene	ND	0.50				NR			
Chloroethane	ND	0.50				NR			
Chloroform	ND	0.50				NR			
Chloromethane	ND	0.50				NR			
cis-1,2-Dichloroethene	ND	0.50				NR			
cis-1,3-Dichloropropene	ND	0.50				NR			
Dibromochloromethane	ND	0.50				NR			
Dibromomethane	ND	0.50				NR			
Dichlorodifluoromethane	ND	0.50				NR			



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San Diego , CA 92122

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Report To : Steve Netto

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Volatile Organic Compounds by EPA 8260 - Quality Control (cont'd)

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec % Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B2E0530 - MSVOAW_LL (continued)

Blank (B2E0530-BLK1) - Continued

Prepared: 5/18/2012 Analyzed: 5/18/2012

Ethylbenzene	ND	0.50				NR			
Hexachlorobutadiene	ND	0.50				NR			
Isopropylbenzene	ND	0.50				NR			
m,p-Xylene	ND	1.0				NR			
Methylene chloride	ND	1.0				NR			
n-Butylbenzene	ND	0.50				NR			
n-Propylbenzene	ND	0.50				NR			
Naphthalene	ND	0.50				NR			
o-Xylene	ND	0.50				NR			
sec-Butylbenzene	ND	0.50				NR			
Styrene	ND	0.50				NR			
tert-Butylbenzene	ND	0.50				NR			
Tetrachloroethene	ND	0.50				NR			
Toluene	ND	0.50				NR			
trans-1,2-Dichloroethene	ND	0.50				NR			
Trichloroethene	ND	0.50				NR			
Trichlorofluoromethane	ND	0.50				NR			
Vinyl chloride	ND	0.50				NR			

<i>Surrogate: 1,2-Dichloroethane-d4</i>	28		25.0		110	70 - 130			
<i>Surrogate: 4-Bromofluorobenzene</i>	30		25.0		120	70 - 130			
<i>Surrogate: Dibromofluoromethane</i>	29		25.0		117	70 - 130			
<i>Surrogate: Toluene-d8</i>	30		25.0		120	70 - 130			

LCS (B2E0530-BS1)

Prepared: 5/18/2012 Analyzed: 5/18/2012

1,1-Dichloroethene	19	0.50	20.0		96.4	70 - 130			
Benzene	42	0.50	40.0		105	70 - 130			
Chlorobenzene	22	0.50	20.0		108	70 - 130			
MTBE	21	0.50	20.0		104	70 - 130			
Toluene	43	0.50	40.0		109	70 - 130			
Trichloroethene	21	0.50	20.0		103	70 - 130			

<i>Surrogate: 1,2-Dichloroethane-d4</i>	21		25.0		85.6	70 - 130			
<i>Surrogate: 4-Bromofluorobenzene</i>	24		25.0		95.6	70 - 130			
<i>Surrogate: Dibromofluoromethane</i>	23		25.0		92.4	70 - 130			
<i>Surrogate: Toluene-d8</i>	24		25.0		97.4	70 - 130			

LCS Dup (B2E0530-BSD1)

Prepared: 5/17/2012 Analyzed: 5/17/2012

1,1-Dichloroethene	20	0.50	20.0		99.8	70 - 130	3.42	20	
Benzene	43	0.50	40.0		108	70 - 130	2.18	20	
Chlorobenzene	21	0.50	20.0		107	70 - 130	0.746	20	
MTBE	21	0.50	20.0		105	70 - 130	0.335	20	
Toluene	43	0.50	40.0		109	70 - 130	0.0230	20	



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Volatile Organic Compounds by EPA 8260 - Quality Control (cont'd)

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec % Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B2E0530 - MSVOAW_LL (continued)

LCS Dup (B2E0530-BSD1) - Continued

Prepared: 5/17/2012 Analyzed: 5/17/2012

Trichloroethene	20	0.50	20.0		102	70 - 130	0.832	20	
Surrogate: 1,2-Dichloroethane-d4	24		25.0		94.9	70 - 130			
Surrogate: 4-Bromofluorobenzene	24		25.0		95.6	70 - 130			
Surrogate: Dibromofluoromethane	24		25.0		94.9	70 - 130			
Surrogate: Toluene-d8	24		25.0		96.3	70 - 130			

Matrix Spike (B2E0530-MS1)

Source: 1201771-04

Prepared: 5/17/2012 Analyzed: 5/17/2012

1,1-Dichloroethene	21	0.50	20.0	0.99	98.4	70 - 130			
Benzene	41	0.50	40.0	ND	102	70 - 130			
Chlorobenzene	20	0.50	20.0	ND	101	70 - 130			
MTBE	19	0.50	20.0	ND	97.0	70 - 130			
Toluene	41	0.50	40.0	ND	102	70 - 130			
Trichloroethene	20	0.50	20.0	ND	97.8	70 - 130			
Surrogate: 1,2-Dichloroethane-d4	27		25.0		108	70 - 130			
Surrogate: 4-Bromofluorobenzene	31		25.0		124	70 - 130			
Surrogate: Dibromofluoromethane	28		25.0		113	70 - 130			
Surrogate: Toluene-d8	30		25.0		118	70 - 130			

Matrix Spike Dup (B2E0530-MSD1)

Source: 1201771-04

Prepared: 5/17/2012 Analyzed: 5/17/2012

1,1-Dichloroethene	21	0.50	20.0	0.99	101	70 - 130	2.58	20	
Benzene	43	0.50	40.0	ND	108	70 - 130	5.50	20	
Chlorobenzene	21	0.50	20.0	ND	107	70 - 130	6.06	20	
MTBE	22	0.50	20.0	ND	111	70 - 130	13.1	20	
Toluene	43	0.50	40.0	ND	106	70 - 130	4.54	20	
Trichloroethene	21	0.50	20.0	ND	103	70 - 130	5.23	20	
Surrogate: 1,2-Dichloroethane-d4	27		25.0		107	70 - 130			
Surrogate: 4-Bromofluorobenzene	31		25.0		124	70 - 130			
Surrogate: Dibromofluoromethane	28		25.0		113	70 - 130			
Surrogate: Toluene-d8	30		25.0		119	70 - 130			

Batch B2E0539 - MSVOAW_LL

Blank (B2E0539-BLK1)

Prepared: 5/18/2012 Analyzed: 5/18/2012

1,1,1,2-Tetrachloroethane	ND	0.50			NR				
1,1,1-Trichloroethane	ND	0.50			NR				
1,1,2,2-Tetrachloroethane	ND	0.50			NR				
1,1,2-Trichloroethane	ND	0.50			NR				
1,1-Dichloroethane	ND	0.50			NR				
1,1-Dichloroethene	ND	0.50			NR				
1,1-Dichloropropene	ND	0.50			NR				
1,2,3-Trichloropropane	ND	0.50			NR				



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Volatile Organic Compounds by EPA 8260 - Quality Control (cont'd)

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec % Rec	% Rec Limits	RPD RPD	RPD Limit	Notes
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Batch B2E0539 - MSVOAW_LL (continued)

Blank (B2E0539-BLK1) - Continued

Prepared: 5/18/2012 Analyzed: 5/18/2012

1,2,3-Trichlorobenzene	ND	0.50			NR
1,2,4-Trichlorobenzene	ND	0.50			NR
1,2,4-Trimethylbenzene	ND	0.50			NR
1,2-Dibromo-3-chloropropane	ND	0.50			NR
1,2-Dibromoethane	ND	0.50			NR
1,2-Dichlorobenzene	ND	0.50			NR
1,2-Dichloroethane	ND	0.50			NR
1,2-Dichloropropane	ND	0.50			NR
1,3,5-Trimethylbenzene	ND	0.50			NR
1,3-Dichlorobenzene	ND	0.50			NR
1,3-Dichloropropane	ND	0.50			NR
1,4-Dichlorobenzene	ND	0.50			NR
2,2-Dichloropropane	ND	0.50			NR
2-Chlorotoluene	ND	0.50			NR
4-Chlorotoluene	ND	0.50			NR
4-Isopropyltoluene	ND	0.50			NR
Benzene	ND	0.50			NR
Bromobenzene	ND	0.50			NR
Bromodichloromethane	ND	0.50			NR
Bromoform	ND	0.50			NR
Bromomethane	ND	0.50			NR
Carbon tetrachloride	ND	0.50			NR
Chlorobenzene	ND	0.50			NR
Chloroethane	ND	0.50			NR
Chloroform	ND	0.50			NR
Chloromethane	ND	0.50			NR
cis-1,2-Dichloroethene	ND	0.50			NR
cis-1,3-Dichloropropene	ND	0.50			NR
Dibromochloromethane	ND	0.50			NR
Dibromomethane	ND	0.50			NR
Dichlorodifluoromethane	ND	0.50			NR
Ethylbenzene	ND	0.50			NR
Hexachlorobutadiene	ND	0.50			NR
Isopropylbenzene	ND	0.50			NR
m,p-Xylene	ND	1.0			NR
Methylene chloride	ND	1.0			NR
n-Butylbenzene	ND	0.50			NR
n-Propylbenzene	ND	0.50			NR
Naphthalene	ND	0.50			NR
o-Xylene	ND	0.50			NR
sec-Butylbenzene	ND	0.50			NR
Styrene	ND	0.50			NR



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Project Number : Raytheon, 532.30

Report To : Steve Netto

Reported : 05/22/2012

Volatile Organic Compounds by EPA 8260 - Quality Control (cont'd)

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec % Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B2E0539 - MSVOAW_LL (continued)

Blank (B2E0539-BLK1) - Continued

Prepared: 5/18/2012 Analyzed: 5/18/2012

tert-Butylbenzene	ND	0.50			NR				
Tetrachloroethene	ND	0.50			NR				
Toluene	ND	0.50			NR				
trans-1,2-Dichloroethene	ND	0.50			NR				
Trichloroethene	ND	0.50			NR				
Trichlorofluoromethane	ND	0.50			NR				
Vinyl chloride	ND	0.50			NR				
<i>Surrogate: 1,2-Dichloroethane-d4</i>	24		25.0		95.0	70 - 130			
<i>Surrogate: 4-Bromofluorobenzene</i>	30		25.0		118	70 - 130			
<i>Surrogate: Dibromofluoromethane</i>	27		25.0		109	70 - 130			
<i>Surrogate: Toluene-d8</i>	30		25.0		118	70 - 130			

LCS (B2E0539-BS1)

Prepared: 5/18/2012 Analyzed: 5/18/2012

1,1-Dichloroethene	17	0.50	20.0		85.6	70 - 130			
Benzene	41	0.50	40.0		104	70 - 130			
Chlorobenzene	21	0.50	20.0		107	70 - 130			
MTBE	21	0.50	20.0		104	70 - 130			
Toluene	42	0.50	40.0		106	70 - 130			
Trichloroethene	20	0.50	20.0		100	70 - 130			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	21		25.0		83.8	70 - 130			
<i>Surrogate: 4-Bromofluorobenzene</i>	24		25.0		94.9	70 - 130			
<i>Surrogate: Dibromofluoromethane</i>	23		25.0		92.0	70 - 130			
<i>Surrogate: Toluene-d8</i>	24		25.0		95.8	70 - 130			

LCS Dup (B2E0539-BSD1)

Prepared: 5/18/2012 Analyzed: 5/18/2012

1,1-Dichloroethene	17	0.50	20.0		86.8	70 - 130	1.33	20	
Benzene	42	0.50	40.0		105	70 - 130	1.44	20	
Chlorobenzene	22	0.50	20.0		108	70 - 130	1.02	20	
MTBE	21	0.50	20.0		107	70 - 130	3.41	20	
Toluene	43	0.50	40.0		107	70 - 130	0.470	20	
Trichloroethene	20	0.50	20.0		102	70 - 130	1.38	20	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	21		25.0		83.7	70 - 130			
<i>Surrogate: 4-Bromofluorobenzene</i>	23		25.0		93.2	70 - 130			
<i>Surrogate: Dibromofluoromethane</i>	23		25.0		91.1	70 - 130			
<i>Surrogate: Toluene-d8</i>	24		25.0		95.8	70 - 130			



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 San Diego, CA 92122

Project Number : Raytheon, 532.30
 Report To : Steve Netto
 Reported : 05/22/2012

1,4-Dioxane by EPA 8270: Isotope Dilution Technique - Quality Control

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec % Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B2E0386 - MSSEMI_ISOTOPEDILN

Blank (B2E0386-BLK2)

Prepared: 5/14/2012 Analyzed: 5/15/2012

1,4-Dioxane	ND	2.0			NR				
Surrogate: 1,2-Dichlorobenzene-d4	76		100		76.0	37 - 93			
Surrogate: 2-Fluorobiphenyl	85		100		85.2	51 - 100			
Surrogate: 4-Terphenyl-d14	120		100		118	58 - 113			S1
Surrogate: Nitrobenzene-d5	87		100		86.7	39 - 95			

LCS (B2E0386-BS2)

Prepared: 5/14/2012 Analyzed: 5/15/2012

1,4-Dioxane	100	2.0	100		102	70 - 130			
Surrogate: 1,2-Dichlorobenzene-d4	82		100		81.9	37 - 93			
Surrogate: 2-Fluorobiphenyl	90		100		90.1	51 - 100			
Surrogate: 4-Terphenyl-d14	110		100		110	58 - 113			
Surrogate: Nitrobenzene-d5	90		100		90.2	39 - 95			

Matrix Spike (B2E0386-MS2)

Source: 1201761-04

Prepared: 5/14/2012 Analyzed: 5/15/2012

1,4-Dioxane	160	2.0	100	58	104	0 - 200			
Surrogate: 1,2-Dichlorobenzene-d4	87		100		86.7	37 - 93			
Surrogate: 2-Fluorobiphenyl	89		100		89.2	51 - 100			
Surrogate: 4-Terphenyl-d14	110		100		110	58 - 113			
Surrogate: Nitrobenzene-d5	94		100		94.1	39 - 95			

Matrix Spike Dup (B2E0386-MSD2)

Source: 1201761-04

Prepared: 5/14/2012 Analyzed: 5/15/2012

1,4-Dioxane	150	2.0	100	58	88.6	0 - 200	10.1	200	
Surrogate: 1,2-Dichlorobenzene-d4	86		100		85.8	37 - 93			
Surrogate: 2-Fluorobiphenyl	94		100		93.8	51 - 100			
Surrogate: 4-Terphenyl-d14	110		100		112	58 - 113			
Surrogate: Nitrobenzene-d5	96		100		95.5	39 - 95			S8



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Project Number : Raytheon, 532.30
 Report To : Steve Netto
 Reported : 05/22/2012

1,4-Dioxane by EPA 8270/SIM: Isotope Dilution Technique - Quality Control

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec % Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B2E0430 - MSSEMI_ISOTOPEDILN

Blank (B2E0430-BLK1)

Prepared: 5/15/2012 Analyzed: 5/16/2012

1,4-Dioxane	ND	0.20			NR				
Surrogate: 1,2-Dichlorobenzene-d4	0.89		1.00		89.2	36 - 107			
Surrogate: 2-Fluorobiphenyl	0.79		1.00		79.1	42 - 120			
Surrogate: 4-Terphenyl-d14	0.96		1.00		96.1	67 - 142			
Surrogate: Nitrobenzene-d5	0.51		1.00		51.1	36 - 130			

LCS (B2E0430-BS1)

Prepared: 5/15/2012 Analyzed: 5/16/2012

1,4-Dioxane	1.0	0.20	1.00		101	70 - 130			
Surrogate: 1,2-Dichlorobenzene-d4	0.93		1.00		93.3	36 - 107			
Surrogate: 2-Fluorobiphenyl	0.80		1.00		79.8	42 - 120			
Surrogate: 4-Terphenyl-d14	0.88		1.00		88.2	67 - 142			
Surrogate: Nitrobenzene-d5	0.59		1.00		58.8	36 - 130			

Matrix Spike (B2E0430-MS1)

Source: 1201715-02

Prepared: 5/15/2012 Analyzed: 5/16/2012

1,4-Dioxane	0.98	0.20	1.00	ND	98.5	70 - 130			
Surrogate: 1,2-Dichlorobenzene-d4	0.91		1.00		91.0	36 - 107			
Surrogate: 2-Fluorobiphenyl	0.78		1.00		77.6	42 - 120			
Surrogate: 4-Terphenyl-d14	0.85		1.00		85.4	67 - 142			
Surrogate: Nitrobenzene-d5	0.60		1.00		60.4	36 - 130			

Matrix Spike Dup (B2E0430-MSD1)

Source: 1201715-02

Prepared: 5/15/2012 Analyzed: 5/16/2012

1,4-Dioxane	0.96	0.20	1.00	ND	95.9	70 - 130	2.65	20	
Surrogate: 1,2-Dichlorobenzene-d4	0.92		1.00		92.1	36 - 107			
Surrogate: 2-Fluorobiphenyl	0.76		1.00		76.0	42 - 120			
Surrogate: 4-Terphenyl-d14	0.78		1.00		78.2	67 - 142			
Surrogate: Nitrobenzene-d5	0.65		1.00		64.9	36 - 130			



Hargis & Associates, Inc.

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Project Number : Raytheon, 532.30

Report To : Steve Netto

Reported : 05/22/2012

Notes and Definitions

- S8 Surrogate recovery was above laboratory acceptance limit. See CAR for details.
- S1 Surrogate recovery was above laboratory acceptance limit. No target analyte was detected in the sample.
- D4 Reporting limits adjusted to reflect sample amount analyzed.
- ND Analyte not detected at or above reporting limit
- PQL Practical Quantitation Limit
- MDL Method Detection Limit
- NR Not Reported
- RPD Relative Percent Difference
- CA1 CA-NELAP (CDPH)
- CA2 CA-ELAP (CDPH)
- OR1 OR-NELAP (OSPHL)
- TX1 TX-NELAP (TCEQ)

PROJECT NAME		PROJECT No./TASK No.		SAMPLE CONTAINERS		ANALYSIS REQUESTED		ESTIMATED CONCENTRATION RANGE (ppb) FOR VOAS		SPECIAL HANDLING		LABORATORY INFORMATION																								
Raytheon		532.30										ATL ATTN: RACHELLE ARADA																								
PROJECT MANAGER Steve Netto		Phone No. 858-455-6500																																		
QA MANAGER		Fax No. 358-455-6533																																		
SAMPLER (SIGNATURE)		SAMPLER (PRINTED)																																		
		Daniel Mora Amanda Beam																																		
LAB ID	SAMPLE ID	SAMPLE COLLECTION		MATRIX			PRESERVATION					40 ml VOA	1L Amber	VOCS 8260B	1,4-Dioxane 8270 MOD	1,4-Dioxane 8270 SIM	0-10	10-100	100-1,000	1,000-10,000	>10,000	24 TAT	48 TAT	Standard TAT	MS collected	MSD collected	REMARKS									
		Date	Time	Soil	Ground water	Surface water	LAB H2O	HCl	HNO3	NaOH	H2SO4																	Ice								
1201771-01	MW-30A	5/10/11	1732	X			X			X								X																		
	↓		↓	X						X																										
-02	MW-30B		1809	X			X			X								X																		
	↓		↓	X						X																										
-03	TB 051112	5/11/12	0600	X			X			X								X																		
-04	MW-28		727	X			X			X																									6 VOAS	
	↓		↓	X						X								X																	2 1L AMBERS	
-05	MW-29		816	X			X			X																										
	↓		↓	X						X																										
-06	MW-2900		836	X			X			X																										
	↓		↓	X						X																										
-07	MW-31		910	X			X			X								X																		
	↓		↓	X						X																										
-08	MW-08		1316	X			X			X								X																		
Total number of Containers per analysis:												23	6	Total No. of Containers: 37 of 42																						
Relinquished by: Amanda Beam		Date: 5/11/12	Received by: FPD		Date: 5/11/12	INSTRUCTIONS		Shipment Method: Drop-off																												
Company: H+A, Inc		Time: 1547	Company: ST		Time: 1547	1. Fill out form completely except for shaded areas (lab use only); sign only after verified for completeness.		Send Results to: Steve Netto																												
						2. Complete in ballpoint pen. Draw one line through errors, initial and date correction.		<input checked="" type="checkbox"/> 9171 TOWNE CENTRE DRIVE, SUITE 375 SAN DIEGO, CA 92122 (858) 455-6500																												
						3. Indicate number of sample containers in analysis request space; indicate choice with ✓ or x.		<input type="checkbox"/> 1640 SOUTH STAPLEY DRIVE, SUITE 124 MESA, AZ 85204 (480) 345-0888																												
						4. Note applicable preservatives, special instructions, and deviations from typical environmental samples.		<input type="checkbox"/> 1820 EAST RIVER ROAD, SUITE 220 TUCSON, AZ 85718 (520) 881-7300																												
						5. Consult project QA documents for specific instructions.		Send invoice to San Diego, CA Attn: Accounts Payable																												
Relinquished by:		Date:	Received by:		Date:	Sample Receipt:		Temp. @ receipt 7.4 °C																												
						<input type="checkbox"/> No. of containers correct		<input checked="" type="checkbox"/> received good condition/cold																												
						<input type="checkbox"/> custody seals secure		<input type="checkbox"/> conforms to COC document																												

CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST FORM

PROJECT NAME Raytheon		PROJECT No./TASK No. 532.30		SAMPLE CONTAINERS		ANALYSIS REQUESTED		ESTIMATED CONCENTRATION RANGE (ppb) FOR VOAs		SPECIAL HANDLING		LABORATORY INFORMATION	
PROJECT MANAGER Steve Netto		Phone No. 858-455-6500										ATL	
QA MANAGER		Fax No. 858-455-6533											
SAMPLER (SIGNATURE) <i>Amanda Beam</i>		SAMPLER (PRINTED) Daniel Mora Amanda Beam											

LAB ID	SAMPLE ID	SAMPLE COLLECTION		MATRIX			PRESERVATION					40 ml VOA	1L Amber	VOCs 8260B	1,4-Dioxane 8270 MOD	1,4-Dioxane 8270 SIM	0-10	10-100	100-1,000	1,000-10,000	>10,000	205TAT	48 TAT	Standard TAT	REMARKS												
		Date	Time	Soil	Ground water	Surface water	HCl	HNO ₃	NaOH	H ₂ SO ₄	Ice																										
1201771 -09	MW-08 (cont'd)	5/11/12	1316	X																																	
	RB-051112	5/11/12	1240		X	X				X				X	X			X	X																		
	↓	5/11/12	↓		X					X					X																						

Total number of Containers per analysis: 3 2 Total No. of Containers: 5 of 42

Relinquished by: <i>Amanda Beam</i>	Date <u>5/11/12</u>	Received by: <i>FPDINA</i>	Date <u>5/11/12</u>
<i>H+A, Inc</i>	Time <u>1547</u>	Company <i>ATL</i>	Time <u>1547</u>
Relinquished by:	Date	Received by:	Date
Company	Time	Company	Time

INSTRUCTIONS

- Fill out form completely except for shaded areas (lab use only); sign only after verified for completeness.
- Complete in ballpoint pen. Draw one line through errors, initial and date correction.
- Indicate number of sample containers in analysis request space; indicate choice with ✓ or x.
- Note applicable preservatives, special instructions, and deviations from typical environmental samples.
- Consult project QA documents for specific instructions.

Sample Receipt:
 No. of containers correct
 custody seals secure

Temp. @ receipt _____ °C
 received good condition/cold
 conforms to COC document

Shipment Method: Drop off

Send Results to: Steve Netto

9171 TOWNE CENTRE DRIVE, SUITE 375
SAN DIEGO, CA 92122 (858) 455-6500

1640 SOUTH STAPLEY DRIVE, SUITE 124
MESA, AZ 85204 (480) 345-0888

1820 EAST RIVER ROAD, SUITE 220
TUCSON, AZ 85718 (520) 881-7300

Send invoice to San Diego, CA
Attn: Accounts Payable

Rachelle Arada

From: Carmen Aguila [carmen@atglobal.com]
Sent: Wednesday, May 16, 2012 1:56 PM
To: Rachelle Arada
Cc: Ed Caballero; Eddie Rodriguez; Edgar Morrison
Subject: FW: 532.30 COC

Confirmation wo# 1201771.

From: Amanda Beam [mailto:ABeam@HARGIS.COM]
Sent: Wednesday, May 16, 2012 1:54 PM
To: Carmen Aguila
Cc: Daniel Mora
Subject: 532.30 COC

Carmen,

This is a follow-up email per our conversation for request of 8260B VOC analysis for the sample collected on 5/11/12 for MW-08 that was not marked on the COC for analysis. Please run the VOA's for VOC analysis.

Thank you,

Amanda Beam
Hydrogeologist

Hargis + Associates, Inc.
9171 Towne Centre Drive, Suite 375
San Diego, California 92122
ph: 858-455-6500 ext. 145
fax: 858-410-7440
abeam@hargis.com

APPENDIX A
LABORATORY ANALYTICAL REPORTS
(THIRD QUARTER 2012)

August 16, 2012

Steve Netto
Hargis & Associates, Inc.
9171 Towne Centre Drive, Suite 375
San Diego, CA 92122
Tel: (619) 249-3166
Fax: (858) 455-6533



Re: ATL Work Order Number : 1202758
Client Reference : RAYTHEON, 532.30

Enclosed are the results for sample(s) received on August 06, 2012 by Advanced Technology Laboratories. The sample(s) are tested for the parameters as indicated on the enclosed chain of custody in accordance with applicable laboratory certifications. The laboratory results contained in this report specifically pertains to the sample(s) submitted.

Thank you for the opportunity to serve the needs of your company. If you have any questions, please feel free to contact me or your Project Manager.

Sincerely,

Eddie Rodriguez
Laboratory Director

The cover letter and the case narrative are an integral part of this analytical report and its absence renders the report invalid. The report cannot be reproduced without written permission from the client and Advanced Technology Laboratories.



Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : RAYTHEON, 532.30

Report To : Steve Netto

Reported : 08/16/2012

SUMMARY OF SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
TB-080612	1202758-01	Lab H2O	8/06/12 12:00	8/06/12 17:20
MW-3100	1202758-02	Groundwater	8/06/12 12:48	8/06/12 17:20
MW-31	1202758-03	Groundwater	8/06/12 14:48	8/06/12 17:20
MW-29	1202758-04	Groundwater	8/06/12 16:12	8/06/12 17:20
EW-01	1202758-05	Groundwater	8/06/12 16:45	8/06/12 17:20
EW-0100	1202758-06	Groundwater	8/06/12 17:00	8/06/12 17:20
MW-21	1202758-07	Groundwater	8/06/12 17:01	8/06/12 17:20



Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : RAYTHEON, 532.30

Report To : Steve Netto

Reported : 08/16/2012

Client Sample ID TB-080612

Lab ID: 1202758-01

Volatile Organic Compounds by EPA 8260

Analyst: RP

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	0.50	NA	1	B2H0191	08/09/2012	08/09/12 13:22	
1,1,1-Trichloroethane	ND	0.50	NA	1	B2H0191	08/09/2012	08/09/12 13:22	
1,1,2,2-Tetrachloroethane	ND	0.50	NA	1	B2H0191	08/09/2012	08/09/12 13:22	
1,1,2-Trichloroethane	ND	0.50	NA	1	B2H0191	08/09/2012	08/09/12 13:22	
1,1-Dichloroethane	ND	0.50	NA	1	B2H0191	08/09/2012	08/09/12 13:22	
1,1-Dichloroethene	ND	0.50	NA	1	B2H0191	08/09/2012	08/09/12 13:22	
1,1-Dichloropropene	ND	0.50	NA	1	B2H0191	08/09/2012	08/09/12 13:22	
1,2,3-Trichloropropane	ND	0.50	NA	1	B2H0191	08/09/2012	08/09/12 13:22	
1,2,3-Trichlorobenzene	ND	0.50	NA	1	B2H0191	08/09/2012	08/09/12 13:22	
1,2,4-Trichlorobenzene	ND	0.50	NA	1	B2H0191	08/09/2012	08/09/12 13:22	
1,2,4-Trimethylbenzene	ND	0.50	NA	1	B2H0191	08/09/2012	08/09/12 13:22	
1,2-Dibromo-3-chloropropane	ND	0.50	NA	1	B2H0191	08/09/2012	08/09/12 13:22	
1,2-Dibromoethane	ND	0.50	NA	1	B2H0191	08/09/2012	08/09/12 13:22	
1,2-Dichlorobenzene	ND	0.50	NA	1	B2H0191	08/09/2012	08/09/12 13:22	
1,2-Dichloroethane	ND	0.50	NA	1	B2H0191	08/09/2012	08/09/12 13:22	
1,2-Dichloropropane	ND	0.50	NA	1	B2H0191	08/09/2012	08/09/12 13:22	
1,3,5-Trimethylbenzene	ND	0.50	NA	1	B2H0191	08/09/2012	08/09/12 13:22	
1,3-Dichlorobenzene	ND	0.50	NA	1	B2H0191	08/09/2012	08/09/12 13:22	
1,3-Dichloropropane	ND	0.50	NA	1	B2H0191	08/09/2012	08/09/12 13:22	
1,4-Dichlorobenzene	ND	0.50	NA	1	B2H0191	08/09/2012	08/09/12 13:22	
2,2-Dichloropropane	ND	0.50	NA	1	B2H0191	08/09/2012	08/09/12 13:22	
2-Chlorotoluene	ND	0.50	NA	1	B2H0191	08/09/2012	08/09/12 13:22	
4-Chlorotoluene	ND	0.50	NA	1	B2H0191	08/09/2012	08/09/12 13:22	
4-Isopropyltoluene	ND	0.50	NA	1	B2H0191	08/09/2012	08/09/12 13:22	
Benzene	ND	0.50	NA	1	B2H0191	08/09/2012	08/09/12 13:22	
Bromobenzene	ND	0.50	NA	1	B2H0191	08/09/2012	08/09/12 13:22	
Bromodichloromethane	ND	0.50	NA	1	B2H0191	08/09/2012	08/09/12 13:22	
Bromoform	ND	0.50	NA	1	B2H0191	08/09/2012	08/09/12 13:22	
Bromomethane	ND	0.50	NA	1	B2H0191	08/09/2012	08/09/12 13:22	
Carbon tetrachloride	ND	0.50	NA	1	B2H0191	08/09/2012	08/09/12 13:22	
Chlorobenzene	ND	0.50	NA	1	B2H0191	08/09/2012	08/09/12 13:22	
Chloroethane	ND	0.50	NA	1	B2H0191	08/09/2012	08/09/12 13:22	
Chloroform	ND	0.50	NA	1	B2H0191	08/09/2012	08/09/12 13:22	
Chloromethane	ND	0.50	NA	1	B2H0191	08/09/2012	08/09/12 13:22	
cis-1,2-Dichloroethene	ND	0.50	NA	1	B2H0191	08/09/2012	08/09/12 13:22	
cis-1,3-Dichloropropene	ND	0.50	NA	1	B2H0191	08/09/2012	08/09/12 13:22	
Dibromochloromethane	ND	0.50	NA	1	B2H0191	08/09/2012	08/09/12 13:22	



Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego, CA 92122

Project Number : RAYTHEON, 532.30

Report To : Steve Netto

Reported : 08/16/2012

Client Sample ID TB-080612

Lab ID: 1202758-01

Volatile Organic Compounds by EPA 8260

Analyst: RP

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Dibromomethane	ND	0.50	NA	1	B2H0191	08/09/2012	08/09/12 13:22	
Dichlorodifluoromethane	ND	0.50	NA	1	B2H0191	08/09/2012	08/09/12 13:22	
Ethylbenzene	ND	0.50	NA	1	B2H0191	08/09/2012	08/09/12 13:22	
Hexachlorobutadiene	ND	0.50	NA	1	B2H0191	08/09/2012	08/09/12 13:22	
Isopropylbenzene	ND	0.50	NA	1	B2H0191	08/09/2012	08/09/12 13:22	
m,p-Xylene	ND	1.0	NA	1	B2H0191	08/09/2012	08/09/12 13:22	
Methylene chloride	ND	1.0	NA	1	B2H0191	08/09/2012	08/09/12 13:22	
n-Butylbenzene	ND	0.50	NA	1	B2H0191	08/09/2012	08/09/12 13:22	
n-Propylbenzene	ND	0.50	NA	1	B2H0191	08/09/2012	08/09/12 13:22	
Naphthalene	ND	0.50	NA	1	B2H0191	08/09/2012	08/09/12 13:22	
o-Xylene	ND	0.50	NA	1	B2H0191	08/09/2012	08/09/12 13:22	
sec-Butylbenzene	ND	0.50	NA	1	B2H0191	08/09/2012	08/09/12 13:22	
Styrene	ND	0.50	NA	1	B2H0191	08/09/2012	08/09/12 13:22	
tert-Butylbenzene	ND	0.50	NA	1	B2H0191	08/09/2012	08/09/12 13:22	
Tetrachloroethene	ND	0.50	NA	1	B2H0191	08/09/2012	08/09/12 13:22	
Toluene	ND	0.50	NA	1	B2H0191	08/09/2012	08/09/12 13:22	
trans-1,2-Dichloroethene	ND	0.50	NA	1	B2H0191	08/09/2012	08/09/12 13:22	
Trichloroethene	ND	0.50	NA	1	B2H0191	08/09/2012	08/09/12 13:22	
Trichlorofluoromethane	ND	0.50	NA	1	B2H0191	08/09/2012	08/09/12 13:22	
Vinyl chloride	ND	0.50	NA	1	B2H0191	08/09/2012	08/09/12 13:22	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>112 %</i>		<i>70 - 130</i>		B2H0191	08/09/2012	<i>08/09/12 13:22</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>97.1 %</i>		<i>70 - 130</i>		B2H0191	08/09/2012	<i>08/09/12 13:22</i>	
<i>Surrogate: Dibromofluoromethane</i>	<i>107 %</i>		<i>70 - 130</i>		B2H0191	08/09/2012	<i>08/09/12 13:22</i>	
<i>Surrogate: Toluene-d8</i>	<i>102 %</i>		<i>70 - 130</i>		B2H0191	08/09/2012	<i>08/09/12 13:22</i>	



Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : RAYTHEON, 532.30

Report To : Steve Netto

Reported : 08/16/2012

Client Sample ID MW-3100

Lab ID: 1202758-02

Volatile Organic Compounds by EPA 8260

Analyst: RP

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	0.50	NA	1	B2H0191	08/09/2012	08/09/12 18:59	
1,1,1-Trichloroethane	ND	0.50	NA	1	B2H0191	08/09/2012	08/09/12 18:59	
1,1,2,2-Tetrachloroethane	ND	0.50	NA	1	B2H0191	08/09/2012	08/09/12 18:59	
1,1,2-Trichloroethane	ND	0.50	NA	1	B2H0191	08/09/2012	08/09/12 18:59	
1,1-Dichloroethane	1.2	0.50	NA	1	B2H0191	08/09/2012	08/09/12 18:59	
1,1-Dichloroethene	180	5.0	NA	10	B2H0248	08/13/2012	08/13/12 18:23	
1,1-Dichloropropene	ND	0.50	NA	1	B2H0191	08/09/2012	08/09/12 18:59	
1,2,3-Trichloropropane	ND	0.50	NA	1	B2H0191	08/09/2012	08/09/12 18:59	
1,2,3-Trichlorobenzene	ND	0.50	NA	1	B2H0191	08/09/2012	08/09/12 18:59	
1,2,4-Trichlorobenzene	ND	0.50	NA	1	B2H0191	08/09/2012	08/09/12 18:59	
1,2,4-Trimethylbenzene	ND	0.50	NA	1	B2H0191	08/09/2012	08/09/12 18:59	
1,2-Dibromo-3-chloropropane	ND	0.50	NA	1	B2H0191	08/09/2012	08/09/12 18:59	
1,2-Dibromoethane	ND	0.50	NA	1	B2H0191	08/09/2012	08/09/12 18:59	
1,2-Dichlorobenzene	ND	0.50	NA	1	B2H0191	08/09/2012	08/09/12 18:59	
1,2-Dichloroethane	ND	0.50	NA	1	B2H0191	08/09/2012	08/09/12 18:59	
1,2-Dichloropropane	ND	0.50	NA	1	B2H0191	08/09/2012	08/09/12 18:59	
1,3,5-Trimethylbenzene	ND	0.50	NA	1	B2H0191	08/09/2012	08/09/12 18:59	
1,3-Dichlorobenzene	ND	0.50	NA	1	B2H0191	08/09/2012	08/09/12 18:59	
1,3-Dichloropropane	ND	0.50	NA	1	B2H0191	08/09/2012	08/09/12 18:59	
1,4-Dichlorobenzene	ND	0.50	NA	1	B2H0191	08/09/2012	08/09/12 18:59	
2,2-Dichloropropane	ND	0.50	NA	1	B2H0191	08/09/2012	08/09/12 18:59	
2-Chlorotoluene	ND	0.50	NA	1	B2H0191	08/09/2012	08/09/12 18:59	
4-Chlorotoluene	ND	0.50	NA	1	B2H0191	08/09/2012	08/09/12 18:59	
4-Isopropyltoluene	ND	0.50	NA	1	B2H0191	08/09/2012	08/09/12 18:59	
Benzene	ND	0.50	NA	1	B2H0191	08/09/2012	08/09/12 18:59	
Bromobenzene	ND	0.50	NA	1	B2H0191	08/09/2012	08/09/12 18:59	
Bromodichloromethane	ND	0.50	NA	1	B2H0191	08/09/2012	08/09/12 18:59	
Bromoform	ND	0.50	NA	1	B2H0191	08/09/2012	08/09/12 18:59	
Bromomethane	ND	0.50	NA	1	B2H0191	08/09/2012	08/09/12 18:59	
Carbon tetrachloride	ND	0.50	NA	1	B2H0191	08/09/2012	08/09/12 18:59	
Chlorobenzene	ND	0.50	NA	1	B2H0191	08/09/2012	08/09/12 18:59	
Chloroethane	ND	0.50	NA	1	B2H0191	08/09/2012	08/09/12 18:59	
Chloroform	ND	0.50	NA	1	B2H0191	08/09/2012	08/09/12 18:59	
Chloromethane	ND	0.50	NA	1	B2H0191	08/09/2012	08/09/12 18:59	
cis-1,2-Dichloroethene	0.61	0.50	NA	1	B2H0191	08/09/2012	08/09/12 18:59	
cis-1,3-Dichloropropene	ND	0.50	NA	1	B2H0191	08/09/2012	08/09/12 18:59	
Dibromochloromethane	ND	0.50	NA	1	B2H0191	08/09/2012	08/09/12 18:59	



Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : RAYTHEON, 532.30

Report To : Steve Netto

Reported : 08/16/2012

Client Sample ID MW-3100

Lab ID: 1202758-02

Volatile Organic Compounds by EPA 8260

Analyst: RP

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Dibromomethane	ND	0.50	NA	1	B2H0191	08/09/2012	08/09/12 18:59	
Dichlorodifluoromethane	ND	0.50	NA	1	B2H0191	08/09/2012	08/09/12 18:59	
Ethylbenzene	ND	0.50	NA	1	B2H0191	08/09/2012	08/09/12 18:59	
Hexachlorobutadiene	ND	0.50	NA	1	B2H0191	08/09/2012	08/09/12 18:59	
Isopropylbenzene	ND	0.50	NA	1	B2H0191	08/09/2012	08/09/12 18:59	
m,p-Xylene	ND	1.0	NA	1	B2H0191	08/09/2012	08/09/12 18:59	
Methylene chloride	ND	1.0	NA	1	B2H0191	08/09/2012	08/09/12 18:59	
n-Butylbenzene	ND	0.50	NA	1	B2H0191	08/09/2012	08/09/12 18:59	
n-Propylbenzene	ND	0.50	NA	1	B2H0191	08/09/2012	08/09/12 18:59	
Naphthalene	ND	0.50	NA	1	B2H0191	08/09/2012	08/09/12 18:59	
o-Xylene	ND	0.50	NA	1	B2H0191	08/09/2012	08/09/12 18:59	
sec-Butylbenzene	ND	0.50	NA	1	B2H0191	08/09/2012	08/09/12 18:59	
Styrene	ND	0.50	NA	1	B2H0191	08/09/2012	08/09/12 18:59	
tert-Butylbenzene	ND	0.50	NA	1	B2H0191	08/09/2012	08/09/12 18:59	
Tetrachloroethene	ND	0.50	NA	1	B2H0191	08/09/2012	08/09/12 18:59	
Toluene	ND	0.50	NA	1	B2H0191	08/09/2012	08/09/12 18:59	
trans-1,2-Dichloroethene	ND	0.50	NA	1	B2H0191	08/09/2012	08/09/12 18:59	
Trichloroethene	9.8	0.50	NA	1	B2H0191	08/09/2012	08/09/12 18:59	
Trichlorofluoromethane	ND	0.50	NA	1	B2H0191	08/09/2012	08/09/12 18:59	
Vinyl chloride	ND	0.50	NA	1	B2H0191	08/09/2012	08/09/12 18:59	

<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>122 %</i>	<i>70 - 130</i>			B2H0248	08/13/2012	<i>08/13/12 18:23</i>	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>114 %</i>	<i>70 - 130</i>			B2H0191	08/09/2012	<i>08/09/12 18:59</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>99.0 %</i>	<i>70 - 130</i>			B2H0248	08/13/2012	<i>08/13/12 18:23</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>97.9 %</i>	<i>70 - 130</i>			B2H0191	08/09/2012	<i>08/09/12 18:59</i>	
<i>Surrogate: Dibromofluoromethane</i>	<i>109 %</i>	<i>70 - 130</i>			B2H0191	08/09/2012	<i>08/09/12 18:59</i>	
<i>Surrogate: Dibromofluoromethane</i>	<i>112 %</i>	<i>70 - 130</i>			B2H0248	08/13/2012	<i>08/13/12 18:23</i>	
<i>Surrogate: Toluene-d8</i>	<i>101 %</i>	<i>70 - 130</i>			B2H0191	08/09/2012	<i>08/09/12 18:59</i>	
<i>Surrogate: Toluene-d8</i>	<i>102 %</i>	<i>70 - 130</i>			B2H0248	08/13/2012	<i>08/13/12 18:23</i>	



Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego, CA 92122

Project Number : RAYTHEON, 532.30

Report To : Steve Netto

Reported : 08/16/2012

Client Sample ID MW-3100

Lab ID: 1202758-02

1,4-Dioxane by EPA 8270/SIM: Isotope Dilution Technique

Analyst: BB

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,4-Dioxane	0.40	0.20	NA	1	B2H0225	08/10/2012	08/10/12 16:50	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	<i>69.0 %</i>		<i>36 - 107</i>		B2H0225	08/10/2012	<i>08/10/12 16:50</i>	
<i>Surrogate: 2-Fluorobiphenyl</i>	<i>83.8 %</i>		<i>42 - 120</i>		B2H0225	08/10/2012	<i>08/10/12 16:50</i>	
<i>Surrogate: 4-Terphenyl-d14</i>	<i>104 %</i>		<i>67 - 142</i>		B2H0225	08/10/2012	<i>08/10/12 16:50</i>	
<i>Surrogate: Nitrobenzene-d5</i>	<i>56.4 %</i>		<i>36 - 130</i>		B2H0225	08/10/2012	<i>08/10/12 16:50</i>	



Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : RAYTHEON, 532.30

Report To : Steve Netto

Reported : 08/16/2012

Client Sample ID MW-31

Lab ID: 1202758-03

Volatile Organic Compounds by EPA 8260

Analyst: RP

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	0.50	NA	1	B2H0191	08/09/2012	08/09/12 19:40	
1,1,1-Trichloroethane	ND	0.50	NA	1	B2H0191	08/09/2012	08/09/12 19:40	
1,1,2,2-Tetrachloroethane	ND	0.50	NA	1	B2H0191	08/09/2012	08/09/12 19:40	
1,1,2-Trichloroethane	ND	0.50	NA	1	B2H0191	08/09/2012	08/09/12 19:40	
1,1-Dichloroethane	1.3	0.50	NA	1	B2H0191	08/09/2012	08/09/12 19:40	
1,1-Dichloroethene	190	5.0	NA	10	B2H0248	08/13/2012	08/13/12 18:44	
1,1-Dichloropropene	ND	0.50	NA	1	B2H0191	08/09/2012	08/09/12 19:40	
1,2,3-Trichloropropane	ND	0.50	NA	1	B2H0191	08/09/2012	08/09/12 19:40	
1,2,3-Trichlorobenzene	ND	0.50	NA	1	B2H0191	08/09/2012	08/09/12 19:40	
1,2,4-Trichlorobenzene	ND	0.50	NA	1	B2H0191	08/09/2012	08/09/12 19:40	
1,2,4-Trimethylbenzene	ND	0.50	NA	1	B2H0191	08/09/2012	08/09/12 19:40	
1,2-Dibromo-3-chloropropane	ND	0.50	NA	1	B2H0191	08/09/2012	08/09/12 19:40	
1,2-Dibromoethane	ND	0.50	NA	1	B2H0191	08/09/2012	08/09/12 19:40	
1,2-Dichlorobenzene	ND	0.50	NA	1	B2H0191	08/09/2012	08/09/12 19:40	
1,2-Dichloroethane	ND	0.50	NA	1	B2H0191	08/09/2012	08/09/12 19:40	
1,2-Dichloropropane	ND	0.50	NA	1	B2H0191	08/09/2012	08/09/12 19:40	
1,3,5-Trimethylbenzene	ND	0.50	NA	1	B2H0191	08/09/2012	08/09/12 19:40	
1,3-Dichlorobenzene	ND	0.50	NA	1	B2H0191	08/09/2012	08/09/12 19:40	
1,3-Dichloropropane	ND	0.50	NA	1	B2H0191	08/09/2012	08/09/12 19:40	
1,4-Dichlorobenzene	ND	0.50	NA	1	B2H0191	08/09/2012	08/09/12 19:40	
2,2-Dichloropropane	ND	0.50	NA	1	B2H0191	08/09/2012	08/09/12 19:40	
2-Chlorotoluene	ND	0.50	NA	1	B2H0191	08/09/2012	08/09/12 19:40	
4-Chlorotoluene	ND	0.50	NA	1	B2H0191	08/09/2012	08/09/12 19:40	
4-Isopropyltoluene	ND	0.50	NA	1	B2H0191	08/09/2012	08/09/12 19:40	
Benzene	ND	0.50	NA	1	B2H0191	08/09/2012	08/09/12 19:40	
Bromobenzene	ND	0.50	NA	1	B2H0191	08/09/2012	08/09/12 19:40	
Bromodichloromethane	ND	0.50	NA	1	B2H0191	08/09/2012	08/09/12 19:40	
Bromoform	ND	0.50	NA	1	B2H0191	08/09/2012	08/09/12 19:40	
Bromomethane	ND	0.50	NA	1	B2H0191	08/09/2012	08/09/12 19:40	
Carbon tetrachloride	ND	0.50	NA	1	B2H0191	08/09/2012	08/09/12 19:40	
Chlorobenzene	ND	0.50	NA	1	B2H0191	08/09/2012	08/09/12 19:40	
Chloroethane	ND	0.50	NA	1	B2H0191	08/09/2012	08/09/12 19:40	
Chloroform	ND	0.50	NA	1	B2H0191	08/09/2012	08/09/12 19:40	
Chloromethane	ND	0.50	NA	1	B2H0191	08/09/2012	08/09/12 19:40	
cis-1,2-Dichloroethene	0.57	0.50	NA	1	B2H0191	08/09/2012	08/09/12 19:40	
cis-1,3-Dichloropropane	ND	0.50	NA	1	B2H0191	08/09/2012	08/09/12 19:40	
Dibromochloromethane	ND	0.50	NA	1	B2H0191	08/09/2012	08/09/12 19:40	



Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : RAYTHEON, 532.30

Report To : Steve Netto

Reported : 08/16/2012

Client Sample ID MW-31

Lab ID: 1202758-03

Volatile Organic Compounds by EPA 8260

Analyst: RP

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Dibromomethane	ND	0.50	NA	1	B2H0191	08/09/2012	08/09/12 19:40	
Dichlorodifluoromethane	ND	0.50	NA	1	B2H0191	08/09/2012	08/09/12 19:40	
Ethylbenzene	ND	0.50	NA	1	B2H0191	08/09/2012	08/09/12 19:40	
Hexachlorobutadiene	ND	0.50	NA	1	B2H0191	08/09/2012	08/09/12 19:40	
Isopropylbenzene	ND	0.50	NA	1	B2H0191	08/09/2012	08/09/12 19:40	
m,p-Xylene	ND	1.0	NA	1	B2H0191	08/09/2012	08/09/12 19:40	
Methylene chloride	ND	1.0	NA	1	B2H0191	08/09/2012	08/09/12 19:40	
n-Butylbenzene	ND	0.50	NA	1	B2H0191	08/09/2012	08/09/12 19:40	
n-Propylbenzene	ND	0.50	NA	1	B2H0191	08/09/2012	08/09/12 19:40	
Naphthalene	ND	0.50	NA	1	B2H0191	08/09/2012	08/09/12 19:40	
o-Xylene	ND	0.50	NA	1	B2H0191	08/09/2012	08/09/12 19:40	
sec-Butylbenzene	ND	0.50	NA	1	B2H0191	08/09/2012	08/09/12 19:40	
Styrene	ND	0.50	NA	1	B2H0191	08/09/2012	08/09/12 19:40	
tert-Butylbenzene	ND	0.50	NA	1	B2H0191	08/09/2012	08/09/12 19:40	
Tetrachloroethene	ND	0.50	NA	1	B2H0191	08/09/2012	08/09/12 19:40	
Toluene	ND	0.50	NA	1	B2H0191	08/09/2012	08/09/12 19:40	
trans-1,2-Dichloroethene	ND	0.50	NA	1	B2H0191	08/09/2012	08/09/12 19:40	
Trichloroethene	10	0.50	NA	1	B2H0191	08/09/2012	08/09/12 19:40	
Trichlorofluoromethane	ND	0.50	NA	1	B2H0191	08/09/2012	08/09/12 19:40	
Vinyl chloride	ND	0.50	NA	1	B2H0191	08/09/2012	08/09/12 19:40	

<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>119 %</i>	<i>70 - 130</i>			B2H0248	08/13/2012	<i>08/13/12 18:44</i>	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>115 %</i>	<i>70 - 130</i>			B2H0191	08/09/2012	<i>08/09/12 19:40</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>97.6 %</i>	<i>70 - 130</i>			B2H0248	08/13/2012	<i>08/13/12 18:44</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>99.0 %</i>	<i>70 - 130</i>			B2H0191	08/09/2012	<i>08/09/12 19:40</i>	
<i>Surrogate: Dibromofluoromethane</i>	<i>108 %</i>	<i>70 - 130</i>			B2H0191	08/09/2012	<i>08/09/12 19:40</i>	
<i>Surrogate: Dibromofluoromethane</i>	<i>110 %</i>	<i>70 - 130</i>			B2H0248	08/13/2012	<i>08/13/12 18:44</i>	
<i>Surrogate: Toluene-d8</i>	<i>100 %</i>	<i>70 - 130</i>			B2H0191	08/09/2012	<i>08/09/12 19:40</i>	
<i>Surrogate: Toluene-d8</i>	<i>102 %</i>	<i>70 - 130</i>			B2H0248	08/13/2012	<i>08/13/12 18:44</i>	



Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : RAYTHEON, 532.30

Report To : Steve Netto

Reported : 08/16/2012

Client Sample ID MW-31

Lab ID: 1202758-03

1,4-Dioxane by EPA 8270/SIM: Isotope Dilution Technique

Analyst: BB

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,4-Dioxane	0.37	0.20	NA	1	B2H0225	08/10/2012	08/10/12 17:19	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	<i>56.5 %</i>		<i>36 - 107</i>		B2H0225	08/10/2012	<i>08/10/12 17:19</i>	
<i>Surrogate: 2-Fluorobiphenyl</i>	<i>65.2 %</i>		<i>42 - 120</i>		B2H0225	08/10/2012	<i>08/10/12 17:19</i>	
<i>Surrogate: 4-Terphenyl-d14</i>	<i>93.4 %</i>		<i>67 - 142</i>		B2H0225	08/10/2012	<i>08/10/12 17:19</i>	
<i>Surrogate: Nitrobenzene-d5</i>	<i>48.4 %</i>		<i>36 - 130</i>		B2H0225	08/10/2012	<i>08/10/12 17:19</i>	



Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : RAYTHEON, 532.30

Report To : Steve Netto

Reported : 08/16/2012

Client Sample ID MW-29

Lab ID: 1202758-04

Volatile Organic Compounds by EPA 8260

Analyst: RP

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	1.0	NA	2	B2H0248	08/13/2012	08/13/12 20:26	D6
1,1,1-Trichloroethane	ND	1.0	NA	2	B2H0248	08/13/2012	08/13/12 20:26	D6
1,1,2,2-Tetrachloroethane	ND	1.0	NA	2	B2H0248	08/13/2012	08/13/12 20:26	D6
1,1,2-Trichloroethane	1.1	1.0	NA	2	B2H0248	08/13/2012	08/13/12 20:26	D6
1,1-Dichloroethane	3.8	1.0	NA	2	B2H0248	08/13/2012	08/13/12 20:26	D6
1,1-Dichloroethene	440	5.0	NA	10	B2H0191	08/09/2012	08/09/12 20:21	
1,1-Dichloropropene	ND	1.0	NA	2	B2H0248	08/13/2012	08/13/12 20:26	D6
1,2,3-Trichloropropane	ND	1.0	NA	2	B2H0248	08/13/2012	08/13/12 20:26	D6
1,2,3-Trichlorobenzene	ND	1.0	NA	2	B2H0248	08/13/2012	08/13/12 20:26	D6
1,2,4-Trichlorobenzene	ND	1.0	NA	2	B2H0248	08/13/2012	08/13/12 20:26	D6
1,2,4-Trimethylbenzene	ND	1.0	NA	2	B2H0248	08/13/2012	08/13/12 20:26	D6
1,2-Dibromo-3-chloropropane	ND	1.0	NA	2	B2H0248	08/13/2012	08/13/12 20:26	D6
1,2-Dibromoethane	ND	1.0	NA	2	B2H0248	08/13/2012	08/13/12 20:26	D6
1,2-Dichlorobenzene	ND	1.0	NA	2	B2H0248	08/13/2012	08/13/12 20:26	D6
1,2-Dichloroethane	ND	1.0	NA	2	B2H0248	08/13/2012	08/13/12 20:26	D6
1,2-Dichloropropane	ND	1.0	NA	2	B2H0248	08/13/2012	08/13/12 20:26	D6
1,3,5-Trimethylbenzene	ND	1.0	NA	2	B2H0248	08/13/2012	08/13/12 20:26	D6
1,3-Dichlorobenzene	ND	1.0	NA	2	B2H0248	08/13/2012	08/13/12 20:26	D6
1,3-Dichloropropane	ND	1.0	NA	2	B2H0248	08/13/2012	08/13/12 20:26	D6
1,4-Dichlorobenzene	ND	1.0	NA	2	B2H0248	08/13/2012	08/13/12 20:26	D6
2,2-Dichloropropane	ND	1.0	NA	2	B2H0248	08/13/2012	08/13/12 20:26	D6
2-Chlorotoluene	ND	1.0	NA	2	B2H0248	08/13/2012	08/13/12 20:26	D6
4-Chlorotoluene	ND	1.0	NA	2	B2H0248	08/13/2012	08/13/12 20:26	D6
4-Isopropyltoluene	ND	1.0	NA	2	B2H0248	08/13/2012	08/13/12 20:26	D6
Benzene	ND	1.0	NA	2	B2H0248	08/13/2012	08/13/12 20:26	D6
Bromobenzene	ND	1.0	NA	2	B2H0248	08/13/2012	08/13/12 20:26	D6
Bromodichloromethane	ND	1.0	NA	2	B2H0248	08/13/2012	08/13/12 20:26	D6
Bromoform	ND	1.0	NA	2	B2H0248	08/13/2012	08/13/12 20:26	D6
Bromomethane	ND	1.0	NA	2	B2H0248	08/13/2012	08/13/12 20:26	D6
Carbon tetrachloride	ND	1.0	NA	2	B2H0248	08/13/2012	08/13/12 20:26	D6
Chlorobenzene	ND	1.0	NA	2	B2H0248	08/13/2012	08/13/12 20:26	D6
Chloroethane	ND	1.0	NA	2	B2H0248	08/13/2012	08/13/12 20:26	D6
Chloroform	ND	1.0	NA	2	B2H0248	08/13/2012	08/13/12 20:26	D6
Chloromethane	ND	1.0	NA	2	B2H0248	08/13/2012	08/13/12 20:26	D6
cis-1,2-Dichloroethene	ND	1.0	NA	2	B2H0248	08/13/2012	08/13/12 20:26	D6
cis-1,3-Dichloropropane	ND	1.0	NA	2	B2H0248	08/13/2012	08/13/12 20:26	D6
Dibromochloromethane	ND	1.0	NA	2	B2H0248	08/13/2012	08/13/12 20:26	D6



Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego, CA 92122

Project Number : RAYTHEON, 532.30

Report To : Steve Netto

Reported : 08/16/2012

Client Sample ID MW-29

Lab ID: 1202758-04

Volatile Organic Compounds by EPA 8260

Analyst: RP

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Dibromomethane	ND	1.0	NA	2	B2H0248	08/13/2012	08/13/12 20:26	D6
Dichlorodifluoromethane	ND	1.0	NA	2	B2H0248	08/13/2012	08/13/12 20:26	D6
Ethylbenzene	ND	1.0	NA	2	B2H0248	08/13/2012	08/13/12 20:26	D6
Hexachlorobutadiene	ND	1.0	NA	2	B2H0248	08/13/2012	08/13/12 20:26	D6
Isopropylbenzene	ND	1.0	NA	2	B2H0248	08/13/2012	08/13/12 20:26	D6
m,p-Xylene	ND	2.0	NA	2	B2H0248	08/13/2012	08/13/12 20:26	D6
Methylene chloride	ND	2.0	NA	2	B2H0248	08/13/2012	08/13/12 20:26	D6
n-Butylbenzene	ND	1.0	NA	2	B2H0248	08/13/2012	08/13/12 20:26	D6
n-Propylbenzene	ND	1.0	NA	2	B2H0248	08/13/2012	08/13/12 20:26	D6
Naphthalene	ND	1.0	NA	2	B2H0248	08/13/2012	08/13/12 20:26	D6
o-Xylene	ND	1.0	NA	2	B2H0248	08/13/2012	08/13/12 20:26	D6
sec-Butylbenzene	ND	1.0	NA	2	B2H0248	08/13/2012	08/13/12 20:26	D6
Styrene	ND	1.0	NA	2	B2H0248	08/13/2012	08/13/12 20:26	D6
tert-Butylbenzene	ND	1.0	NA	2	B2H0248	08/13/2012	08/13/12 20:26	D6
Tetrachloroethene	1.2	1.0	NA	2	B2H0248	08/13/2012	08/13/12 20:26	D6
Toluene	ND	1.0	NA	2	B2H0248	08/13/2012	08/13/12 20:26	D6
trans-1,2-Dichloroethene	ND	1.0	NA	2	B2H0248	08/13/2012	08/13/12 20:26	D6
Trichloroethene	2.2	1.0	NA	2	B2H0248	08/13/2012	08/13/12 20:26	D6
Trichlorofluoromethane	1.0	1.0	NA	2	B2H0248	08/13/2012	08/13/12 20:26	D6
Vinyl chloride	ND	1.0	NA	2	B2H0248	08/13/2012	08/13/12 20:26	D6
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>123 %</i>		<i>70 - 130</i>		B2H0248	08/13/2012	<i>08/13/12 20:26</i>	D6
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>114 %</i>		<i>70 - 130</i>		B2H0191	08/09/2012	<i>08/09/12 20:21</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>97.3 %</i>		<i>70 - 130</i>		B2H0248	08/13/2012	<i>08/13/12 20:26</i>	D6
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>97.6 %</i>		<i>70 - 130</i>		B2H0191	08/09/2012	<i>08/09/12 20:21</i>	
<i>Surrogate: Dibromofluoromethane</i>	<i>108 %</i>		<i>70 - 130</i>		B2H0191	08/09/2012	<i>08/09/12 20:21</i>	
<i>Surrogate: Dibromofluoromethane</i>	<i>114 %</i>		<i>70 - 130</i>		B2H0248	08/13/2012	<i>08/13/12 20:26</i>	D6
<i>Surrogate: Toluene-d8</i>	<i>101 %</i>		<i>70 - 130</i>		B2H0191	08/09/2012	<i>08/09/12 20:21</i>	
<i>Surrogate: Toluene-d8</i>	<i>102 %</i>		<i>70 - 130</i>		B2H0248	08/13/2012	<i>08/13/12 20:26</i>	D6



Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : RAYTHEON, 532.30

Report To : Steve Netto

Reported : 08/16/2012

Client Sample ID MW-29

Lab ID: 1202758-04

1,4-Dioxane by EPA 8270: Isotope Dilution Technique

Analyst: BB

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,4-Dioxane	110	2.0	NA	1	B2H0223	08/10/2012	08/10/12 13:18	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	<i>70.7 %</i>		<i>37 - 93</i>		B2H0223	08/10/2012	<i>08/10/12 13:18</i>	
<i>Surrogate: 2-Fluorobiphenyl</i>	<i>79.7 %</i>		<i>51 - 100</i>		B2H0223	08/10/2012	<i>08/10/12 13:18</i>	
<i>Surrogate: 4-Terphenyl-d14</i>	<i>87.0 %</i>		<i>58 - 113</i>		B2H0223	08/10/2012	<i>08/10/12 13:18</i>	
<i>Surrogate: Nitrobenzene-d5</i>	<i>72.1 %</i>		<i>39 - 95</i>		B2H0223	08/10/2012	<i>08/10/12 13:18</i>	



Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : RAYTHEON, 532.30

Report To : Steve Netto

Reported : 08/16/2012

Client Sample ID EW-01

Lab ID: 1202758-05

Volatile Organic Compounds by EPA 8260

Analyst: RP

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	0.50	NA	1	B2H0191	08/09/2012	08/09/12 15:34	
1,1,1-Trichloroethane	ND	0.50	NA	1	B2H0191	08/09/2012	08/09/12 15:34	
1,1,2,2-Tetrachloroethane	ND	0.50	NA	1	B2H0191	08/09/2012	08/09/12 15:34	
1,1,2-Trichloroethane	0.56	0.50	NA	1	B2H0191	08/09/2012	08/09/12 15:34	
1,1-Dichloroethane	1.2	0.50	NA	1	B2H0191	08/09/2012	08/09/12 15:34	
1,1-Dichloroethene	94	0.50	NA	1	B2H0191	08/09/2012	08/09/12 15:34	
1,1-Dichloropropene	ND	0.50	NA	1	B2H0191	08/09/2012	08/09/12 15:34	
1,2,3-Trichloropropane	ND	0.50	NA	1	B2H0191	08/09/2012	08/09/12 15:34	
1,2,3-Trichlorobenzene	ND	0.50	NA	1	B2H0191	08/09/2012	08/09/12 15:34	
1,2,4-Trichlorobenzene	ND	0.50	NA	1	B2H0191	08/09/2012	08/09/12 15:34	
1,2,4-Trimethylbenzene	ND	0.50	NA	1	B2H0191	08/09/2012	08/09/12 15:34	
1,2-Dibromo-3-chloropropane	ND	0.50	NA	1	B2H0191	08/09/2012	08/09/12 15:34	
1,2-Dibromoethane	ND	0.50	NA	1	B2H0191	08/09/2012	08/09/12 15:34	
1,2-Dichlorobenzene	ND	0.50	NA	1	B2H0191	08/09/2012	08/09/12 15:34	
1,2-Dichloroethane	ND	0.50	NA	1	B2H0191	08/09/2012	08/09/12 15:34	
1,2-Dichloropropane	ND	0.50	NA	1	B2H0191	08/09/2012	08/09/12 15:34	
1,3,5-Trimethylbenzene	ND	0.50	NA	1	B2H0191	08/09/2012	08/09/12 15:34	
1,3-Dichlorobenzene	ND	0.50	NA	1	B2H0191	08/09/2012	08/09/12 15:34	
1,3-Dichloropropane	ND	0.50	NA	1	B2H0191	08/09/2012	08/09/12 15:34	
1,4-Dichlorobenzene	ND	0.50	NA	1	B2H0191	08/09/2012	08/09/12 15:34	
2,2-Dichloropropane	ND	0.50	NA	1	B2H0191	08/09/2012	08/09/12 15:34	
2-Chlorotoluene	ND	0.50	NA	1	B2H0191	08/09/2012	08/09/12 15:34	
4-Chlorotoluene	ND	0.50	NA	1	B2H0191	08/09/2012	08/09/12 15:34	
4-Isopropyltoluene	ND	0.50	NA	1	B2H0191	08/09/2012	08/09/12 15:34	
Benzene	ND	0.50	NA	1	B2H0191	08/09/2012	08/09/12 15:34	
Bromobenzene	ND	0.50	NA	1	B2H0191	08/09/2012	08/09/12 15:34	
Bromodichloromethane	ND	0.50	NA	1	B2H0191	08/09/2012	08/09/12 15:34	
Bromoform	ND	0.50	NA	1	B2H0191	08/09/2012	08/09/12 15:34	
Bromomethane	ND	0.50	NA	1	B2H0191	08/09/2012	08/09/12 15:34	
Carbon tetrachloride	ND	0.50	NA	1	B2H0191	08/09/2012	08/09/12 15:34	
Chlorobenzene	ND	0.50	NA	1	B2H0191	08/09/2012	08/09/12 15:34	
Chloroethane	ND	0.50	NA	1	B2H0191	08/09/2012	08/09/12 15:34	
Chloroform	ND	0.50	NA	1	B2H0191	08/09/2012	08/09/12 15:34	
Chloromethane	ND	0.50	NA	1	B2H0191	08/09/2012	08/09/12 15:34	
cis-1,2-Dichloroethene	ND	0.50	NA	1	B2H0191	08/09/2012	08/09/12 15:34	
cis-1,3-Dichloropropane	ND	0.50	NA	1	B2H0191	08/09/2012	08/09/12 15:34	
Dibromochloromethane	ND	0.50	NA	1	B2H0191	08/09/2012	08/09/12 15:34	



Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : RAYTHEON, 532.30

Report To : Steve Netto

Reported : 08/16/2012

Client Sample ID EW-01

Lab ID: 1202758-05

Volatile Organic Compounds by EPA 8260

Analyst: RP

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Dibromomethane	ND	0.50	NA	1	B2H0191	08/09/2012	08/09/12 15:34	
Dichlorodifluoromethane	ND	0.50	NA	1	B2H0191	08/09/2012	08/09/12 15:34	
Ethylbenzene	ND	0.50	NA	1	B2H0191	08/09/2012	08/09/12 15:34	
Hexachlorobutadiene	ND	0.50	NA	1	B2H0191	08/09/2012	08/09/12 15:34	
Isopropylbenzene	ND	0.50	NA	1	B2H0191	08/09/2012	08/09/12 15:34	
m,p-Xylene	ND	1.0	NA	1	B2H0191	08/09/2012	08/09/12 15:34	
Methylene chloride	ND	1.0	NA	1	B2H0191	08/09/2012	08/09/12 15:34	
n-Butylbenzene	ND	0.50	NA	1	B2H0191	08/09/2012	08/09/12 15:34	
n-Propylbenzene	ND	0.50	NA	1	B2H0191	08/09/2012	08/09/12 15:34	
Naphthalene	ND	0.50	NA	1	B2H0191	08/09/2012	08/09/12 15:34	
o-Xylene	ND	0.50	NA	1	B2H0191	08/09/2012	08/09/12 15:34	
sec-Butylbenzene	ND	0.50	NA	1	B2H0191	08/09/2012	08/09/12 15:34	
Styrene	ND	0.50	NA	1	B2H0191	08/09/2012	08/09/12 15:34	
tert-Butylbenzene	ND	0.50	NA	1	B2H0191	08/09/2012	08/09/12 15:34	
Tetrachloroethene	ND	0.50	NA	1	B2H0191	08/09/2012	08/09/12 15:34	
Toluene	ND	0.50	NA	1	B2H0191	08/09/2012	08/09/12 15:34	
trans-1,2-Dichloroethene	ND	0.50	NA	1	B2H0191	08/09/2012	08/09/12 15:34	
Trichloroethene	ND	0.50	NA	1	B2H0191	08/09/2012	08/09/12 15:34	
Trichlorofluoromethane	ND	0.50	NA	1	B2H0191	08/09/2012	08/09/12 15:34	
Vinyl chloride	ND	0.50	NA	1	B2H0191	08/09/2012	08/09/12 15:34	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>115 %</i>		<i>70 - 130</i>		B2H0191	08/09/2012	<i>08/09/12 15:34</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>98.2 %</i>		<i>70 - 130</i>		B2H0191	08/09/2012	<i>08/09/12 15:34</i>	
<i>Surrogate: Dibromofluoromethane</i>	<i>108 %</i>		<i>70 - 130</i>		B2H0191	08/09/2012	<i>08/09/12 15:34</i>	
<i>Surrogate: Toluene-d8</i>	<i>101 %</i>		<i>70 - 130</i>		B2H0191	08/09/2012	<i>08/09/12 15:34</i>	



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9171 Towne Centre Drive, Suite 375
San Diego, CA 92122

Project Number : RAYTHEON, 532.30
Report To : Steve Netto
Reported : 08/16/2012

Client Sample ID EW-01
Lab ID: 1202758-05

1,4-Dioxane by EPA 8270: Isotope Dilution Technique

Analyst: BB

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,4-Dioxane	42	2.0	NA	1	B2H0223	08/10/2012	08/10/12 13:43	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	84.9 %		37 - 93		B2H0223	08/10/2012	08/10/12 13:43	
<i>Surrogate: 2-Fluorobiphenyl</i>	98.2 %		51 - 100		B2H0223	08/10/2012	08/10/12 13:43	
<i>Surrogate: 4-Terphenyl-d14</i>	95.1 %		58 - 113		B2H0223	08/10/2012	08/10/12 13:43	
<i>Surrogate: Nitrobenzene-d5</i>	86.4 %		39 - 95		B2H0223	08/10/2012	08/10/12 13:43	



Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : RAYTHEON, 532.30

Report To : Steve Netto

Reported : 08/16/2012

Client Sample ID EW-0100

Lab ID: 1202758-06

Volatile Organic Compounds by EPA 8260

Analyst: RP

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	0.50	NA	1	B2H0191	08/09/2012	08/09/12 18:18	
1,1,1-Trichloroethane	ND	0.50	NA	1	B2H0191	08/09/2012	08/09/12 18:18	
1,1,2,2-Tetrachloroethane	ND	0.50	NA	1	B2H0191	08/09/2012	08/09/12 18:18	
1,1,2-Trichloroethane	0.55	0.50	NA	1	B2H0191	08/09/2012	08/09/12 18:18	
1,1-Dichloroethane	1.2	0.50	NA	1	B2H0191	08/09/2012	08/09/12 18:18	
1,1-Dichloroethene	99	0.50	NA	1	B2H0191	08/09/2012	08/09/12 18:18	
1,1-Dichloropropene	ND	0.50	NA	1	B2H0191	08/09/2012	08/09/12 18:18	
1,2,3-Trichloropropane	ND	0.50	NA	1	B2H0191	08/09/2012	08/09/12 18:18	
1,2,3-Trichlorobenzene	ND	0.50	NA	1	B2H0191	08/09/2012	08/09/12 18:18	
1,2,4-Trichlorobenzene	ND	0.50	NA	1	B2H0191	08/09/2012	08/09/12 18:18	
1,2,4-Trimethylbenzene	ND	0.50	NA	1	B2H0191	08/09/2012	08/09/12 18:18	
1,2-Dibromo-3-chloropropane	ND	0.50	NA	1	B2H0191	08/09/2012	08/09/12 18:18	
1,2-Dibromoethane	ND	0.50	NA	1	B2H0191	08/09/2012	08/09/12 18:18	
1,2-Dichlorobenzene	ND	0.50	NA	1	B2H0191	08/09/2012	08/09/12 18:18	
1,2-Dichloroethane	ND	0.50	NA	1	B2H0191	08/09/2012	08/09/12 18:18	
1,2-Dichloropropane	ND	0.50	NA	1	B2H0191	08/09/2012	08/09/12 18:18	
1,3,5-Trimethylbenzene	ND	0.50	NA	1	B2H0191	08/09/2012	08/09/12 18:18	
1,3-Dichlorobenzene	ND	0.50	NA	1	B2H0191	08/09/2012	08/09/12 18:18	
1,3-Dichloropropane	ND	0.50	NA	1	B2H0191	08/09/2012	08/09/12 18:18	
1,4-Dichlorobenzene	ND	0.50	NA	1	B2H0191	08/09/2012	08/09/12 18:18	
2,2-Dichloropropane	ND	0.50	NA	1	B2H0191	08/09/2012	08/09/12 18:18	
2-Chlorotoluene	ND	0.50	NA	1	B2H0191	08/09/2012	08/09/12 18:18	
4-Chlorotoluene	ND	0.50	NA	1	B2H0191	08/09/2012	08/09/12 18:18	
4-Isopropyltoluene	ND	0.50	NA	1	B2H0191	08/09/2012	08/09/12 18:18	
Benzene	ND	0.50	NA	1	B2H0191	08/09/2012	08/09/12 18:18	
Bromobenzene	ND	0.50	NA	1	B2H0191	08/09/2012	08/09/12 18:18	
Bromodichloromethane	ND	0.50	NA	1	B2H0191	08/09/2012	08/09/12 18:18	
Bromoform	ND	0.50	NA	1	B2H0191	08/09/2012	08/09/12 18:18	
Bromomethane	ND	0.50	NA	1	B2H0191	08/09/2012	08/09/12 18:18	
Carbon tetrachloride	ND	0.50	NA	1	B2H0191	08/09/2012	08/09/12 18:18	
Chlorobenzene	ND	0.50	NA	1	B2H0191	08/09/2012	08/09/12 18:18	
Chloroethane	ND	0.50	NA	1	B2H0191	08/09/2012	08/09/12 18:18	
Chloroform	ND	0.50	NA	1	B2H0191	08/09/2012	08/09/12 18:18	
Chloromethane	ND	0.50	NA	1	B2H0191	08/09/2012	08/09/12 18:18	
cis-1,2-Dichloroethene	ND	0.50	NA	1	B2H0191	08/09/2012	08/09/12 18:18	
cis-1,3-Dichloropropane	ND	0.50	NA	1	B2H0191	08/09/2012	08/09/12 18:18	
Dibromochloromethane	ND	0.50	NA	1	B2H0191	08/09/2012	08/09/12 18:18	



Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : RAYTHEON, 532.30

Report To : Steve Netto

Reported : 08/16/2012

Client Sample ID EW-0100

Lab ID: 1202758-06

Volatile Organic Compounds by EPA 8260

Analyst: RP

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Dibromomethane	ND	0.50	NA	1	B2H0191	08/09/2012	08/09/12 18:18	
Dichlorodifluoromethane	ND	0.50	NA	1	B2H0191	08/09/2012	08/09/12 18:18	
Ethylbenzene	ND	0.50	NA	1	B2H0191	08/09/2012	08/09/12 18:18	
Hexachlorobutadiene	ND	0.50	NA	1	B2H0191	08/09/2012	08/09/12 18:18	
Isopropylbenzene	ND	0.50	NA	1	B2H0191	08/09/2012	08/09/12 18:18	
m,p-Xylene	ND	1.0	NA	1	B2H0191	08/09/2012	08/09/12 18:18	
Methylene chloride	ND	1.0	NA	1	B2H0191	08/09/2012	08/09/12 18:18	
n-Butylbenzene	ND	0.50	NA	1	B2H0191	08/09/2012	08/09/12 18:18	
n-Propylbenzene	ND	0.50	NA	1	B2H0191	08/09/2012	08/09/12 18:18	
Naphthalene	ND	0.50	NA	1	B2H0191	08/09/2012	08/09/12 18:18	
o-Xylene	ND	0.50	NA	1	B2H0191	08/09/2012	08/09/12 18:18	
sec-Butylbenzene	ND	0.50	NA	1	B2H0191	08/09/2012	08/09/12 18:18	
Styrene	ND	0.50	NA	1	B2H0191	08/09/2012	08/09/12 18:18	
tert-Butylbenzene	ND	0.50	NA	1	B2H0191	08/09/2012	08/09/12 18:18	
Tetrachloroethene	ND	0.50	NA	1	B2H0191	08/09/2012	08/09/12 18:18	
Toluene	ND	0.50	NA	1	B2H0191	08/09/2012	08/09/12 18:18	
trans-1,2-Dichloroethene	ND	0.50	NA	1	B2H0191	08/09/2012	08/09/12 18:18	
Trichloroethene	ND	0.50	NA	1	B2H0191	08/09/2012	08/09/12 18:18	
Trichlorofluoromethane	ND	0.50	NA	1	B2H0191	08/09/2012	08/09/12 18:18	
Vinyl chloride	ND	0.50	NA	1	B2H0191	08/09/2012	08/09/12 18:18	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>113 %</i>		<i>70 - 130</i>		B2H0191	08/09/2012	<i>08/09/12 18:18</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>99.5 %</i>		<i>70 - 130</i>		B2H0191	08/09/2012	<i>08/09/12 18:18</i>	
<i>Surrogate: Dibromofluoromethane</i>	<i>106 %</i>		<i>70 - 130</i>		B2H0191	08/09/2012	<i>08/09/12 18:18</i>	
<i>Surrogate: Toluene-d8</i>	<i>101 %</i>		<i>70 - 130</i>		B2H0191	08/09/2012	<i>08/09/12 18:18</i>	



Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : RAYTHEON, 532.30

Report To : Steve Netto

Reported : 08/16/2012

Client Sample ID EW-0100

Lab ID: 1202758-06

1,4-Dioxane by EPA 8270: Isotope Dilution Technique

Analyst: BB

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,4-Dioxane	44	2.0	NA	1	B2H0223	08/10/2012	08/10/12 14:08	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	<i>89.3 %</i>		<i>37 - 93</i>		B2H0223	08/10/2012	<i>08/10/12 14:08</i>	
<i>Surrogate: 2-Fluorobiphenyl</i>	<i>100 %</i>		<i>51 - 100</i>		B2H0223	08/10/2012	<i>08/10/12 14:08</i>	S8
<i>Surrogate: 4-Terphenyl-d14</i>	<i>96.9 %</i>		<i>58 - 113</i>		B2H0223	08/10/2012	<i>08/10/12 14:08</i>	
<i>Surrogate: Nitrobenzene-d5</i>	<i>88.9 %</i>		<i>39 - 95</i>		B2H0223	08/10/2012	<i>08/10/12 14:08</i>	



Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : RAYTHEON, 532.30

Report To : Steve Netto

Reported : 08/16/2012

Client Sample ID MW-21

Lab ID: 1202758-07

Volatile Organic Compounds by EPA 8260

Analyst: RP

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	5.0	NA	10	B2H0191	08/09/2012	08/09/12 21:02	D6
1,1,1-Trichloroethane	ND	5.0	NA	10	B2H0191	08/09/2012	08/09/12 21:02	D6
1,1,2,2-Tetrachloroethane	ND	5.0	NA	10	B2H0191	08/09/2012	08/09/12 21:02	D6
1,1,2-Trichloroethane	ND	5.0	NA	10	B2H0191	08/09/2012	08/09/12 21:02	D6
1,1-Dichloroethane	10	5.0	NA	10	B2H0191	08/09/2012	08/09/12 21:02	D6
1,1-Dichloroethene	1300	10	NA	20	B2H0248	08/13/2012	08/13/12 19:04	
1,1-Dichloropropene	ND	5.0	NA	10	B2H0191	08/09/2012	08/09/12 21:02	D6
1,2,3-Trichloropropane	ND	5.0	NA	10	B2H0191	08/09/2012	08/09/12 21:02	D6
1,2,3-Trichlorobenzene	ND	5.0	NA	10	B2H0191	08/09/2012	08/09/12 21:02	D6
1,2,4-Trichlorobenzene	ND	5.0	NA	10	B2H0191	08/09/2012	08/09/12 21:02	D6
1,2,4-Trimethylbenzene	ND	5.0	NA	10	B2H0191	08/09/2012	08/09/12 21:02	D6
1,2-Dibromo-3-chloropropane	ND	5.0	NA	10	B2H0191	08/09/2012	08/09/12 21:02	D6
1,2-Dibromoethane	ND	5.0	NA	10	B2H0191	08/09/2012	08/09/12 21:02	D6
1,2-Dichlorobenzene	ND	5.0	NA	10	B2H0191	08/09/2012	08/09/12 21:02	D6
1,2-Dichloroethane	ND	5.0	NA	10	B2H0191	08/09/2012	08/09/12 21:02	D6
1,2-Dichloropropane	ND	5.0	NA	10	B2H0191	08/09/2012	08/09/12 21:02	D6
1,3,5-Trimethylbenzene	ND	5.0	NA	10	B2H0191	08/09/2012	08/09/12 21:02	D6
1,3-Dichlorobenzene	ND	5.0	NA	10	B2H0191	08/09/2012	08/09/12 21:02	D6
1,3-Dichloropropane	ND	5.0	NA	10	B2H0191	08/09/2012	08/09/12 21:02	D6
1,4-Dichlorobenzene	ND	5.0	NA	10	B2H0191	08/09/2012	08/09/12 21:02	D6
2,2-Dichloropropane	ND	5.0	NA	10	B2H0191	08/09/2012	08/09/12 21:02	D6
2-Chlorotoluene	ND	5.0	NA	10	B2H0191	08/09/2012	08/09/12 21:02	D6
4-Chlorotoluene	ND	5.0	NA	10	B2H0191	08/09/2012	08/09/12 21:02	D6
4-Isopropyltoluene	ND	5.0	NA	10	B2H0191	08/09/2012	08/09/12 21:02	D6
Benzene	ND	5.0	NA	10	B2H0191	08/09/2012	08/09/12 21:02	D6
Bromobenzene	ND	5.0	NA	10	B2H0191	08/09/2012	08/09/12 21:02	D6
Bromodichloromethane	ND	5.0	NA	10	B2H0191	08/09/2012	08/09/12 21:02	D6
Bromoform	ND	5.0	NA	10	B2H0191	08/09/2012	08/09/12 21:02	D6
Bromomethane	ND	5.0	NA	10	B2H0191	08/09/2012	08/09/12 21:02	D6
Carbon tetrachloride	ND	5.0	NA	10	B2H0191	08/09/2012	08/09/12 21:02	D6
Chlorobenzene	ND	5.0	NA	10	B2H0191	08/09/2012	08/09/12 21:02	D6
Chloroethane	ND	5.0	NA	10	B2H0191	08/09/2012	08/09/12 21:02	D6
Chloroform	ND	5.0	NA	10	B2H0191	08/09/2012	08/09/12 21:02	D6
Chloromethane	ND	5.0	NA	10	B2H0191	08/09/2012	08/09/12 21:02	D6
cis-1,2-Dichloroethene	ND	5.0	NA	10	B2H0191	08/09/2012	08/09/12 21:02	D6
cis-1,3-Dichloropropane	ND	5.0	NA	10	B2H0191	08/09/2012	08/09/12 21:02	D6
Dibromochloromethane	ND	5.0	NA	10	B2H0191	08/09/2012	08/09/12 21:02	D6



Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego, CA 92122

Project Number : RAYTHEON, 532.30

Report To : Steve Netto

Reported : 08/16/2012

Client Sample ID MW-21

Lab ID: 1202758-07

Volatile Organic Compounds by EPA 8260

Analyst: RP

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Dibromomethane	ND	5.0	NA	10	B2H0191	08/09/2012	08/09/12 21:02	D6
Dichlorodifluoromethane	ND	5.0	NA	10	B2H0191	08/09/2012	08/09/12 21:02	D6
Ethylbenzene	ND	5.0	NA	10	B2H0191	08/09/2012	08/09/12 21:02	D6
Hexachlorobutadiene	ND	5.0	NA	10	B2H0191	08/09/2012	08/09/12 21:02	D6
Isopropylbenzene	ND	5.0	NA	10	B2H0191	08/09/2012	08/09/12 21:02	D6
m,p-Xylene	ND	10	NA	10	B2H0191	08/09/2012	08/09/12 21:02	D6
Methylene chloride	ND	10	NA	10	B2H0191	08/09/2012	08/09/12 21:02	D6
n-Butylbenzene	ND	5.0	NA	10	B2H0191	08/09/2012	08/09/12 21:02	D6
n-Propylbenzene	ND	5.0	NA	10	B2H0191	08/09/2012	08/09/12 21:02	D6
Naphthalene	ND	5.0	NA	10	B2H0191	08/09/2012	08/09/12 21:02	D6
o-Xylene	ND	5.0	NA	10	B2H0191	08/09/2012	08/09/12 21:02	D6
sec-Butylbenzene	ND	5.0	NA	10	B2H0191	08/09/2012	08/09/12 21:02	D6
Styrene	ND	5.0	NA	10	B2H0191	08/09/2012	08/09/12 21:02	D6
tert-Butylbenzene	ND	5.0	NA	10	B2H0191	08/09/2012	08/09/12 21:02	D6
Tetrachloroethene	ND	5.0	NA	10	B2H0191	08/09/2012	08/09/12 21:02	D6
Toluene	ND	5.0	NA	10	B2H0191	08/09/2012	08/09/12 21:02	D6
trans-1,2-Dichloroethene	ND	5.0	NA	10	B2H0191	08/09/2012	08/09/12 21:02	D6
Trichloroethene	12	5.0	NA	10	B2H0191	08/09/2012	08/09/12 21:02	D6
Trichlorofluoromethane	ND	5.0	NA	10	B2H0191	08/09/2012	08/09/12 21:02	D6
Vinyl chloride	ND	5.0	NA	10	B2H0191	08/09/2012	08/09/12 21:02	D6

<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>120 %</i>	<i>70 - 130</i>			B2H0248	08/13/2012	<i>08/13/12 19:04</i>	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>112 %</i>	<i>70 - 130</i>			B2H0191	08/09/2012	<i>08/09/12 21:02</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>98.9 %</i>	<i>70 - 130</i>			B2H0248	08/13/2012	<i>08/13/12 19:04</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>97.2 %</i>	<i>70 - 130</i>			B2H0191	08/09/2012	<i>08/09/12 21:02</i>	
<i>Surrogate: Dibromofluoromethane</i>	<i>112 %</i>	<i>70 - 130</i>			B2H0248	08/13/2012	<i>08/13/12 19:04</i>	
<i>Surrogate: Dibromofluoromethane</i>	<i>109 %</i>	<i>70 - 130</i>			B2H0191	08/09/2012	<i>08/09/12 21:02</i>	
<i>Surrogate: Toluene-d8</i>	<i>101 %</i>	<i>70 - 130</i>			B2H0191	08/09/2012	<i>08/09/12 21:02</i>	
<i>Surrogate: Toluene-d8</i>	<i>101 %</i>	<i>70 - 130</i>			B2H0248	08/13/2012	<i>08/13/12 19:04</i>	



Hargis & Associates, Inc.
9171 Towne Centre Drive, Suite 375
San Diego , CA 92122

Project Number : RAYTHEON, 532.30
Report To : Steve Netto
Reported : 08/16/2012

Client Sample ID MW-21
Lab ID: 1202758-07

1,4-Dioxane by EPA 8270: Isotope Dilution Technique

Analyst: BB

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,4-Dioxane	60	2.0	NA	1	B2H0223	08/10/2012	08/10/12 14:34	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	86.6 %		37 - 93		B2H0223	08/10/2012	08/10/12 14:34	
<i>Surrogate: 2-Fluorobiphenyl</i>	96.1 %		51 - 100		B2H0223	08/10/2012	08/10/12 14:34	
<i>Surrogate: 4-Terphenyl-d14</i>	93.6 %		58 - 113		B2H0223	08/10/2012	08/10/12 14:34	
<i>Surrogate: Nitrobenzene-d5</i>	85.7 %		39 - 95		B2H0223	08/10/2012	08/10/12 14:34	



Hargis & Associates, Inc.
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Project Number : RAYTHEON, 532.30
 Report To : Steve Netto
 Reported : 08/16/2012

QUALITY CONTROL SECTION

Volatile Organic Compounds by EPA 8260 - Quality Control

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B2H0191 - MSVOAW_LL

Blank (B2H0191-BLK1)

Prepared: 8/9/2012 Analyzed: 8/9/2012

1,1,1,2-Tetrachloroethane	ND	0.50				NR			
1,1,1-Trichloroethane	ND	0.50				NR			
1,1,2,2-Tetrachloroethane	ND	0.50				NR			
1,1,2-Trichloroethane	ND	0.50				NR			
1,1-Dichloroethane	ND	0.50				NR			
1,1-Dichloroethene	ND	0.50				NR			
1,1-Dichloropropene	ND	0.50				NR			
1,2,3-Trichloropropane	ND	0.50				NR			
1,2,3-Trichlorobenzene	ND	0.50				NR			
1,2,4-Trichlorobenzene	ND	0.50				NR			
1,2,4-Trimethylbenzene	ND	0.50				NR			
1,2-Dibromo-3-chloropropane	ND	0.50				NR			
1,2-Dibromoethane	ND	0.50				NR			
1,2-Dichlorobenzene	ND	0.50				NR			
1,2-Dichloroethane	ND	0.50				NR			
1,2-Dichloropropane	ND	0.50				NR			
1,3,5-Trimethylbenzene	ND	0.50				NR			
1,3-Dichlorobenzene	ND	0.50				NR			
1,3-Dichloropropane	ND	0.50				NR			
1,4-Dichlorobenzene	ND	0.50				NR			
2,2-Dichloropropane	ND	0.50				NR			
2-Chlorotoluene	ND	0.50				NR			
4-Chlorotoluene	ND	0.50				NR			
4-Isopropyltoluene	ND	0.50				NR			
Benzene	ND	0.50				NR			
Bromobenzene	ND	0.50				NR			
Bromodichloromethane	ND	0.50				NR			
Bromoform	ND	0.50				NR			
Bromomethane	ND	0.50				NR			
Carbon tetrachloride	ND	0.50				NR			
Chlorobenzene	ND	0.50				NR			
Chloroethane	ND	0.50				NR			
Chloroform	ND	0.50				NR			
Chloromethane	ND	0.50				NR			
cis-1,2-Dichloroethene	ND	0.50				NR			
cis-1,3-Dichloropropene	ND	0.50				NR			
Dibromochloromethane	ND	0.50				NR			
Dibromomethane	ND	0.50				NR			
Dichlorodifluoromethane	ND	0.50				NR			



Hargis & Associates, Inc.

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San Diego , CA 92122

Project Number : RAYTHEON, 532.30

Report To : Steve Netto

Reported : 08/16/2012

Volatile Organic Compounds by EPA 8260 - Quality Control (cont'd)

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec % Rec	% Rec Limits	RPD RPD	RPD Limit	Notes
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Batch B2H0191 - MSVOAW_LL (continued)

Blank (B2H0191-BLK1) - Continued

Prepared: 8/9/2012 Analyzed: 8/9/2012

Ethylbenzene	ND	0.50						NR	
Hexachlorobutadiene	ND	0.50						NR	
Isopropylbenzene	ND	0.50						NR	
m,p-Xylene	ND	1.0						NR	
Methylene chloride	ND	1.0						NR	
n-Butylbenzene	ND	0.50						NR	
n-Propylbenzene	ND	0.50						NR	
Naphthalene	ND	0.50						NR	
o-Xylene	ND	0.50						NR	
sec-Butylbenzene	ND	0.50						NR	
Styrene	ND	0.50						NR	
tert-Butylbenzene	ND	0.50						NR	
Tetrachloroethene	ND	0.50						NR	
Toluene	ND	0.50						NR	
trans-1,2-Dichloroethene	ND	0.50						NR	
Trichloroethene	ND	0.50						NR	
Trichlorofluoromethane	ND	0.50						NR	
Vinyl chloride	ND	0.50						NR	

<i>Surrogate: 1,2-Dichloroethane-d4</i>	27.17		25.0000		109	70 - 130			
<i>Surrogate: 4-Bromofluorobenzene</i>	25.02		25.0000		100	70 - 130			
<i>Surrogate: Dibromofluoromethane</i>	25.93		25.0000		104	70 - 130			
<i>Surrogate: Toluene-d8</i>	25.21		25.0000		101	70 - 130			

LCS (B2H0191-BS1)

Prepared: 8/9/2012 Analyzed: 8/9/2012

1,1-Dichloroethene	21.6300		20.0000		108	70 - 130			
Benzene	19.7900		20.0000		99.0	70 - 130			
Chlorobenzene	18.6500		20.0000		93.2	70 - 130			
MTBE	20.8300		20.0000		104	70 - 130			
Toluene	19.4700		20.0000		97.4	70 - 130			
Trichloroethene	19.6000		20.0000		98.0	70 - 130			

<i>Surrogate: 1,2-Dichloroethane-d4</i>	26.55		25.0000		106	70 - 130			
<i>Surrogate: 4-Bromofluorobenzene</i>	24.32		25.0000		97.3	70 - 130			
<i>Surrogate: Dibromofluoromethane</i>	25.08		25.0000		100	70 - 130			
<i>Surrogate: Toluene-d8</i>	24.12		25.0000		96.5	70 - 130			

LCS Dup (B2H0191-BSD1)

Prepared: 8/9/2012 Analyzed: 8/9/2012

1,1-Dichloroethene	20.2700		20.0000		101	70 - 130	6.49	20	
Benzene	20.2700		20.0000		101	70 - 130	2.40	20	
Chlorobenzene	19.4200		20.0000		97.1	70 - 130	4.05	20	
MTBE	22.0300		20.0000		110	70 - 130	5.60	20	
Toluene	19.9600		20.0000		99.8	70 - 130	2.49	20	



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Project Number : RAYTHEON, 532.30

Report To : Steve Netto

Reported : 08/16/2012

Volatile Organic Compounds by EPA 8260 - Quality Control (cont'd)

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec % Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B2H0191 - MSVOAW_LL (continued)

LCS Dup (B2H0191-bsd1) - Continued

Prepared: 8/9/2012 Analyzed: 8/9/2012

Trichloroethene	19.7500		20.0000		98.8	70 - 130	0.762	20	
Surrogate: 1,2-Dichloroethane-d4	27.70		25.0000		111	70 - 130			
Surrogate: 4-Bromofluorobenzene	25.55		25.0000		102	70 - 130			
Surrogate: Dibromofluoromethane	26.54		25.0000		106	70 - 130			
Surrogate: Toluene-d8	25.39		25.0000		102	70 - 130			

Matrix Spike (B2H0191-MS1)

Source: 1202758-05

Prepared: 8/9/2012 Analyzed: 8/9/2012

1,1-Dichloroethene	135.320		40.0000	94.4400	102	70 - 130			
Benzene	42.4800		40.0000	ND	106	70 - 130			
Chlorobenzene	40.3200		40.0000	ND	101	70 - 130			
MTBE	42.9800		40.0000	ND	107	70 - 130			
Toluene	41.3600		40.0000	ND	103	70 - 130			
Trichloroethene	42.2000		40.0000	0.290000	105	70 - 130			
Surrogate: 1,2-Dichloroethane-d4	28.34		25.0000		113	70 - 130			
Surrogate: 4-Bromofluorobenzene	25.77		25.0000		103	70 - 130			
Surrogate: Dibromofluoromethane	26.80		25.0000		107	70 - 130			
Surrogate: Toluene-d8	25.25		25.0000		101	70 - 130			

Matrix Spike Dup (B2H0191-MSD1)

Source: 1202758-05

Prepared: 8/9/2012 Analyzed: 8/9/2012

1,1-Dichloroethene	134.560		40.0000	94.4400	100	70 - 130	0.563	20	
Benzene	45.8600		40.0000	ND	115	70 - 130	7.65	20	
Chlorobenzene	42.7600		40.0000	ND	107	70 - 130	5.87	20	
MTBE	47.3800		40.0000	ND	118	70 - 130	9.74	20	
Toluene	44.7000		40.0000	ND	112	70 - 130	7.76	20	
Trichloroethene	45.1800		40.0000	0.290000	112	70 - 130	6.82	20	
Surrogate: 1,2-Dichloroethane-d4	28.38		25.0000		114	70 - 130			
Surrogate: 4-Bromofluorobenzene	25.74		25.0000		103	70 - 130			
Surrogate: Dibromofluoromethane	26.42		25.0000		106	70 - 130			
Surrogate: Toluene-d8	25.39		25.0000		102	70 - 130			

Batch B2H0248 - MSVOAW_LL

Blank (B2H0248-BLK1)

Prepared: 8/13/2012 Analyzed: 8/13/2012

1,1,1,2-Tetrachloroethane	ND	0.50			NR				
1,1,1-Trichloroethane	ND	0.50			NR				
1,1,2,2-Tetrachloroethane	ND	0.50			NR				
1,1,2-Trichloroethane	ND	0.50			NR				
1,1-Dichloroethane	ND	0.50			NR				
1,1-Dichloroethene	ND	0.50			NR				
1,1-Dichloropropene	ND	0.50			NR				
1,2,3-Trichloropropane	ND	0.50			NR				



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Volatile Organic Compounds by EPA 8260 - Quality Control (cont'd)

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec % Rec	% Rec Limits	RPD RPD	RPD Limit	Notes
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Batch B2H0248 - MSVOAW_LL (continued)

Blank (B2H0248-BLK1) - Continued

Prepared: 8/13/2012 Analyzed: 8/13/2012

1,2,3-Trichlorobenzene	ND	0.50			NR
1,2,4-Trichlorobenzene	ND	0.50			NR
1,2,4-Trimethylbenzene	ND	0.50			NR
1,2-Dibromo-3-chloropropane	ND	0.50			NR
1,2-Dibromoethane	ND	0.50			NR
1,2-Dichlorobenzene	ND	0.50			NR
1,2-Dichloroethane	ND	0.50			NR
1,2-Dichloropropane	ND	0.50			NR
1,3,5-Trimethylbenzene	ND	0.50			NR
1,3-Dichlorobenzene	ND	0.50			NR
1,3-Dichloropropane	ND	0.50			NR
1,4-Dichlorobenzene	ND	0.50			NR
2,2-Dichloropropane	ND	0.50			NR
2-Chlorotoluene	ND	0.50			NR
4-Chlorotoluene	ND	0.50			NR
4-Isopropyltoluene	ND	0.50			NR
Benzene	ND	0.50			NR
Bromobenzene	ND	0.50			NR
Bromodichloromethane	ND	0.50			NR
Bromoform	ND	0.50			NR
Bromomethane	ND	0.50			NR
Carbon tetrachloride	ND	0.50			NR
Chlorobenzene	ND	0.50			NR
Chloroethane	ND	0.50			NR
Chloroform	ND	0.50			NR
Chloromethane	ND	0.50			NR
cis-1,2-Dichloroethene	ND	0.50			NR
cis-1,3-Dichloropropene	ND	0.50			NR
Dibromochloromethane	ND	0.50			NR
Dibromomethane	ND	0.50			NR
Dichlorodifluoromethane	ND	0.50			NR
Ethylbenzene	ND	0.50			NR
Hexachlorobutadiene	ND	0.50			NR
Isopropylbenzene	ND	0.50			NR
m,p-Xylene	ND	1.0			NR
Methylene chloride	ND	1.0			NR
n-Butylbenzene	ND	0.50			NR
n-Propylbenzene	ND	0.50			NR
Naphthalene	ND	0.50			NR
o-Xylene	ND	0.50			NR
sec-Butylbenzene	ND	0.50			NR
Styrene	ND	0.50			NR



Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : RAYTHEON, 532.30

Report To : Steve Netto

Reported : 08/16/2012

Volatile Organic Compounds by EPA 8260 - Quality Control (cont'd)

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec % Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B2H0248 - MSVOAW_LL (continued)

Blank (B2H0248-BLK1) - Continued

Prepared: 8/13/2012 Analyzed: 8/13/2012

tert-Butylbenzene	ND	0.50			NR				
Tetrachloroethene	ND	0.50			NR				
Toluene	ND	0.50			NR				
trans-1,2-Dichloroethene	ND	0.50			NR				
Trichloroethene	ND	0.50			NR				
Trichlorofluoromethane	ND	0.50			NR				
Vinyl chloride	ND	0.50			NR				
<i>Surrogate: 1,2-Dichloroethane-d4</i>	27.70		25.0000		111	70 - 130			
<i>Surrogate: 4-Bromofluorobenzene</i>	24.53		25.0000		98.1	70 - 130			
<i>Surrogate: Dibromofluoromethane</i>	26.55		25.0000		106	70 - 130			
<i>Surrogate: Toluene-d8</i>	25.18		25.0000		101	70 - 130			

LCS (B2H0248-BS1)

Prepared: 8/13/2012 Analyzed: 8/13/2012

1,1-Dichloroethene	21.2500		20.0000		106	70 - 130			
Benzene	19.6400		20.0000		98.2	70 - 130			
Chlorobenzene	19.0700		20.0000		95.4	70 - 130			
MTBE	22.2100		20.0000		111	70 - 130			
Toluene	19.2900		20.0000		96.4	70 - 130			
Trichloroethene	19.6800		20.0000		98.4	70 - 130			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	28.58		25.0000		114	70 - 130			
<i>Surrogate: 4-Bromofluorobenzene</i>	25.69		25.0000		103	70 - 130			
<i>Surrogate: Dibromofluoromethane</i>	26.92		25.0000		108	70 - 130			
<i>Surrogate: Toluene-d8</i>	25.31		25.0000		101	70 - 130			

LCS Dup (B2H0248-BSD1)

Prepared: 8/13/2012 Analyzed: 8/13/2012

1,1-Dichloroethene	19.6100		20.0000		98.0	70 - 130	8.03	20	
Benzene	20.0500		20.0000		100	70 - 130	2.07	20	
Chlorobenzene	19.3200		20.0000		96.6	70 - 130	1.30	20	
MTBE	22.7000		20.0000		114	70 - 130	2.18	20	
Toluene	19.4900		20.0000		97.4	70 - 130	1.03	20	
Trichloroethene	19.7600		20.0000		98.8	70 - 130	0.406	20	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	28.33		25.0000		113	70 - 130			
<i>Surrogate: 4-Bromofluorobenzene</i>	25.62		25.0000		102	70 - 130			
<i>Surrogate: Dibromofluoromethane</i>	26.62		25.0000		106	70 - 130			
<i>Surrogate: Toluene-d8</i>	25.46		25.0000		102	70 - 130			

Matrix Spike (B2H0248-MS1)

Source: 1202812-06

Prepared: 8/13/2012 Analyzed: 8/13/2012

1,1-Dichloroethene	27.3100		22.7000	ND	120	70 - 130			
Benzene	25.0000		22.7000	ND	110	70 - 130			
Chlorobenzene	23.7800		22.7000	ND	105	70 - 130			
MTBE	25.4300		22.7000	ND	112	70 - 130			



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San Diego , CA 92122

Project Number : RAYTHEON, 532.30

Report To : Steve Netto

Reported : 08/16/2012

Volatile Organic Compounds by EPA 8260 - Quality Control (cont'd)

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B2H0248 - MSVOAW_LL (continued)

Matrix Spike (B2H0248-MS1) - Continued

Source: 1202812-06

Prepared: 8/13/2012 Analyzed: 8/13/2012

Toluene	24.7200		22.7000	ND	109	70 - 130			
Trichloroethene	24.9000		22.7000	ND	110	70 - 130			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>27.52</i>		<i>25.0000</i>		<i>110</i>	<i>70 - 130</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>25.44</i>		<i>25.0000</i>		<i>102</i>	<i>70 - 130</i>			
<i>Surrogate: Dibromofluoromethane</i>	<i>26.11</i>		<i>25.0000</i>		<i>104</i>	<i>70 - 130</i>			
<i>Surrogate: Toluene-d8</i>	<i>25.25</i>		<i>25.0000</i>		<i>101</i>	<i>70 - 130</i>			

Matrix Spike Dup (B2H0248-MSD1)

Source: 1202812-06

Prepared: 8/13/2012 Analyzed: 8/13/2012

1,1-Dichloroethene	26.8300		22.7000	ND	118	70 - 130	1.77	20	
Benzene	25.0300		22.7000	ND	110	70 - 130	0.120	20	
Chlorobenzene	23.5300		22.7000	ND	104	70 - 130	1.06	20	
MTBE	26.7100		22.7000	ND	118	70 - 130	4.91	20	
Toluene	24.5100		22.7000	ND	108	70 - 130	0.853	20	
Trichloroethene	25.0800		22.7000	ND	110	70 - 130	0.720	20	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>28.20</i>		<i>25.0000</i>		<i>113</i>	<i>70 - 130</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>25.68</i>		<i>25.0000</i>		<i>103</i>	<i>70 - 130</i>			
<i>Surrogate: Dibromofluoromethane</i>	<i>26.42</i>		<i>25.0000</i>		<i>106</i>	<i>70 - 130</i>			
<i>Surrogate: Toluene-d8</i>	<i>25.54</i>		<i>25.0000</i>		<i>102</i>	<i>70 - 130</i>			



Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : RAYTHEON, 532.30

Report To : Steve Netto

Reported : 08/16/2012

1,4-Dioxane by EPA 8270: Isotope Dilution Technique - Quality Control

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec % Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B2H0223 - MSSEMI_ISOTOPEDILN

Blank (B2H0223-BLK1)

Prepared: 8/10/2012 Analyzed: 8/10/2012

1,4-Dioxane	ND	2.0			NR				
Surrogate: 1,2-Dichlorobenzene-d4	81.83		100.000		81.8	37 - 93			
Surrogate: 2-Fluorobiphenyl	96.16		100.000		96.2	51 - 100			
Surrogate: 4-Terphenyl-d14	99.56		100.000		99.6	58 - 113			
Surrogate: Nitrobenzene-d5	86.58		100.000		86.6	39 - 95			

LCS (B2H0223-BS1)

Prepared: 8/10/2012 Analyzed: 8/10/2012

1,4-Dioxane	97.5500	2.0	100.000		97.6	70 - 130			
Surrogate: 1,2-Dichlorobenzene-d4	82.47		100.000		82.5	37 - 93			
Surrogate: 2-Fluorobiphenyl	97.83		100.000		97.8	51 - 100			
Surrogate: 4-Terphenyl-d14	92.41		100.000		92.4	58 - 113			
Surrogate: Nitrobenzene-d5	90.68		100.000		90.7	39 - 95			

Matrix Spike (B2H0223-MS1)

Source: 1202758-05

Prepared: 8/10/2012 Analyzed: 8/10/2012

1,4-Dioxane	136.880	2.0	100.000	42.1900	94.7	0 - 200			
Surrogate: 1,2-Dichlorobenzene-d4	78.55		100.000		78.6	37 - 93			
Surrogate: 2-Fluorobiphenyl	97.74		100.000		97.7	51 - 100			
Surrogate: 4-Terphenyl-d14	90.68		100.000		90.7	58 - 113			
Surrogate: Nitrobenzene-d5	85.81		100.000		85.8	39 - 95			

Matrix Spike Dup (B2H0223-MSD1)

Source: 1202758-05

Prepared: 8/10/2012 Analyzed: 8/10/2012

1,4-Dioxane	135.440	2.0	100.000	42.1900	93.2	0 - 200	1.06	200	
Surrogate: 1,2-Dichlorobenzene-d4	82.04		100.000		82.0	37 - 93			
Surrogate: 2-Fluorobiphenyl	96.11		100.000		96.1	51 - 100			
Surrogate: 4-Terphenyl-d14	89.48		100.000		89.5	58 - 113			
Surrogate: Nitrobenzene-d5	89.45		100.000		89.4	39 - 95			



Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego, CA 92122

Project Number : RAYTHEON, 532.30

Report To : Steve Netto

Reported : 08/16/2012

1,4-Dioxane by EPA 8270/SIM: Isotope Dilution Technique - Quality Control

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec % Rec	% Rec Limits	RPD RPD	RPD Limit	Notes
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Batch B2H0225 - MSSEMI

Blank (B2H0225-BLK1)

Prepared: 8/10/2012 Analyzed: 8/10/2012

1,4-Dioxane	ND	0.20			NR				
Surrogate: 1,2-Dichlorobenzene-d4	0.8013		1.00000		80.1	36 - 107			
Surrogate: 2-Fluorobiphenyl	0.8991		1.00000		89.9	42 - 120			
Surrogate: 4-Terphenyl-d14	1.088		1.00000		109	67 - 142			
Surrogate: Nitrobenzene-d5	0.7258		1.00000		72.6	36 - 130			

LCS (B2H0225-BS1)

Prepared: 8/10/2012 Analyzed: 8/13/2012

1,4-Dioxane	0.765890	0.20	1.00000		76.6	70 - 130			
Surrogate: 1,2-Dichlorobenzene-d4	0.8308		1.00000		83.1	36 - 107			
Surrogate: 2-Fluorobiphenyl	0.8210		1.00000		82.1	42 - 120			
Surrogate: 4-Terphenyl-d14	0.8169		1.00000		81.7	67 - 142			
Surrogate: Nitrobenzene-d5	0.6246		1.00000		62.5	36 - 130			

Matrix Spike (B2H0225-MS1)

Source: 1202779-02

Prepared: 8/10/2012 Analyzed: 8/13/2012

1,4-Dioxane	0.788860	0.20	1.00000	ND	78.9	70 - 130			
Surrogate: 1,2-Dichlorobenzene-d4	0.8280		1.00000		82.8	36 - 107			
Surrogate: 2-Fluorobiphenyl	0.8148		1.00000		81.5	42 - 120			
Surrogate: 4-Terphenyl-d14	0.7520		1.00000		75.2	67 - 142			
Surrogate: Nitrobenzene-d5	0.6067		1.00000		60.7	36 - 130			

Matrix Spike Dup (B2H0225-MSD1)

Source: 1202779-02

Prepared: 8/10/2012 Analyzed: 8/13/2012

1,4-Dioxane	0.797980	0.20	1.00000	ND	79.8	70 - 130	1.15	20	
Surrogate: 1,2-Dichlorobenzene-d4	0.8078		1.00000		80.8	36 - 107			
Surrogate: 2-Fluorobiphenyl	0.8077		1.00000		80.8	42 - 120			
Surrogate: 4-Terphenyl-d14	0.7737		1.00000		77.4	67 - 142			
Surrogate: Nitrobenzene-d5	0.5841		1.00000		58.4	36 - 130			



Hargis & Associates, Inc.

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Project Number : RAYTHEON, 532.30

Report To : Steve Netto

Reported : 08/16/2012

Notes and Definitions

S8	Surrogate recovery was above laboratory acceptance limit. See Corrective Action Report for details.
D6	Sample required dilution due to high concentration of target analyte.
ND	Analyte not detected at or above reporting limit
PQL	Practical Quantitation Limit
MDL	Method Detection Limit
NR	Not Reported
RPD	Relative Percent Difference
CA1	CA-NELAP (CDPH)
CA2	CA-ELAP (CDPH)
OR1	OR-NELAP (OSPHL)
TX1	TX-NELAP (TCEQ)

CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST FORM

PROJECT NAME RAYTHEON				PROJECT No./TASK No. 532.30				SAMPLE CONTAINERS		ANALYSIS REQUESTED		ESTIMATED CONCENTRATION RANGE (ppb) FOR VOAS		SPECIAL HANDLING		LABORATORY INFORMATION																
PROJECT MANAGER STEVE NETTO				Phone No. 858-455-6500												ATL																
QA MANAGER				Fax No. 858-455-6533												Attn: Rachelle Arada																
SAMPLER (SIGNATURE) <i>[Signature]</i>				SAMPLER (PRINTED) DANIEL MORA MARLOS RODRIGUEZ AMANDA BEAM																												
LAB ID	SAMPLE ID	SAMPLE COLLECTION		MATRIX			PRESERVATION					ESTIMATED CONCENTRATION RANGE (ppb) FOR VOAS		SPECIAL HANDLING		REMARKS																
		Date	Time	Soil	Ground water	Surface water	Lab #20	HCl	HNO ₃	NaOH	H ₂ SO ₄	Ice	40 ml VOA	1L Amber	VOCs 8260B		1,4-Dioxane 8270 MOD	1,4-Dioxane 8270 SIM	0-10	10-100	100-1,000	>10,000	STANDARD TAT	MS (VOC'S)	MSD (1,4 DIOXANE) MOD	MS (1,4 DIOXANE) MOD	MSD (VOC)					
120758																																
2 ✓	MW-3100	8/6/12	1200		X		X	X			X																				1248 Sample time	
3 ✓	MW-31		1448		X		X	X			X		X																			
4 ✓	MW-29		1612		X		X	X			X		X																			
5 ✓	EW-01		1645		X		X	X			X		X												X	X	X	X	X		MS	
6 ✓	EW-0100		1700		X		X	X			X		X																			
7 ✓	MW-21		1701		X		X	X			X		X																			

01TB-080612
2 ✓
3 ✓
4 ✓
5 ✓
6 ✓
7 ✓

Total number of Containers per analysis: 20/46 Total No. of Containers: 26

Relinquished by: <i>[Signature]</i>	Date 8/6/12	Received by: <i>[Signature]</i>	Date 8/6/12
Company HHA, INC	Time 1720	Company <i>[Signature]</i>	Time 1700

Relinquished by: <i>[Signature]</i>	Date 8/11/12	Received by: <i>[Signature]</i>	Date 8/6/12
Company ATL	Time 1802	Company ATL	Time 1500

INSTRUCTIONS

- Fill out form completely except for shaded areas (lab use only); sign only after verified for completeness.
- Complete in ballpoint pen. Draw one line through errors, initial and date correction.
- Indicate number of sample containers in analysis request space; indicate choice with ✓ or x.
- Note applicable preservatives, special instructions, and deviations from typical environmental samples.
- Consult project QA documents for specific instructions.

Sample Receipt:

Temp. @ receipt 5.4 °C

No. of containers correct received good condition/cold

custody seals secure conforms to COC document

Shipment Method: CARRIER

Send Results to: STEVE NETTO

9171 TOWNE CENTRE DRIVE, SUITE 375
SAN DIEGO, CA 92122 (858) 455-6500

1640 SOUTH STAPLEY DRIVE, SUITE 124
MESA, AZ 85204 (480) 345-0888

1820 EAST RIVER ROAD, SUITE 220
TUCSON, AZ 85718 (520) 881-7300

Send invoice to San Diego, CA
Attn: Accounts Payable

August 17, 2012

Steve Netto
Hargis & Associates, Inc.
9171 Towne Centre Drive, Suite 375
San Diego, CA 92122
Tel: (619) 249-3166
Fax: (858) 455-6533



Re: ATL Work Order Number : 1202779
Client Reference : RAYTHEON, 532.30

Enclosed are the results for sample(s) received on August 07, 2012 by Advanced Technology Laboratories. The sample(s) are tested for the parameters as indicated on the enclosed chain of custody in accordance with applicable laboratory certifications. The laboratory results contained in this report specifically pertains to the sample(s) submitted.

Thank you for the opportunity to serve the needs of your company. If you have any questions, please feel free to contact me or your Project Manager.

Sincerely,

Eddie Rodriguez
Laboratory Director

The cover letter and the case narrative are an integral part of this analytical report and its absence renders the report invalid. The report cannot be reproduced without written permission from the client and Advanced Technology Laboratories.



Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : RAYTHEON, 532.30

Report To : Steve Netto

Reported : 08/17/2012

SUMMARY OF SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
TB-080712	1202779-01	Lab H2O	8/07/12 7:00	8/07/12 17:25
MW-35A	1202779-02	Groundwater	8/07/12 9:34	8/07/12 17:25
MW-35B	1202779-03	Groundwater	8/07/12 10:36	8/07/12 17:25
MW-35C	1202779-04	Groundwater	8/07/12 12:06	8/07/12 17:25
MW-26C	1202779-05	Groundwater	8/07/12 16:38	8/07/12 17:25



Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : RAYTHEON, 532.30

Report To : Steve Netto

Reported : 08/17/2012

Client Sample ID TB-080712

Lab ID: 1202779-01

Volatile Organic Compounds by EPA 8260

Analyst: RP

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	0.50	NA	1	B2H0217	08/10/2012	08/10/12 11:16	
1,1,1-Trichloroethane	ND	0.50	NA	1	B2H0217	08/10/2012	08/10/12 11:16	
1,1,2,2-Tetrachloroethane	ND	0.50	NA	1	B2H0217	08/10/2012	08/10/12 11:16	
1,1,2-Trichloroethane	ND	0.50	NA	1	B2H0217	08/10/2012	08/10/12 11:16	
1,1-Dichloroethane	ND	0.50	NA	1	B2H0217	08/10/2012	08/10/12 11:16	
1,1-Dichloroethene	ND	0.50	NA	1	B2H0217	08/10/2012	08/10/12 11:16	
1,1-Dichloropropene	ND	0.50	NA	1	B2H0217	08/10/2012	08/10/12 11:16	
1,2,3-Trichloropropane	ND	0.50	NA	1	B2H0217	08/10/2012	08/10/12 11:16	
1,2,3-Trichlorobenzene	ND	0.50	NA	1	B2H0217	08/10/2012	08/10/12 11:16	
1,2,4-Trichlorobenzene	ND	0.50	NA	1	B2H0217	08/10/2012	08/10/12 11:16	
1,2,4-Trimethylbenzene	ND	0.50	NA	1	B2H0217	08/10/2012	08/10/12 11:16	
1,2-Dibromo-3-chloropropane	ND	0.50	NA	1	B2H0217	08/10/2012	08/10/12 11:16	
1,2-Dibromoethane	ND	0.50	NA	1	B2H0217	08/10/2012	08/10/12 11:16	
1,2-Dichlorobenzene	ND	0.50	NA	1	B2H0217	08/10/2012	08/10/12 11:16	
1,2-Dichloroethane	ND	0.50	NA	1	B2H0217	08/10/2012	08/10/12 11:16	
1,2-Dichloropropane	ND	0.50	NA	1	B2H0217	08/10/2012	08/10/12 11:16	
1,3,5-Trimethylbenzene	ND	0.50	NA	1	B2H0217	08/10/2012	08/10/12 11:16	
1,3-Dichlorobenzene	ND	0.50	NA	1	B2H0217	08/10/2012	08/10/12 11:16	
1,3-Dichloropropane	ND	0.50	NA	1	B2H0217	08/10/2012	08/10/12 11:16	
1,4-Dichlorobenzene	ND	0.50	NA	1	B2H0217	08/10/2012	08/10/12 11:16	
2,2-Dichloropropane	ND	0.50	NA	1	B2H0217	08/10/2012	08/10/12 11:16	
2-Chlorotoluene	ND	0.50	NA	1	B2H0217	08/10/2012	08/10/12 11:16	
4-Chlorotoluene	ND	0.50	NA	1	B2H0217	08/10/2012	08/10/12 11:16	
4-Isopropyltoluene	ND	0.50	NA	1	B2H0217	08/10/2012	08/10/12 11:16	
Benzene	ND	0.50	NA	1	B2H0217	08/10/2012	08/10/12 11:16	
Bromobenzene	ND	0.50	NA	1	B2H0217	08/10/2012	08/10/12 11:16	
Bromodichloromethane	ND	0.50	NA	1	B2H0217	08/10/2012	08/10/12 11:16	
Bromoform	ND	0.50	NA	1	B2H0217	08/10/2012	08/10/12 11:16	
Bromomethane	ND	0.50	NA	1	B2H0217	08/10/2012	08/10/12 11:16	
Carbon tetrachloride	ND	0.50	NA	1	B2H0217	08/10/2012	08/10/12 11:16	
Chlorobenzene	ND	0.50	NA	1	B2H0217	08/10/2012	08/10/12 11:16	
Chloroethane	ND	0.50	NA	1	B2H0217	08/10/2012	08/10/12 11:16	
Chloroform	ND	0.50	NA	1	B2H0217	08/10/2012	08/10/12 11:16	
Chloromethane	ND	0.50	NA	1	B2H0217	08/10/2012	08/10/12 11:16	
cis-1,2-Dichloroethene	ND	0.50	NA	1	B2H0217	08/10/2012	08/10/12 11:16	
cis-1,3-Dichloropropene	ND	0.50	NA	1	B2H0217	08/10/2012	08/10/12 11:16	
Dibromochloromethane	ND	0.50	NA	1	B2H0217	08/10/2012	08/10/12 11:16	



Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : RAYTHEON, 532.30

Report To : Steve Netto

Reported : 08/17/2012

Client Sample ID TB-080712

Lab ID: 1202779-01

Volatile Organic Compounds by EPA 8260

Analyst: RP

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Dibromomethane	ND	0.50	NA	1	B2H0217	08/10/2012	08/10/12 11:16	
Dichlorodifluoromethane	ND	0.50	NA	1	B2H0217	08/10/2012	08/10/12 11:16	
Ethylbenzene	ND	0.50	NA	1	B2H0217	08/10/2012	08/10/12 11:16	
Hexachlorobutadiene	ND	0.50	NA	1	B2H0217	08/10/2012	08/10/12 11:16	
Isopropylbenzene	ND	0.50	NA	1	B2H0217	08/10/2012	08/10/12 11:16	
m,p-Xylene	ND	1.0	NA	1	B2H0217	08/10/2012	08/10/12 11:16	
Methylene chloride	ND	1.0	NA	1	B2H0217	08/10/2012	08/10/12 11:16	
n-Butylbenzene	ND	0.50	NA	1	B2H0217	08/10/2012	08/10/12 11:16	
n-Propylbenzene	ND	0.50	NA	1	B2H0217	08/10/2012	08/10/12 11:16	
Naphthalene	ND	0.50	NA	1	B2H0217	08/10/2012	08/10/12 11:16	
o-Xylene	ND	0.50	NA	1	B2H0217	08/10/2012	08/10/12 11:16	
sec-Butylbenzene	ND	0.50	NA	1	B2H0217	08/10/2012	08/10/12 11:16	
Styrene	ND	0.50	NA	1	B2H0217	08/10/2012	08/10/12 11:16	
tert-Butylbenzene	ND	0.50	NA	1	B2H0217	08/10/2012	08/10/12 11:16	
Tetrachloroethene	ND	0.50	NA	1	B2H0217	08/10/2012	08/10/12 11:16	
Toluene	ND	0.50	NA	1	B2H0217	08/10/2012	08/10/12 11:16	
trans-1,2-Dichloroethene	ND	0.50	NA	1	B2H0217	08/10/2012	08/10/12 11:16	
Trichloroethene	ND	0.50	NA	1	B2H0217	08/10/2012	08/10/12 11:16	
Trichlorofluoromethane	ND	0.50	NA	1	B2H0217	08/10/2012	08/10/12 11:16	
Vinyl chloride	ND	0.50	NA	1	B2H0217	08/10/2012	08/10/12 11:16	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>117 %</i>		<i>70 - 130</i>		B2H0217	08/10/2012	<i>08/10/12 11:16</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>98.0 %</i>		<i>70 - 130</i>		B2H0217	08/10/2012	<i>08/10/12 11:16</i>	
<i>Surrogate: Dibromofluoromethane</i>	<i>109 %</i>		<i>70 - 130</i>		B2H0217	08/10/2012	<i>08/10/12 11:16</i>	
<i>Surrogate: Toluene-d8</i>	<i>101 %</i>		<i>70 - 130</i>		B2H0217	08/10/2012	<i>08/10/12 11:16</i>	



Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : RAYTHEON, 532.30

Report To : Steve Netto

Reported : 08/17/2012

Client Sample ID MW-35A

Lab ID: 1202779-02

Volatile Organic Compounds by EPA 8260

Analyst: RP

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	0.50	NA	1	B2H0217	08/10/2012	08/10/12 18:40	
1,1,1-Trichloroethane	ND	0.50	NA	1	B2H0217	08/10/2012	08/10/12 18:40	
1,1,2,2-Tetrachloroethane	ND	0.50	NA	1	B2H0217	08/10/2012	08/10/12 18:40	
1,1,2-Trichloroethane	ND	0.50	NA	1	B2H0217	08/10/2012	08/10/12 18:40	
1,1-Dichloroethane	ND	0.50	NA	1	B2H0217	08/10/2012	08/10/12 18:40	
1,1-Dichloroethene	ND	0.50	NA	1	B2H0217	08/10/2012	08/10/12 18:40	
1,1-Dichloropropene	ND	0.50	NA	1	B2H0217	08/10/2012	08/10/12 18:40	
1,2,3-Trichloropropane	ND	0.50	NA	1	B2H0217	08/10/2012	08/10/12 18:40	
1,2,3-Trichlorobenzene	ND	0.50	NA	1	B2H0217	08/10/2012	08/10/12 18:40	
1,2,4-Trichlorobenzene	ND	0.50	NA	1	B2H0217	08/10/2012	08/10/12 18:40	
1,2,4-Trimethylbenzene	ND	0.50	NA	1	B2H0217	08/10/2012	08/10/12 18:40	
1,2-Dibromo-3-chloropropane	ND	0.50	NA	1	B2H0217	08/10/2012	08/10/12 18:40	
1,2-Dibromoethane	ND	0.50	NA	1	B2H0217	08/10/2012	08/10/12 18:40	
1,2-Dichlorobenzene	ND	0.50	NA	1	B2H0217	08/10/2012	08/10/12 18:40	
1,2-Dichloroethane	ND	0.50	NA	1	B2H0217	08/10/2012	08/10/12 18:40	
1,2-Dichloropropane	ND	0.50	NA	1	B2H0217	08/10/2012	08/10/12 18:40	
1,3,5-Trimethylbenzene	ND	0.50	NA	1	B2H0217	08/10/2012	08/10/12 18:40	
1,3-Dichlorobenzene	ND	0.50	NA	1	B2H0217	08/10/2012	08/10/12 18:40	
1,3-Dichloropropane	ND	0.50	NA	1	B2H0217	08/10/2012	08/10/12 18:40	
1,4-Dichlorobenzene	ND	0.50	NA	1	B2H0217	08/10/2012	08/10/12 18:40	
2,2-Dichloropropane	ND	0.50	NA	1	B2H0217	08/10/2012	08/10/12 18:40	
2-Chlorotoluene	ND	0.50	NA	1	B2H0217	08/10/2012	08/10/12 18:40	
4-Chlorotoluene	ND	0.50	NA	1	B2H0217	08/10/2012	08/10/12 18:40	
4-Isopropyltoluene	ND	0.50	NA	1	B2H0217	08/10/2012	08/10/12 18:40	
Benzene	ND	0.50	NA	1	B2H0217	08/10/2012	08/10/12 18:40	
Bromobenzene	ND	0.50	NA	1	B2H0217	08/10/2012	08/10/12 18:40	
Bromodichloromethane	ND	0.50	NA	1	B2H0217	08/10/2012	08/10/12 18:40	
Bromoform	ND	0.50	NA	1	B2H0217	08/10/2012	08/10/12 18:40	
Bromomethane	ND	0.50	NA	1	B2H0217	08/10/2012	08/10/12 18:40	
Carbon tetrachloride	ND	0.50	NA	1	B2H0217	08/10/2012	08/10/12 18:40	
Chlorobenzene	ND	0.50	NA	1	B2H0217	08/10/2012	08/10/12 18:40	
Chloroethane	ND	0.50	NA	1	B2H0217	08/10/2012	08/10/12 18:40	
Chloroform	1.5	0.50	NA	1	B2H0217	08/10/2012	08/10/12 18:40	
Chloromethane	ND	0.50	NA	1	B2H0217	08/10/2012	08/10/12 18:40	
cis-1,2-Dichloroethene	ND	0.50	NA	1	B2H0217	08/10/2012	08/10/12 18:40	
cis-1,3-Dichloropropene	ND	0.50	NA	1	B2H0217	08/10/2012	08/10/12 18:40	
Dibromochloromethane	ND	0.50	NA	1	B2H0217	08/10/2012	08/10/12 18:40	



Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : RAYTHEON, 532.30

Report To : Steve Netto

Reported : 08/17/2012

Client Sample ID MW-35A

Lab ID: 1202779-02

Volatile Organic Compounds by EPA 8260

Analyst: RP

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Dibromomethane	ND	0.50	NA	1	B2H0217	08/10/2012	08/10/12 18:40	
Dichlorodifluoromethane	ND	0.50	NA	1	B2H0217	08/10/2012	08/10/12 18:40	
Ethylbenzene	ND	0.50	NA	1	B2H0217	08/10/2012	08/10/12 18:40	
Hexachlorobutadiene	ND	0.50	NA	1	B2H0217	08/10/2012	08/10/12 18:40	
Isopropylbenzene	ND	0.50	NA	1	B2H0217	08/10/2012	08/10/12 18:40	
m,p-Xylene	ND	1.0	NA	1	B2H0217	08/10/2012	08/10/12 18:40	
Methylene chloride	ND	1.0	NA	1	B2H0217	08/10/2012	08/10/12 18:40	
n-Butylbenzene	ND	0.50	NA	1	B2H0217	08/10/2012	08/10/12 18:40	
n-Propylbenzene	ND	0.50	NA	1	B2H0217	08/10/2012	08/10/12 18:40	
Naphthalene	ND	0.50	NA	1	B2H0217	08/10/2012	08/10/12 18:40	
o-Xylene	ND	0.50	NA	1	B2H0217	08/10/2012	08/10/12 18:40	
sec-Butylbenzene	ND	0.50	NA	1	B2H0217	08/10/2012	08/10/12 18:40	
Styrene	ND	0.50	NA	1	B2H0217	08/10/2012	08/10/12 18:40	
tert-Butylbenzene	ND	0.50	NA	1	B2H0217	08/10/2012	08/10/12 18:40	
Tetrachloroethene	ND	0.50	NA	1	B2H0217	08/10/2012	08/10/12 18:40	
Toluene	ND	0.50	NA	1	B2H0217	08/10/2012	08/10/12 18:40	
trans-1,2-Dichloroethene	ND	0.50	NA	1	B2H0217	08/10/2012	08/10/12 18:40	
Trichloroethene	ND	0.50	NA	1	B2H0217	08/10/2012	08/10/12 18:40	
Trichlorofluoromethane	ND	0.50	NA	1	B2H0217	08/10/2012	08/10/12 18:40	
Vinyl chloride	ND	0.50	NA	1	B2H0217	08/10/2012	08/10/12 18:40	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>116 %</i>		<i>70 - 130</i>		B2H0217	08/10/2012	<i>08/10/12 18:40</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>97.1 %</i>		<i>70 - 130</i>		B2H0217	08/10/2012	<i>08/10/12 18:40</i>	
<i>Surrogate: Dibromofluoromethane</i>	<i>111 %</i>		<i>70 - 130</i>		B2H0217	08/10/2012	<i>08/10/12 18:40</i>	
<i>Surrogate: Toluene-d8</i>	<i>102 %</i>		<i>70 - 130</i>		B2H0217	08/10/2012	<i>08/10/12 18:40</i>	



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9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : RAYTHEON, 532.30

Report To : Steve Netto

Reported : 08/17/2012

Client Sample ID MW-35A

Lab ID: 1202779-02

1,4-Dioxane by EPA 8270/SIM: Isotope Dilution Technique

Analyst: BB

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,4-Dioxane	ND	0.20	NA	1	B2H0225	08/10/2012	08/10/12 17:49	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	<i>74.3 %</i>		<i>36 - 107</i>		B2H0225	08/10/2012	<i>08/10/12 17:49</i>	
<i>Surrogate: 2-Fluorobiphenyl</i>	<i>96.2 %</i>		<i>42 - 120</i>		B2H0225	08/10/2012	<i>08/10/12 17:49</i>	
<i>Surrogate: 4-Terphenyl-d14</i>	<i>103 %</i>		<i>67 - 142</i>		B2H0225	08/10/2012	<i>08/10/12 17:49</i>	
<i>Surrogate: Nitrobenzene-d5</i>	<i>58.4 %</i>		<i>36 - 130</i>		B2H0225	08/10/2012	<i>08/10/12 17:49</i>	



Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : RAYTHEON, 532.30

Report To : Steve Netto

Reported : 08/17/2012

Client Sample ID MW-35B

Lab ID: 1202779-03

Volatile Organic Compounds by EPA 8260

Analyst: RP

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	0.50	NA	1	B2H0217	08/10/2012	08/10/12 19:00	
1,1,1-Trichloroethane	ND	0.50	NA	1	B2H0217	08/10/2012	08/10/12 19:00	
1,1,2,2-Tetrachloroethane	ND	0.50	NA	1	B2H0217	08/10/2012	08/10/12 19:00	
1,1,2-Trichloroethane	ND	0.50	NA	1	B2H0217	08/10/2012	08/10/12 19:00	
1,1-Dichloroethane	ND	0.50	NA	1	B2H0217	08/10/2012	08/10/12 19:00	
1,1-Dichloroethene	ND	0.50	NA	1	B2H0217	08/10/2012	08/10/12 19:00	
1,1-Dichloropropene	ND	0.50	NA	1	B2H0217	08/10/2012	08/10/12 19:00	
1,2,3-Trichloropropane	ND	0.50	NA	1	B2H0217	08/10/2012	08/10/12 19:00	
1,2,3-Trichlorobenzene	ND	0.50	NA	1	B2H0217	08/10/2012	08/10/12 19:00	
1,2,4-Trichlorobenzene	ND	0.50	NA	1	B2H0217	08/10/2012	08/10/12 19:00	
1,2,4-Trimethylbenzene	ND	0.50	NA	1	B2H0217	08/10/2012	08/10/12 19:00	
1,2-Dibromo-3-chloropropane	ND	0.50	NA	1	B2H0217	08/10/2012	08/10/12 19:00	
1,2-Dibromoethane	ND	0.50	NA	1	B2H0217	08/10/2012	08/10/12 19:00	
1,2-Dichlorobenzene	ND	0.50	NA	1	B2H0217	08/10/2012	08/10/12 19:00	
1,2-Dichloroethane	ND	0.50	NA	1	B2H0217	08/10/2012	08/10/12 19:00	
1,2-Dichloropropane	ND	0.50	NA	1	B2H0217	08/10/2012	08/10/12 19:00	
1,3,5-Trimethylbenzene	ND	0.50	NA	1	B2H0217	08/10/2012	08/10/12 19:00	
1,3-Dichlorobenzene	ND	0.50	NA	1	B2H0217	08/10/2012	08/10/12 19:00	
1,3-Dichloropropane	ND	0.50	NA	1	B2H0217	08/10/2012	08/10/12 19:00	
1,4-Dichlorobenzene	ND	0.50	NA	1	B2H0217	08/10/2012	08/10/12 19:00	
2,2-Dichloropropane	ND	0.50	NA	1	B2H0217	08/10/2012	08/10/12 19:00	
2-Chlorotoluene	ND	0.50	NA	1	B2H0217	08/10/2012	08/10/12 19:00	
4-Chlorotoluene	ND	0.50	NA	1	B2H0217	08/10/2012	08/10/12 19:00	
4-Isopropyltoluene	ND	0.50	NA	1	B2H0217	08/10/2012	08/10/12 19:00	
Benzene	ND	0.50	NA	1	B2H0217	08/10/2012	08/10/12 19:00	
Bromobenzene	ND	0.50	NA	1	B2H0217	08/10/2012	08/10/12 19:00	
Bromodichloromethane	ND	0.50	NA	1	B2H0217	08/10/2012	08/10/12 19:00	
Bromoform	ND	0.50	NA	1	B2H0217	08/10/2012	08/10/12 19:00	
Bromomethane	ND	0.50	NA	1	B2H0217	08/10/2012	08/10/12 19:00	
Carbon tetrachloride	ND	0.50	NA	1	B2H0217	08/10/2012	08/10/12 19:00	
Chlorobenzene	ND	0.50	NA	1	B2H0217	08/10/2012	08/10/12 19:00	
Chloroethane	ND	0.50	NA	1	B2H0217	08/10/2012	08/10/12 19:00	
Chloroform	ND	0.50	NA	1	B2H0217	08/10/2012	08/10/12 19:00	
Chloromethane	ND	0.50	NA	1	B2H0217	08/10/2012	08/10/12 19:00	
cis-1,2-Dichloroethene	ND	0.50	NA	1	B2H0217	08/10/2012	08/10/12 19:00	
cis-1,3-Dichloropropene	ND	0.50	NA	1	B2H0217	08/10/2012	08/10/12 19:00	
Dibromochloromethane	ND	0.50	NA	1	B2H0217	08/10/2012	08/10/12 19:00	



Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : RAYTHEON, 532.30

Report To : Steve Netto

Reported : 08/17/2012

Client Sample ID MW-35B

Lab ID: 1202779-03

Volatile Organic Compounds by EPA 8260

Analyst: RP

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Dibromomethane	ND	0.50	NA	1	B2H0217	08/10/2012	08/10/12 19:00	
Dichlorodifluoromethane	ND	0.50	NA	1	B2H0217	08/10/2012	08/10/12 19:00	
Ethylbenzene	ND	0.50	NA	1	B2H0217	08/10/2012	08/10/12 19:00	
Hexachlorobutadiene	ND	0.50	NA	1	B2H0217	08/10/2012	08/10/12 19:00	
Isopropylbenzene	ND	0.50	NA	1	B2H0217	08/10/2012	08/10/12 19:00	
m,p-Xylene	ND	1.0	NA	1	B2H0217	08/10/2012	08/10/12 19:00	
Methylene chloride	ND	1.0	NA	1	B2H0217	08/10/2012	08/10/12 19:00	
n-Butylbenzene	ND	0.50	NA	1	B2H0217	08/10/2012	08/10/12 19:00	
n-Propylbenzene	ND	0.50	NA	1	B2H0217	08/10/2012	08/10/12 19:00	
Naphthalene	ND	0.50	NA	1	B2H0217	08/10/2012	08/10/12 19:00	
o-Xylene	ND	0.50	NA	1	B2H0217	08/10/2012	08/10/12 19:00	
sec-Butylbenzene	ND	0.50	NA	1	B2H0217	08/10/2012	08/10/12 19:00	
Styrene	ND	0.50	NA	1	B2H0217	08/10/2012	08/10/12 19:00	
tert-Butylbenzene	ND	0.50	NA	1	B2H0217	08/10/2012	08/10/12 19:00	
Tetrachloroethene	ND	0.50	NA	1	B2H0217	08/10/2012	08/10/12 19:00	
Toluene	ND	0.50	NA	1	B2H0217	08/10/2012	08/10/12 19:00	
trans-1,2-Dichloroethene	ND	0.50	NA	1	B2H0217	08/10/2012	08/10/12 19:00	
Trichloroethene	ND	0.50	NA	1	B2H0217	08/10/2012	08/10/12 19:00	
Trichlorofluoromethane	ND	0.50	NA	1	B2H0217	08/10/2012	08/10/12 19:00	
Vinyl chloride	ND	0.50	NA	1	B2H0217	08/10/2012	08/10/12 19:00	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>116 %</i>		<i>70 - 130</i>		B2H0217	08/10/2012	<i>08/10/12 19:00</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>98.1 %</i>		<i>70 - 130</i>		B2H0217	08/10/2012	<i>08/10/12 19:00</i>	
<i>Surrogate: Dibromofluoromethane</i>	<i>110 %</i>		<i>70 - 130</i>		B2H0217	08/10/2012	<i>08/10/12 19:00</i>	
<i>Surrogate: Toluene-d8</i>	<i>102 %</i>		<i>70 - 130</i>		B2H0217	08/10/2012	<i>08/10/12 19:00</i>	



Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : RAYTHEON, 532.30

Report To : Steve Netto

Reported : 08/17/2012

Client Sample ID MW-35B

Lab ID: 1202779-03

1,4-Dioxane by EPA 8270/SIM: Isotope Dilution Technique

Analyst: BB

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,4-Dioxane	ND	0.20	NA	1	B2H0225	08/10/2012	08/10/12 18:18	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	83.1 %		36 - 107		B2H0225	08/10/2012	08/10/12 18:18	
<i>Surrogate: 2-Fluorobiphenyl</i>	96.4 %		42 - 120		B2H0225	08/10/2012	08/10/12 18:18	
<i>Surrogate: 4-Terphenyl-d14</i>	118 %		67 - 142		B2H0225	08/10/2012	08/10/12 18:18	
<i>Surrogate: Nitrobenzene-d5</i>	68.2 %		36 - 130		B2H0225	08/10/2012	08/10/12 18:18	



Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : RAYTHEON, 532.30

Report To : Steve Netto

Reported : 08/17/2012

Client Sample ID MW-35C

Lab ID: 1202779-04

Volatile Organic Compounds by EPA 8260

Analyst: RP

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	0.50	NA	1	B2H0217	08/10/2012	08/10/12 19:20	
1,1,1-Trichloroethane	ND	0.50	NA	1	B2H0217	08/10/2012	08/10/12 19:20	
1,1,2,2-Tetrachloroethane	ND	0.50	NA	1	B2H0217	08/10/2012	08/10/12 19:20	
1,1,2-Trichloroethane	ND	0.50	NA	1	B2H0217	08/10/2012	08/10/12 19:20	
1,1-Dichloroethane	ND	0.50	NA	1	B2H0217	08/10/2012	08/10/12 19:20	
1,1-Dichloroethene	ND	0.50	NA	1	B2H0217	08/10/2012	08/10/12 19:20	
1,1-Dichloropropene	ND	0.50	NA	1	B2H0217	08/10/2012	08/10/12 19:20	
1,2,3-Trichloropropane	ND	0.50	NA	1	B2H0217	08/10/2012	08/10/12 19:20	
1,2,3-Trichlorobenzene	ND	0.50	NA	1	B2H0217	08/10/2012	08/10/12 19:20	
1,2,4-Trichlorobenzene	ND	0.50	NA	1	B2H0217	08/10/2012	08/10/12 19:20	
1,2,4-Trimethylbenzene	ND	0.50	NA	1	B2H0217	08/10/2012	08/10/12 19:20	
1,2-Dibromo-3-chloropropane	ND	0.50	NA	1	B2H0217	08/10/2012	08/10/12 19:20	
1,2-Dibromoethane	ND	0.50	NA	1	B2H0217	08/10/2012	08/10/12 19:20	
1,2-Dichlorobenzene	ND	0.50	NA	1	B2H0217	08/10/2012	08/10/12 19:20	
1,2-Dichloroethane	ND	0.50	NA	1	B2H0217	08/10/2012	08/10/12 19:20	
1,2-Dichloropropane	ND	0.50	NA	1	B2H0217	08/10/2012	08/10/12 19:20	
1,3,5-Trimethylbenzene	ND	0.50	NA	1	B2H0217	08/10/2012	08/10/12 19:20	
1,3-Dichlorobenzene	ND	0.50	NA	1	B2H0217	08/10/2012	08/10/12 19:20	
1,3-Dichloropropane	ND	0.50	NA	1	B2H0217	08/10/2012	08/10/12 19:20	
1,4-Dichlorobenzene	ND	0.50	NA	1	B2H0217	08/10/2012	08/10/12 19:20	
2,2-Dichloropropane	ND	0.50	NA	1	B2H0217	08/10/2012	08/10/12 19:20	
2-Chlorotoluene	ND	0.50	NA	1	B2H0217	08/10/2012	08/10/12 19:20	
4-Chlorotoluene	ND	0.50	NA	1	B2H0217	08/10/2012	08/10/12 19:20	
4-Isopropyltoluene	ND	0.50	NA	1	B2H0217	08/10/2012	08/10/12 19:20	
Benzene	ND	0.50	NA	1	B2H0217	08/10/2012	08/10/12 19:20	
Bromobenzene	ND	0.50	NA	1	B2H0217	08/10/2012	08/10/12 19:20	
Bromodichloromethane	ND	0.50	NA	1	B2H0217	08/10/2012	08/10/12 19:20	
Bromoform	ND	0.50	NA	1	B2H0217	08/10/2012	08/10/12 19:20	
Bromomethane	ND	0.50	NA	1	B2H0217	08/10/2012	08/10/12 19:20	
Carbon tetrachloride	ND	0.50	NA	1	B2H0217	08/10/2012	08/10/12 19:20	
Chlorobenzene	ND	0.50	NA	1	B2H0217	08/10/2012	08/10/12 19:20	
Chloroethane	ND	0.50	NA	1	B2H0217	08/10/2012	08/10/12 19:20	
Chloroform	ND	0.50	NA	1	B2H0217	08/10/2012	08/10/12 19:20	
Chloromethane	ND	0.50	NA	1	B2H0217	08/10/2012	08/10/12 19:20	
cis-1,2-Dichloroethene	ND	0.50	NA	1	B2H0217	08/10/2012	08/10/12 19:20	
cis-1,3-Dichloropropene	ND	0.50	NA	1	B2H0217	08/10/2012	08/10/12 19:20	
Dibromochloromethane	ND	0.50	NA	1	B2H0217	08/10/2012	08/10/12 19:20	



Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : RAYTHEON, 532.30

Report To : Steve Netto

Reported : 08/17/2012

Client Sample ID MW-35C

Lab ID: 1202779-04

Volatile Organic Compounds by EPA 8260

Analyst: RP

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Dibromomethane	ND	0.50	NA	1	B2H0217	08/10/2012	08/10/12 19:20	
Dichlorodifluoromethane	ND	0.50	NA	1	B2H0217	08/10/2012	08/10/12 19:20	
Ethylbenzene	ND	0.50	NA	1	B2H0217	08/10/2012	08/10/12 19:20	
Hexachlorobutadiene	ND	0.50	NA	1	B2H0217	08/10/2012	08/10/12 19:20	
Isopropylbenzene	ND	0.50	NA	1	B2H0217	08/10/2012	08/10/12 19:20	
m,p-Xylene	ND	1.0	NA	1	B2H0217	08/10/2012	08/10/12 19:20	
Methylene chloride	ND	1.0	NA	1	B2H0217	08/10/2012	08/10/12 19:20	
n-Butylbenzene	ND	0.50	NA	1	B2H0217	08/10/2012	08/10/12 19:20	
n-Propylbenzene	ND	0.50	NA	1	B2H0217	08/10/2012	08/10/12 19:20	
Naphthalene	ND	0.50	NA	1	B2H0217	08/10/2012	08/10/12 19:20	
o-Xylene	ND	0.50	NA	1	B2H0217	08/10/2012	08/10/12 19:20	
sec-Butylbenzene	ND	0.50	NA	1	B2H0217	08/10/2012	08/10/12 19:20	
Styrene	ND	0.50	NA	1	B2H0217	08/10/2012	08/10/12 19:20	
tert-Butylbenzene	ND	0.50	NA	1	B2H0217	08/10/2012	08/10/12 19:20	
Tetrachloroethene	ND	0.50	NA	1	B2H0217	08/10/2012	08/10/12 19:20	
Toluene	ND	0.50	NA	1	B2H0217	08/10/2012	08/10/12 19:20	
trans-1,2-Dichloroethene	ND	0.50	NA	1	B2H0217	08/10/2012	08/10/12 19:20	
Trichloroethene	ND	0.50	NA	1	B2H0217	08/10/2012	08/10/12 19:20	
Trichlorofluoromethane	ND	0.50	NA	1	B2H0217	08/10/2012	08/10/12 19:20	
Vinyl chloride	ND	0.50	NA	1	B2H0217	08/10/2012	08/10/12 19:20	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>117 %</i>		<i>70 - 130</i>		B2H0217	08/10/2012	<i>08/10/12 19:20</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>98.1 %</i>		<i>70 - 130</i>		B2H0217	08/10/2012	<i>08/10/12 19:20</i>	
<i>Surrogate: Dibromofluoromethane</i>	<i>109 %</i>		<i>70 - 130</i>		B2H0217	08/10/2012	<i>08/10/12 19:20</i>	
<i>Surrogate: Toluene-d8</i>	<i>102 %</i>		<i>70 - 130</i>		B2H0217	08/10/2012	<i>08/10/12 19:20</i>	



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9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : RAYTHEON, 532.30

Report To : Steve Netto

Reported : 08/17/2012

Client Sample ID MW-35C

Lab ID: 1202779-04

1,4-Dioxane by EPA 8270/SIM: Isotope Dilution Technique

Analyst: BB

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,4-Dioxane	ND	0.20	NA	1	B2H0225	08/10/2012	08/10/12 18:48	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	<i>78.1 %</i>		<i>36 - 107</i>		B2H0225	08/10/2012	<i>08/10/12 18:48</i>	
<i>Surrogate: 2-Fluorobiphenyl</i>	<i>89.4 %</i>		<i>42 - 120</i>		B2H0225	08/10/2012	<i>08/10/12 18:48</i>	
<i>Surrogate: 4-Terphenyl-d14</i>	<i>101 %</i>		<i>67 - 142</i>		B2H0225	08/10/2012	<i>08/10/12 18:48</i>	
<i>Surrogate: Nitrobenzene-d5</i>	<i>64.7 %</i>		<i>36 - 130</i>		B2H0225	08/10/2012	<i>08/10/12 18:48</i>	



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Project Number : RAYTHEON, 532.30

Report To : Steve Netto

Reported : 08/17/2012

Client Sample ID MW-26C

Lab ID: 1202779-05

Volatile Organic Compounds by EPA 8260

Analyst: RP

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	0.50	NA	1	B2H0217	08/10/2012	08/10/12 20:42	
1,1,1-Trichloroethane	ND	0.50	NA	1	B2H0217	08/10/2012	08/10/12 20:42	
1,1,2,2-Tetrachloroethane	ND	0.50	NA	1	B2H0217	08/10/2012	08/10/12 20:42	
1,1,2-Trichloroethane	ND	0.50	NA	1	B2H0217	08/10/2012	08/10/12 20:42	
1,1-Dichloroethane	ND	0.50	NA	1	B2H0217	08/10/2012	08/10/12 20:42	
1,1-Dichloroethene	ND	0.50	NA	1	B2H0217	08/10/2012	08/10/12 20:42	
1,1-Dichloropropene	ND	0.50	NA	1	B2H0217	08/10/2012	08/10/12 20:42	
1,2,3-Trichloropropane	ND	0.50	NA	1	B2H0217	08/10/2012	08/10/12 20:42	
1,2,3-Trichlorobenzene	ND	0.50	NA	1	B2H0217	08/10/2012	08/10/12 20:42	
1,2,4-Trichlorobenzene	ND	0.50	NA	1	B2H0217	08/10/2012	08/10/12 20:42	
1,2,4-Trimethylbenzene	ND	0.50	NA	1	B2H0217	08/10/2012	08/10/12 20:42	
1,2-Dibromo-3-chloropropane	ND	0.50	NA	1	B2H0217	08/10/2012	08/10/12 20:42	
1,2-Dibromoethane	ND	0.50	NA	1	B2H0217	08/10/2012	08/10/12 20:42	
1,2-Dichlorobenzene	ND	0.50	NA	1	B2H0217	08/10/2012	08/10/12 20:42	
1,2-Dichloroethane	ND	0.50	NA	1	B2H0217	08/10/2012	08/10/12 20:42	
1,2-Dichloropropane	ND	0.50	NA	1	B2H0217	08/10/2012	08/10/12 20:42	
1,3,5-Trimethylbenzene	ND	0.50	NA	1	B2H0217	08/10/2012	08/10/12 20:42	
1,3-Dichlorobenzene	ND	0.50	NA	1	B2H0217	08/10/2012	08/10/12 20:42	
1,3-Dichloropropane	ND	0.50	NA	1	B2H0217	08/10/2012	08/10/12 20:42	
1,4-Dichlorobenzene	ND	0.50	NA	1	B2H0217	08/10/2012	08/10/12 20:42	
2,2-Dichloropropane	ND	0.50	NA	1	B2H0217	08/10/2012	08/10/12 20:42	
2-Chlorotoluene	ND	0.50	NA	1	B2H0217	08/10/2012	08/10/12 20:42	
4-Chlorotoluene	ND	0.50	NA	1	B2H0217	08/10/2012	08/10/12 20:42	
4-Isopropyltoluene	ND	0.50	NA	1	B2H0217	08/10/2012	08/10/12 20:42	
Benzene	ND	0.50	NA	1	B2H0217	08/10/2012	08/10/12 20:42	
Bromobenzene	ND	0.50	NA	1	B2H0217	08/10/2012	08/10/12 20:42	
Bromodichloromethane	ND	0.50	NA	1	B2H0217	08/10/2012	08/10/12 20:42	
Bromoform	ND	0.50	NA	1	B2H0217	08/10/2012	08/10/12 20:42	
Bromomethane	ND	0.50	NA	1	B2H0217	08/10/2012	08/10/12 20:42	
Carbon tetrachloride	ND	0.50	NA	1	B2H0217	08/10/2012	08/10/12 20:42	
Chlorobenzene	ND	0.50	NA	1	B2H0217	08/10/2012	08/10/12 20:42	
Chloroethane	ND	0.50	NA	1	B2H0217	08/10/2012	08/10/12 20:42	
Chloroform	ND	0.50	NA	1	B2H0217	08/10/2012	08/10/12 20:42	
Chloromethane	ND	0.50	NA	1	B2H0217	08/10/2012	08/10/12 20:42	
cis-1,2-Dichloroethene	ND	0.50	NA	1	B2H0217	08/10/2012	08/10/12 20:42	
cis-1,3-Dichloropropene	ND	0.50	NA	1	B2H0217	08/10/2012	08/10/12 20:42	
Dibromochloromethane	ND	0.50	NA	1	B2H0217	08/10/2012	08/10/12 20:42	



Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego, CA 92122

Project Number : RAYTHEON, 532.30

Report To : Steve Netto

Reported : 08/17/2012

Client Sample ID MW-26C

Lab ID: 1202779-05

Volatile Organic Compounds by EPA 8260

Analyst: RP

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Dibromomethane	ND	0.50	NA	1	B2H0217	08/10/2012	08/10/12 20:42	
Dichlorodifluoromethane	ND	0.50	NA	1	B2H0217	08/10/2012	08/10/12 20:42	
Ethylbenzene	ND	0.50	NA	1	B2H0217	08/10/2012	08/10/12 20:42	
Hexachlorobutadiene	ND	0.50	NA	1	B2H0217	08/10/2012	08/10/12 20:42	
Isopropylbenzene	ND	0.50	NA	1	B2H0217	08/10/2012	08/10/12 20:42	
m,p-Xylene	ND	1.0	NA	1	B2H0217	08/10/2012	08/10/12 20:42	
Methylene chloride	ND	1.0	NA	1	B2H0217	08/10/2012	08/10/12 20:42	
n-Butylbenzene	ND	0.50	NA	1	B2H0217	08/10/2012	08/10/12 20:42	
n-Propylbenzene	ND	0.50	NA	1	B2H0217	08/10/2012	08/10/12 20:42	
Naphthalene	ND	0.50	NA	1	B2H0217	08/10/2012	08/10/12 20:42	
o-Xylene	ND	0.50	NA	1	B2H0217	08/10/2012	08/10/12 20:42	
sec-Butylbenzene	ND	0.50	NA	1	B2H0217	08/10/2012	08/10/12 20:42	
Styrene	ND	0.50	NA	1	B2H0217	08/10/2012	08/10/12 20:42	
tert-Butylbenzene	ND	0.50	NA	1	B2H0217	08/10/2012	08/10/12 20:42	
Tetrachloroethene	ND	0.50	NA	1	B2H0217	08/10/2012	08/10/12 20:42	
Toluene	0.95	0.50	NA	1	B2H0217	08/10/2012	08/10/12 20:42	
trans-1,2-Dichloroethene	ND	0.50	NA	1	B2H0217	08/10/2012	08/10/12 20:42	
Trichloroethene	ND	0.50	NA	1	B2H0217	08/10/2012	08/10/12 20:42	
Trichlorofluoromethane	ND	0.50	NA	1	B2H0217	08/10/2012	08/10/12 20:42	
Vinyl chloride	ND	0.50	NA	1	B2H0217	08/10/2012	08/10/12 20:42	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>117 %</i>		<i>70 - 130</i>		B2H0217	08/10/2012	<i>08/10/12 20:42</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>98.6 %</i>		<i>70 - 130</i>		B2H0217	08/10/2012	<i>08/10/12 20:42</i>	
<i>Surrogate: Dibromofluoromethane</i>	<i>111 %</i>		<i>70 - 130</i>		B2H0217	08/10/2012	<i>08/10/12 20:42</i>	
<i>Surrogate: Toluene-d8</i>	<i>101 %</i>		<i>70 - 130</i>		B2H0217	08/10/2012	<i>08/10/12 20:42</i>	



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San Diego , CA 92122

Project Number : RAYTHEON, 532.30

Report To : Steve Netto

Reported : 08/17/2012

Client Sample ID MW-26C

Lab ID: 1202779-05

1,4-Dioxane by EPA 8270/SIM: Isotope Dilution Technique

Analyst: BB

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,4-Dioxane	ND	0.20	NA	1	B2H0225	08/10/2012	08/10/12 19:17	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	<i>87.7 %</i>		<i>36 - 107</i>		B2H0225	08/10/2012	<i>08/10/12 19:17</i>	
<i>Surrogate: 2-Fluorobiphenyl</i>	<i>106 %</i>		<i>42 - 120</i>		B2H0225	08/10/2012	<i>08/10/12 19:17</i>	
<i>Surrogate: 4-Terphenyl-d14</i>	<i>117 %</i>		<i>67 - 142</i>		B2H0225	08/10/2012	<i>08/10/12 19:17</i>	
<i>Surrogate: Nitrobenzene-d5</i>	<i>70.0 %</i>		<i>36 - 130</i>		B2H0225	08/10/2012	<i>08/10/12 19:17</i>	



Hargis & Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego , CA 92122

Project Number : RAYTHEON, 532.30
 Report To : Steve Netto
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QUALITY CONTROL SECTION

Volatile Organic Compounds by EPA 8260 - Quality Control

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B2H0217 - MSVOAW_LL

Blank (B2H0217-BLK1)

Prepared: 8/10/2012 Analyzed: 8/10/2012

1,1,1,2-Tetrachloroethane	ND	0.50			NR				
1,1,1-Trichloroethane	ND	0.50			NR				
1,1,2,2-Tetrachloroethane	ND	0.50			NR				
1,1,2-Trichloroethane	ND	0.50			NR				
1,1-Dichloroethane	ND	0.50			NR				
1,1-Dichloroethene	ND	0.50			NR				
1,1-Dichloropropene	ND	0.50			NR				
1,2,3-Trichloropropane	ND	0.50			NR				
1,2,3-Trichlorobenzene	ND	0.50			NR				
1,2,4-Trichlorobenzene	ND	0.50			NR				
1,2,4-Trimethylbenzene	ND	0.50			NR				
1,2-Dibromo-3-chloropropane	ND	0.50			NR				
1,2-Dibromoethane	ND	0.50			NR				
1,2-Dichlorobenzene	ND	0.50			NR				
1,2-Dichloroethane	ND	0.50			NR				
1,2-Dichloropropane	ND	0.50			NR				
1,3,5-Trimethylbenzene	ND	0.50			NR				
1,3-Dichlorobenzene	ND	0.50			NR				
1,3-Dichloropropane	ND	0.50			NR				
1,4-Dichlorobenzene	ND	0.50			NR				
2,2-Dichloropropane	ND	0.50			NR				
2-Chlorotoluene	ND	0.50			NR				
4-Chlorotoluene	ND	0.50			NR				
4-Isopropyltoluene	ND	0.50			NR				
Benzene	ND	0.50			NR				
Bromobenzene	ND	0.50			NR				
Bromodichloromethane	ND	0.50			NR				
Bromoform	ND	0.50			NR				
Bromomethane	ND	0.50			NR				
Carbon tetrachloride	ND	0.50			NR				
Chlorobenzene	ND	0.50			NR				
Chloroethane	ND	0.50			NR				
Chloroform	ND	0.50			NR				
Chloromethane	ND	0.50			NR				
cis-1,2-Dichloroethene	ND	0.50			NR				
cis-1,3-Dichloropropene	ND	0.50			NR				
Dibromochloromethane	ND	0.50			NR				
Dibromomethane	ND	0.50			NR				
Dichlorodifluoromethane	ND	0.50			NR				



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San Diego, CA 92122

Project Number : RAYTHEON, 532.30

Report To : Steve Netto

Reported : 08/17/2012

Volatile Organic Compounds by EPA 8260 - Quality Control (cont'd)

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B2H0217 - MSVOAW_LL (continued)

Blank (B2H0217-BLK1) - Continued

Prepared: 8/10/2012 Analyzed: 8/10/2012

Ethylbenzene	ND	0.50					NR		
Hexachlorobutadiene	ND	0.50					NR		
Isopropylbenzene	ND	0.50					NR		
m,p-Xylene	ND	1.0					NR		
Methylene chloride	ND	1.0					NR		
n-Butylbenzene	ND	0.50					NR		
n-Propylbenzene	ND	0.50					NR		
Naphthalene	ND	0.50					NR		
o-Xylene	ND	0.50					NR		
sec-Butylbenzene	ND	0.50					NR		
Styrene	ND	0.50					NR		
tert-Butylbenzene	ND	0.50					NR		
Tetrachloroethene	ND	0.50					NR		
Toluene	ND	0.50					NR		
trans-1,2-Dichloroethene	ND	0.50					NR		
Trichloroethene	ND	0.50					NR		
Trichlorofluoromethane	ND	0.50					NR		
Vinyl chloride	ND	0.50					NR		

<i>Surrogate: 1,2-Dichloroethane-d4</i>	28.99		25.0000		116	70 - 130			
<i>Surrogate: 4-Bromofluorobenzene</i>	24.43		25.0000		97.7	70 - 130			
<i>Surrogate: Dibromofluoromethane</i>	27.26		25.0000		109	70 - 130			
<i>Surrogate: Toluene-d8</i>	25.37		25.0000		101	70 - 130			

LCS (B2H0217-BS1)

Prepared: 8/10/2012 Analyzed: 8/10/2012

1,1-Dichloroethene	21.2200		20.0000		106	70 - 130			
Benzene	19.9100		20.0000		99.6	70 - 130			
Chlorobenzene	19.0100		20.0000		95.0	70 - 130			
MTBE	20.8700		20.0000		104	70 - 130			
Toluene	19.5500		20.0000		97.8	70 - 130			
Trichloroethene	19.4900		20.0000		97.4	70 - 130			

<i>Surrogate: 1,2-Dichloroethane-d4</i>	27.98		25.0000		112	70 - 130			
<i>Surrogate: 4-Bromofluorobenzene</i>	25.42		25.0000		102	70 - 130			
<i>Surrogate: Dibromofluoromethane</i>	26.82		25.0000		107	70 - 130			
<i>Surrogate: Toluene-d8</i>	25.31		25.0000		101	70 - 130			

LCS Dup (B2H0217-BSD1)

Prepared: 8/10/2012 Analyzed: 8/10/2012

1,1-Dichloroethene	21.2900		20.0000		106	70 - 130	0.329	20	
Benzene	20.8300		20.0000		104	70 - 130	4.52	20	
Chlorobenzene	18.9700		20.0000		94.8	70 - 130	0.211	20	
MTBE	21.5700		20.0000		108	70 - 130	3.30	20	
Toluene	19.7800		20.0000		98.9	70 - 130	1.17	20	



Hargis & Associates, Inc.

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Project Number : RAYTHEON, 532.30

Report To : Steve Netto

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Volatile Organic Compounds by EPA 8260 - Quality Control (cont'd)

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec % Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B2H0217 - MSVOAW_LL (continued)

LCS Dup (B2H0217-BSD1) - Continued

Prepared: 8/10/2012 Analyzed: 8/10/2012

Trichloroethene	19.9400		20.0000		99.7	70 - 130	2.28	20	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>28.04</i>		<i>25.0000</i>		<i>112</i>	<i>70 - 130</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>25.77</i>		<i>25.0000</i>		<i>103</i>	<i>70 - 130</i>			
<i>Surrogate: Dibromofluoromethane</i>	<i>26.56</i>		<i>25.0000</i>		<i>106</i>	<i>70 - 130</i>			
<i>Surrogate: Toluene-d8</i>	<i>25.52</i>		<i>25.0000</i>		<i>102</i>	<i>70 - 130</i>			

Matrix Spike (B2H0217-MS1)

Source: 1202779-02

Prepared: 8/10/2012 Analyzed: 8/10/2012

1,1-Dichloroethene	26.9500		20.0000	ND	135	70 - 130			M1
Benzene	22.3700		20.0000	ND	112	70 - 130			
Chlorobenzene	21.0100		20.0000	ND	105	70 - 130			
MTBE	23.2700		20.0000	ND	116	70 - 130			
Toluene	21.9000		20.0000	ND	110	70 - 130			
Trichloroethene	22.3500		20.0000	ND	112	70 - 130			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>29.12</i>		<i>25.0000</i>		<i>116</i>	<i>70 - 130</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>25.48</i>		<i>25.0000</i>		<i>102</i>	<i>70 - 130</i>			
<i>Surrogate: Dibromofluoromethane</i>	<i>27.17</i>		<i>25.0000</i>		<i>109</i>	<i>70 - 130</i>			
<i>Surrogate: Toluene-d8</i>	<i>25.44</i>		<i>25.0000</i>		<i>102</i>	<i>70 - 130</i>			

Matrix Spike Dup (B2H0217-MSD1)

Source: 1202779-02

Prepared: 8/10/2012 Analyzed: 8/10/2012

1,1-Dichloroethene	26.1000		20.0000	ND	130	70 - 130	3.20	20	M1
Benzene	22.6600		20.0000	ND	113	70 - 130	1.29	20	
Chlorobenzene	21.1700		20.0000	ND	106	70 - 130	0.759	20	
MTBE	24.3700		20.0000	ND	122	70 - 130	4.62	20	
Toluene	21.9700		20.0000	ND	110	70 - 130	0.319	20	
Trichloroethene	22.5100		20.0000	ND	113	70 - 130	0.713	20	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>28.89</i>		<i>25.0000</i>		<i>116</i>	<i>70 - 130</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>25.42</i>		<i>25.0000</i>		<i>102</i>	<i>70 - 130</i>			
<i>Surrogate: Dibromofluoromethane</i>	<i>26.87</i>		<i>25.0000</i>		<i>107</i>	<i>70 - 130</i>			
<i>Surrogate: Toluene-d8</i>	<i>25.08</i>		<i>25.0000</i>		<i>100</i>	<i>70 - 130</i>			



Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : RAYTHEON, 532.30

Report To : Steve Netto

Reported : 08/17/2012

1,4-Dioxane by EPA 8270/SIM: Isotope Dilution Technique - Quality Control

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec % Rec	% Rec Limits	RPD RPD	RPD Limit	Notes
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Batch B2H0225 - MSSEMI

Blank (B2H0225-BLK1)

Prepared: 8/10/2012 Analyzed: 8/10/2012

1,4-Dioxane	ND	0.20			NR				
Surrogate: 1,2-Dichlorobenzene-d4	0.8013		1.00000		80.1	36 - 107			
Surrogate: 2-Fluorobiphenyl	0.8991		1.00000		89.9	42 - 120			
Surrogate: 4-Terphenyl-d14	1.088		1.00000		109	67 - 142			
Surrogate: Nitrobenzene-d5	0.7258		1.00000		72.6	36 - 130			

LCS (B2H0225-BS1)

Prepared: 8/10/2012 Analyzed: 8/13/2012

1,4-Dioxane	0.765890	0.20	1.00000		76.6	70 - 130			
Surrogate: 1,2-Dichlorobenzene-d4	0.8308		1.00000		83.1	36 - 107			
Surrogate: 2-Fluorobiphenyl	0.8210		1.00000		82.1	42 - 120			
Surrogate: 4-Terphenyl-d14	0.8169		1.00000		81.7	67 - 142			
Surrogate: Nitrobenzene-d5	0.6246		1.00000		62.5	36 - 130			

Matrix Spike (B2H0225-MS1)

Source: 1202779-02

Prepared: 8/10/2012 Analyzed: 8/13/2012

1,4-Dioxane	0.788860	0.20	1.00000	ND	78.9	70 - 130			
Surrogate: 1,2-Dichlorobenzene-d4	0.8280		1.00000		82.8	36 - 107			
Surrogate: 2-Fluorobiphenyl	0.8148		1.00000		81.5	42 - 120			
Surrogate: 4-Terphenyl-d14	0.7520		1.00000		75.2	67 - 142			
Surrogate: Nitrobenzene-d5	0.6067		1.00000		60.7	36 - 130			

Matrix Spike Dup (B2H0225-MSD1)

Source: 1202779-02

Prepared: 8/10/2012 Analyzed: 8/13/2012

1,4-Dioxane	0.797980	0.20	1.00000	ND	79.8	70 - 130	1.15	20	
Surrogate: 1,2-Dichlorobenzene-d4	0.8078		1.00000		80.8	36 - 107			
Surrogate: 2-Fluorobiphenyl	0.8077		1.00000		80.8	42 - 120			
Surrogate: 4-Terphenyl-d14	0.7737		1.00000		77.4	67 - 142			
Surrogate: Nitrobenzene-d5	0.5841		1.00000		58.4	36 - 130			



Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : RAYTHEON, 532.30

Report To : Steve Netto

Reported : 08/17/2012

Notes and Definitions

M1	Matrix spike recovery outside of acceptance limit. The analytical batch was validated by the laboratory control sample.
ND	Analyte not detected at or above reporting limit
PQL	Practical Quantitation Limit
MDL	Method Detection Limit
NR	Not Reported
RPD	Relative Percent Difference
CA1	CA-NELAP (CDPH)
CA2	CA-ELAP (CDPH)
OR1	OR-NELAP (OSPHL)
TX1	TX-NELAP (TCEQ)

CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST FORM

PROJECT NAME		PROJECT No./TASK No.		SAMPLE CONTAINERS		ANALYSIS REQUESTED		ESTIMATED CONCENTRATION RANGE (ppb) FOR VOAS		SPECIAL HANDLING		LABORATORY INFORMATION																				
RAYTHEON		532.30										ATL																				
PROJECT MANAGER STEVE NETTO		Phone No. 858-455-6500										Attn: Rachelle Arada																				
QA MANAGER		Fax No. 858-455-6533																														
SAMPLER (SIGNATURE)		SAMPLER (PRINTED)																														
<i>Amanda Beam</i>		DANIEL MORA AMANDA BEAM																														
LAB ID	SAMPLE ID	SAMPLE COLLECTION		MATRIX		PRESERVATION					40 ml VOA	1L Amber	VOCs 8260B	1,4-Dioxane 8270 MOD	1,4-Dioxane 8270 SIM	ESTIMATED CONCENTRATION RANGE (ppb) FOR VOAS					STANDARD TAT	MS Collected	MSD Collected	REMARKS								
		Date	Time	Soil	Ground water	Surface water	Lab H2O	HCl	HNO3	NaOH						H2SO4	Ice	0-10	10-100	100-1,000					1,000-10,000	>10,000						
1202779-07	TB-080712	8/7/12	700			X	X			X	2						X					X										
2	MW-35A		934	X			X			X	3						X					X	X	X							+ 6 VOAS	
	↓		934	X						X	1				X							X	X	X							+ 2 1L Amber	
3	MW-35B		1036	X			X			X	3						X					X										
	↓		1036	X						X	1				X							X										
4	MW-35C		1206	X			X			X	3						X					X										
	↓		1206	X						X	1				X							X										
5	MW-26C		1638	X			X			X	3						X					X										
	↓			X						X	1				X							X										
Total number of Containers per analysis:											14	4												Total No. of Containers: (18) + 8								
Relinquished by: <i>[Signature]</i>		Date: 8/7/12	Received by: <i>[Signature]</i>		Date: 8/7/12	INSTRUCTIONS											Shipment Method: _____															
Company: 1725 H+A		Time: 17:25	Company: Advanced Tech Labs		Time: 17:25	<ol style="list-style-type: none"> Fill out form completely except for shaded areas (lab use only); sign only after verified for completeness. Complete in ballpoint pen. Draw one line through errors, initial and date correction. Indicate number of sample containers in analysis request space; indicate choice with ✓ or x. Note applicable preservatives, special instructions, and deviations from typical environmental samples. Consult project QA documents for specific instructions. 											Send Results to: STEVE NETTO															
Relinquished by: <i>[Signature]</i>		Date: 8/7/12	Received by: <i>[Signature]</i>		Date: 8/7/12	<p>Sample Receipt: Temp. @ receipt <u>1-8</u> °C</p> <input type="checkbox"/> No. of containers correct <input type="checkbox"/> received good condition/cold <input type="checkbox"/> custody seals secure <input type="checkbox"/> conforms to COC document											<input checked="" type="checkbox"/> 9171 TOWNE CENTRE DRIVE, SUITE 375 SAN DIEGO, CA 92122 (858) 455-6500 <input type="checkbox"/> 1640 SOUTH STAPLEY DRIVE, SUITE 124 MESA, AZ 85204 (480) 345-0888 <input type="checkbox"/> 1820 EAST RIVER ROAD, SUITE 220 TUCSON, AZ 85718 (520) 881-7300															
Company: Advanced Tech Labs		Time: 18:16	Company: ATL		Time: 18:16												Send invoice to San Diego, CA Attn: Accounts Payable															

August 20, 2012

Steve Netto
Hargis & Associates, Inc.
9171 Towne Centre Drive, Suite 375
San Diego, CA 92122
Tel: (619) 249-3166
Fax: (858) 455-6533



Re: ATL Work Order Number : 1202791
Client Reference : RAYTHEON, 532.30

Enclosed are the results for sample(s) received on August 08, 2012 by Advanced Technology Laboratories. The sample(s) are tested for the parameters as indicated on the enclosed chain of custody in accordance with applicable laboratory certifications. The laboratory results contained in this report specifically pertains to the sample(s) submitted.

Thank you for the opportunity to serve the needs of your company. If you have any questions, please feel free to contact me or your Project Manager.

Sincerely,

Eddie Rodriguez
Laboratory Director

The cover letter and the case narrative are an integral part of this analytical report and its absence renders the report invalid. The report cannot be reproduced without written permission from the client and Advanced Technology Laboratories.



Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : RAYTHEON, 532.30

Report To : Steve Netto

Reported : 08/20/2012

SUMMARY OF SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
TB-080812	1202791-01	Lab H2O	8/08/12 6:00	8/08/12 16:45
MW-09	1202791-02	Groundwater	8/08/12 12:40	8/08/12 16:45
MW-34C	1202791-03	Groundwater	8/08/12 15:20	8/08/12 16:45
MW-34A	1202791-04	Groundwater	8/08/12 16:03	8/08/12 16:45



Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : RAYTHEON, 532.30

Report To : Steve Netto

Reported : 08/20/2012

Client Sample ID TB-080812

Lab ID: 1202791-01

Volatile Organic Compounds by EPA 8260

Analyst: RP

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 12:02	
1,1,1-Trichloroethane	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 12:02	
1,1,2,2-Tetrachloroethane	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 12:02	
1,1,2-Trichloroethane	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 12:02	
1,1-Dichloroethane	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 12:02	
1,1-Dichloroethene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 12:02	
1,1-Dichloropropene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 12:02	
1,2,3-Trichloropropane	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 12:02	
1,2,3-Trichlorobenzene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 12:02	
1,2,4-Trichlorobenzene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 12:02	
1,2,4-Trimethylbenzene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 12:02	
1,2-Dibromo-3-chloropropane	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 12:02	
1,2-Dibromoethane	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 12:02	
1,2-Dichlorobenzene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 12:02	
1,2-Dichloroethane	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 12:02	
1,2-Dichloropropane	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 12:02	
1,3,5-Trimethylbenzene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 12:02	
1,3-Dichlorobenzene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 12:02	
1,3-Dichloropropane	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 12:02	
1,4-Dichlorobenzene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 12:02	
2,2-Dichloropropane	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 12:02	
2-Chlorotoluene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 12:02	
4-Chlorotoluene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 12:02	
4-Isopropyltoluene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 12:02	
Benzene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 12:02	
Bromobenzene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 12:02	
Bromodichloromethane	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 12:02	
Bromoform	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 12:02	
Bromomethane	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 12:02	
Carbon tetrachloride	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 12:02	
Chlorobenzene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 12:02	
Chloroethane	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 12:02	
Chloroform	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 12:02	
Chloromethane	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 12:02	
cis-1,2-Dichloroethene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 12:02	
cis-1,3-Dichloropropene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 12:02	
Dibromochloromethane	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 12:02	



Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : RAYTHEON, 532.30

Report To : Steve Netto

Reported : 08/20/2012

Client Sample ID TB-080812

Lab ID: 1202791-01

Volatile Organic Compounds by EPA 8260

Analyst: RP

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Dibromomethane	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 12:02	
Dichlorodifluoromethane	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 12:02	
Ethylbenzene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 12:02	
Hexachlorobutadiene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 12:02	
Isopropylbenzene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 12:02	
m,p-Xylene	ND	1.0	NA	1	B2H0269	08/14/2012	08/14/12 12:02	
Methylene chloride	ND	1.0	NA	1	B2H0269	08/14/2012	08/14/12 12:02	
n-Butylbenzene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 12:02	
n-Propylbenzene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 12:02	
Naphthalene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 12:02	
o-Xylene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 12:02	
sec-Butylbenzene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 12:02	
Styrene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 12:02	
tert-Butylbenzene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 12:02	
Tetrachloroethene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 12:02	
Toluene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 12:02	
trans-1,2-Dichloroethene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 12:02	
Trichloroethene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 12:02	
Trichlorofluoromethane	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 12:02	
Vinyl chloride	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 12:02	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>117 %</i>		<i>70 - 130</i>		B2H0269	08/14/2012	<i>08/14/12 12:02</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>98.4 %</i>		<i>70 - 130</i>		B2H0269	08/14/2012	<i>08/14/12 12:02</i>	
<i>Surrogate: Dibromofluoromethane</i>	<i>108 %</i>		<i>70 - 130</i>		B2H0269	08/14/2012	<i>08/14/12 12:02</i>	
<i>Surrogate: Toluene-d8</i>	<i>102 %</i>		<i>70 - 130</i>		B2H0269	08/14/2012	<i>08/14/12 12:02</i>	



Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : RAYTHEON, 532.30

Report To : Steve Netto

Reported : 08/20/2012

Client Sample ID MW-09

Lab ID: 1202791-02

Volatile Organic Compounds by EPA 8260

Analyst: RP

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 17:40	
1,1,1-Trichloroethane	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 17:40	
1,1,2,2-Tetrachloroethane	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 17:40	
1,1,2-Trichloroethane	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 17:40	
1,1-Dichloroethane	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 17:40	
1,1-Dichloroethene	0.52	0.50	NA	1	B2H0269	08/14/2012	08/14/12 17:40	
1,1-Dichloropropene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 17:40	
1,2,3-Trichloropropane	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 17:40	
1,2,3-Trichlorobenzene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 17:40	
1,2,4-Trichlorobenzene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 17:40	
1,2,4-Trimethylbenzene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 17:40	
1,2-Dibromo-3-chloropropane	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 17:40	
1,2-Dibromoethane	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 17:40	
1,2-Dichlorobenzene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 17:40	
1,2-Dichloroethane	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 17:40	
1,2-Dichloropropane	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 17:40	
1,3,5-Trimethylbenzene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 17:40	
1,3-Dichlorobenzene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 17:40	
1,3-Dichloropropane	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 17:40	
1,4-Dichlorobenzene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 17:40	
2,2-Dichloropropane	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 17:40	
2-Chlorotoluene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 17:40	
4-Chlorotoluene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 17:40	
4-Isopropyltoluene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 17:40	
Benzene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 17:40	
Bromobenzene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 17:40	
Bromodichloromethane	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 17:40	
Bromoform	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 17:40	
Bromomethane	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 17:40	
Carbon tetrachloride	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 17:40	
Chlorobenzene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 17:40	
Chloroethane	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 17:40	
Chloroform	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 17:40	
Chloromethane	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 17:40	
cis-1,2-Dichloroethene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 17:40	
cis-1,3-Dichloropropane	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 17:40	
Dibromochloromethane	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 17:40	



Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : RAYTHEON, 532.30

Report To : Steve Netto

Reported : 08/20/2012

Client Sample ID MW-09

Lab ID: 1202791-02

Volatile Organic Compounds by EPA 8260

Analyst: RP

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Dibromomethane	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 17:40	
Dichlorodifluoromethane	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 17:40	
Ethylbenzene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 17:40	
Hexachlorobutadiene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 17:40	
Isopropylbenzene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 17:40	
m,p-Xylene	ND	1.0	NA	1	B2H0269	08/14/2012	08/14/12 17:40	
Methylene chloride	ND	1.0	NA	1	B2H0269	08/14/2012	08/14/12 17:40	
n-Butylbenzene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 17:40	
n-Propylbenzene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 17:40	
Naphthalene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 17:40	
o-Xylene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 17:40	
sec-Butylbenzene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 17:40	
Styrene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 17:40	
tert-Butylbenzene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 17:40	
Tetrachloroethene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 17:40	
Toluene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 17:40	
trans-1,2-Dichloroethene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 17:40	
Trichloroethene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 17:40	
Trichlorofluoromethane	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 17:40	
Vinyl chloride	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 17:40	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>121 %</i>		<i>70 - 130</i>		B2H0269	08/14/2012	<i>08/14/12 17:40</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>97.6 %</i>		<i>70 - 130</i>		B2H0269	08/14/2012	<i>08/14/12 17:40</i>	
<i>Surrogate: Dibromofluoromethane</i>	<i>113 %</i>		<i>70 - 130</i>		B2H0269	08/14/2012	<i>08/14/12 17:40</i>	
<i>Surrogate: Toluene-d8</i>	<i>102 %</i>		<i>70 - 130</i>		B2H0269	08/14/2012	<i>08/14/12 17:40</i>	



Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego, CA 92122

Project Number : RAYTHEON, 532.30

Report To : Steve Netto

Reported : 08/20/2012

Client Sample ID MW-09

Lab ID: 1202791-02

1,4-Dioxane by EPA 8270/SIM: Isotope Dilution Technique

Analyst: BB

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,4-Dioxane	ND	0.20	NA	1	B2H0225	08/10/2012	08/10/12 19:47	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	83.6 %		36 - 107		B2H0225	08/10/2012	08/10/12 19:47	
<i>Surrogate: 2-Fluorobiphenyl</i>	93.4 %		42 - 120		B2H0225	08/10/2012	08/10/12 19:47	
<i>Surrogate: 4-Terphenyl-d14</i>	112 %		67 - 142		B2H0225	08/10/2012	08/10/12 19:47	
<i>Surrogate: Nitrobenzene-d5</i>	69.9 %		36 - 130		B2H0225	08/10/2012	08/10/12 19:47	



Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : RAYTHEON, 532.30

Report To : Steve Netto

Reported : 08/20/2012

Client Sample ID MW-34C

Lab ID: 1202791-03

Volatile Organic Compounds by EPA 8260

Analyst: RP

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 18:00	
1,1,1-Trichloroethane	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 18:00	
1,1,2,2-Tetrachloroethane	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 18:00	
1,1,2-Trichloroethane	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 18:00	
1,1-Dichloroethane	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 18:00	
1,1-Dichloroethene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 18:00	
1,1-Dichloropropene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 18:00	
1,2,3-Trichloropropane	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 18:00	
1,2,3-Trichlorobenzene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 18:00	
1,2,4-Trichlorobenzene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 18:00	
1,2,4-Trimethylbenzene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 18:00	
1,2-Dibromo-3-chloropropane	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 18:00	
1,2-Dibromoethane	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 18:00	
1,2-Dichlorobenzene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 18:00	
1,2-Dichloroethane	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 18:00	
1,2-Dichloropropane	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 18:00	
1,3,5-Trimethylbenzene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 18:00	
1,3-Dichlorobenzene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 18:00	
1,3-Dichloropropane	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 18:00	
1,4-Dichlorobenzene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 18:00	
2,2-Dichloropropane	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 18:00	
2-Chlorotoluene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 18:00	
4-Chlorotoluene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 18:00	
4-Isopropyltoluene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 18:00	
Benzene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 18:00	
Bromobenzene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 18:00	
Bromodichloromethane	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 18:00	
Bromoform	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 18:00	
Bromomethane	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 18:00	
Carbon tetrachloride	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 18:00	
Chlorobenzene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 18:00	
Chloroethane	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 18:00	
Chloroform	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 18:00	
Chloromethane	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 18:00	
cis-1,2-Dichloroethene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 18:00	
cis-1,3-Dichloropropene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 18:00	
Dibromochloromethane	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 18:00	



Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : RAYTHEON, 532.30

Report To : Steve Netto

Reported : 08/20/2012

Client Sample ID MW-34C

Lab ID: 1202791-03

Volatile Organic Compounds by EPA 8260

Analyst: RP

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Dibromomethane	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 18:00	
Dichlorodifluoromethane	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 18:00	
Ethylbenzene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 18:00	
Hexachlorobutadiene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 18:00	
Isopropylbenzene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 18:00	
m,p-Xylene	ND	1.0	NA	1	B2H0269	08/14/2012	08/14/12 18:00	
Methylene chloride	ND	1.0	NA	1	B2H0269	08/14/2012	08/14/12 18:00	
n-Butylbenzene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 18:00	
n-Propylbenzene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 18:00	
Naphthalene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 18:00	
o-Xylene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 18:00	
sec-Butylbenzene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 18:00	
Styrene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 18:00	
tert-Butylbenzene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 18:00	
Tetrachloroethene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 18:00	
Toluene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 18:00	
trans-1,2-Dichloroethene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 18:00	
Trichloroethene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 18:00	
Trichlorofluoromethane	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 18:00	
Vinyl chloride	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 18:00	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>120 %</i>		<i>70 - 130</i>		B2H0269	08/14/2012	<i>08/14/12 18:00</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>98.8 %</i>		<i>70 - 130</i>		B2H0269	08/14/2012	<i>08/14/12 18:00</i>	
<i>Surrogate: Dibromofluoromethane</i>	<i>112 %</i>		<i>70 - 130</i>		B2H0269	08/14/2012	<i>08/14/12 18:00</i>	
<i>Surrogate: Toluene-d8</i>	<i>103 %</i>		<i>70 - 130</i>		B2H0269	08/14/2012	<i>08/14/12 18:00</i>	



Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego, CA 92122

Project Number : RAYTHEON, 532.30

Report To : Steve Netto

Reported : 08/20/2012

Client Sample ID MW-34C

Lab ID: 1202791-03

1,4-Dioxane by EPA 8270/SIM: Isotope Dilution Technique

Analyst: BB

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,4-Dioxane	ND	0.20	NA	1	B2H0225	08/10/2012	08/10/12 20:16	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	<i>68.9 %</i>		<i>36 - 107</i>		B2H0225	08/10/2012	<i>08/10/12 20:16</i>	
<i>Surrogate: 2-Fluorobiphenyl</i>	<i>79.0 %</i>		<i>42 - 120</i>		B2H0225	08/10/2012	<i>08/10/12 20:16</i>	
<i>Surrogate: 4-Terphenyl-d14</i>	<i>113 %</i>		<i>67 - 142</i>		B2H0225	08/10/2012	<i>08/10/12 20:16</i>	
<i>Surrogate: Nitrobenzene-d5</i>	<i>55.6 %</i>		<i>36 - 130</i>		B2H0225	08/10/2012	<i>08/10/12 20:16</i>	



Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : RAYTHEON, 532.30

Report To : Steve Netto

Reported : 08/20/2012

Client Sample ID MW-34A

Lab ID: 1202791-04

Volatile Organic Compounds by EPA 8260

Analyst: RP

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 18:21	
1,1,1-Trichloroethane	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 18:21	
1,1,2,2-Tetrachloroethane	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 18:21	
1,1,2-Trichloroethane	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 18:21	
1,1-Dichloroethane	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 18:21	
1,1-Dichloroethene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 18:21	
1,1-Dichloropropene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 18:21	
1,2,3-Trichloropropane	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 18:21	
1,2,3-Trichlorobenzene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 18:21	
1,2,4-Trichlorobenzene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 18:21	
1,2,4-Trimethylbenzene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 18:21	
1,2-Dibromo-3-chloropropane	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 18:21	
1,2-Dibromoethane	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 18:21	
1,2-Dichlorobenzene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 18:21	
1,2-Dichloroethane	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 18:21	
1,2-Dichloropropane	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 18:21	
1,3,5-Trimethylbenzene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 18:21	
1,3-Dichlorobenzene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 18:21	
1,3-Dichloropropane	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 18:21	
1,4-Dichlorobenzene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 18:21	
2,2-Dichloropropane	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 18:21	
2-Chlorotoluene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 18:21	
4-Chlorotoluene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 18:21	
4-Isopropyltoluene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 18:21	
Benzene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 18:21	
Bromobenzene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 18:21	
Bromodichloromethane	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 18:21	
Bromoform	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 18:21	
Bromomethane	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 18:21	
Carbon tetrachloride	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 18:21	
Chlorobenzene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 18:21	
Chloroethane	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 18:21	
Chloroform	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 18:21	
Chloromethane	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 18:21	
cis-1,2-Dichloroethene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 18:21	
cis-1,3-Dichloropropene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 18:21	
Dibromochloromethane	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 18:21	



Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : RAYTHEON, 532.30

Report To : Steve Netto

Reported : 08/20/2012

Client Sample ID MW-34A

Lab ID: 1202791-04

Volatile Organic Compounds by EPA 8260

Analyst: RP

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Dibromomethane	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 18:21	
Dichlorodifluoromethane	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 18:21	
Ethylbenzene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 18:21	
Hexachlorobutadiene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 18:21	
Isopropylbenzene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 18:21	
m,p-Xylene	ND	1.0	NA	1	B2H0269	08/14/2012	08/14/12 18:21	
Methylene chloride	ND	1.0	NA	1	B2H0269	08/14/2012	08/14/12 18:21	
n-Butylbenzene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 18:21	
n-Propylbenzene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 18:21	
Naphthalene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 18:21	
o-Xylene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 18:21	
sec-Butylbenzene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 18:21	
Styrene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 18:21	
tert-Butylbenzene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 18:21	
Tetrachloroethene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 18:21	
Toluene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 18:21	
trans-1,2-Dichloroethene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 18:21	
Trichloroethene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 18:21	
Trichlorofluoromethane	0.77	0.50	NA	1	B2H0269	08/14/2012	08/14/12 18:21	
Vinyl chloride	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 18:21	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>122 %</i>		<i>70 - 130</i>		B2H0269	08/14/2012	<i>08/14/12 18:21</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>99.4 %</i>		<i>70 - 130</i>		B2H0269	08/14/2012	<i>08/14/12 18:21</i>	
<i>Surrogate: Dibromofluoromethane</i>	<i>113 %</i>		<i>70 - 130</i>		B2H0269	08/14/2012	<i>08/14/12 18:21</i>	
<i>Surrogate: Toluene-d8</i>	<i>103 %</i>		<i>70 - 130</i>		B2H0269	08/14/2012	<i>08/14/12 18:21</i>	



Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : RAYTHEON, 532.30

Report To : Steve Netto

Reported : 08/20/2012

Client Sample ID MW-34A

Lab ID: 1202791-04

1,4-Dioxane by EPA 8270/SIM: Isotope Dilution Technique

Analyst: BB

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,4-Dioxane	ND	0.20	NA	1	B2H0225	08/10/2012	08/10/12 20:45	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	<i>92.5 %</i>		<i>36 - 107</i>		B2H0225	08/10/2012	<i>08/10/12 20:45</i>	
<i>Surrogate: 2-Fluorobiphenyl</i>	<i>100 %</i>		<i>42 - 120</i>		B2H0225	08/10/2012	<i>08/10/12 20:45</i>	
<i>Surrogate: 4-Terphenyl-d14</i>	<i>115 %</i>		<i>67 - 142</i>		B2H0225	08/10/2012	<i>08/10/12 20:45</i>	
<i>Surrogate: Nitrobenzene-d5</i>	<i>72.0 %</i>		<i>36 - 130</i>		B2H0225	08/10/2012	<i>08/10/12 20:45</i>	



Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : RAYTHEON, 532.30

Report To : Steve Netto

Reported : 08/20/2012

QUALITY CONTROL SECTION

Volatile Organic Compounds by EPA 8260 - Quality Control

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B2H0269 - MSVOAW_LL

Blank (B2H0269-BLK1)

Prepared: 8/14/2012 Analyzed: 8/14/2012

1,1,1,2-Tetrachloroethane	ND	0.50			NR				
1,1,1-Trichloroethane	ND	0.50			NR				
1,1,2,2-Tetrachloroethane	ND	0.50			NR				
1,1,2-Trichloroethane	ND	0.50			NR				
1,1-Dichloroethane	ND	0.50			NR				
1,1-Dichloroethene	ND	0.50			NR				
1,1-Dichloropropene	ND	0.50			NR				
1,2,3-Trichloropropane	ND	0.50			NR				
1,2,3-Trichlorobenzene	ND	0.50			NR				
1,2,4-Trichlorobenzene	ND	0.50			NR				
1,2,4-Trimethylbenzene	ND	0.50			NR				
1,2-Dibromo-3-chloropropane	ND	0.50			NR				
1,2-Dibromoethane	ND	0.50			NR				
1,2-Dichlorobenzene	ND	0.50			NR				
1,2-Dichloroethane	ND	0.50			NR				
1,2-Dichloropropane	ND	0.50			NR				
1,3,5-Trimethylbenzene	ND	0.50			NR				
1,3-Dichlorobenzene	ND	0.50			NR				
1,3-Dichloropropane	ND	0.50			NR				
1,4-Dichlorobenzene	ND	0.50			NR				
2,2-Dichloropropane	ND	0.50			NR				
2-Chlorotoluene	ND	0.50			NR				
4-Chlorotoluene	ND	0.50			NR				
4-Isopropyltoluene	ND	0.50			NR				
Benzene	ND	0.50			NR				
Bromobenzene	ND	0.50			NR				
Bromodichloromethane	ND	0.50			NR				
Bromoform	ND	0.50			NR				
Bromomethane	ND	0.50			NR				
Carbon tetrachloride	ND	0.50			NR				
Chlorobenzene	ND	0.50			NR				
Chloroethane	ND	0.50			NR				
Chloroform	ND	0.50			NR				
Chloromethane	ND	0.50			NR				
cis-1,2-Dichloroethene	ND	0.50			NR				
cis-1,3-Dichloropropene	ND	0.50			NR				
Dibromochloromethane	ND	0.50			NR				
Dibromomethane	ND	0.50			NR				
Dichlorodifluoromethane	ND	0.50			NR				



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Volatile Organic Compounds by EPA 8260 - Quality Control (cont'd)

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec % Rec	% Rec Limits	RPD RPD	RPD Limit	Notes
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Batch B2H0269 - MSVOAW_LL (continued)

Blank (B2H0269-BLK1) - Continued

Prepared: 8/14/2012 Analyzed: 8/14/2012

Ethylbenzene	ND	0.50					NR		
Hexachlorobutadiene	ND	0.50					NR		
Isopropylbenzene	ND	0.50					NR		
m,p-Xylene	ND	1.0					NR		
Methylene chloride	ND	1.0					NR		
n-Butylbenzene	ND	0.50					NR		
n-Propylbenzene	ND	0.50					NR		
Naphthalene	ND	0.50					NR		
o-Xylene	ND	0.50					NR		
sec-Butylbenzene	ND	0.50					NR		
Styrene	ND	0.50					NR		
tert-Butylbenzene	ND	0.50					NR		
Tetrachloroethene	ND	0.50					NR		
Toluene	ND	0.50					NR		
trans-1,2-Dichloroethene	ND	0.50					NR		
Trichloroethene	ND	0.50					NR		
Trichlorofluoromethane	ND	0.50					NR		
Vinyl chloride	ND	0.50					NR		

<i>Surrogate: 1,2-Dichloroethane-d4</i>	28.35		25.0000		113	70 - 130			
<i>Surrogate: 4-Bromofluorobenzene</i>	24.48		25.0000		97.9	70 - 130			
<i>Surrogate: Dibromofluoromethane</i>	26.73		25.0000		107	70 - 130			
<i>Surrogate: Toluene-d8</i>	25.27		25.0000		101	70 - 130			

LCS (B2H0269-BS1)

Prepared: 8/14/2012 Analyzed: 8/14/2012

1,1-Dichloroethene	20.4000		20.0000		102	70 - 130			
Benzene	19.9600		20.0000		99.8	70 - 130			
Chlorobenzene	19.3400		20.0000		96.7	70 - 130			
MTBE	21.2400		20.0000		106	70 - 130			
Toluene	19.4800		20.0000		97.4	70 - 130			
Trichloroethene	19.5400		20.0000		97.7	70 - 130			

<i>Surrogate: 1,2-Dichloroethane-d4</i>	27.97		25.0000		112	70 - 130			
<i>Surrogate: 4-Bromofluorobenzene</i>	25.88		25.0000		104	70 - 130			
<i>Surrogate: Dibromofluoromethane</i>	26.75		25.0000		107	70 - 130			
<i>Surrogate: Toluene-d8</i>	25.26		25.0000		101	70 - 130			

LCS Dup (B2H0269-BSD1)

Prepared: 8/14/2012 Analyzed: 8/14/2012

1,1-Dichloroethene	20.3600		20.0000		102	70 - 130	0.196	20	
Benzene	20.1500		20.0000		101	70 - 130	0.947	20	
Chlorobenzene	19.3200		20.0000		96.6	70 - 130	0.103	20	
MTBE	21.8300		20.0000		109	70 - 130	2.74	20	
Toluene	19.2400		20.0000		96.2	70 - 130	1.24	20	



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Project Number : RAYTHEON, 532.30

Report To : Steve Netto

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Volatile Organic Compounds by EPA 8260 - Quality Control (cont'd)

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec % Rec	% Rec Limits	RPD RPD	RPD Limit	Notes
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Batch B2H0269 - MSVOAW_LL (continued)

LCS Dup (B2H0269-BSD1) - Continued

Prepared: 8/14/2012 Analyzed: 8/14/2012

Trichloroethene	19.7600		20.0000		98.8	70 - 130	1.12	20	
Surrogate: 1,2-Dichloroethane-d4	27.80		25.0000		111	70 - 130			
Surrogate: 4-Bromofluorobenzene	25.45		25.0000		102	70 - 130			
Surrogate: Dibromofluoromethane	26.29		25.0000		105	70 - 130			
Surrogate: Toluene-d8	25.39		25.0000		102	70 - 130			

Matrix Spike (B2H0269-MS1)

Source: 1202839-04

Prepared: 8/14/2012 Analyzed: 8/14/2012

1,1-Dichloroethene	25.7900		20.0000	ND	129	70 - 130			
Benzene	21.9600		20.0000	ND	110	70 - 130			
Chlorobenzene	20.9700		20.0000	ND	105	70 - 130			
MTBE	22.2500		20.0000	ND	111	70 - 130			
Toluene	21.7100		20.0000	ND	109	70 - 130			
Trichloroethene	22.4300		20.0000	0.660000	109	70 - 130			
Surrogate: 1,2-Dichloroethane-d4	29.61		25.0000		118	70 - 130			
Surrogate: 4-Bromofluorobenzene	26.28		25.0000		105	70 - 130			
Surrogate: Dibromofluoromethane	27.25		25.0000		109	70 - 130			
Surrogate: Toluene-d8	25.23		25.0000		101	70 - 130			

Matrix Spike Dup (B2H0269-MSD1)

Source: 1202839-04

Prepared: 8/14/2012 Analyzed: 8/14/2012

1,1-Dichloroethene	24.6600		20.0000	ND	123	70 - 130	4.48	20	
Benzene	22.3800		20.0000	ND	112	70 - 130	1.89	20	
Chlorobenzene	21.0800		20.0000	ND	105	70 - 130	0.523	20	
MTBE	23.0800		20.0000	ND	115	70 - 130	3.66	20	
Toluene	22.0500		20.0000	ND	110	70 - 130	1.55	20	
Trichloroethene	22.6100		20.0000	0.660000	110	70 - 130	0.799	20	
Surrogate: 1,2-Dichloroethane-d4	28.88		25.0000		116	70 - 130			
Surrogate: 4-Bromofluorobenzene	25.87		25.0000		103	70 - 130			
Surrogate: Dibromofluoromethane	26.69		25.0000		107	70 - 130			
Surrogate: Toluene-d8	25.57		25.0000		102	70 - 130			



Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : RAYTHEON, 532.30

Report To : Steve Netto

Reported : 08/20/2012

1,4-Dioxane by EPA 8270/SIM: Isotope Dilution Technique - Quality Control

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec % Rec	% Rec Limits	RPD RPD	RPD Limit	Notes
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Batch B2H0225 - MSSEMI

Blank (B2H0225-BLK1)

Prepared: 8/10/2012 Analyzed: 8/10/2012

1,4-Dioxane	ND	0.20			NR				
Surrogate: 1,2-Dichlorobenzene-d4	0.8013		1.00000		80.1	36 - 107			
Surrogate: 2-Fluorobiphenyl	0.8991		1.00000		89.9	42 - 120			
Surrogate: 4-Terphenyl-d14	1.088		1.00000		109	67 - 142			
Surrogate: Nitrobenzene-d5	0.7258		1.00000		72.6	36 - 130			

LCS (B2H0225-BS1)

Prepared: 8/10/2012 Analyzed: 8/13/2012

1,4-Dioxane	0.765890	0.20	1.00000		76.6	70 - 130			
Surrogate: 1,2-Dichlorobenzene-d4	0.8308		1.00000		83.1	36 - 107			
Surrogate: 2-Fluorobiphenyl	0.8210		1.00000		82.1	42 - 120			
Surrogate: 4-Terphenyl-d14	0.8169		1.00000		81.7	67 - 142			
Surrogate: Nitrobenzene-d5	0.6246		1.00000		62.5	36 - 130			

Matrix Spike (B2H0225-MS1)

Source: 1202779-02

Prepared: 8/10/2012 Analyzed: 8/13/2012

1,4-Dioxane	0.788860	0.20	1.00000	ND	78.9	70 - 130			
Surrogate: 1,2-Dichlorobenzene-d4	0.8280		1.00000		82.8	36 - 107			
Surrogate: 2-Fluorobiphenyl	0.8148		1.00000		81.5	42 - 120			
Surrogate: 4-Terphenyl-d14	0.7520		1.00000		75.2	67 - 142			
Surrogate: Nitrobenzene-d5	0.6067		1.00000		60.7	36 - 130			

Matrix Spike Dup (B2H0225-MSD1)

Source: 1202779-02

Prepared: 8/10/2012 Analyzed: 8/13/2012

1,4-Dioxane	0.797980	0.20	1.00000	ND	79.8	70 - 130	1.15	20	
Surrogate: 1,2-Dichlorobenzene-d4	0.8078		1.00000		80.8	36 - 107			
Surrogate: 2-Fluorobiphenyl	0.8077		1.00000		80.8	42 - 120			
Surrogate: 4-Terphenyl-d14	0.7737		1.00000		77.4	67 - 142			
Surrogate: Nitrobenzene-d5	0.5841		1.00000		58.4	36 - 130			



Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : RAYTHEON, 532.30

Report To : Steve Netto

Reported : 08/20/2012

Notes and Definitions

ND	Analyte not detected at or above reporting limit
PQL	Practical Quantitation Limit
MDL	Method Detection Limit
NR	Not Reported
RPD	Relative Percent Difference
CA1	CA-NELAP (CDPH)
CA2	CA-ELAP (CDPH)
OR1	OR-NELAP (OSPHL)
TX1	TX-NELAP (TCEQ)

CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST FORM

PROJECT NAME RAYTHEON		PROJECT No./TASK No. 532.30		SAMPLE CONTAINERS		ANALYSIS REQUESTED		ESTIMATED CONCENTRATION RANGE (ppb) FOR VOAS		SPECIAL HANDLING		LABORATORY INFORMATION													
PROJECT MANAGER STEVE NETTO		Phone No. 858-455-6500										ATL													
QA MANAGER		Fax No. 858-455-6533										Att#: Rachelle Arada													
SAMPLER (SIGNATURE) <i>[Signature]</i>		SAMPLER (PRINTED) DANIEL MORA AMANDA BEAM																							
LAB ID	SAMPLE ID	SAMPLE COLLECTION		MATRIX			PRESERVATION					STANDARD TAT	REMARKS												
		Date	Time	Soil	Ground Water	Surface Water	Lab H2O	HCl	HNO3	NaOH	H2SO4			Ice	40 ml VOA	1L Amber	VOCs 8260B	1,4-Dioxane 8270 ROD	1,4-Dioxane 8270 SIM	0-10	10-100	100-1,000	1,000-10,000	>10,000	
1202791-01	TB-080812	8/8/12	600				X					X													
2	MW-09		1740	X				X				X							X						
	↓		↓	X									X						X						
3	MW-34C		1520	X				X				X							X						
	↓		↓	X								X							X						
4	MW-34A		1603	X				X				X							X						
	↓		↓	X								X							X						
Total number of Containers per analysis:															Total No. of Containers: <u>14</u>										

Relinquished by: *[Signature]*
Date: 8/8/12
Time: 1645
Company: HHA

Received by: *[Signature]*
Date: 8/8/12
Time: 1645
Company: Advanced Tech Labs

- INSTRUCTIONS**
- Fill out form completely except for shaded areas (lab use only); sign only after verified for completeness.
 - Complete in ballpoint pen. Draw one line through errors, initial and date correction.
 - Indicate number of sample containers in analysis request space; indicate choice with \checkmark or x .
 - Note applicable preservatives, special instructions, and deviations from typical environmental samples.
 - Consult project QA documents for specific instructions.

Shipment Method: COUVEY
Send Results to: STEVE NETTO

Relinquished by: *[Signature]*
Date: 8/8/12
Time: 1732
Company: Advanced Tech Labs

Received by: Hong M.
Date: 8/8/12
Time: 1732
Company: ATL

Sample Receipt: Temp. @ receipt 7.4 °C

No. of containers correct
 custody seals secure

received good condition/cold
 conforms to COC document

- 9171 TOWNE CENTRE DRIVE, SUITE 375
SAN DIEGO, CA 92122 (858) 455-6500
 - 1640 SOUTH STAPLEY DRIVE, SUITE 124
MESA, AZ 85204 (480) 345-0888
 - 1820 EAST RIVER ROAD, SUITE 220
TUCSON, AZ 85718 (520) 881-7300
- Send invoice to San Diego, CA
Attn: Accounts Payable

August 21, 2012

Steve Netto
Hargis & Associates, Inc.
9171 Towne Centre Drive, Suite 375
San Diego, CA 92122
Tel: (619) 249-3166
Fax: (858) 455-6533



Re: ATL Work Order Number : 1202812
Client Reference : RAYTHEON, 532.30

Enclosed are the results for sample(s) received on August 09, 2012 by Advanced Technology Laboratories. The sample(s) are tested for the parameters as indicated on the enclosed chain of custody in accordance with applicable laboratory certifications. The laboratory results contained in this report specifically pertains to the sample(s) submitted.

Thank you for the opportunity to serve the needs of your company. If you have any questions, please feel free to contact me or your Project Manager.

Sincerely,

Eddie Rodriguez
Laboratory Director

The cover letter and the case narrative are an integral part of this analytical report and its absence renders the report invalid. The report cannot be reproduced without written permission from the client and Advanced Technology Laboratories.



Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : RAYTHEON, 532.30

Report To : Steve Netto

Reported : 08/21/2012

SUMMARY OF SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
TB-080912	1202812-01	Lab H2O	8/09/12 17:15	8/09/12 17:26
RB-080912	1202812-02	Lab H2O	8/09/12 17:05	8/09/12 17:26
MW-15	1202812-03	Groundwater	8/09/12 9:12	8/09/12 17:26
MW-08	1202812-04	Groundwater	8/09/12 12:28	8/09/12 17:26
MW-18	1202812-05	Groundwater	8/09/12 14:58	8/09/12 17:26
MW-32A	1202812-06	Groundwater	8/09/12 9:06	8/09/12 17:26
MW-32C	1202812-07	Groundwater	8/09/12 12:10	8/09/12 17:26
MW-32B	1202812-08	Groundwater	8/09/12 13:48	8/09/12 17:26
MW-33	1202812-09	Groundwater	8/09/12 16:51	8/09/12 17:26

CASE NARRATIVE

Sample Receiving / General Comments

Headspace >5-6mm was noted on one voa vial for sample TB-080912.

Two sets of samples for MW-32C were received. Per client, disregard the other set of sample.



Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : RAYTHEON, 532.30

Report To : Steve Netto

Reported : 08/21/2012

Client Sample ID TB-080912

Lab ID: 1202812-01

Volatile Organic Compounds by EPA 8260

Analyst: RP

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 12:23	
1,1,1-Trichloroethane	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 12:23	
1,1,2,2-Tetrachloroethane	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 12:23	
1,1,2-Trichloroethane	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 12:23	
1,1-Dichloroethane	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 12:23	
1,1-Dichloroethene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 12:23	
1,1-Dichloropropene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 12:23	
1,2,3-Trichloropropane	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 12:23	
1,2,3-Trichlorobenzene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 12:23	
1,2,4-Trichlorobenzene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 12:23	
1,2,4-Trimethylbenzene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 12:23	
1,2-Dibromo-3-chloropropane	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 12:23	
1,2-Dibromoethane	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 12:23	
1,2-Dichlorobenzene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 12:23	
1,2-Dichloroethane	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 12:23	
1,2-Dichloropropane	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 12:23	
1,3,5-Trimethylbenzene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 12:23	
1,3-Dichlorobenzene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 12:23	
1,3-Dichloropropane	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 12:23	
1,4-Dichlorobenzene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 12:23	
2,2-Dichloropropane	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 12:23	
2-Butanone	ND	10	NA	1	B2H0269	08/14/2012	08/14/12 12:23	
2-Chloroethyl vinyl ether	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 12:23	
2-Chlorotoluene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 12:23	
2-Hexanone	ND	10	NA	1	B2H0269	08/14/2012	08/14/12 12:23	
4-Chlorotoluene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 12:23	
4-Isopropyltoluene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 12:23	
4-Methyl-2-pentanone	ND	10	NA	1	B2H0269	08/14/2012	08/14/12 12:23	
Acetone	ND	10	NA	1	B2H0269	08/14/2012	08/14/12 12:23	
Acrolein	ND	10	NA	1	B2H0269	08/14/2012	08/14/12 12:23	
Acrylonitrile	ND	10	NA	1	B2H0269	08/14/2012	08/14/12 12:23	
Benzene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 12:23	
Bromobenzene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 12:23	
Bromochloromethane	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 12:23	
Bromodichloromethane	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 12:23	
Bromoform	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 12:23	
Bromomethane	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 12:23	



Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : RAYTHEON, 532.30

Report To : Steve Netto

Reported : 08/21/2012

Client Sample ID TB-080912

Lab ID: 1202812-01

Volatile Organic Compounds by EPA 8260

Analyst: RP

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Carbon disulfide	ND	1.0	NA	1	B2H0269	08/14/2012	08/14/12 12:23	
Carbon tetrachloride	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 12:23	
Chlorobenzene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 12:23	
Chloroethane	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 12:23	
Chloroform	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 12:23	
Chloromethane	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 12:23	
cis-1,2-Dichloroethene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 12:23	
cis-1,3-Dichloropropene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 12:23	
Cyclohexanone	ND	50	NA	1	B2H0269	08/14/2012	08/14/12 12:23	
Di-isopropyl ether	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 12:23	
Dibromochloromethane	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 12:23	
Dibromomethane	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 12:23	
Dichlorodifluoromethane	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 12:23	
Ethanol	ND	500	NA	1	B2H0269	08/14/2012	08/14/12 12:23	
Ethyl Acetate	ND	10	NA	1	B2H0269	08/14/2012	08/14/12 12:23	
Ethyl Ether	ND	10	NA	1	B2H0269	08/14/2012	08/14/12 12:23	
Ethyl tert-butyl ether	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 12:23	
Ethylbenzene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 12:23	
Freon-113	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 12:23	
Hexachlorobutadiene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 12:23	
Iodomethane	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 12:23	
Isopropylbenzene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 12:23	
m,p-Xylene	ND	1.0	NA	1	B2H0269	08/14/2012	08/14/12 12:23	
Methylene chloride	ND	1.0	NA	1	B2H0269	08/14/2012	08/14/12 12:23	
MTBE	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 12:23	
n-Butylbenzene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 12:23	
n-Propylbenzene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 12:23	
Naphthalene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 12:23	
o-Xylene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 12:23	
sec-Butylbenzene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 12:23	
Styrene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 12:23	
tert-Amyl methyl ether	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 12:23	
tert-Butanol	ND	10	NA	1	B2H0269	08/14/2012	08/14/12 12:23	
tert-Butylbenzene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 12:23	
Tetrachloroethene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 12:23	
Toluene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 12:23	
trans-1,2-Dichloroethene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 12:23	



Hargis & Associates, Inc.
9171 Towne Centre Drive, Suite 375
San Diego , CA 92122

Project Number : RAYTHEON, 532.30
Report To : Steve Netto
Reported : 08/21/2012

Client Sample ID TB-080912
Lab ID: 1202812-01

Volatile Organic Compounds by EPA 8260

Analyst: RP

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
trans-1,3-Dichloropropene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 12:23	
Trichloroethene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 12:23	
Trichlorofluoromethane	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 12:23	
Vinyl acetate	ND	10	NA	1	B2H0269	08/14/2012	08/14/12 12:23	
Vinyl chloride	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 12:23	
Xylenes, Total	ND	1.5	NA	1	B2H0269	08/14/2012	08/14/12 12:23	
Tentatively Identified Compound	0.0	NA	NA	1	B2H0269	08/14/2012	08/14/12 12:23	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>118 %</i>		<i>70 - 130</i>		B2H0269	08/14/2012	<i>08/14/12 12:23</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>98.0 %</i>		<i>70 - 130</i>		B2H0269	08/14/2012	<i>08/14/12 12:23</i>	
<i>Surrogate: Dibromofluoromethane</i>	<i>110 %</i>		<i>70 - 130</i>		B2H0269	08/14/2012	<i>08/14/12 12:23</i>	
<i>Surrogate: Toluene-d8</i>	<i>102 %</i>		<i>70 - 130</i>		B2H0269	08/14/2012	<i>08/14/12 12:23</i>	



Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : RAYTHEON, 532.30

Report To : Steve Netto

Reported : 08/21/2012

Client Sample ID RB-080912

Lab ID: 1202812-02

Volatile Organic Compounds by EPA 8260

Analyst: RP

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 12:43	
1,1,1-Trichloroethane	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 12:43	
1,1,2,2-Tetrachloroethane	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 12:43	
1,1,2-Trichloroethane	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 12:43	
1,1-Dichloroethane	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 12:43	
1,1-Dichloroethene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 12:43	
1,1-Dichloropropene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 12:43	
1,2,3-Trichloropropane	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 12:43	
1,2,3-Trichlorobenzene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 12:43	
1,2,4-Trichlorobenzene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 12:43	
1,2,4-Trimethylbenzene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 12:43	
1,2-Dibromo-3-chloropropane	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 12:43	
1,2-Dibromoethane	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 12:43	
1,2-Dichlorobenzene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 12:43	
1,2-Dichloroethane	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 12:43	
1,2-Dichloropropane	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 12:43	
1,3,5-Trimethylbenzene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 12:43	
1,3-Dichlorobenzene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 12:43	
1,3-Dichloropropane	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 12:43	
1,4-Dichlorobenzene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 12:43	
2,2-Dichloropropane	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 12:43	
2-Butanone	ND	10	NA	1	B2H0269	08/14/2012	08/14/12 12:43	
2-Chloroethyl vinyl ether	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 12:43	
2-Chlorotoluene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 12:43	
2-Hexanone	ND	10	NA	1	B2H0269	08/14/2012	08/14/12 12:43	
4-Chlorotoluene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 12:43	
4-Isopropyltoluene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 12:43	
4-Methyl-2-pentanone	ND	10	NA	1	B2H0269	08/14/2012	08/14/12 12:43	
Acetone	ND	10	NA	1	B2H0269	08/14/2012	08/14/12 12:43	
Acrolein	ND	10	NA	1	B2H0269	08/14/2012	08/14/12 12:43	
Acrylonitrile	ND	10	NA	1	B2H0269	08/14/2012	08/14/12 12:43	
Benzene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 12:43	
Bromobenzene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 12:43	
Bromochloromethane	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 12:43	
Bromodichloromethane	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 12:43	
Bromoform	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 12:43	
Bromomethane	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 12:43	



Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : RAYTHEON, 532.30

Report To : Steve Netto

Reported : 08/21/2012

Client Sample ID RB-080912

Lab ID: 1202812-02

Volatile Organic Compounds by EPA 8260

Analyst: RP

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Carbon disulfide	ND	1.0	NA	1	B2H0269	08/14/2012	08/14/12 12:43	
Carbon tetrachloride	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 12:43	
Chlorobenzene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 12:43	
Chloroethane	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 12:43	
Chloroform	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 12:43	
Chloromethane	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 12:43	
cis-1,2-Dichloroethene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 12:43	
cis-1,3-Dichloropropene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 12:43	
Cyclohexanone	ND	50	NA	1	B2H0269	08/14/2012	08/14/12 12:43	
Di-isopropyl ether	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 12:43	
Dibromochloromethane	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 12:43	
Dibromomethane	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 12:43	
Dichlorodifluoromethane	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 12:43	
Ethanol	ND	500	NA	1	B2H0269	08/14/2012	08/14/12 12:43	
Ethyl Acetate	ND	10	NA	1	B2H0269	08/14/2012	08/14/12 12:43	
Ethyl Ether	ND	10	NA	1	B2H0269	08/14/2012	08/14/12 12:43	
Ethyl tert-butyl ether	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 12:43	
Ethylbenzene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 12:43	
Freon-113	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 12:43	
Hexachlorobutadiene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 12:43	
Iodomethane	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 12:43	
Isopropylbenzene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 12:43	
m,p-Xylene	ND	1.0	NA	1	B2H0269	08/14/2012	08/14/12 12:43	
Methylene chloride	ND	1.0	NA	1	B2H0269	08/14/2012	08/14/12 12:43	
MTBE	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 12:43	
n-Butylbenzene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 12:43	
n-Propylbenzene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 12:43	
Naphthalene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 12:43	
o-Xylene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 12:43	
sec-Butylbenzene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 12:43	
Styrene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 12:43	
tert-Amyl methyl ether	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 12:43	
tert-Butanol	ND	10	NA	1	B2H0269	08/14/2012	08/14/12 12:43	
tert-Butylbenzene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 12:43	
Tetrachloroethene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 12:43	
Toluene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 12:43	
trans-1,2-Dichloroethene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 12:43	



Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : RAYTHEON, 532.30

Report To : Steve Netto

Reported : 08/21/2012

Client Sample ID RB-080912

Lab ID: 1202812-02

Volatile Organic Compounds by EPA 8260

Analyst: RP

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
trans-1,3-Dichloropropene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 12:43	
Trichloroethene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 12:43	
Trichlorofluoromethane	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 12:43	
Vinyl acetate	ND	10	NA	1	B2H0269	08/14/2012	08/14/12 12:43	
Vinyl chloride	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 12:43	
Xylenes, Total	ND	1.5	NA	1	B2H0269	08/14/2012	08/14/12 12:43	
Tentatively Identified Compound	0.0	NA	NA	1	B2H0269	08/14/2012	08/14/12 12:43	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>119 %</i>		<i>70 - 130</i>		B2H0269	08/14/2012	<i>08/14/12 12:43</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>98.2 %</i>		<i>70 - 130</i>		B2H0269	08/14/2012	<i>08/14/12 12:43</i>	
<i>Surrogate: Dibromofluoromethane</i>	<i>111 %</i>		<i>70 - 130</i>		B2H0269	08/14/2012	<i>08/14/12 12:43</i>	
<i>Surrogate: Toluene-d8</i>	<i>102 %</i>		<i>70 - 130</i>		B2H0269	08/14/2012	<i>08/14/12 12:43</i>	

1,4-Dioxane by EPA 8270/SIM: Isotope Dilution Technique

Analyst: BB

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,4-Dioxane	ND	0.20	NA	1	B2H0298	08/14/2012	08/15/12 09:58	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	<i>81.7 %</i>		<i>36 - 107</i>		B2H0298	08/14/2012	<i>08/15/12 09:58</i>	
<i>Surrogate: 2-Fluorobiphenyl</i>	<i>93.4 %</i>		<i>42 - 120</i>		B2H0298	08/14/2012	<i>08/15/12 09:58</i>	
<i>Surrogate: 4-Terphenyl-d14</i>	<i>110 %</i>		<i>67 - 142</i>		B2H0298	08/14/2012	<i>08/15/12 09:58</i>	
<i>Surrogate: Nitrobenzene-d5</i>	<i>61.0 %</i>		<i>36 - 130</i>		B2H0298	08/14/2012	<i>08/15/12 09:58</i>	



Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : RAYTHEON, 532.30

Report To : Steve Netto

Reported : 08/21/2012

Client Sample ID MW-15

Lab ID: 1202812-03

Volatile Organic Compounds by EPA 8260

Analyst: RP

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 16:18	
1,1,1-Trichloroethane	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 16:18	
1,1,2,2-Tetrachloroethane	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 16:18	
1,1,2-Trichloroethane	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 16:18	
1,1-Dichloroethane	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 16:18	
1,1-Dichloroethene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 16:18	
1,1-Dichloropropene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 16:18	
1,2,3-Trichloropropane	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 16:18	
1,2,3-Trichlorobenzene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 16:18	
1,2,4-Trichlorobenzene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 16:18	
1,2,4-Trimethylbenzene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 16:18	
1,2-Dibromo-3-chloropropane	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 16:18	
1,2-Dibromoethane	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 16:18	
1,2-Dichlorobenzene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 16:18	
1,2-Dichloroethane	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 16:18	
1,2-Dichloropropane	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 16:18	
1,3,5-Trimethylbenzene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 16:18	
1,3-Dichlorobenzene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 16:18	
1,3-Dichloropropane	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 16:18	
1,4-Dichlorobenzene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 16:18	
2,2-Dichloropropane	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 16:18	
2-Butanone	ND	10	NA	1	B2H0269	08/14/2012	08/14/12 16:18	
2-Chloroethyl vinyl ether	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 16:18	
2-Chlorotoluene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 16:18	
2-Hexanone	ND	10	NA	1	B2H0269	08/14/2012	08/14/12 16:18	
4-Chlorotoluene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 16:18	
4-Isopropyltoluene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 16:18	
4-Methyl-2-pentanone	ND	10	NA	1	B2H0269	08/14/2012	08/14/12 16:18	
Acetone	ND	10	NA	1	B2H0269	08/14/2012	08/14/12 16:18	
Acrolein	ND	10	NA	1	B2H0269	08/14/2012	08/14/12 16:18	
Acrylonitrile	ND	10	NA	1	B2H0269	08/14/2012	08/14/12 16:18	
Benzene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 16:18	
Bromobenzene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 16:18	
Bromochloromethane	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 16:18	
Bromodichloromethane	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 16:18	
Bromoform	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 16:18	
Bromomethane	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 16:18	



Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : RAYTHEON, 532.30

Report To : Steve Netto

Reported : 08/21/2012

Client Sample ID MW-15

Lab ID: 1202812-03

Volatile Organic Compounds by EPA 8260

Analyst: RP

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Carbon disulfide	ND	1.0	NA	1	B2H0269	08/14/2012	08/14/12 16:18	
Carbon tetrachloride	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 16:18	
Chlorobenzene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 16:18	
Chloroethane	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 16:18	
Chloroform	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 16:18	
Chloromethane	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 16:18	
cis-1,2-Dichloroethene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 16:18	
cis-1,3-Dichloropropene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 16:18	
Cyclohexanone	ND	50	NA	1	B2H0269	08/14/2012	08/14/12 16:18	
Di-isopropyl ether	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 16:18	
Dibromochloromethane	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 16:18	
Dibromomethane	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 16:18	
Dichlorodifluoromethane	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 16:18	
Ethanol	ND	500	NA	1	B2H0269	08/14/2012	08/14/12 16:18	
Ethyl Acetate	ND	10	NA	1	B2H0269	08/14/2012	08/14/12 16:18	
Ethyl Ether	ND	10	NA	1	B2H0269	08/14/2012	08/14/12 16:18	
Ethyl tert-butyl ether	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 16:18	
Ethylbenzene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 16:18	
Freon-113	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 16:18	
Hexachlorobutadiene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 16:18	
Iodomethane	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 16:18	
Isopropylbenzene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 16:18	
m,p-Xylene	ND	1.0	NA	1	B2H0269	08/14/2012	08/14/12 16:18	
Methylene chloride	ND	1.0	NA	1	B2H0269	08/14/2012	08/14/12 16:18	
MTBE	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 16:18	
n-Butylbenzene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 16:18	
n-Propylbenzene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 16:18	
Naphthalene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 16:18	
o-Xylene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 16:18	
sec-Butylbenzene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 16:18	
Styrene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 16:18	
tert-Amyl methyl ether	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 16:18	
tert-Butanol	ND	10	NA	1	B2H0269	08/14/2012	08/14/12 16:18	
tert-Butylbenzene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 16:18	
Tetrachloroethene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 16:18	
Toluene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 16:18	
trans-1,2-Dichloroethene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 16:18	



Hargis & Associates, Inc.
9171 Towne Centre Drive, Suite 375
San Diego, CA 92122

Project Number : RAYTHEON, 532.30
Report To : Steve Netto
Reported : 08/21/2012

Client Sample ID MW-15
Lab ID: 1202812-03

Volatile Organic Compounds by EPA 8260

Analyst: RP

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
trans-1,3-Dichloropropene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 16:18	
Trichloroethene	4.1	0.50	NA	1	B2H0269	08/14/2012	08/14/12 16:18	
Trichlorofluoromethane	14	0.50	NA	1	B2H0269	08/14/2012	08/14/12 16:18	
Vinyl acetate	ND	10	NA	1	B2H0269	08/14/2012	08/14/12 16:18	
Vinyl chloride	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 16:18	
Xylenes, Total	ND	1.5	NA	1	B2H0269	08/14/2012	08/14/12 16:18	
Tentatively Identified Compound	0.0	NA	NA	1	B2H0269	08/14/2012	08/14/12 16:18	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>115 %</i>		<i>70 - 130</i>		B2H0269	08/14/2012	<i>08/14/12 16:18</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>96.9 %</i>		<i>70 - 130</i>		B2H0269	08/14/2012	<i>08/14/12 16:18</i>	
<i>Surrogate: Dibromofluoromethane</i>	<i>109 %</i>		<i>70 - 130</i>		B2H0269	08/14/2012	<i>08/14/12 16:18</i>	
<i>Surrogate: Toluene-d8</i>	<i>101 %</i>		<i>70 - 130</i>		B2H0269	08/14/2012	<i>08/14/12 16:18</i>	



Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : RAYTHEON, 532.30

Report To : Steve Netto

Reported : 08/21/2012

Client Sample ID MW-08

Lab ID: 1202812-04

Volatile Organic Compounds by EPA 8260

Analyst: RP

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 14:41	
1,1,1-Trichloroethane	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 14:41	
1,1,2,2-Tetrachloroethane	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 14:41	
1,1,2-Trichloroethane	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 14:41	
1,1-Dichloroethane	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 14:41	
1,1-Dichloroethene	52	0.50	NA	1	B2H0309	08/15/2012	08/15/12 14:41	
1,1-Dichloropropene	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 14:41	
1,2,3-Trichloropropane	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 14:41	
1,2,3-Trichlorobenzene	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 14:41	
1,2,4-Trichlorobenzene	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 14:41	
1,2,4-Trimethylbenzene	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 14:41	
1,2-Dibromo-3-chloropropane	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 14:41	
1,2-Dibromoethane	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 14:41	
1,2-Dichlorobenzene	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 14:41	
1,2-Dichloroethane	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 14:41	
1,2-Dichloropropane	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 14:41	
1,3,5-Trimethylbenzene	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 14:41	
1,3-Dichlorobenzene	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 14:41	
1,3-Dichloropropane	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 14:41	
1,4-Dichlorobenzene	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 14:41	
2,2-Dichloropropane	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 14:41	
2-Chlorotoluene	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 14:41	
4-Chlorotoluene	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 14:41	
4-Isopropyltoluene	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 14:41	
Benzene	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 14:41	
Bromobenzene	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 14:41	
Bromodichloromethane	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 14:41	
Bromoform	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 14:41	
Bromomethane	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 14:41	
Carbon tetrachloride	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 14:41	
Chlorobenzene	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 14:41	
Chloroethane	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 14:41	
Chloroform	0.67	0.50	NA	1	B2H0309	08/15/2012	08/15/12 14:41	
Chloromethane	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 14:41	
cis-1,2-Dichloroethene	6.0	0.50	NA	1	B2H0309	08/15/2012	08/15/12 14:41	
cis-1,3-Dichloropropane	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 14:41	
Dibromochloromethane	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 14:41	



Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego, CA 92122

Project Number : RAYTHEON, 532.30

Report To : Steve Netto

Reported : 08/21/2012

Client Sample ID MW-08

Lab ID: 1202812-04

Volatile Organic Compounds by EPA 8260

Analyst: RP

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Dibromomethane	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 14:41	
Dichlorodifluoromethane	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 14:41	
Ethylbenzene	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 14:41	
Hexachlorobutadiene	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 14:41	
Isopropylbenzene	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 14:41	
m,p-Xylene	ND	1.0	NA	1	B2H0309	08/15/2012	08/15/12 14:41	
Methylene chloride	ND	1.0	NA	1	B2H0309	08/15/2012	08/15/12 14:41	
n-Butylbenzene	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 14:41	
n-Propylbenzene	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 14:41	
Naphthalene	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 14:41	
o-Xylene	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 14:41	
sec-Butylbenzene	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 14:41	
Styrene	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 14:41	
tert-Butylbenzene	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 14:41	
Tetrachloroethene	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 14:41	
Toluene	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 14:41	
trans-1,2-Dichloroethene	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 14:41	
Trichloroethene	120	5.0	NA	10	B2H0269	08/14/2012	08/14/12 20:02	
Trichlorofluoromethane	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 14:41	
Vinyl chloride	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 14:41	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>121 %</i>		<i>70 - 130</i>		<i>B2H0269</i>	<i>08/14/2012</i>	<i>08/14/12 20:02</i>	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>116 %</i>		<i>70 - 130</i>		<i>B2H0309</i>	<i>08/15/2012</i>	<i>08/15/12 14:41</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>98.2 %</i>		<i>70 - 130</i>		<i>B2H0269</i>	<i>08/14/2012</i>	<i>08/14/12 20:02</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>98.8 %</i>		<i>70 - 130</i>		<i>B2H0309</i>	<i>08/15/2012</i>	<i>08/15/12 14:41</i>	
<i>Surrogate: Dibromofluoromethane</i>	<i>109 %</i>		<i>70 - 130</i>		<i>B2H0309</i>	<i>08/15/2012</i>	<i>08/15/12 14:41</i>	
<i>Surrogate: Dibromofluoromethane</i>	<i>112 %</i>		<i>70 - 130</i>		<i>B2H0269</i>	<i>08/14/2012</i>	<i>08/14/12 20:02</i>	
<i>Surrogate: Toluene-d8</i>	<i>98.6 %</i>		<i>70 - 130</i>		<i>B2H0309</i>	<i>08/15/2012</i>	<i>08/15/12 14:41</i>	
<i>Surrogate: Toluene-d8</i>	<i>101 %</i>		<i>70 - 130</i>		<i>B2H0269</i>	<i>08/14/2012</i>	<i>08/14/12 20:02</i>	



Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego, CA 92122

Project Number : RAYTHEON, 532.30

Report To : Steve Netto

Reported : 08/21/2012

Client Sample ID MW-08

Lab ID: 1202812-04

1,4-Dioxane by EPA 8270/SIM: Isotope Dilution Technique

Analyst: BB

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,4-Dioxane	0.38	0.20	NA	1	B2H0298	08/14/2012	08/15/12 10:27	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	<i>74.1 %</i>		<i>36 - 107</i>		B2H0298	08/14/2012	<i>08/15/12 10:27</i>	
<i>Surrogate: 2-Fluorobiphenyl</i>	<i>95.4 %</i>		<i>42 - 120</i>		B2H0298	08/14/2012	<i>08/15/12 10:27</i>	
<i>Surrogate: 4-Terphenyl-d14</i>	<i>98.2 %</i>		<i>67 - 142</i>		B2H0298	08/14/2012	<i>08/15/12 10:27</i>	
<i>Surrogate: Nitrobenzene-d5</i>	<i>55.2 %</i>		<i>36 - 130</i>		B2H0298	08/14/2012	<i>08/15/12 10:27</i>	



Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : RAYTHEON, 532.30

Report To : Steve Netto

Reported : 08/21/2012

Client Sample ID MW-18

Lab ID: 1202812-05

Volatile Organic Compounds by EPA 8260

Analyst: RP

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 16:38	
1,1,1-Trichloroethane	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 16:38	
1,1,2,2-Tetrachloroethane	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 16:38	
1,1,2-Trichloroethane	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 16:38	
1,1-Dichloroethane	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 16:38	
1,1-Dichloroethene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 16:38	
1,1-Dichloropropene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 16:38	
1,2,3-Trichloropropane	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 16:38	
1,2,3-Trichlorobenzene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 16:38	
1,2,4-Trichlorobenzene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 16:38	
1,2,4-Trimethylbenzene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 16:38	
1,2-Dibromo-3-chloropropane	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 16:38	
1,2-Dibromoethane	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 16:38	
1,2-Dichlorobenzene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 16:38	
1,2-Dichloroethane	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 16:38	
1,2-Dichloropropane	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 16:38	
1,3,5-Trimethylbenzene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 16:38	
1,3-Dichlorobenzene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 16:38	
1,3-Dichloropropane	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 16:38	
1,4-Dichlorobenzene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 16:38	
2,2-Dichloropropane	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 16:38	
2-Butanone	ND	10	NA	1	B2H0269	08/14/2012	08/14/12 16:38	
2-Chloroethyl vinyl ether	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 16:38	
2-Chlorotoluene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 16:38	
2-Hexanone	ND	10	NA	1	B2H0269	08/14/2012	08/14/12 16:38	
4-Chlorotoluene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 16:38	
4-Isopropyltoluene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 16:38	
4-Methyl-2-pentanone	ND	10	NA	1	B2H0269	08/14/2012	08/14/12 16:38	
Acetone	ND	10	NA	1	B2H0269	08/14/2012	08/14/12 16:38	
Acrolein	ND	10	NA	1	B2H0269	08/14/2012	08/14/12 16:38	
Acrylonitrile	ND	10	NA	1	B2H0269	08/14/2012	08/14/12 16:38	
Benzene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 16:38	
Bromobenzene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 16:38	
Bromochloromethane	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 16:38	
Bromodichloromethane	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 16:38	
Bromoform	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 16:38	
Bromomethane	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 16:38	



Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : RAYTHEON, 532.30

Report To : Steve Netto

Reported : 08/21/2012

Client Sample ID MW-18

Lab ID: 1202812-05

Volatile Organic Compounds by EPA 8260

Analyst: RP

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Carbon disulfide	ND	1.0	NA	1	B2H0269	08/14/2012	08/14/12 16:38	
Carbon tetrachloride	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 16:38	
Chlorobenzene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 16:38	
Chloroethane	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 16:38	
Chloroform	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 16:38	
Chloromethane	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 16:38	
cis-1,2-Dichloroethene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 16:38	
cis-1,3-Dichloropropene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 16:38	
Cyclohexanone	ND	50	NA	1	B2H0269	08/14/2012	08/14/12 16:38	
Di-isopropyl ether	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 16:38	
Dibromochloromethane	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 16:38	
Dibromomethane	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 16:38	
Dichlorodifluoromethane	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 16:38	
Ethanol	ND	500	NA	1	B2H0269	08/14/2012	08/14/12 16:38	
Ethyl Acetate	ND	10	NA	1	B2H0269	08/14/2012	08/14/12 16:38	
Ethyl Ether	ND	10	NA	1	B2H0269	08/14/2012	08/14/12 16:38	
Ethyl tert-butyl ether	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 16:38	
Ethylbenzene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 16:38	
Freon-113	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 16:38	
Hexachlorobutadiene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 16:38	
Iodomethane	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 16:38	
Isopropylbenzene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 16:38	
m,p-Xylene	ND	1.0	NA	1	B2H0269	08/14/2012	08/14/12 16:38	
Methylene chloride	ND	1.0	NA	1	B2H0269	08/14/2012	08/14/12 16:38	
MTBE	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 16:38	
n-Butylbenzene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 16:38	
n-Propylbenzene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 16:38	
Naphthalene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 16:38	
o-Xylene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 16:38	
sec-Butylbenzene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 16:38	
Styrene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 16:38	
tert-Amyl methyl ether	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 16:38	
tert-Butanol	ND	10	NA	1	B2H0269	08/14/2012	08/14/12 16:38	
tert-Butylbenzene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 16:38	
Tetrachloroethene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 16:38	
Toluene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 16:38	
trans-1,2-Dichloroethene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 16:38	



Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego, CA 92122

Project Number : RAYTHEON, 532.30

Report To : Steve Netto

Reported : 08/21/2012

Client Sample ID MW-18

Lab ID: 1202812-05

Volatile Organic Compounds by EPA 8260

Analyst: RP

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
trans-1,3-Dichloropropene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 16:38	
Trichloroethene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 16:38	
Trichlorofluoromethane	2.5	0.50	NA	1	B2H0269	08/14/2012	08/14/12 16:38	
Vinyl acetate	ND	10	NA	1	B2H0269	08/14/2012	08/14/12 16:38	
Vinyl chloride	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 16:38	
Xylenes, Total	ND	1.5	NA	1	B2H0269	08/14/2012	08/14/12 16:38	
Tentatively Identified Compound	0.0	NA	NA	1	B2H0269	08/14/2012	08/14/12 16:38	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>117 %</i>		<i>70 - 130</i>		B2H0269	08/14/2012	<i>08/14/12 16:38</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>97.6 %</i>		<i>70 - 130</i>		B2H0269	08/14/2012	<i>08/14/12 16:38</i>	
<i>Surrogate: Dibromofluoromethane</i>	<i>110 %</i>		<i>70 - 130</i>		B2H0269	08/14/2012	<i>08/14/12 16:38</i>	
<i>Surrogate: Toluene-d8</i>	<i>102 %</i>		<i>70 - 130</i>		B2H0269	08/14/2012	<i>08/14/12 16:38</i>	

1,4-Dioxane by EPA 8270/SIM: Isotope Dilution Technique

Analyst: BB

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,4-Dioxane	ND	0.20	NA	1	B2H0298	08/14/2012	08/15/12 10:55	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	<i>87.7 %</i>		<i>36 - 107</i>		B2H0298	08/14/2012	<i>08/15/12 10:55</i>	
<i>Surrogate: 2-Fluorobiphenyl</i>	<i>99.3 %</i>		<i>42 - 120</i>		B2H0298	08/14/2012	<i>08/15/12 10:55</i>	
<i>Surrogate: 4-Terphenyl-d14</i>	<i>109 %</i>		<i>67 - 142</i>		B2H0298	08/14/2012	<i>08/15/12 10:55</i>	
<i>Surrogate: Nitrobenzene-d5</i>	<i>66.8 %</i>		<i>36 - 130</i>		B2H0298	08/14/2012	<i>08/15/12 10:55</i>	



Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : RAYTHEON, 532.30

Report To : Steve Netto

Reported : 08/21/2012

Client Sample ID MW-32A

Lab ID: 1202812-06

Volatile Organic Compounds by EPA 8260

Analyst: RP

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	0.50	NA	1	B2H0248	08/13/2012	08/13/12 13:21	
1,1,1-Trichloroethane	ND	0.50	NA	1	B2H0248	08/13/2012	08/13/12 13:21	
1,1,2,2-Tetrachloroethane	ND	0.50	NA	1	B2H0248	08/13/2012	08/13/12 13:21	
1,1,2-Trichloroethane	ND	0.50	NA	1	B2H0248	08/13/2012	08/13/12 13:21	
1,1-Dichloroethane	ND	0.50	NA	1	B2H0248	08/13/2012	08/13/12 13:21	
1,1-Dichloroethene	ND	0.50	NA	1	B2H0248	08/13/2012	08/13/12 13:21	
1,1-Dichloropropene	ND	0.50	NA	1	B2H0248	08/13/2012	08/13/12 13:21	
1,2,3-Trichloropropane	ND	0.50	NA	1	B2H0248	08/13/2012	08/13/12 13:21	
1,2,3-Trichlorobenzene	ND	0.50	NA	1	B2H0248	08/13/2012	08/13/12 13:21	
1,2,4-Trichlorobenzene	ND	0.50	NA	1	B2H0248	08/13/2012	08/13/12 13:21	
1,2,4-Trimethylbenzene	ND	0.50	NA	1	B2H0248	08/13/2012	08/13/12 13:21	
1,2-Dibromo-3-chloropropane	ND	0.50	NA	1	B2H0248	08/13/2012	08/13/12 13:21	
1,2-Dibromoethane	ND	0.50	NA	1	B2H0248	08/13/2012	08/13/12 13:21	
1,2-Dichlorobenzene	ND	0.50	NA	1	B2H0248	08/13/2012	08/13/12 13:21	
1,2-Dichloroethane	ND	0.50	NA	1	B2H0248	08/13/2012	08/13/12 13:21	
1,2-Dichloropropane	ND	0.50	NA	1	B2H0248	08/13/2012	08/13/12 13:21	
1,3,5-Trimethylbenzene	ND	0.50	NA	1	B2H0248	08/13/2012	08/13/12 13:21	
1,3-Dichlorobenzene	ND	0.50	NA	1	B2H0248	08/13/2012	08/13/12 13:21	
1,3-Dichloropropane	ND	0.50	NA	1	B2H0248	08/13/2012	08/13/12 13:21	
1,4-Dichlorobenzene	ND	0.50	NA	1	B2H0248	08/13/2012	08/13/12 13:21	
2,2-Dichloropropane	ND	0.50	NA	1	B2H0248	08/13/2012	08/13/12 13:21	
2-Butanone	ND	10	NA	1	B2H0248	08/13/2012	08/13/12 13:21	
2-Chloroethyl vinyl ether	ND	0.50	NA	1	B2H0248	08/13/2012	08/13/12 13:21	
2-Chlorotoluene	ND	0.50	NA	1	B2H0248	08/13/2012	08/13/12 13:21	
2-Hexanone	ND	10	NA	1	B2H0248	08/13/2012	08/13/12 13:21	
4-Chlorotoluene	ND	0.50	NA	1	B2H0248	08/13/2012	08/13/12 13:21	
4-Isopropyltoluene	ND	0.50	NA	1	B2H0248	08/13/2012	08/13/12 13:21	
4-Methyl-2-pentanone	ND	10	NA	1	B2H0248	08/13/2012	08/13/12 13:21	
Acetone	ND	10	NA	1	B2H0248	08/13/2012	08/13/12 13:21	
Acrolein	ND	10	NA	1	B2H0248	08/13/2012	08/13/12 13:21	
Acrylonitrile	ND	10	NA	1	B2H0248	08/13/2012	08/13/12 13:21	
Benzene	ND	0.50	NA	1	B2H0248	08/13/2012	08/13/12 13:21	
Bromobenzene	ND	0.50	NA	1	B2H0248	08/13/2012	08/13/12 13:21	
Bromochloromethane	ND	0.50	NA	1	B2H0248	08/13/2012	08/13/12 13:21	
Bromodichloromethane	ND	0.50	NA	1	B2H0248	08/13/2012	08/13/12 13:21	
Bromoform	ND	0.50	NA	1	B2H0248	08/13/2012	08/13/12 13:21	
Bromomethane	ND	0.50	NA	1	B2H0248	08/13/2012	08/13/12 13:21	



Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : RAYTHEON, 532.30

Report To : Steve Netto

Reported : 08/21/2012

Client Sample ID MW-32A

Lab ID: 1202812-06

Volatile Organic Compounds by EPA 8260

Analyst: RP

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Carbon disulfide	ND	1.0	NA	1	B2H0248	08/13/2012	08/13/12 13:21	
Carbon tetrachloride	ND	0.50	NA	1	B2H0248	08/13/2012	08/13/12 13:21	
Chlorobenzene	ND	0.50	NA	1	B2H0248	08/13/2012	08/13/12 13:21	
Chloroethane	ND	0.50	NA	1	B2H0248	08/13/2012	08/13/12 13:21	
Chloroform	ND	0.50	NA	1	B2H0248	08/13/2012	08/13/12 13:21	
Chloromethane	ND	0.50	NA	1	B2H0248	08/13/2012	08/13/12 13:21	
cis-1,2-Dichloroethene	ND	0.50	NA	1	B2H0248	08/13/2012	08/13/12 13:21	
cis-1,3-Dichloropropene	ND	0.50	NA	1	B2H0248	08/13/2012	08/13/12 13:21	
Cyclohexanone	ND	50	NA	1	B2H0248	08/13/2012	08/13/12 13:21	
Di-isopropyl ether	ND	0.50	NA	1	B2H0248	08/13/2012	08/13/12 13:21	
Dibromochloromethane	ND	0.50	NA	1	B2H0248	08/13/2012	08/13/12 13:21	
Dibromomethane	ND	0.50	NA	1	B2H0248	08/13/2012	08/13/12 13:21	
Dichlorodifluoromethane	ND	0.50	NA	1	B2H0248	08/13/2012	08/13/12 13:21	
Ethanol	ND	500	NA	1	B2H0248	08/13/2012	08/13/12 13:21	
Ethyl Acetate	ND	10	NA	1	B2H0248	08/13/2012	08/13/12 13:21	
Ethyl Ether	ND	10	NA	1	B2H0248	08/13/2012	08/13/12 13:21	
Ethyl tert-butyl ether	ND	0.50	NA	1	B2H0248	08/13/2012	08/13/12 13:21	
Ethylbenzene	ND	0.50	NA	1	B2H0248	08/13/2012	08/13/12 13:21	
Freon-113	ND	0.50	NA	1	B2H0248	08/13/2012	08/13/12 13:21	
Hexachlorobutadiene	ND	0.50	NA	1	B2H0248	08/13/2012	08/13/12 13:21	
Iodomethane	ND	0.50	NA	1	B2H0248	08/13/2012	08/13/12 13:21	
Isopropylbenzene	ND	0.50	NA	1	B2H0248	08/13/2012	08/13/12 13:21	
m,p-Xylene	ND	1.0	NA	1	B2H0248	08/13/2012	08/13/12 13:21	
Methylene chloride	ND	1.0	NA	1	B2H0248	08/13/2012	08/13/12 13:21	
MTBE	ND	0.50	NA	1	B2H0248	08/13/2012	08/13/12 13:21	
n-Butylbenzene	ND	0.50	NA	1	B2H0248	08/13/2012	08/13/12 13:21	
n-Propylbenzene	ND	0.50	NA	1	B2H0248	08/13/2012	08/13/12 13:21	
Naphthalene	ND	0.50	NA	1	B2H0248	08/13/2012	08/13/12 13:21	
o-Xylene	ND	0.50	NA	1	B2H0248	08/13/2012	08/13/12 13:21	
sec-Butylbenzene	ND	0.50	NA	1	B2H0248	08/13/2012	08/13/12 13:21	
Styrene	ND	0.50	NA	1	B2H0248	08/13/2012	08/13/12 13:21	
tert-Amyl methyl ether	ND	0.50	NA	1	B2H0248	08/13/2012	08/13/12 13:21	
tert-Butanol	ND	10	NA	1	B2H0248	08/13/2012	08/13/12 13:21	
tert-Butylbenzene	ND	0.50	NA	1	B2H0248	08/13/2012	08/13/12 13:21	
Tetrachloroethene	ND	0.50	NA	1	B2H0248	08/13/2012	08/13/12 13:21	
Toluene	ND	0.50	NA	1	B2H0248	08/13/2012	08/13/12 13:21	
trans-1,2-Dichloroethene	ND	0.50	NA	1	B2H0248	08/13/2012	08/13/12 13:21	



Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : RAYTHEON, 532.30

Report To : Steve Netto

Reported : 08/21/2012

Client Sample ID MW-32A

Lab ID: 1202812-06

Volatile Organic Compounds by EPA 8260

Analyst: RP

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
trans-1,3-Dichloropropene	ND	0.50	NA	1	B2H0248	08/13/2012	08/13/12 13:21	
Trichloroethene	ND	0.50	NA	1	B2H0248	08/13/2012	08/13/12 13:21	
Trichlorofluoromethane	ND	0.50	NA	1	B2H0248	08/13/2012	08/13/12 13:21	
Vinyl acetate	ND	10	NA	1	B2H0248	08/13/2012	08/13/12 13:21	
Vinyl chloride	ND	0.50	NA	1	B2H0248	08/13/2012	08/13/12 13:21	
Xylenes, Total	ND	1.5	NA	1	B2H0248	08/13/2012	08/13/12 13:21	
Tentatively Identified Compound	0.0	NA	NA	1	B2H0248	08/13/2012	08/13/12 13:21	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>112 %</i>		<i>70 - 130</i>		B2H0248	08/13/2012	<i>08/13/12 13:21</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>98.2 %</i>		<i>70 - 130</i>		B2H0248	08/13/2012	<i>08/13/12 13:21</i>	
<i>Surrogate: Dibromofluoromethane</i>	<i>106 %</i>		<i>70 - 130</i>		B2H0248	08/13/2012	<i>08/13/12 13:21</i>	
<i>Surrogate: Toluene-d8</i>	<i>102 %</i>		<i>70 - 130</i>		B2H0248	08/13/2012	<i>08/13/12 13:21</i>	

1,4-Dioxane by EPA 8270/SIM: Isotope Dilution Technique

Analyst: BB

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,4-Dioxane	ND	0.20	NA	1	B2H0298	08/14/2012	08/15/12 11:24	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	<i>85.2 %</i>		<i>36 - 107</i>		B2H0298	08/14/2012	<i>08/15/12 11:24</i>	
<i>Surrogate: 2-Fluorobiphenyl</i>	<i>94.6 %</i>		<i>42 - 120</i>		B2H0298	08/14/2012	<i>08/15/12 11:24</i>	
<i>Surrogate: 4-Terphenyl-d14</i>	<i>101 %</i>		<i>67 - 142</i>		B2H0298	08/14/2012	<i>08/15/12 11:24</i>	
<i>Surrogate: Nitrobenzene-d5</i>	<i>63.6 %</i>		<i>36 - 130</i>		B2H0298	08/14/2012	<i>08/15/12 11:24</i>	



Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : RAYTHEON, 532.30

Report To : Steve Netto

Reported : 08/21/2012

Client Sample ID MW-32C

Lab ID: 1202812-07

Volatile Organic Compounds by EPA 8260

Analyst: RP

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 17:19	
1,1,1-Trichloroethane	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 17:19	
1,1,2,2-Tetrachloroethane	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 17:19	
1,1,2-Trichloroethane	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 17:19	
1,1-Dichloroethane	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 17:19	
1,1-Dichloroethene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 17:19	
1,1-Dichloropropene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 17:19	
1,2,3-Trichloropropane	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 17:19	
1,2,3-Trichlorobenzene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 17:19	
1,2,4-Trichlorobenzene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 17:19	
1,2,4-Trimethylbenzene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 17:19	
1,2-Dibromo-3-chloropropane	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 17:19	
1,2-Dibromoethane	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 17:19	
1,2-Dichlorobenzene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 17:19	
1,2-Dichloroethane	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 17:19	
1,2-Dichloropropane	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 17:19	
1,3,5-Trimethylbenzene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 17:19	
1,3-Dichlorobenzene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 17:19	
1,3-Dichloropropane	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 17:19	
1,4-Dichlorobenzene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 17:19	
2,2-Dichloropropane	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 17:19	
2-Butanone	ND	10	NA	1	B2H0269	08/14/2012	08/14/12 17:19	
2-Chloroethyl vinyl ether	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 17:19	
2-Chlorotoluene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 17:19	
2-Hexanone	ND	10	NA	1	B2H0269	08/14/2012	08/14/12 17:19	
4-Chlorotoluene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 17:19	
4-Isopropyltoluene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 17:19	
4-Methyl-2-pentanone	ND	10	NA	1	B2H0269	08/14/2012	08/14/12 17:19	
Acetone	ND	10	NA	1	B2H0269	08/14/2012	08/14/12 17:19	
Acrolein	ND	10	NA	1	B2H0269	08/14/2012	08/14/12 17:19	
Acrylonitrile	ND	10	NA	1	B2H0269	08/14/2012	08/14/12 17:19	
Benzene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 17:19	
Bromobenzene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 17:19	
Bromochloromethane	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 17:19	
Bromodichloromethane	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 17:19	
Bromoform	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 17:19	
Bromomethane	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 17:19	



Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : RAYTHEON, 532.30

Report To : Steve Netto

Reported : 08/21/2012

Client Sample ID MW-32C

Lab ID: 1202812-07

Volatile Organic Compounds by EPA 8260

Analyst: RP

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Carbon disulfide	ND	1.0	NA	1	B2H0269	08/14/2012	08/14/12 17:19	
Carbon tetrachloride	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 17:19	
Chlorobenzene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 17:19	
Chloroethane	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 17:19	
Chloroform	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 17:19	
Chloromethane	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 17:19	
cis-1,2-Dichloroethene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 17:19	
cis-1,3-Dichloropropene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 17:19	
Cyclohexanone	ND	50	NA	1	B2H0269	08/14/2012	08/14/12 17:19	
Di-isopropyl ether	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 17:19	
Dibromochloromethane	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 17:19	
Dibromomethane	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 17:19	
Dichlorodifluoromethane	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 17:19	
Ethanol	ND	500	NA	1	B2H0269	08/14/2012	08/14/12 17:19	
Ethyl Acetate	ND	10	NA	1	B2H0269	08/14/2012	08/14/12 17:19	
Ethyl Ether	ND	10	NA	1	B2H0269	08/14/2012	08/14/12 17:19	
Ethyl tert-butyl ether	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 17:19	
Ethylbenzene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 17:19	
Freon-113	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 17:19	
Hexachlorobutadiene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 17:19	
Iodomethane	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 17:19	
Isopropylbenzene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 17:19	
m,p-Xylene	ND	1.0	NA	1	B2H0269	08/14/2012	08/14/12 17:19	
Methylene chloride	ND	1.0	NA	1	B2H0269	08/14/2012	08/14/12 17:19	
MTBE	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 17:19	
n-Butylbenzene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 17:19	
n-Propylbenzene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 17:19	
Naphthalene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 17:19	
o-Xylene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 17:19	
sec-Butylbenzene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 17:19	
Styrene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 17:19	
tert-Amyl methyl ether	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 17:19	
tert-Butanol	ND	10	NA	1	B2H0269	08/14/2012	08/14/12 17:19	
tert-Butylbenzene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 17:19	
Tetrachloroethene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 17:19	
Toluene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 17:19	
trans-1,2-Dichloroethene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 17:19	



Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego, CA 92122

Project Number : RAYTHEON, 532.30

Report To : Steve Netto

Reported : 08/21/2012

Client Sample ID MW-32C

Lab ID: 1202812-07

Volatile Organic Compounds by EPA 8260

Analyst: RP

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
trans-1,3-Dichloropropene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 17:19	
Trichloroethene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 17:19	
Trichlorofluoromethane	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 17:19	
Vinyl acetate	ND	10	NA	1	B2H0269	08/14/2012	08/14/12 17:19	
Vinyl chloride	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 17:19	
Xylenes, Total	ND	1.5	NA	1	B2H0269	08/14/2012	08/14/12 17:19	
Tentatively Identified Compound	0.0	NA	NA	1	B2H0269	08/14/2012	08/14/12 17:19	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>118 %</i>	<i>70 - 130</i>			B2H0269	08/14/2012	<i>08/14/12 17:19</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>97.6 %</i>	<i>70 - 130</i>			B2H0269	08/14/2012	<i>08/14/12 17:19</i>	
<i>Surrogate: Dibromofluoromethane</i>	<i>112 %</i>	<i>70 - 130</i>			B2H0269	08/14/2012	<i>08/14/12 17:19</i>	
<i>Surrogate: Toluene-d8</i>	<i>102 %</i>	<i>70 - 130</i>			B2H0269	08/14/2012	<i>08/14/12 17:19</i>	

1,4-Dioxane by EPA 8270/SIM: Isotope Dilution Technique

Analyst: BB

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,4-Dioxane	ND	0.20	NA	1	B2H0298	08/14/2012	08/15/12 11:53	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	<i>87.4 %</i>	<i>36 - 107</i>			B2H0298	08/14/2012	<i>08/15/12 11:53</i>	
<i>Surrogate: 2-Fluorobiphenyl</i>	<i>101 %</i>	<i>42 - 120</i>			B2H0298	08/14/2012	<i>08/15/12 11:53</i>	
<i>Surrogate: 4-Terphenyl-d14</i>	<i>106 %</i>	<i>67 - 142</i>			B2H0298	08/14/2012	<i>08/15/12 11:53</i>	
<i>Surrogate: Nitrobenzene-d5</i>	<i>63.2 %</i>	<i>36 - 130</i>			B2H0298	08/14/2012	<i>08/15/12 11:53</i>	



Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : RAYTHEON, 532.30

Report To : Steve Netto

Reported : 08/21/2012

Client Sample ID MW-32B

Lab ID: 1202812-08

Volatile Organic Compounds by EPA 8260

Analyst: RP

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 19:22	
1,1,1-Trichloroethane	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 19:22	
1,1,2,2-Tetrachloroethane	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 19:22	
1,1,2-Trichloroethane	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 19:22	
1,1-Dichloroethane	0.76	0.50	NA	1	B2H0269	08/14/2012	08/14/12 19:22	
1,1-Dichloroethene	120	2.0	NA	4	B2H0309	08/15/2012	08/15/12 14:21	
1,1-Dichloropropene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 19:22	
1,2,3-Trichloropropane	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 19:22	
1,2,3-Trichlorobenzene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 19:22	
1,2,4-Trichlorobenzene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 19:22	
1,2,4-Trimethylbenzene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 19:22	
1,2-Dibromo-3-chloropropane	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 19:22	
1,2-Dibromoethane	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 19:22	
1,2-Dichlorobenzene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 19:22	
1,2-Dichloroethane	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 19:22	
1,2-Dichloropropane	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 19:22	
1,3,5-Trimethylbenzene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 19:22	
1,3-Dichlorobenzene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 19:22	
1,3-Dichloropropane	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 19:22	
1,4-Dichlorobenzene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 19:22	
2,2-Dichloropropane	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 19:22	
2-Butanone	ND	10	NA	1	B2H0269	08/14/2012	08/14/12 19:22	
2-Chloroethyl vinyl ether	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 19:22	
2-Chlorotoluene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 19:22	
2-Hexanone	ND	10	NA	1	B2H0269	08/14/2012	08/14/12 19:22	
4-Chlorotoluene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 19:22	
4-Isopropyltoluene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 19:22	
4-Methyl-2-pentanone	ND	10	NA	1	B2H0269	08/14/2012	08/14/12 19:22	
Acetone	ND	10	NA	1	B2H0269	08/14/2012	08/14/12 19:22	
Acrolein	ND	10	NA	1	B2H0269	08/14/2012	08/14/12 19:22	
Acrylonitrile	ND	10	NA	1	B2H0269	08/14/2012	08/14/12 19:22	
Benzene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 19:22	
Bromobenzene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 19:22	
Bromochloromethane	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 19:22	
Bromodichloromethane	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 19:22	
Bromoform	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 19:22	
Bromomethane	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 19:22	



Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : RAYTHEON, 532.30

Report To : Steve Netto

Reported : 08/21/2012

Client Sample ID MW-32B

Lab ID: 1202812-08

Volatile Organic Compounds by EPA 8260

Analyst: RP

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Carbon disulfide	ND	1.0	NA	1	B2H0269	08/14/2012	08/14/12 19:22	
Carbon tetrachloride	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 19:22	
Chlorobenzene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 19:22	
Chloroethane	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 19:22	
Chloroform	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 19:22	
Chloromethane	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 19:22	
cis-1,2-Dichloroethene	5.5	0.50	NA	1	B2H0269	08/14/2012	08/14/12 19:22	
cis-1,3-Dichloropropene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 19:22	
Cyclohexanone	ND	50	NA	1	B2H0269	08/14/2012	08/14/12 19:22	
Di-isopropyl ether	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 19:22	
Dibromochloromethane	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 19:22	
Dibromomethane	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 19:22	
Dichlorodifluoromethane	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 19:22	
Ethanol	ND	500	NA	1	B2H0269	08/14/2012	08/14/12 19:22	
Ethyl Acetate	ND	10	NA	1	B2H0269	08/14/2012	08/14/12 19:22	
Ethyl Ether	ND	10	NA	1	B2H0269	08/14/2012	08/14/12 19:22	
Ethyl tert-butyl ether	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 19:22	
Ethylbenzene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 19:22	
Freon-113	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 19:22	
Hexachlorobutadiene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 19:22	
Iodomethane	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 19:22	
Isopropylbenzene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 19:22	
m,p-Xylene	ND	1.0	NA	1	B2H0269	08/14/2012	08/14/12 19:22	
Methylene chloride	ND	1.0	NA	1	B2H0269	08/14/2012	08/14/12 19:22	
MTBE	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 19:22	
n-Butylbenzene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 19:22	
n-Propylbenzene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 19:22	
Naphthalene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 19:22	
o-Xylene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 19:22	
sec-Butylbenzene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 19:22	
Styrene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 19:22	
tert-Amyl methyl ether	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 19:22	
tert-Butanol	ND	10	NA	1	B2H0269	08/14/2012	08/14/12 19:22	
tert-Butylbenzene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 19:22	
Tetrachloroethene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 19:22	
Toluene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 19:22	
trans-1,2-Dichloroethene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 19:22	



Hargis & Associates, Inc.
9171 Towne Centre Drive, Suite 375
San Diego, CA 92122

Project Number : RAYTHEON, 532.30
Report To : Steve Netto
Reported : 08/21/2012

Client Sample ID MW-32B
Lab ID: 1202812-08

Volatile Organic Compounds by EPA 8260

Analyst: RP

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
trans-1,3-Dichloropropene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 19:22	
Trichloroethene	62	0.50	NA	1	B2H0269	08/14/2012	08/14/12 19:22	
Trichlorofluoromethane	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 19:22	
Vinyl acetate	ND	10	NA	1	B2H0269	08/14/2012	08/14/12 19:22	
Vinyl chloride	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 19:22	
Xylenes, Total	ND	1.5	NA	1	B2H0269	08/14/2012	08/14/12 19:22	
Tentatively Identified Compound	0.0	NA	NA	1	B2H0269	08/14/2012	08/14/12 19:22	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>112 %</i>	<i>70 - 130</i>			B2H0309	08/15/2012	<i>08/15/12 14:21</i>	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>119 %</i>	<i>70 - 130</i>			B2H0269	08/14/2012	<i>08/14/12 19:22</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>97.1 %</i>	<i>70 - 130</i>			B2H0309	08/15/2012	<i>08/15/12 14:21</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>98.6 %</i>	<i>70 - 130</i>			B2H0269	08/14/2012	<i>08/14/12 19:22</i>	
<i>Surrogate: Dibromofluoromethane</i>	<i>111 %</i>	<i>70 - 130</i>			B2H0269	08/14/2012	<i>08/14/12 19:22</i>	
<i>Surrogate: Dibromofluoromethane</i>	<i>108 %</i>	<i>70 - 130</i>			B2H0309	08/15/2012	<i>08/15/12 14:21</i>	
<i>Surrogate: Toluene-d8</i>	<i>100 %</i>	<i>70 - 130</i>			B2H0309	08/15/2012	<i>08/15/12 14:21</i>	
<i>Surrogate: Toluene-d8</i>	<i>99.0 %</i>	<i>70 - 130</i>			B2H0269	08/14/2012	<i>08/14/12 19:22</i>	

1,4-Dioxane by EPA 8270/SIM: Isotope Dilution Technique

Analyst: BB

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,4-Dioxane	0.39	0.20	NA	1	B2H0298	08/14/2012	08/17/12 13:17	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	<i>47.4 %</i>	<i>36 - 107</i>			B2H0298	08/14/2012	<i>08/17/12 13:17</i>	
<i>Surrogate: 2-Fluorobiphenyl</i>	<i>57.9 %</i>	<i>42 - 120</i>			B2H0298	08/14/2012	<i>08/17/12 13:17</i>	
<i>Surrogate: 4-Terphenyl-d14</i>	<i>75.7 %</i>	<i>67 - 142</i>			B2H0298	08/14/2012	<i>08/17/12 13:17</i>	
<i>Surrogate: Nitrobenzene-d5</i>	<i>36.9 %</i>	<i>36 - 130</i>			B2H0298	08/14/2012	<i>08/17/12 13:17</i>	



Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : RAYTHEON, 532.30

Report To : Steve Netto

Reported : 08/21/2012

Client Sample ID MW-33

Lab ID: 1202812-09

Volatile Organic Compounds by EPA 8260

Analyst: RP

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 16:59	
1,1,1-Trichloroethane	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 16:59	
1,1,2,2-Tetrachloroethane	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 16:59	
1,1,2-Trichloroethane	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 16:59	
1,1-Dichloroethane	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 16:59	
1,1-Dichloroethene	5.2	0.50	NA	1	B2H0269	08/14/2012	08/14/12 16:59	
1,1-Dichloropropene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 16:59	
1,2,3-Trichloropropane	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 16:59	
1,2,3-Trichlorobenzene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 16:59	
1,2,4-Trichlorobenzene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 16:59	
1,2,4-Trimethylbenzene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 16:59	
1,2-Dibromo-3-chloropropane	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 16:59	
1,2-Dibromoethane	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 16:59	
1,2-Dichlorobenzene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 16:59	
1,2-Dichloroethane	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 16:59	
1,2-Dichloropropane	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 16:59	
1,3,5-Trimethylbenzene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 16:59	
1,3-Dichlorobenzene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 16:59	
1,3-Dichloropropane	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 16:59	
1,4-Dichlorobenzene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 16:59	
2,2-Dichloropropane	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 16:59	
2-Butanone	ND	10	NA	1	B2H0269	08/14/2012	08/14/12 16:59	
2-Chloroethyl vinyl ether	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 16:59	
2-Chlorotoluene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 16:59	
2-Hexanone	ND	10	NA	1	B2H0269	08/14/2012	08/14/12 16:59	
4-Chlorotoluene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 16:59	
4-Isopropyltoluene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 16:59	
4-Methyl-2-pentanone	ND	10	NA	1	B2H0269	08/14/2012	08/14/12 16:59	
Acetone	ND	10	NA	1	B2H0269	08/14/2012	08/14/12 16:59	
Acrolein	ND	10	NA	1	B2H0269	08/14/2012	08/14/12 16:59	
Acrylonitrile	ND	10	NA	1	B2H0269	08/14/2012	08/14/12 16:59	
Benzene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 16:59	
Bromobenzene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 16:59	
Bromochloromethane	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 16:59	
Bromodichloromethane	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 16:59	
Bromoform	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 16:59	
Bromomethane	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 16:59	



Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : RAYTHEON, 532.30

Report To : Steve Netto

Reported : 08/21/2012

Client Sample ID MW-33

Lab ID: 1202812-09

Volatile Organic Compounds by EPA 8260

Analyst: RP

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Carbon disulfide	ND	1.0	NA	1	B2H0269	08/14/2012	08/14/12 16:59	
Carbon tetrachloride	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 16:59	
Chlorobenzene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 16:59	
Chloroethane	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 16:59	
Chloroform	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 16:59	
Chloromethane	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 16:59	
cis-1,2-Dichloroethene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 16:59	
cis-1,3-Dichloropropene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 16:59	
Cyclohexanone	ND	50	NA	1	B2H0269	08/14/2012	08/14/12 16:59	
Di-isopropyl ether	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 16:59	
Dibromochloromethane	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 16:59	
Dibromomethane	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 16:59	
Dichlorodifluoromethane	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 16:59	
Ethanol	ND	500	NA	1	B2H0269	08/14/2012	08/14/12 16:59	
Ethyl Acetate	ND	10	NA	1	B2H0269	08/14/2012	08/14/12 16:59	
Ethyl Ether	ND	10	NA	1	B2H0269	08/14/2012	08/14/12 16:59	
Ethyl tert-butyl ether	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 16:59	
Ethylbenzene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 16:59	
Freon-113	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 16:59	
Hexachlorobutadiene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 16:59	
Iodomethane	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 16:59	
Isopropylbenzene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 16:59	
m,p-Xylene	ND	1.0	NA	1	B2H0269	08/14/2012	08/14/12 16:59	
Methylene chloride	ND	1.0	NA	1	B2H0269	08/14/2012	08/14/12 16:59	
MTBE	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 16:59	
n-Butylbenzene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 16:59	
n-Propylbenzene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 16:59	
Naphthalene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 16:59	
o-Xylene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 16:59	
sec-Butylbenzene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 16:59	
Styrene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 16:59	
tert-Amyl methyl ether	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 16:59	
tert-Butanol	ND	10	NA	1	B2H0269	08/14/2012	08/14/12 16:59	
tert-Butylbenzene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 16:59	
Tetrachloroethene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 16:59	
Toluene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 16:59	
trans-1,2-Dichloroethene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 16:59	



Hargis & Associates, Inc.
9171 Towne Centre Drive, Suite 375
San Diego, CA 92122

Project Number : RAYTHEON, 532.30
Report To : Steve Netto
Reported : 08/21/2012

Client Sample ID MW-33
Lab ID: 1202812-09

Volatile Organic Compounds by EPA 8260

Analyst: RP

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
trans-1,3-Dichloropropene	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 16:59	
Trichloroethene	0.74	0.50	NA	1	B2H0269	08/14/2012	08/14/12 16:59	
Trichlorofluoromethane	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 16:59	
Vinyl acetate	ND	10	NA	1	B2H0269	08/14/2012	08/14/12 16:59	
Vinyl chloride	ND	0.50	NA	1	B2H0269	08/14/2012	08/14/12 16:59	
Xylenes, Total	ND	1.5	NA	1	B2H0269	08/14/2012	08/14/12 16:59	
Tentatively Identified Compound	0.0	NA	NA	1	B2H0269	08/14/2012	08/14/12 16:59	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>117 %</i>		<i>70 - 130</i>		B2H0269	08/14/2012	<i>08/14/12 16:59</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>98.7 %</i>		<i>70 - 130</i>		B2H0269	08/14/2012	<i>08/14/12 16:59</i>	
<i>Surrogate: Dibromofluoromethane</i>	<i>110 %</i>		<i>70 - 130</i>		B2H0269	08/14/2012	<i>08/14/12 16:59</i>	
<i>Surrogate: Toluene-d8</i>	<i>102 %</i>		<i>70 - 130</i>		B2H0269	08/14/2012	<i>08/14/12 16:59</i>	

1,4-Dioxane by EPA 8270/SIM: Isotope Dilution Technique

Analyst: BB

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,4-Dioxane	ND	0.20	NA	1	B2H0298	08/14/2012	08/15/12 12:50	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	<i>62.5 %</i>		<i>36 - 107</i>		B2H0298	08/14/2012	<i>08/15/12 12:50</i>	
<i>Surrogate: 2-Fluorobiphenyl</i>	<i>69.8 %</i>		<i>42 - 120</i>		B2H0298	08/14/2012	<i>08/15/12 12:50</i>	
<i>Surrogate: 4-Terphenyl-d14</i>	<i>83.0 %</i>		<i>67 - 142</i>		B2H0298	08/14/2012	<i>08/15/12 12:50</i>	
<i>Surrogate: Nitrobenzene-d5</i>	<i>45.5 %</i>		<i>36 - 130</i>		B2H0298	08/14/2012	<i>08/15/12 12:50</i>	



Hargis & Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego , CA 92122

Project Number : RAYTHEON, 532.30
 Report To : Steve Netto
 Reported : 08/21/2012

QUALITY CONTROL SECTION

Volatile Organic Compounds by EPA 8260 - Quality Control

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec % Rec	% Rec Limits	RPD RPD	RPD Limit	Notes
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Batch B2H0248 - MSVOAW_LL

Blank (B2H0248-BLK1)

Prepared: 8/13/2012 Analyzed: 8/13/2012

1,1,1,2-Tetrachloroethane	ND	0.50			NR				
1,1,1-Trichloroethane	ND	0.50			NR				
1,1,2,2-Tetrachloroethane	ND	0.50			NR				
1,1,2-Trichloroethane	ND	0.50			NR				
1,1-Dichloroethane	ND	0.50			NR				
1,1-Dichloroethene	ND	0.50			NR				
1,1-Dichloropropene	ND	0.50			NR				
1,2,3-Trichloropropane	ND	0.50			NR				
1,2,3-Trichlorobenzene	ND	0.50			NR				
1,2,4-Trichlorobenzene	ND	0.50			NR				
1,2,4-Trimethylbenzene	ND	0.50			NR				
1,2-Dibromo-3-chloropropane	ND	0.50			NR				
1,2-Dibromoethane	ND	0.50			NR				
1,2-Dichlorobenzene	ND	0.50			NR				
1,2-Dichloroethane	ND	0.50			NR				
1,2-Dichloropropane	ND	0.50			NR				
1,3,5-Trimethylbenzene	ND	0.50			NR				
1,3-Dichlorobenzene	ND	0.50			NR				
1,3-Dichloropropane	ND	0.50			NR				
1,4-Dichlorobenzene	ND	0.50			NR				
2,2-Dichloropropane	ND	0.50			NR				
2-Chlorotoluene	ND	0.50			NR				
4-Chlorotoluene	ND	0.50			NR				
4-Isopropyltoluene	ND	0.50			NR				
Benzene	ND	0.50			NR				
Bromobenzene	ND	0.50			NR				
Bromodichloromethane	ND	0.50			NR				
Bromoform	ND	0.50			NR				
Bromomethane	ND	0.50			NR				
Carbon tetrachloride	ND	0.50			NR				
Chlorobenzene	ND	0.50			NR				
Chloroethane	ND	0.50			NR				
Chloroform	ND	0.50			NR				
Chloromethane	ND	0.50			NR				
cis-1,2-Dichloroethene	ND	0.50			NR				
cis-1,3-Dichloropropene	ND	0.50			NR				
Dibromochloromethane	ND	0.50			NR				
Dibromomethane	ND	0.50			NR				
Dichlorodifluoromethane	ND	0.50			NR				



Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : RAYTHEON, 532.30

Report To : Steve Netto

Reported : 08/21/2012

Volatile Organic Compounds by EPA 8260 - Quality Control (cont'd)

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec % Rec	% Rec Limits	RPD RPD	RPD Limit	Notes
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Batch B2H0248 - MSVOAW_LL (continued)

Blank (B2H0248-BLK1) - Continued

Prepared: 8/13/2012 Analyzed: 8/13/2012

Ethylbenzene	ND	0.50					NR		
Hexachlorobutadiene	ND	0.50					NR		
Isopropylbenzene	ND	0.50					NR		
m,p-Xylene	ND	1.0					NR		
Methylene chloride	ND	1.0					NR		
n-Butylbenzene	ND	0.50					NR		
n-Propylbenzene	ND	0.50					NR		
Naphthalene	ND	0.50					NR		
o-Xylene	ND	0.50					NR		
sec-Butylbenzene	ND	0.50					NR		
Styrene	ND	0.50					NR		
tert-Butylbenzene	ND	0.50					NR		
Tetrachloroethene	ND	0.50					NR		
Toluene	ND	0.50					NR		
trans-1,2-Dichloroethene	ND	0.50					NR		
Trichloroethene	ND	0.50					NR		
Trichlorofluoromethane	ND	0.50					NR		
Vinyl chloride	ND	0.50					NR		

<i>Surrogate: 1,2-Dichloroethane-d4</i>	27.70		25.0000		111	70 - 130			
<i>Surrogate: 4-Bromofluorobenzene</i>	24.53		25.0000		98.1	70 - 130			
<i>Surrogate: Dibromofluoromethane</i>	26.55		25.0000		106	70 - 130			
<i>Surrogate: Toluene-d8</i>	25.18		25.0000		101	70 - 130			

LCS (B2H0248-BS1)

Prepared: 8/13/2012 Analyzed: 8/13/2012

1,1-Dichloroethene	21.2500		20.0000		106	70 - 130			
Benzene	19.6400		20.0000		98.2	70 - 130			
Chlorobenzene	19.0700		20.0000		95.4	70 - 130			
MTBE	22.2100		20.0000		111	70 - 130			
Toluene	19.2900		20.0000		96.4	70 - 130			
Trichloroethene	19.6800		20.0000		98.4	70 - 130			

<i>Surrogate: 1,2-Dichloroethane-d4</i>	28.58		25.0000		114	70 - 130			
<i>Surrogate: 4-Bromofluorobenzene</i>	25.69		25.0000		103	70 - 130			
<i>Surrogate: Dibromofluoromethane</i>	26.92		25.0000		108	70 - 130			
<i>Surrogate: Toluene-d8</i>	25.31		25.0000		101	70 - 130			

LCS Dup (B2H0248-BSD1)

Prepared: 8/13/2012 Analyzed: 8/13/2012

1,1-Dichloroethene	19.6100		20.0000		98.0	70 - 130	8.03	20	
Benzene	20.0500		20.0000		100	70 - 130	2.07	20	
Chlorobenzene	19.3200		20.0000		96.6	70 - 130	1.30	20	
MTBE	22.7000		20.0000		114	70 - 130	2.18	20	
Toluene	19.4900		20.0000		97.4	70 - 130	1.03	20	



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Volatile Organic Compounds by EPA 8260 - Quality Control (cont'd)

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec % Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B2H0248 - MSVOAW_LL (continued)

LCS Dup (B2H0248-BSD1) - Continued

Prepared: 8/13/2012 Analyzed: 8/13/2012

Trichloroethene	19.7600		20.0000		98.8	70 - 130	0.406	20	
Surrogate: 1,2-Dichloroethane-d4	28.33		25.0000		113	70 - 130			
Surrogate: 4-Bromofluorobenzene	25.62		25.0000		102	70 - 130			
Surrogate: Dibromofluoromethane	26.62		25.0000		106	70 - 130			
Surrogate: Toluene-d8	25.46		25.0000		102	70 - 130			

Matrix Spike (B2H0248-MS1)

Source: 1202812-06

Prepared: 8/13/2012 Analyzed: 8/13/2012

1,1-Dichloroethene	27.3100		22.7000	ND	120	70 - 130			
Benzene	25.0000		22.7000	ND	110	70 - 130			
Chlorobenzene	23.7800		22.7000	ND	105	70 - 130			
MTBE	25.4300		22.7000	ND	112	70 - 130			
Toluene	24.7200		22.7000	ND	109	70 - 130			
Trichloroethene	24.9000		22.7000	ND	110	70 - 130			
Surrogate: 1,2-Dichloroethane-d4	27.52		25.0000		110	70 - 130			
Surrogate: 4-Bromofluorobenzene	25.44		25.0000		102	70 - 130			
Surrogate: Dibromofluoromethane	26.11		25.0000		104	70 - 130			
Surrogate: Toluene-d8	25.25		25.0000		101	70 - 130			

Matrix Spike Dup (B2H0248-MSD1)

Source: 1202812-06

Prepared: 8/13/2012 Analyzed: 8/13/2012

1,1-Dichloroethene	26.8300		22.7000	ND	118	70 - 130	1.77	20	
Benzene	25.0300		22.7000	ND	110	70 - 130	0.120	20	
Chlorobenzene	23.5300		22.7000	ND	104	70 - 130	1.06	20	
MTBE	26.7100		22.7000	ND	118	70 - 130	4.91	20	
Toluene	24.5100		22.7000	ND	108	70 - 130	0.853	20	
Trichloroethene	25.0800		22.7000	ND	110	70 - 130	0.720	20	
Surrogate: 1,2-Dichloroethane-d4	28.20		25.0000		113	70 - 130			
Surrogate: 4-Bromofluorobenzene	25.68		25.0000		103	70 - 130			
Surrogate: Dibromofluoromethane	26.42		25.0000		106	70 - 130			
Surrogate: Toluene-d8	25.54		25.0000		102	70 - 130			

Batch B2H0269 - MSVOAW_LL

Blank (B2H0269-BLK1)

Prepared: 8/14/2012 Analyzed: 8/14/2012

1,1,1,2-Tetrachloroethane	ND	0.50			NR				
1,1,1-Trichloroethane	ND	0.50			NR				
1,1,2,2-Tetrachloroethane	ND	0.50			NR				
1,1,2-Trichloroethane	ND	0.50			NR				
1,1-Dichloroethane	ND	0.50			NR				
1,1-Dichloroethene	ND	0.50			NR				
1,1-Dichloropropene	ND	0.50			NR				
1,2,3-Trichloropropane	ND	0.50			NR				



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Project Number : RAYTHEON, 532.30

Report To : Steve Netto

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Volatile Organic Compounds by EPA 8260 - Quality Control (cont'd)

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec % Rec	% Rec Limits	RPD RPD	RPD Limit	Notes
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Batch B2H0269 - MSVOAW_LL (continued)

Blank (B2H0269-BLK1) - Continued

Prepared: 8/14/2012 Analyzed: 8/14/2012

1,2,3-Trichlorobenzene	ND	0.50			NR
1,2,4-Trichlorobenzene	ND	0.50			NR
1,2,4-Trimethylbenzene	ND	0.50			NR
1,2-Dibromo-3-chloropropane	ND	0.50			NR
1,2-Dibromoethane	ND	0.50			NR
1,2-Dichlorobenzene	ND	0.50			NR
1,2-Dichloroethane	ND	0.50			NR
1,2-Dichloropropane	ND	0.50			NR
1,3,5-Trimethylbenzene	ND	0.50			NR
1,3-Dichlorobenzene	ND	0.50			NR
1,3-Dichloropropane	ND	0.50			NR
1,4-Dichlorobenzene	ND	0.50			NR
2,2-Dichloropropane	ND	0.50			NR
2-Chlorotoluene	ND	0.50			NR
4-Chlorotoluene	ND	0.50			NR
4-Isopropyltoluene	ND	0.50			NR
Benzene	ND	0.50			NR
Bromobenzene	ND	0.50			NR
Bromodichloromethane	ND	0.50			NR
Bromoform	ND	0.50			NR
Bromomethane	ND	0.50			NR
Carbon tetrachloride	ND	0.50			NR
Chlorobenzene	ND	0.50			NR
Chloroethane	ND	0.50			NR
Chloroform	ND	0.50			NR
Chloromethane	ND	0.50			NR
cis-1,2-Dichloroethene	ND	0.50			NR
cis-1,3-Dichloropropene	ND	0.50			NR
Dibromochloromethane	ND	0.50			NR
Dibromomethane	ND	0.50			NR
Dichlorodifluoromethane	ND	0.50			NR
Ethylbenzene	ND	0.50			NR
Hexachlorobutadiene	ND	0.50			NR
Isopropylbenzene	ND	0.50			NR
m,p-Xylene	ND	1.0			NR
Methylene chloride	ND	1.0			NR
n-Butylbenzene	ND	0.50			NR
n-Propylbenzene	ND	0.50			NR
Naphthalene	ND	0.50			NR
o-Xylene	ND	0.50			NR
sec-Butylbenzene	ND	0.50			NR
Styrene	ND	0.50			NR



Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego, CA 92122

Project Number : RAYTHEON, 532.30

Report To : Steve Netto

Reported : 08/21/2012

Volatile Organic Compounds by EPA 8260 - Quality Control (cont'd)

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec % Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B2H0269 - MSVOAW_LL (continued)

Blank (B2H0269-BLK1) - Continued

Prepared: 8/14/2012 Analyzed: 8/14/2012

tert-Butylbenzene	ND	0.50			NR				
Tetrachloroethene	ND	0.50			NR				
Toluene	ND	0.50			NR				
trans-1,2-Dichloroethene	ND	0.50			NR				
Trichloroethene	ND	0.50			NR				
Trichlorofluoromethane	ND	0.50			NR				
Vinyl chloride	ND	0.50			NR				
<i>Surrogate: 1,2-Dichloroethane-d4</i>	28.35		25.0000		113	70 - 130			
<i>Surrogate: 4-Bromofluorobenzene</i>	24.48		25.0000		97.9	70 - 130			
<i>Surrogate: Dibromofluoromethane</i>	26.73		25.0000		107	70 - 130			
<i>Surrogate: Toluene-d8</i>	25.27		25.0000		101	70 - 130			

LCS (B2H0269-BS1)

Prepared: 8/14/2012 Analyzed: 8/14/2012

1,1-Dichloroethene	20.4000		20.0000		102	70 - 130			
Benzene	19.9600		20.0000		99.8	70 - 130			
Chlorobenzene	19.3400		20.0000		96.7	70 - 130			
MTBE	21.2400		20.0000		106	70 - 130			
Toluene	19.4800		20.0000		97.4	70 - 130			
Trichloroethene	19.5400		20.0000		97.7	70 - 130			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	27.97		25.0000		112	70 - 130			
<i>Surrogate: 4-Bromofluorobenzene</i>	25.88		25.0000		104	70 - 130			
<i>Surrogate: Dibromofluoromethane</i>	26.75		25.0000		107	70 - 130			
<i>Surrogate: Toluene-d8</i>	25.26		25.0000		101	70 - 130			

LCS Dup (B2H0269-BSD1)

Prepared: 8/14/2012 Analyzed: 8/14/2012

1,1-Dichloroethene	20.3600		20.0000		102	70 - 130	0.196	20	
Benzene	20.1500		20.0000		101	70 - 130	0.947	20	
Chlorobenzene	19.3200		20.0000		96.6	70 - 130	0.103	20	
MTBE	21.8300		20.0000		109	70 - 130	2.74	20	
Toluene	19.2400		20.0000		96.2	70 - 130	1.24	20	
Trichloroethene	19.7600		20.0000		98.8	70 - 130	1.12	20	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	27.80		25.0000		111	70 - 130			
<i>Surrogate: 4-Bromofluorobenzene</i>	25.45		25.0000		102	70 - 130			
<i>Surrogate: Dibromofluoromethane</i>	26.29		25.0000		105	70 - 130			
<i>Surrogate: Toluene-d8</i>	25.39		25.0000		102	70 - 130			

Matrix Spike (B2H0269-MS1)

Source: 1202839-04

Prepared: 8/14/2012 Analyzed: 8/14/2012

1,1-Dichloroethene	25.7900		20.0000	ND	129	70 - 130			
Benzene	21.9600		20.0000	ND	110	70 - 130			
Chlorobenzene	20.9700		20.0000	ND	105	70 - 130			
MTBE	22.2500		20.0000	ND	111	70 - 130			



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Project Number : RAYTHEON, 532.30

Report To : Steve Netto

Reported : 08/21/2012

Volatile Organic Compounds by EPA 8260 - Quality Control (cont'd)

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B2H0269 - MSVOAW_LL (continued)

Matrix Spike (B2H0269-MS1) - Continued

Source: 1202839-04

Prepared: 8/14/2012 Analyzed: 8/14/2012

Toluene	21.7100		20.0000	ND	109	70 - 130			
Trichloroethene	22.4300		20.0000	0.660000	109	70 - 130			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>29.61</i>		<i>25.0000</i>		<i>118</i>	<i>70 - 130</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>26.28</i>		<i>25.0000</i>		<i>105</i>	<i>70 - 130</i>			
<i>Surrogate: Dibromofluoromethane</i>	<i>27.25</i>		<i>25.0000</i>		<i>109</i>	<i>70 - 130</i>			
<i>Surrogate: Toluene-d8</i>	<i>25.23</i>		<i>25.0000</i>		<i>101</i>	<i>70 - 130</i>			

Matrix Spike Dup (B2H0269-MSD1)

Source: 1202839-04

Prepared: 8/14/2012 Analyzed: 8/14/2012

1,1-Dichloroethene	24.6600		20.0000	ND	123	70 - 130	4.48	20	
Benzene	22.3800		20.0000	ND	112	70 - 130	1.89	20	
Chlorobenzene	21.0800		20.0000	ND	105	70 - 130	0.523	20	
MTBE	23.0800		20.0000	ND	115	70 - 130	3.66	20	
Toluene	22.0500		20.0000	ND	110	70 - 130	1.55	20	
Trichloroethene	22.6100		20.0000	0.660000	110	70 - 130	0.799	20	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>28.88</i>		<i>25.0000</i>		<i>116</i>	<i>70 - 130</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>25.87</i>		<i>25.0000</i>		<i>103</i>	<i>70 - 130</i>			
<i>Surrogate: Dibromofluoromethane</i>	<i>26.69</i>		<i>25.0000</i>		<i>107</i>	<i>70 - 130</i>			
<i>Surrogate: Toluene-d8</i>	<i>25.57</i>		<i>25.0000</i>		<i>102</i>	<i>70 - 130</i>			

Batch B2H0309 - MSVOAW_LL

Blank (B2H0309-BLK1)

Prepared: 8/15/2012 Analyzed: 8/15/2012

1,1,1,2-Tetrachloroethane	ND	0.50							NR
1,1,1-Trichloroethane	ND	0.50							NR
1,1,2,2-Tetrachloroethane	ND	0.50							NR
1,1,2-Trichloroethane	ND	0.50							NR
1,1-Dichloroethane	ND	0.50							NR
1,1-Dichloroethene	ND	0.50							NR
1,1-Dichloropropene	ND	0.50							NR
1,2,3-Trichloropropane	ND	0.50							NR
1,2,3-Trichlorobenzene	ND	0.50							NR
1,2,4-Trichlorobenzene	ND	0.50							NR
1,2,4-Trimethylbenzene	ND	0.50							NR
1,2-Dibromo-3-chloropropane	ND	0.50							NR
1,2-Dibromoethane	ND	0.50							NR
1,2-Dichlorobenzene	ND	0.50							NR
1,2-Dichloroethane	ND	0.50							NR
1,2-Dichloropropane	ND	0.50							NR
1,3,5-Trimethylbenzene	ND	0.50							NR
1,3-Dichlorobenzene	ND	0.50							NR
1,3-Dichloropropane	ND	0.50							NR



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San Diego , CA 92122

Project Number : RAYTHEON, 532.30

Report To : Steve Netto

Reported : 08/21/2012

Volatile Organic Compounds by EPA 8260 - Quality Control (cont'd)

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec % Rec	% Rec Limits	RPD RPD	RPD Limit	Notes
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Batch B2H0309 - MSVOAW_LL (continued)

Blank (B2H0309-BLK1) - Continued

Prepared: 8/15/2012 Analyzed: 8/15/2012

1,4-Dichlorobenzene	ND	0.50						NR	
2,2-Dichloropropane	ND	0.50						NR	
2-Chlorotoluene	ND	0.50						NR	
4-Chlorotoluene	ND	0.50						NR	
4-Isopropyltoluene	ND	0.50						NR	
Benzene	ND	0.50						NR	
Bromobenzene	ND	0.50						NR	
Bromodichloromethane	ND	0.50						NR	
Bromoform	ND	0.50						NR	
Bromomethane	ND	0.50						NR	
Carbon tetrachloride	ND	0.50						NR	
Chlorobenzene	ND	0.50						NR	
Chloroethane	ND	0.50						NR	
Chloroform	ND	0.50						NR	
Chloromethane	ND	0.50						NR	
cis-1,2-Dichloroethene	ND	0.50						NR	
cis-1,3-Dichloropropene	ND	0.50						NR	
Dibromochloromethane	ND	0.50						NR	
Dibromomethane	ND	0.50						NR	
Dichlorodifluoromethane	ND	0.50						NR	
Ethylbenzene	ND	0.50						NR	
Hexachlorobutadiene	ND	0.50						NR	
Isopropylbenzene	ND	0.50						NR	
m,p-Xylene	ND	1.0						NR	
Methylene chloride	ND	1.0						NR	
n-Butylbenzene	ND	0.50						NR	
n-Propylbenzene	ND	0.50						NR	
Naphthalene	ND	0.50						NR	
o-Xylene	ND	0.50						NR	
sec-Butylbenzene	ND	0.50						NR	
Styrene	ND	0.50						NR	
tert-Butylbenzene	ND	0.50						NR	
Tetrachloroethene	ND	0.50						NR	
Toluene	ND	0.50						NR	
trans-1,2-Dichloroethene	ND	0.50						NR	
Trichloroethene	ND	0.50						NR	
Trichlorofluoromethane	ND	0.50						NR	
Vinyl chloride	ND	0.50						NR	
Surrogate: 1,2-Dichloroethane-d4	28.22		25.0000		113			70 - 130	
Surrogate: 4-Bromofluorobenzene	24.61		25.0000		98.4			70 - 130	
Surrogate: Dibromofluoromethane	26.34		25.0000		105			70 - 130	



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Volatile Organic Compounds by EPA 8260 - Quality Control (cont'd)

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec % Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B2H0309 - MSVOAW_LL (continued)

Blank (B2H0309-BLK1) - Continued

Prepared: 8/15/2012 Analyzed: 8/15/2012

Surrogate: Toluene-d8 25.16 25.0000 101 70 - 130

LCS (B2H0309-BS1)

Prepared: 8/15/2012 Analyzed: 8/15/2012

1,1-Dichloroethene 20.9700 20.0000 105 70 - 130
 Benzene 19.9700 20.0000 99.8 70 - 130
 Chlorobenzene 19.2500 20.0000 96.2 70 - 130
 MTBE 21.1700 20.0000 106 70 - 130
 Toluene 19.5100 20.0000 97.6 70 - 130
 Trichloroethene 19.7000 20.0000 98.5 70 - 130

Surrogate: 1,2-Dichloroethane-d4 28.15 25.0000 113 70 - 130
 Surrogate: 4-Bromofluorobenzene 25.61 25.0000 102 70 - 130
 Surrogate: Dibromofluoromethane 26.86 25.0000 107 70 - 130
 Surrogate: Toluene-d8 25.29 25.0000 101 70 - 130

LCS Dup (B2H0309-BSD1)

Prepared: 8/15/2012 Analyzed: 8/15/2012

1,1-Dichloroethene 20.2100 20.0000 101 70 - 130 3.69 20
 Benzene 19.5500 20.0000 97.8 70 - 130 2.13 20
 Chlorobenzene 18.7000 20.0000 93.5 70 - 130 2.90 20
 MTBE 20.3500 20.0000 102 70 - 130 3.95 20
 Toluene 18.8300 20.0000 94.2 70 - 130 3.55 20
 Trichloroethene 19.1400 20.0000 95.7 70 - 130 2.88 20

Surrogate: 1,2-Dichloroethane-d4 27.49 25.0000 110 70 - 130
 Surrogate: 4-Bromofluorobenzene 25.55 25.0000 102 70 - 130
 Surrogate: Dibromofluoromethane 26.08 25.0000 104 70 - 130
 Surrogate: Toluene-d8 25.17 25.0000 101 70 - 130

Matrix Spike (B2H0309-MS1)

Source: 1202830-02

Prepared: 8/15/2012 Analyzed: 8/15/2012

1,1-Dichloroethene 2275.00 1000.00 1140.70 113 70 - 130
 Benzene 1053.00 1000.00 ND 105 70 - 130
 Chlorobenzene 1001.00 1000.00 ND 100 70 - 130
 MTBE 1078.00 1000.00 ND 108 70 - 130
 Toluene 1033.50 1000.00 ND 103 70 - 130
 Trichloroethene 1054.50 1000.00 ND 105 70 - 130

Surrogate: 1,2-Dichloroethane-d4 29.92 25.0000 120 70 - 130
 Surrogate: 4-Bromofluorobenzene 25.87 25.0000 103 70 - 130
 Surrogate: Dibromofluoromethane 27.14 25.0000 109 70 - 130
 Surrogate: Toluene-d8 25.28 25.0000 101 70 - 130

Matrix Spike Dup (B2H0309-MSD1)

Source: 1202830-02

Prepared: 8/15/2012 Analyzed: 8/15/2012

1,1-Dichloroethene 2349.00 1000.00 1140.70 121 70 - 130 3.20 20
 Benzene 1140.00 1000.00 ND 114 70 - 130 7.93 20



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Project Number : RAYTHEON, 532.30

Report To : Steve Netto

Reported : 08/21/2012

Volatile Organic Compounds by EPA 8260 - Quality Control (cont'd)

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B2H0309 - MSVOAW_LL (continued)

Matrix Spike Dup (B2H0309-MSD1) - Continued

Source: 1202830-02

Prepared: 8/15/2012 Analyzed: 8/15/2012

Chlorobenzene	1048.50		1000.00	ND	105	70 - 130	4.64	20	
MTBE	1156.00		1000.00	ND	116	70 - 130	6.98	20	
Toluene	1108.00		1000.00	ND	111	70 - 130	6.96	20	
Trichloroethene	1142.50		1000.00	ND	114	70 - 130	8.01	20	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>28.99</i>		<i>25.0000</i>		<i>116</i>	<i>70 - 130</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>25.52</i>		<i>25.0000</i>		<i>102</i>	<i>70 - 130</i>			
<i>Surrogate: Dibromofluoromethane</i>	<i>27.03</i>		<i>25.0000</i>		<i>108</i>	<i>70 - 130</i>			
<i>Surrogate: Toluene-d8</i>	<i>25.67</i>		<i>25.0000</i>		<i>103</i>	<i>70 - 130</i>			



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San Diego, CA 92122

Project Number : RAYTHEON, 532.30

Report To : Steve Netto

Reported : 08/21/2012

1,4-Dioxane by EPA 8270/SIM: Isotope Dilution Technique - Quality Control

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec % Rec	% Rec Limits	RPD RPD	RPD Limit	Notes
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Batch B2H0298 - MSSEMI

Blank (B2H0298-BLK1)

Prepared: 8/14/2012 Analyzed: 8/15/2012

1,4-Dioxane	ND	0.20			NR				
Surrogate: 1,2-Dichlorobenzene-d4	0.8457		1.00000		84.6	36 - 107			
Surrogate: 2-Fluorobiphenyl	0.9270		1.00000		92.7	42 - 120			
Surrogate: 4-Terphenyl-d14	0.9988		1.00000		99.9	67 - 142			
Surrogate: Nitrobenzene-d5	0.6428		1.00000		64.3	36 - 130			

LCS (B2H0298-BS1)

Prepared: 8/14/2012 Analyzed: 8/15/2012

1,4-Dioxane	0.819980	0.20	1.00000		82.0	70 - 130			
Surrogate: 1,2-Dichlorobenzene-d4	0.7831		1.00000		78.3	36 - 107			
Surrogate: 2-Fluorobiphenyl	0.8318		1.00000		83.2	42 - 120			
Surrogate: 4-Terphenyl-d14	0.7766		1.00000		77.7	67 - 142			
Surrogate: Nitrobenzene-d5	0.5856		1.00000		58.6	36 - 130			

Matrix Spike (B2H0298-MS1)

Source: 1202812-06

Prepared: 8/14/2012 Analyzed: 8/15/2012

1,4-Dioxane	0.803580	0.20	1.00000	ND	80.4	70 - 130			
Surrogate: 1,2-Dichlorobenzene-d4	0.7677		1.00000		76.8	36 - 107			
Surrogate: 2-Fluorobiphenyl	0.8541		1.00000		85.4	42 - 120			
Surrogate: 4-Terphenyl-d14	0.7151		1.00000		71.5	67 - 142			
Surrogate: Nitrobenzene-d5	0.5636		1.00000		56.4	36 - 130			

Matrix Spike Dup (B2H0298-MSD1)

Source: 1202812-06

Prepared: 8/14/2012 Analyzed: 8/15/2012

1,4-Dioxane	0.820840	0.20	1.00000	ND	82.1	70 - 130	2.13	20	
Surrogate: 1,2-Dichlorobenzene-d4	0.8008		1.00000		80.1	36 - 107			
Surrogate: 2-Fluorobiphenyl	0.8229		1.00000		82.3	42 - 120			
Surrogate: 4-Terphenyl-d14	0.7044		1.00000		70.4	67 - 142			
Surrogate: Nitrobenzene-d5	0.5932		1.00000		59.3	36 - 130			



Hargis & Associates, Inc.

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San Diego , CA 92122

Project Number : RAYTHEON, 532.30

Report To : Steve Netto

Reported : 08/21/2012

Notes and Definitions

ND	Analyte not detected at or above reporting limit
PQL	Practical Quantitation Limit
MDL	Method Detection Limit
NR	Not Reported
RPD	Relative Percent Difference
CA1	CA-NELAP (CDPH)
CA2	CA-ELAP (CDPH)
OR1	OR-NELAP (OSPHL)
TX1	TX-NELAP (TCEQ)

PROJECT NAME		PROJECT No./TASK No.		SAMPLE CONTAINERS			ANALYSIS REQUESTED			ESTIMATED CONCENTRATION RANGE (ppb) FOR VOA'S			SPECIAL HANDLING		LABORATORY INFORMATION								
RAYTHEON		532.30													ATL								
PROJECT MANAGER STEVE NETTO		Phone No. 858-455-6500													Attn: Rachelle Araga								
QA MANAGER		Fax No. 858-455-6533																					
SAMPLER (SIGNATURE)		SAMPLER (PRINTED) DANIEL MORA																					
SAMPLER (SIGNATURE)		SAMPLER (PRINTED) AMANDA BEAM																					
LAB ID	SAMPLE ID	SAMPLE COLLECTION		MATRIX			PRESERVATION					STANDARD TAT	REMARKS										
		Date	Time	Soil	Ground water	Surface water	Lab H2O	HCl	HNO3	NaOH	H2SO4			Ice									
1202812-01	TB-080912	8/9/12	515			X	X		X	X		3	X	VOCs 8260B	1,4-Dioxane 8270 MOD	1,4-Dioxane 8270 SIM	0-10	10-100	100-1,000	1,000-10,000	>10,000		
-2	TB-080912		505			X	X		X	X		3	X	VOCs 8260B	1,4-Dioxane 8270 MOD	1,4-Dioxane 8270 SIM	X						X SIM
-3	MW-15		912	X			X		X	X		3	X	VOCs 8260B	1,4-Dioxane 8270 MOD	1,4-Dioxane 8270 SIM	X						
-4	MW-08		1728	X			X		X	X		3	X	VOCs 8260B	1,4-Dioxane 8270 MOD	1,4-Dioxane 8270 SIM		X					
-5	MW-18		1458	X			X		X	X		3	X	VOCs 8260B	1,4-Dioxane 8270 MOD	1,4-Dioxane 8270 SIM	X						

Total number of Containers per analysis: 18

Total No. of Containers: 18 of p 1

Relinquished by: HFA Company	Date: <u>8/9/12</u> Time: <u></u>	Received by: Advanced Tech Labs Company	Date: <u>8/9/12</u> Time: <u>1726</u>
Relinquished by: Advanced Tech Labs Company	Date: <u>8/9/12</u> Time: <u>18:12</u>	Received by: Advanced Tech Labs Company	Date: <u>8/9/12</u> Time: <u>18:11</u>

INSTRUCTIONS

- Fill out form completely except for shaded areas (lab use only); sign only after verified for completeness.
- Complete in ballpoint pen. Draw one line through errors, initial and date correction.
- Indicate number of sample containers in analysis request space; indicate choice with ✓ or x.
- Note applicable preservatives, special instructions, and deviations from typical environmental samples.
- Consult project QA documents for specific instructions.

Sample Receipt: No. of containers correct received good condition/cold custody seals secure conforms to COC document

Temp. @ receipt 2.8 °C

Shipment Method: COURIER PICKUP

Send Results to: STEVE NETTO

9171 TOWNE CENTRE DRIVE, SUITE 375
SAN DIEGO, CA 92122 (858) 455-6500

1640 SOUTH STAPLEY DRIVE, SUITE 124
MESA, AZ 85204 (480) 345-0888

1820 EAST RIVER ROAD, SUITE 220
TUCSON, AZ 85718 (520) 881-7300

Send invoice to San Diego, CA
Attn: Accounts Payable

CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST FORM

PROJECT NAME		PROJECT No./TASK No.		SAMPLE CONTAINERS		ANALYSIS REQUESTED		ESTIMATED CONCENTRATION RANGE (ppb) FOR VOAS		SPECIAL HANDLING		LABORATORY INFORMATION													
RAYTHEON MAIN		532.30																							
PROJECT MANAGER STEVE NETTO		Phone No. 858-455-6500																							
QA MANAGER		Fax No. 858-455-6533																							
SAMPLER (SIGNATURE) <i>Amanda Bean</i>		SAMPLER (PRINTED) Amanda Bean																							
		ERIN HUNTER																							
LAB ID	SAMPLE ID	SAMPLE COLLECTION		MATRIX			PRESERVATION					40 ml Amber	1 L Amber	8260B VOCs	8270C (M) 1,4-Dioxane	8270C SIM 1,4-Dioxane (0.2ug/L)	0-10	10-100	100-1,000	STANDARD TAT	MS collected	MSD collected	REMARKS		
		Date	Time	Soil	Ground water	Surface water	Lab H2O	HCl	HNO3	NaOH	H2SO4													Ice	
1202872-6	MW-32A	8/9/12	906	X			X					X													+6 VOA's
	↓		↓	X								X													+2 1L Amber
	-7 MW-32C		1210	X			X					X													
	↓		↓	X								X													
	-8 MW-32B		1348	X			X					X													
	↓		↓	X								X													
	-9 MW-33		1651	X			X					X													
	↓		↓	X								X													
Total number of Containers per analysis:												124		Total No. of Containers: <u>(16) + 8 PZ</u>											
Relinquished by: <i>Amanda Bean</i>		Date 8/9/12	Received by: <i>Erin Hunter</i>		Date 8/9/12	INSTRUCTIONS																Shipment Method: <u>Courier Pickup</u>			
H+A Inc Company		Time	Advanced Tech Labs Company		Time 1726	<ol style="list-style-type: none"> Fill out form completely except for shaded areas (lab use only); sign only after verified for completeness. Complete in ballpoint pen. Draw one line through errors, initial and date correction. Indicate number of sample containers in analysis request space; indicate choice with / or x. Note applicable preservatives, special instructions, and deviations from typical environmental samples. Consult project QA documents for specific instructions. 																Send Results to: <u>STEVE NETTO</u>			
Relinquished by: <i>Erin Hunter</i>		Date 8/9/12	Received by: <i>[Signature]</i>		Date 8/9/12	Sample Receipt: <input type="checkbox"/> No. of containers correct <input type="checkbox"/> custody seals secure																<input checked="" type="checkbox"/> 9171 TOWNE CENTRE DRIVE, SUITE 375 SAN DIEGO, CA 92122 (858) 455-6500 <input type="checkbox"/> 1640 SOUTH STAPLEY DRIVE, SUITE 124 MESA, AZ 85204 (480) 345-0888 <input type="checkbox"/> 1820 EAST RIVER ROAD, SUITE 220 TUCSON, AZ 85718 (520) 881-7300			
Advanced Tech Labs Company		Time 18:12	[Signature] Company		Time 18:12	Temp. @ receipt _____ °C <input type="checkbox"/> received good condition/cold <input type="checkbox"/> conforms to COC document																Send invoice to San Diego, CA Attn: Accounts Payable			

Rachelle Arada

From: Amanda Beam [ABeam@HARGIS.COM]
Sent: Monday, August 13, 2012 8:38 AM
To: Fernando Diwa
Cc: Carmen Aguila; Rachelle Arada; Daniel Mora
Subject: RE: Raytheon, 532.30

Hello Ron,

MW-18 was supposed to be marked for VOC analysis. Please analyze the 3 VOAs for 8260 VOCs. I apologize for the inconvenience.

Thanks,
Amanda

From: Fernando Diwa [mailto:Fernando@atlglobal.com]
Sent: Friday, August 10, 2012 11:44 AM
To: Amanda Beam
Cc: Carmen Aguila; Rachelle Arada
Subject: Raytheon, 532.30

Hi Amada,

We received 3 preserved voa vials fo Sample ID MW-18, but was not marked for 8260B VOCs (see attached coc).

Please advise.

Regards,

Ron

August 22, 2012

Steve Netto
Hargis & Associates, Inc.
9171 Towne Centre Drive, Suite 375
San Diego, CA 92122
Tel: (619) 249-3166
Fax: (858) 455-6533



Re: ATL Work Order Number : 1202830
Client Reference : RAYTHEON, 532.30

Enclosed are the results for sample(s) received on August 10, 2012 by Advanced Technology Laboratories. The sample(s) are tested for the parameters as indicated on the enclosed chain of custody in accordance with applicable laboratory certifications. The laboratory results contained in this report specifically pertains to the sample(s) submitted.

Thank you for the opportunity to serve the needs of your company. If you have any questions, please feel free to contact me or your Project Manager.

Sincerely,

Eddie Rodriguez
Laboratory Director

The cover letter and the case narrative are an integral part of this analytical report and its absence renders the report invalid. The report cannot be reproduced without written permission from the client and Advanced Technology Laboratories.



Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : RAYTHEON, 532.30

Report To : Steve Netto

Reported : 08/22/2012

SUMMARY OF SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
TB-081012	1202830-01	Lab H2O	8/10/12 6:30	8/10/12 15:50
MW-34B	1202830-02	Groundwater	8/10/12 7:44	8/10/12 15:50
MW-36	1202830-03	Groundwater	8/10/12 10:33	8/10/12 15:50
MW-3600	1202830-04	Groundwater	8/10/12 10:45	8/10/12 15:50
MW-28	1202830-05	Groundwater	8/10/12 12:54	8/10/12 15:50
MW-16	1202830-06	Groundwater	8/10/12 8:20	8/10/12 15:50
MW-20	1202830-07	Groundwater	8/09/12 18:08	8/10/12 15:50
MW-30B	1202830-08	Groundwater	8/10/12 10:35	8/10/12 15:50
MW-30A	1202830-09	Groundwater	8/10/12 11:46	8/10/12 15:50

CASE NARRATIVE

Sample Receiving / General Comments

Date of collection for samples MW-36, MW-3600, MW-28 were taken from the sample containers.

One voa vials for sample MW-34B was not labeled.



Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : RAYTHEON, 532.30

Report To : Steve Netto

Reported : 08/22/2012

Client Sample ID TB-081012

Lab ID: 1202830-01

Volatile Organic Compounds by EPA 8260

Analyst: RP

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 11:45	
1,1,1-Trichloroethane	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 11:45	
1,1,2,2-Tetrachloroethane	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 11:45	
1,1,2-Trichloroethane	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 11:45	
1,1-Dichloroethane	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 11:45	
1,1-Dichloroethene	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 11:45	
1,1-Dichloropropene	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 11:45	
1,2,3-Trichloropropane	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 11:45	
1,2,3-Trichlorobenzene	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 11:45	
1,2,4-Trichlorobenzene	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 11:45	
1,2,4-Trimethylbenzene	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 11:45	
1,2-Dibromo-3-chloropropane	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 11:45	
1,2-Dibromoethane	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 11:45	
1,2-Dichlorobenzene	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 11:45	
1,2-Dichloroethane	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 11:45	
1,2-Dichloropropane	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 11:45	
1,3,5-Trimethylbenzene	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 11:45	
1,3-Dichlorobenzene	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 11:45	
1,3-Dichloropropane	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 11:45	
1,4-Dichlorobenzene	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 11:45	
2,2-Dichloropropane	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 11:45	
2-Chlorotoluene	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 11:45	
4-Chlorotoluene	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 11:45	
4-Isopropyltoluene	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 11:45	
Benzene	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 11:45	
Bromobenzene	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 11:45	
Bromodichloromethane	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 11:45	
Bromoform	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 11:45	
Bromomethane	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 11:45	
Carbon tetrachloride	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 11:45	
Chlorobenzene	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 11:45	
Chloroethane	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 11:45	
Chloroform	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 11:45	
Chloromethane	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 11:45	
cis-1,2-Dichloroethene	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 11:45	
cis-1,3-Dichloropropene	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 11:45	
Dibromochloromethane	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 11:45	



Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : RAYTHEON, 532.30

Report To : Steve Netto

Reported : 08/22/2012

Client Sample ID TB-081012

Lab ID: 1202830-01

Volatile Organic Compounds by EPA 8260

Analyst: RP

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Dibromomethane	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 11:45	
Dichlorodifluoromethane	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 11:45	
Ethylbenzene	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 11:45	
Hexachlorobutadiene	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 11:45	
Isopropylbenzene	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 11:45	
m,p-Xylene	ND	1.0	NA	1	B2H0309	08/15/2012	08/15/12 11:45	
Methylene chloride	ND	1.0	NA	1	B2H0309	08/15/2012	08/15/12 11:45	
n-Butylbenzene	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 11:45	
n-Propylbenzene	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 11:45	
Naphthalene	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 11:45	
o-Xylene	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 11:45	
sec-Butylbenzene	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 11:45	
Styrene	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 11:45	
tert-Butylbenzene	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 11:45	
Tetrachloroethene	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 11:45	
Toluene	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 11:45	
trans-1,2-Dichloroethene	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 11:45	
Trichloroethene	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 11:45	
Trichlorofluoromethane	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 11:45	
Vinyl chloride	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 11:45	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>118 %</i>		<i>70 - 130</i>		B2H0309	08/15/2012	<i>08/15/12 11:45</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>97.5 %</i>		<i>70 - 130</i>		B2H0309	08/15/2012	<i>08/15/12 11:45</i>	
<i>Surrogate: Dibromofluoromethane</i>	<i>110 %</i>		<i>70 - 130</i>		B2H0309	08/15/2012	<i>08/15/12 11:45</i>	
<i>Surrogate: Toluene-d8</i>	<i>103 %</i>		<i>70 - 130</i>		B2H0309	08/15/2012	<i>08/15/12 11:45</i>	



Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : RAYTHEON, 532.30

Report To : Steve Netto

Reported : 08/22/2012

Client Sample ID MW-34B

Lab ID: 1202830-02

Volatile Organic Compounds by EPA 8260

Analyst: RP

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	5.0	NA	10	B2H0309	08/15/2012	08/15/12 12:07	D6
1,1,1-Trichloroethane	ND	5.0	NA	10	B2H0309	08/15/2012	08/15/12 12:07	D6
1,1,2,2-Tetrachloroethane	ND	5.0	NA	10	B2H0309	08/15/2012	08/15/12 12:07	D6
1,1,2-Trichloroethane	ND	5.0	NA	10	B2H0309	08/15/2012	08/15/12 12:07	D6
1,1-Dichloroethane	9.8	5.0	NA	10	B2H0309	08/15/2012	08/15/12 12:07	D6
1,1-Dichloroethene	1100	10	NA	20	B2H0309	08/15/2012	08/15/12 12:58	
1,1-Dichloropropene	ND	5.0	NA	10	B2H0309	08/15/2012	08/15/12 12:07	D6
1,2,3-Trichloropropane	ND	5.0	NA	10	B2H0309	08/15/2012	08/15/12 12:07	D6
1,2,3-Trichlorobenzene	ND	5.0	NA	10	B2H0309	08/15/2012	08/15/12 12:07	D6
1,2,4-Trichlorobenzene	ND	5.0	NA	10	B2H0309	08/15/2012	08/15/12 12:07	D6
1,2,4-Trimethylbenzene	ND	5.0	NA	10	B2H0309	08/15/2012	08/15/12 12:07	D6
1,2-Dibromo-3-chloropropane	ND	5.0	NA	10	B2H0309	08/15/2012	08/15/12 12:07	D6
1,2-Dibromoethane	ND	5.0	NA	10	B2H0309	08/15/2012	08/15/12 12:07	D6
1,2-Dichlorobenzene	ND	5.0	NA	10	B2H0309	08/15/2012	08/15/12 12:07	D6
1,2-Dichloroethane	ND	5.0	NA	10	B2H0309	08/15/2012	08/15/12 12:07	D6
1,2-Dichloropropane	ND	5.0	NA	10	B2H0309	08/15/2012	08/15/12 12:07	D6
1,3,5-Trimethylbenzene	ND	5.0	NA	10	B2H0309	08/15/2012	08/15/12 12:07	D6
1,3-Dichlorobenzene	ND	5.0	NA	10	B2H0309	08/15/2012	08/15/12 12:07	D6
1,3-Dichloropropane	ND	5.0	NA	10	B2H0309	08/15/2012	08/15/12 12:07	D6
1,4-Dichlorobenzene	ND	5.0	NA	10	B2H0309	08/15/2012	08/15/12 12:07	D6
2,2-Dichloropropane	ND	5.0	NA	10	B2H0309	08/15/2012	08/15/12 12:07	D6
2-Chlorotoluene	ND	5.0	NA	10	B2H0309	08/15/2012	08/15/12 12:07	D6
4-Chlorotoluene	ND	5.0	NA	10	B2H0309	08/15/2012	08/15/12 12:07	D6
4-Isopropyltoluene	ND	5.0	NA	10	B2H0309	08/15/2012	08/15/12 12:07	D6
Benzene	ND	5.0	NA	10	B2H0309	08/15/2012	08/15/12 12:07	D6
Bromobenzene	ND	5.0	NA	10	B2H0309	08/15/2012	08/15/12 12:07	D6
Bromodichloromethane	ND	5.0	NA	10	B2H0309	08/15/2012	08/15/12 12:07	D6
Bromoform	ND	5.0	NA	10	B2H0309	08/15/2012	08/15/12 12:07	D6
Bromomethane	ND	5.0	NA	10	B2H0309	08/15/2012	08/15/12 12:07	D6
Carbon tetrachloride	ND	5.0	NA	10	B2H0309	08/15/2012	08/15/12 12:07	D6
Chlorobenzene	ND	5.0	NA	10	B2H0309	08/15/2012	08/15/12 12:07	D6
Chloroethane	ND	5.0	NA	10	B2H0309	08/15/2012	08/15/12 12:07	D6
Chloroform	ND	5.0	NA	10	B2H0309	08/15/2012	08/15/12 12:07	D6
Chloromethane	ND	5.0	NA	10	B2H0309	08/15/2012	08/15/12 12:07	D6
cis-1,2-Dichloroethene	ND	5.0	NA	10	B2H0309	08/15/2012	08/15/12 12:07	D6
cis-1,3-Dichloropropane	ND	5.0	NA	10	B2H0309	08/15/2012	08/15/12 12:07	D6
Dibromochloromethane	ND	5.0	NA	10	B2H0309	08/15/2012	08/15/12 12:07	D6



Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : RAYTHEON, 532.30

Report To : Steve Netto

Reported : 08/22/2012

Client Sample ID MW-34B

Lab ID: 1202830-02

Volatile Organic Compounds by EPA 8260

Analyst: RP

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Dibromomethane	ND	5.0	NA	10	B2H0309	08/15/2012	08/15/12 12:07	D6
Dichlorodifluoromethane	ND	5.0	NA	10	B2H0309	08/15/2012	08/15/12 12:07	D6
Ethylbenzene	ND	5.0	NA	10	B2H0309	08/15/2012	08/15/12 12:07	D6
Hexachlorobutadiene	ND	5.0	NA	10	B2H0309	08/15/2012	08/15/12 12:07	D6
Isopropylbenzene	ND	5.0	NA	10	B2H0309	08/15/2012	08/15/12 12:07	D6
m,p-Xylene	ND	10	NA	10	B2H0309	08/15/2012	08/15/12 12:07	D6
Methylene chloride	ND	10	NA	10	B2H0309	08/15/2012	08/15/12 12:07	D6
n-Butylbenzene	ND	5.0	NA	10	B2H0309	08/15/2012	08/15/12 12:07	D6
n-Propylbenzene	ND	5.0	NA	10	B2H0309	08/15/2012	08/15/12 12:07	D6
Naphthalene	ND	5.0	NA	10	B2H0309	08/15/2012	08/15/12 12:07	D6
o-Xylene	ND	5.0	NA	10	B2H0309	08/15/2012	08/15/12 12:07	D6
sec-Butylbenzene	ND	5.0	NA	10	B2H0309	08/15/2012	08/15/12 12:07	D6
Styrene	ND	5.0	NA	10	B2H0309	08/15/2012	08/15/12 12:07	D6
tert-Butylbenzene	ND	5.0	NA	10	B2H0309	08/15/2012	08/15/12 12:07	D6
Tetrachloroethene	ND	5.0	NA	10	B2H0309	08/15/2012	08/15/12 12:07	D6
Toluene	ND	5.0	NA	10	B2H0309	08/15/2012	08/15/12 12:07	D6
trans-1,2-Dichloroethene	ND	5.0	NA	10	B2H0309	08/15/2012	08/15/12 12:07	D6
Trichloroethene	ND	5.0	NA	10	B2H0309	08/15/2012	08/15/12 12:07	D6
Trichlorofluoromethane	ND	5.0	NA	10	B2H0309	08/15/2012	08/15/12 12:07	D6
Vinyl chloride	ND	5.0	NA	10	B2H0309	08/15/2012	08/15/12 12:07	D6
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>116 %</i>		<i>70 - 130</i>		B2H0309	08/15/2012	<i>08/15/12 12:58</i>	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>115 %</i>		<i>70 - 130</i>		B2H0309	08/15/2012	<i>08/15/12 12:07</i>	D6
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>96.5 %</i>		<i>70 - 130</i>		B2H0309	08/15/2012	<i>08/15/12 12:58</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>96.7 %</i>		<i>70 - 130</i>		B2H0309	08/15/2012	<i>08/15/12 12:07</i>	D6
<i>Surrogate: Dibromofluoromethane</i>	<i>109 %</i>		<i>70 - 130</i>		B2H0309	08/15/2012	<i>08/15/12 12:07</i>	D6
<i>Surrogate: Dibromofluoromethane</i>	<i>111 %</i>		<i>70 - 130</i>		B2H0309	08/15/2012	<i>08/15/12 12:58</i>	
<i>Surrogate: Toluene-d8</i>	<i>101 %</i>		<i>70 - 130</i>		B2H0309	08/15/2012	<i>08/15/12 12:58</i>	
<i>Surrogate: Toluene-d8</i>	<i>102 %</i>		<i>70 - 130</i>		B2H0309	08/15/2012	<i>08/15/12 12:07</i>	D6



Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego, CA 92122

Project Number : RAYTHEON, 532.30

Report To : Steve Netto

Reported : 08/22/2012

Client Sample ID MW-34B

Lab ID: 1202830-02

1,4-Dioxane by EPA 8270: Isotope Dilution Technique

Analyst: BB

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,4-Dioxane	250	2.0	NA	1	B2H0349	08/16/2012	08/22/12 12:10	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	38.0 %		37 - 93		B2H0349	08/16/2012	08/22/12 12:10	
<i>Surrogate: 2-Fluorobiphenyl</i>	45.0 %		51 - 100		B2H0349	08/16/2012	08/22/12 12:10	S6
<i>Surrogate: 4-Terphenyl-d14</i>	86.1 %		58 - 113		B2H0349	08/16/2012	08/22/12 12:10	
<i>Surrogate: Nitrobenzene-d5</i>	44.1 %		39 - 95		B2H0349	08/16/2012	08/22/12 12:10	



Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : RAYTHEON, 532.30

Report To : Steve Netto

Reported : 08/22/2012

Client Sample ID MW-36

Lab ID: 1202830-03

Volatile Organic Compounds by EPA 8260

Analyst: RP

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 16:34	
1,1,1-Trichloroethane	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 16:34	
1,1,2,2-Tetrachloroethane	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 16:34	
1,1,2-Trichloroethane	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 16:34	
1,1-Dichloroethane	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 16:34	
1,1-Dichloroethene	19	0.50	NA	1	B2H0309	08/15/2012	08/15/12 16:34	
1,1-Dichloropropene	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 16:34	
1,2,3-Trichloropropane	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 16:34	
1,2,3-Trichlorobenzene	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 16:34	
1,2,4-Trichlorobenzene	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 16:34	
1,2,4-Trimethylbenzene	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 16:34	
1,2-Dibromo-3-chloropropane	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 16:34	
1,2-Dibromoethane	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 16:34	
1,2-Dichlorobenzene	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 16:34	
1,2-Dichloroethane	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 16:34	
1,2-Dichloropropane	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 16:34	
1,3,5-Trimethylbenzene	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 16:34	
1,3-Dichlorobenzene	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 16:34	
1,3-Dichloropropane	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 16:34	
1,4-Dichlorobenzene	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 16:34	
2,2-Dichloropropane	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 16:34	
2-Chlorotoluene	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 16:34	
4-Chlorotoluene	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 16:34	
4-Isopropyltoluene	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 16:34	
Benzene	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 16:34	
Bromobenzene	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 16:34	
Bromodichloromethane	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 16:34	
Bromoform	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 16:34	
Bromomethane	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 16:34	
Carbon tetrachloride	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 16:34	
Chlorobenzene	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 16:34	
Chloroethane	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 16:34	
Chloroform	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 16:34	
Chloromethane	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 16:34	
cis-1,2-Dichloroethene	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 16:34	
cis-1,3-Dichloropropene	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 16:34	
Dibromochloromethane	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 16:34	



Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : RAYTHEON, 532.30

Report To : Steve Netto

Reported : 08/22/2012

Client Sample ID MW-36

Lab ID: 1202830-03

Volatile Organic Compounds by EPA 8260

Analyst: RP

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Dibromomethane	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 16:34	
Dichlorodifluoromethane	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 16:34	
Ethylbenzene	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 16:34	
Hexachlorobutadiene	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 16:34	
Isopropylbenzene	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 16:34	
m,p-Xylene	ND	1.0	NA	1	B2H0309	08/15/2012	08/15/12 16:34	
Methylene chloride	ND	1.0	NA	1	B2H0309	08/15/2012	08/15/12 16:34	
n-Butylbenzene	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 16:34	
n-Propylbenzene	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 16:34	
Naphthalene	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 16:34	
o-Xylene	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 16:34	
sec-Butylbenzene	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 16:34	
Styrene	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 16:34	
tert-Butylbenzene	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 16:34	
Tetrachloroethene	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 16:34	
Toluene	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 16:34	
trans-1,2-Dichloroethene	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 16:34	
Trichloroethene	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 16:34	
Trichlorofluoromethane	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 16:34	
Vinyl chloride	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 16:34	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>120 %</i>		<i>70 - 130</i>		B2H0309	08/15/2012	<i>08/15/12 16:34</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>95.9 %</i>		<i>70 - 130</i>		B2H0309	08/15/2012	<i>08/15/12 16:34</i>	
<i>Surrogate: Dibromofluoromethane</i>	<i>111 %</i>		<i>70 - 130</i>		B2H0309	08/15/2012	<i>08/15/12 16:34</i>	
<i>Surrogate: Toluene-d8</i>	<i>102 %</i>		<i>70 - 130</i>		B2H0309	08/15/2012	<i>08/15/12 16:34</i>	



Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego, CA 92122

Project Number : RAYTHEON, 532.30

Report To : Steve Netto

Reported : 08/22/2012

Client Sample ID MW-36

Lab ID: 1202830-03

1,4-Dioxane by EPA 8270/SIM: Isotope Dilution Technique

Analyst: BB

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,4-Dioxane	ND	0.20	NA	1	B2H0298	08/14/2012	08/17/12 13:46	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	<i>49.1 %</i>		<i>36 - 107</i>		B2H0298	08/14/2012	<i>08/17/12 13:46</i>	
<i>Surrogate: 2-Fluorobiphenyl</i>	<i>58.0 %</i>		<i>42 - 120</i>		B2H0298	08/14/2012	<i>08/17/12 13:46</i>	
<i>Surrogate: 4-Terphenyl-d14</i>	<i>94.3 %</i>		<i>67 - 142</i>		B2H0298	08/14/2012	<i>08/17/12 13:46</i>	
<i>Surrogate: Nitrobenzene-d5</i>	<i>37.2 %</i>		<i>36 - 130</i>		B2H0298	08/14/2012	<i>08/17/12 13:46</i>	



Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : RAYTHEON, 532.30

Report To : Steve Netto

Reported : 08/22/2012

Client Sample ID MW-3600

Lab ID: 1202830-04

Volatile Organic Compounds by EPA 8260

Analyst: RP

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 18:16	
1,1,1-Trichloroethane	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 18:16	
1,1,2,2-Tetrachloroethane	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 18:16	
1,1,2-Trichloroethane	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 18:16	
1,1-Dichloroethane	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 18:16	
1,1-Dichloroethene	19	0.50	NA	1	B2H0309	08/15/2012	08/15/12 18:16	
1,1-Dichloropropene	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 18:16	
1,2,3-Trichloropropane	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 18:16	
1,2,3-Trichlorobenzene	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 18:16	
1,2,4-Trichlorobenzene	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 18:16	
1,2,4-Trimethylbenzene	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 18:16	
1,2-Dibromo-3-chloropropane	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 18:16	
1,2-Dibromoethane	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 18:16	
1,2-Dichlorobenzene	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 18:16	
1,2-Dichloroethane	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 18:16	
1,2-Dichloropropane	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 18:16	
1,3,5-Trimethylbenzene	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 18:16	
1,3-Dichlorobenzene	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 18:16	
1,3-Dichloropropane	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 18:16	
1,4-Dichlorobenzene	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 18:16	
2,2-Dichloropropane	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 18:16	
2-Chlorotoluene	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 18:16	
4-Chlorotoluene	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 18:16	
4-Isopropyltoluene	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 18:16	
Benzene	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 18:16	
Bromobenzene	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 18:16	
Bromodichloromethane	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 18:16	
Bromoform	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 18:16	
Bromomethane	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 18:16	
Carbon tetrachloride	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 18:16	
Chlorobenzene	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 18:16	
Chloroethane	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 18:16	
Chloroform	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 18:16	
Chloromethane	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 18:16	
cis-1,2-Dichloroethene	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 18:16	
cis-1,3-Dichloropropane	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 18:16	
Dibromochloromethane	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 18:16	



Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : RAYTHEON, 532.30

Report To : Steve Netto

Reported : 08/22/2012

Client Sample ID MW-3600

Lab ID: 1202830-04

Volatile Organic Compounds by EPA 8260

Analyst: RP

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Dibromomethane	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 18:16	
Dichlorodifluoromethane	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 18:16	
Ethylbenzene	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 18:16	
Hexachlorobutadiene	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 18:16	
Isopropylbenzene	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 18:16	
m,p-Xylene	ND	1.0	NA	1	B2H0309	08/15/2012	08/15/12 18:16	
Methylene chloride	ND	1.0	NA	1	B2H0309	08/15/2012	08/15/12 18:16	
n-Butylbenzene	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 18:16	
n-Propylbenzene	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 18:16	
Naphthalene	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 18:16	
o-Xylene	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 18:16	
sec-Butylbenzene	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 18:16	
Styrene	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 18:16	
tert-Butylbenzene	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 18:16	
Tetrachloroethene	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 18:16	
Toluene	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 18:16	
trans-1,2-Dichloroethene	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 18:16	
Trichloroethene	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 18:16	
Trichlorofluoromethane	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 18:16	
Vinyl chloride	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 18:16	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>122 %</i>		<i>70 - 130</i>		B2H0309	08/15/2012	<i>08/15/12 18:16</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>98.7 %</i>		<i>70 - 130</i>		B2H0309	08/15/2012	<i>08/15/12 18:16</i>	
<i>Surrogate: Dibromofluoromethane</i>	<i>113 %</i>		<i>70 - 130</i>		B2H0309	08/15/2012	<i>08/15/12 18:16</i>	
<i>Surrogate: Toluene-d8</i>	<i>102 %</i>		<i>70 - 130</i>		B2H0309	08/15/2012	<i>08/15/12 18:16</i>	



Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : RAYTHEON, 532.30

Report To : Steve Netto

Reported : 08/22/2012

Client Sample ID MW-3600

Lab ID: 1202830-04

1,4-Dioxane by EPA 8270/SIM: Isotope Dilution Technique

Analyst: BB

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,4-Dioxane	ND	0.20	NA	1	B2H0298	08/14/2012	08/17/12 14:15	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	49.9 %		36 - 107		B2H0298	08/14/2012	08/17/12 14:15	
<i>Surrogate: 2-Fluorobiphenyl</i>	55.7 %		42 - 120		B2H0298	08/14/2012	08/17/12 14:15	
<i>Surrogate: 4-Terphenyl-d14</i>	78.9 %		67 - 142		B2H0298	08/14/2012	08/17/12 14:15	
<i>Surrogate: Nitrobenzene-d5</i>	38.5 %		36 - 130		B2H0298	08/14/2012	08/17/12 14:15	



Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : RAYTHEON, 532.30

Report To : Steve Netto

Reported : 08/22/2012

Client Sample ID MW-28

Lab ID: 1202830-05

Volatile Organic Compounds by EPA 8260

Analyst: RP

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 17:15	
1,1,1-Trichloroethane	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 17:15	
1,1,2,2-Tetrachloroethane	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 17:15	
1,1,2-Trichloroethane	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 17:15	
1,1-Dichloroethane	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 17:15	
1,1-Dichloroethene	2.4	0.50	NA	1	B2H0309	08/15/2012	08/15/12 17:15	
1,1-Dichloropropene	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 17:15	
1,2,3-Trichloropropane	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 17:15	
1,2,3-Trichlorobenzene	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 17:15	
1,2,4-Trichlorobenzene	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 17:15	
1,2,4-Trimethylbenzene	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 17:15	
1,2-Dibromo-3-chloropropane	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 17:15	
1,2-Dibromoethane	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 17:15	
1,2-Dichlorobenzene	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 17:15	
1,2-Dichloroethane	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 17:15	
1,2-Dichloropropane	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 17:15	
1,3,5-Trimethylbenzene	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 17:15	
1,3-Dichlorobenzene	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 17:15	
1,3-Dichloropropane	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 17:15	
1,4-Dichlorobenzene	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 17:15	
2,2-Dichloropropane	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 17:15	
2-Chlorotoluene	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 17:15	
4-Chlorotoluene	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 17:15	
4-Isopropyltoluene	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 17:15	
Benzene	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 17:15	
Bromobenzene	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 17:15	
Bromodichloromethane	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 17:15	
Bromoform	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 17:15	
Bromomethane	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 17:15	
Carbon tetrachloride	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 17:15	
Chlorobenzene	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 17:15	
Chloroethane	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 17:15	
Chloroform	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 17:15	
Chloromethane	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 17:15	
cis-1,2-Dichloroethene	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 17:15	
cis-1,3-Dichloropropane	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 17:15	
Dibromochloromethane	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 17:15	



Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego, CA 92122

Project Number : RAYTHEON, 532.30

Report To : Steve Netto

Reported : 08/22/2012

Client Sample ID MW-28

Lab ID: 1202830-05

Volatile Organic Compounds by EPA 8260

Analyst: RP

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Dibromomethane	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 17:15	
Dichlorodifluoromethane	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 17:15	
Ethylbenzene	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 17:15	
Hexachlorobutadiene	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 17:15	
Isopropylbenzene	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 17:15	
m,p-Xylene	ND	1.0	NA	1	B2H0309	08/15/2012	08/15/12 17:15	
Methylene chloride	ND	1.0	NA	1	B2H0309	08/15/2012	08/15/12 17:15	
n-Butylbenzene	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 17:15	
n-Propylbenzene	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 17:15	
Naphthalene	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 17:15	
o-Xylene	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 17:15	
sec-Butylbenzene	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 17:15	
Styrene	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 17:15	
tert-Butylbenzene	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 17:15	
Tetrachloroethene	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 17:15	
Toluene	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 17:15	
trans-1,2-Dichloroethene	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 17:15	
Trichloroethene	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 17:15	
Trichlorofluoromethane	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 17:15	
Vinyl chloride	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 17:15	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>121 %</i>		<i>70 - 130</i>		B2H0309	08/15/2012	<i>08/15/12 17:15</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>97.7 %</i>		<i>70 - 130</i>		B2H0309	08/15/2012	<i>08/15/12 17:15</i>	
<i>Surrogate: Dibromofluoromethane</i>	<i>111 %</i>		<i>70 - 130</i>		B2H0309	08/15/2012	<i>08/15/12 17:15</i>	
<i>Surrogate: Toluene-d8</i>	<i>101 %</i>		<i>70 - 130</i>		B2H0309	08/15/2012	<i>08/15/12 17:15</i>	



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9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : RAYTHEON, 532.30

Report To : Steve Netto

Reported : 08/22/2012

Client Sample ID MW-28

Lab ID: 1202830-05

1,4-Dioxane by EPA 8270/SIM: Isotope Dilution Technique

Analyst: BB

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,4-Dioxane	ND	0.20	NA	1	B2H0298	08/14/2012	08/15/12 14:17	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	<i>80.9 %</i>		<i>36 - 107</i>		B2H0298	08/14/2012	<i>08/15/12 14:17</i>	
<i>Surrogate: 2-Fluorobiphenyl</i>	<i>91.1 %</i>		<i>42 - 120</i>		B2H0298	08/14/2012	<i>08/15/12 14:17</i>	
<i>Surrogate: 4-Terphenyl-d14</i>	<i>97.5 %</i>		<i>67 - 142</i>		B2H0298	08/14/2012	<i>08/15/12 14:17</i>	
<i>Surrogate: Nitrobenzene-d5</i>	<i>57.9 %</i>		<i>36 - 130</i>		B2H0298	08/14/2012	<i>08/15/12 14:17</i>	



Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : RAYTHEON, 532.30

Report To : Steve Netto

Reported : 08/22/2012

Client Sample ID MW-16

Lab ID: 1202830-06

Volatile Organic Compounds by EPA 8260

Analyst: RP

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 18:57	
1,1,1-Trichloroethane	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 18:57	
1,1,2,2-Tetrachloroethane	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 18:57	
1,1,2-Trichloroethane	0.52	0.50	NA	1	B2H0309	08/15/2012	08/15/12 18:57	
1,1-Dichloroethane	3.5	0.50	NA	1	B2H0309	08/15/2012	08/15/12 18:57	
1,1-Dichloroethene	560	10	NA	20	B2H0366	08/17/2012	08/17/12 11:58	
1,1-Dichloropropene	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 18:57	
1,2,3-Trichloropropane	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 18:57	
1,2,3-Trichlorobenzene	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 18:57	
1,2,4-Trichlorobenzene	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 18:57	
1,2,4-Trimethylbenzene	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 18:57	
1,2-Dibromo-3-chloropropane	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 18:57	
1,2-Dibromoethane	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 18:57	
1,2-Dichlorobenzene	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 18:57	
1,2-Dichloroethane	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 18:57	
1,2-Dichloropropane	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 18:57	
1,3,5-Trimethylbenzene	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 18:57	
1,3-Dichlorobenzene	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 18:57	
1,3-Dichloropropane	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 18:57	
1,4-Dichlorobenzene	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 18:57	
2,2-Dichloropropane	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 18:57	
2-Chlorotoluene	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 18:57	
4-Chlorotoluene	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 18:57	
4-Isopropyltoluene	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 18:57	
Benzene	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 18:57	
Bromobenzene	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 18:57	
Bromodichloromethane	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 18:57	
Bromoform	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 18:57	
Bromomethane	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 18:57	
Carbon tetrachloride	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 18:57	
Chlorobenzene	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 18:57	
Chloroethane	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 18:57	
Chloroform	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 18:57	
Chloromethane	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 18:57	
cis-1,2-Dichloroethene	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 18:57	
cis-1,3-Dichloropropane	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 18:57	
Dibromochloromethane	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 18:57	



Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego, CA 92122

Project Number : RAYTHEON, 532.30

Report To : Steve Netto

Reported : 08/22/2012

Client Sample ID MW-16

Lab ID: 1202830-06

Volatile Organic Compounds by EPA 8260

Analyst: RP

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Dibromomethane	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 18:57	
Dichlorodifluoromethane	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 18:57	
Ethylbenzene	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 18:57	
Hexachlorobutadiene	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 18:57	
Isopropylbenzene	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 18:57	
m,p-Xylene	ND	1.0	NA	1	B2H0309	08/15/2012	08/15/12 18:57	
Methylene chloride	ND	1.0	NA	1	B2H0309	08/15/2012	08/15/12 18:57	
n-Butylbenzene	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 18:57	
n-Propylbenzene	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 18:57	
Naphthalene	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 18:57	
o-Xylene	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 18:57	
sec-Butylbenzene	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 18:57	
Styrene	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 18:57	
tert-Butylbenzene	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 18:57	
Tetrachloroethene	0.57	0.50	NA	1	B2H0309	08/15/2012	08/15/12 18:57	
Toluene	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 18:57	
trans-1,2-Dichloroethene	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 18:57	
Trichloroethene	4.2	0.50	NA	1	B2H0309	08/15/2012	08/15/12 18:57	
Trichlorofluoromethane	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 18:57	
Vinyl chloride	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 18:57	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>106 %</i>		<i>70 - 130</i>		B2H0366	08/17/2012	<i>08/17/12 11:58</i>	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>122 %</i>		<i>70 - 130</i>		B2H0309	08/15/2012	<i>08/15/12 18:57</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>98.4 %</i>		<i>70 - 130</i>		B2H0366	08/17/2012	<i>08/17/12 11:58</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>98.4 %</i>		<i>70 - 130</i>		B2H0309	08/15/2012	<i>08/15/12 18:57</i>	
<i>Surrogate: Dibromofluoromethane</i>	<i>113 %</i>		<i>70 - 130</i>		B2H0309	08/15/2012	<i>08/15/12 18:57</i>	
<i>Surrogate: Dibromofluoromethane</i>	<i>105 %</i>		<i>70 - 130</i>		B2H0366	08/17/2012	<i>08/17/12 11:58</i>	
<i>Surrogate: Toluene-d8</i>	<i>100 %</i>		<i>70 - 130</i>		B2H0366	08/17/2012	<i>08/17/12 11:58</i>	
<i>Surrogate: Toluene-d8</i>	<i>102 %</i>		<i>70 - 130</i>		B2H0309	08/15/2012	<i>08/15/12 18:57</i>	



Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego, CA 92122

Project Number : RAYTHEON, 532.30

Report To : Steve Netto

Reported : 08/22/2012

Client Sample ID MW-16

Lab ID: 1202830-06

1,4-Dioxane by EPA 8270: Isotope Dilution Technique

Analyst: BB

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,4-Dioxane	24	2.0	NA	1	B2H0349	08/16/2012	08/22/12 11:45	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	<i>71.1 %</i>		<i>37 - 93</i>		B2H0349	08/16/2012	<i>08/22/12 11:45</i>	
<i>Surrogate: 2-Fluorobiphenyl</i>	<i>75.8 %</i>		<i>51 - 100</i>		B2H0349	08/16/2012	<i>08/22/12 11:45</i>	
<i>Surrogate: 4-Terphenyl-d14</i>	<i>92.6 %</i>		<i>58 - 113</i>		B2H0349	08/16/2012	<i>08/22/12 11:45</i>	
<i>Surrogate: Nitrobenzene-d5</i>	<i>77.0 %</i>		<i>39 - 95</i>		B2H0349	08/16/2012	<i>08/22/12 11:45</i>	



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9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : RAYTHEON, 532.30

Report To : Steve Netto

Reported : 08/22/2012

Client Sample ID MW-20

Lab ID: 1202830-07

Volatile Organic Compounds by EPA 8260

Analyst: RP

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 17:35	
1,1,1-Trichloroethane	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 17:35	
1,1,2,2-Tetrachloroethane	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 17:35	
1,1,2-Trichloroethane	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 17:35	
1,1-Dichloroethane	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 17:35	
1,1-Dichloroethene	3.6	0.50	NA	1	B2H0309	08/15/2012	08/15/12 17:35	
1,1-Dichloropropene	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 17:35	
1,2,3-Trichloropropane	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 17:35	
1,2,3-Trichlorobenzene	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 17:35	
1,2,4-Trichlorobenzene	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 17:35	
1,2,4-Trimethylbenzene	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 17:35	
1,2-Dibromo-3-chloropropane	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 17:35	
1,2-Dibromoethane	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 17:35	
1,2-Dichlorobenzene	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 17:35	
1,2-Dichloroethane	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 17:35	
1,2-Dichloropropane	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 17:35	
1,3,5-Trimethylbenzene	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 17:35	
1,3-Dichlorobenzene	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 17:35	
1,3-Dichloropropane	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 17:35	
1,4-Dichlorobenzene	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 17:35	
2,2-Dichloropropane	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 17:35	
2-Chlorotoluene	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 17:35	
4-Chlorotoluene	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 17:35	
4-Isopropyltoluene	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 17:35	
Benzene	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 17:35	
Bromobenzene	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 17:35	
Bromodichloromethane	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 17:35	
Bromoform	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 17:35	
Bromomethane	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 17:35	
Carbon tetrachloride	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 17:35	
Chlorobenzene	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 17:35	
Chloroethane	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 17:35	
Chloroform	0.53	0.50	NA	1	B2H0309	08/15/2012	08/15/12 17:35	
Chloromethane	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 17:35	
cis-1,2-Dichloroethene	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 17:35	
cis-1,3-Dichloropropane	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 17:35	
Dibromochloromethane	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 17:35	



Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego, CA 92122

Project Number : RAYTHEON, 532.30

Report To : Steve Netto

Reported : 08/22/2012

Client Sample ID MW-20

Lab ID: 1202830-07

Volatile Organic Compounds by EPA 8260

Analyst: RP

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Dibromomethane	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 17:35	
Dichlorodifluoromethane	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 17:35	
Ethylbenzene	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 17:35	
Hexachlorobutadiene	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 17:35	
Isopropylbenzene	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 17:35	
m,p-Xylene	ND	1.0	NA	1	B2H0309	08/15/2012	08/15/12 17:35	
Methylene chloride	ND	1.0	NA	1	B2H0309	08/15/2012	08/15/12 17:35	
n-Butylbenzene	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 17:35	
n-Propylbenzene	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 17:35	
Naphthalene	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 17:35	
o-Xylene	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 17:35	
sec-Butylbenzene	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 17:35	
Styrene	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 17:35	
tert-Butylbenzene	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 17:35	
Tetrachloroethene	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 17:35	
Toluene	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 17:35	
trans-1,2-Dichloroethene	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 17:35	
Trichloroethene	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 17:35	
Trichlorofluoromethane	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 17:35	
Vinyl chloride	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 17:35	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>121 %</i>		<i>70 - 130</i>		B2H0309	08/15/2012	<i>08/15/12 17:35</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>98.4 %</i>		<i>70 - 130</i>		B2H0309	08/15/2012	<i>08/15/12 17:35</i>	
<i>Surrogate: Dibromofluoromethane</i>	<i>112 %</i>		<i>70 - 130</i>		B2H0309	08/15/2012	<i>08/15/12 17:35</i>	
<i>Surrogate: Toluene-d8</i>	<i>102 %</i>		<i>70 - 130</i>		B2H0309	08/15/2012	<i>08/15/12 17:35</i>	



Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : RAYTHEON, 532.30

Report To : Steve Netto

Reported : 08/22/2012

Client Sample ID MW-20

Lab ID: 1202830-07

1,4-Dioxane by EPA 8270/SIM: Isotope Dilution Technique

Analyst: BB

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,4-Dioxane	ND	0.20	NA	1	B2H0298	08/14/2012	08/15/12 14:46	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	<i>72.4 %</i>		<i>36 - 107</i>		B2H0298	08/14/2012	<i>08/15/12 14:46</i>	
<i>Surrogate: 2-Fluorobiphenyl</i>	<i>78.8 %</i>		<i>42 - 120</i>		B2H0298	08/14/2012	<i>08/15/12 14:46</i>	
<i>Surrogate: 4-Terphenyl-d14</i>	<i>98.3 %</i>		<i>67 - 142</i>		B2H0298	08/14/2012	<i>08/15/12 14:46</i>	
<i>Surrogate: Nitrobenzene-d5</i>	<i>49.0 %</i>		<i>36 - 130</i>		B2H0298	08/14/2012	<i>08/15/12 14:46</i>	



Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : RAYTHEON, 532.30

Report To : Steve Netto

Reported : 08/22/2012

Client Sample ID MW-30B

Lab ID: 1202830-08

Volatile Organic Compounds by EPA 8260

Analyst: RP

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 15:50	
1,1,1-Trichloroethane	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 15:50	
1,1,2,2-Tetrachloroethane	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 15:50	
1,1,2-Trichloroethane	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 15:50	
1,1-Dichloroethane	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 15:50	
1,1-Dichloroethene	21	0.50	NA	1	B2H0309	08/15/2012	08/15/12 15:50	
1,1-Dichloropropene	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 15:50	
1,2,3-Trichloropropane	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 15:50	
1,2,3-Trichlorobenzene	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 15:50	
1,2,4-Trichlorobenzene	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 15:50	
1,2,4-Trimethylbenzene	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 15:50	
1,2-Dibromo-3-chloropropane	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 15:50	
1,2-Dibromoethane	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 15:50	
1,2-Dichlorobenzene	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 15:50	
1,2-Dichloroethane	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 15:50	
1,2-Dichloropropane	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 15:50	
1,3,5-Trimethylbenzene	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 15:50	
1,3-Dichlorobenzene	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 15:50	
1,3-Dichloropropane	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 15:50	
1,4-Dichlorobenzene	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 15:50	
2,2-Dichloropropane	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 15:50	
2-Chlorotoluene	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 15:50	
4-Chlorotoluene	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 15:50	
4-Isopropyltoluene	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 15:50	
Benzene	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 15:50	
Bromobenzene	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 15:50	
Bromodichloromethane	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 15:50	
Bromoform	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 15:50	
Bromomethane	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 15:50	
Carbon tetrachloride	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 15:50	
Chlorobenzene	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 15:50	
Chloroethane	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 15:50	
Chloroform	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 15:50	
Chloromethane	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 15:50	
cis-1,2-Dichloroethene	4.4	0.50	NA	1	B2H0309	08/15/2012	08/15/12 15:50	
cis-1,3-Dichloropropene	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 15:50	
Dibromochloromethane	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 15:50	



Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : RAYTHEON, 532.30

Report To : Steve Netto

Reported : 08/22/2012

Client Sample ID MW-30B

Lab ID: 1202830-08

Volatile Organic Compounds by EPA 8260

Analyst: RP

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Dibromomethane	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 15:50	
Dichlorodifluoromethane	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 15:50	
Ethylbenzene	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 15:50	
Hexachlorobutadiene	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 15:50	
Isopropylbenzene	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 15:50	
m,p-Xylene	ND	1.0	NA	1	B2H0309	08/15/2012	08/15/12 15:50	
Methylene chloride	ND	1.0	NA	1	B2H0309	08/15/2012	08/15/12 15:50	
n-Butylbenzene	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 15:50	
n-Propylbenzene	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 15:50	
Naphthalene	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 15:50	
o-Xylene	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 15:50	
sec-Butylbenzene	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 15:50	
Styrene	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 15:50	
tert-Butylbenzene	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 15:50	
Tetrachloroethene	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 15:50	
Toluene	2.0	0.50	NA	1	B2H0309	08/15/2012	08/15/12 15:50	
trans-1,2-Dichloroethene	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 15:50	
Trichloroethene	88	0.50	NA	1	B2H0309	08/15/2012	08/15/12 15:50	
Trichlorofluoromethane	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 15:50	
Vinyl chloride	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 15:50	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>116 %</i>		<i>70 - 130</i>		B2H0309	08/15/2012	<i>08/15/12 15:50</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>97.0 %</i>		<i>70 - 130</i>		B2H0309	08/15/2012	<i>08/15/12 15:50</i>	
<i>Surrogate: Dibromofluoromethane</i>	<i>112 %</i>		<i>70 - 130</i>		B2H0309	08/15/2012	<i>08/15/12 15:50</i>	
<i>Surrogate: Toluene-d8</i>	<i>99.1 %</i>		<i>70 - 130</i>		B2H0309	08/15/2012	<i>08/15/12 15:50</i>	



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9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : RAYTHEON, 532.30

Report To : Steve Netto

Reported : 08/22/2012

Client Sample ID MW-30B

Lab ID: 1202830-08

1,4-Dioxane by EPA 8270/SIM: Isotope Dilution Technique

Analyst: BB

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,4-Dioxane	ND	0.20	NA	1	B2H0298	08/14/2012	08/15/12 15:15	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	<i>84.1 %</i>		<i>36 - 107</i>		B2H0298	08/14/2012	<i>08/15/12 15:15</i>	
<i>Surrogate: 2-Fluorobiphenyl</i>	<i>96.6 %</i>		<i>42 - 120</i>		B2H0298	08/14/2012	<i>08/15/12 15:15</i>	
<i>Surrogate: 4-Terphenyl-d14</i>	<i>102 %</i>		<i>67 - 142</i>		B2H0298	08/14/2012	<i>08/15/12 15:15</i>	
<i>Surrogate: Nitrobenzene-d5</i>	<i>66.0 %</i>		<i>36 - 130</i>		B2H0298	08/14/2012	<i>08/15/12 15:15</i>	



Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : RAYTHEON, 532.30

Report To : Steve Netto

Reported : 08/22/2012

Client Sample ID MW-30A

Lab ID: 1202830-09

Volatile Organic Compounds by EPA 8260

Analyst: RP

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 17:56	
1,1,1-Trichloroethane	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 17:56	
1,1,2,2-Tetrachloroethane	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 17:56	
1,1,2-Trichloroethane	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 17:56	
1,1-Dichloroethane	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 17:56	
1,1-Dichloroethene	2.9	0.50	NA	1	B2H0309	08/15/2012	08/15/12 17:56	
1,1-Dichloropropene	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 17:56	
1,2,3-Trichloropropane	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 17:56	
1,2,3-Trichlorobenzene	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 17:56	
1,2,4-Trichlorobenzene	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 17:56	
1,2,4-Trimethylbenzene	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 17:56	
1,2-Dibromo-3-chloropropane	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 17:56	
1,2-Dibromoethane	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 17:56	
1,2-Dichlorobenzene	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 17:56	
1,2-Dichloroethane	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 17:56	
1,2-Dichloropropane	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 17:56	
1,3,5-Trimethylbenzene	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 17:56	
1,3-Dichlorobenzene	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 17:56	
1,3-Dichloropropane	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 17:56	
1,4-Dichlorobenzene	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 17:56	
2,2-Dichloropropane	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 17:56	
2-Chlorotoluene	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 17:56	
4-Chlorotoluene	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 17:56	
4-Isopropyltoluene	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 17:56	
Benzene	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 17:56	
Bromobenzene	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 17:56	
Bromodichloromethane	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 17:56	
Bromoform	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 17:56	
Bromomethane	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 17:56	
Carbon tetrachloride	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 17:56	
Chlorobenzene	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 17:56	
Chloroethane	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 17:56	
Chloroform	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 17:56	
Chloromethane	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 17:56	
cis-1,2-Dichloroethene	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 17:56	
cis-1,3-Dichloropropane	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 17:56	
Dibromochloromethane	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 17:56	



Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego, CA 92122

Project Number : RAYTHEON, 532.30

Report To : Steve Netto

Reported : 08/22/2012

Client Sample ID MW-30A

Lab ID: 1202830-09

Volatile Organic Compounds by EPA 8260

Analyst: RP

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Dibromomethane	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 17:56	
Dichlorodifluoromethane	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 17:56	
Ethylbenzene	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 17:56	
Hexachlorobutadiene	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 17:56	
Isopropylbenzene	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 17:56	
m,p-Xylene	ND	1.0	NA	1	B2H0309	08/15/2012	08/15/12 17:56	
Methylene chloride	ND	1.0	NA	1	B2H0309	08/15/2012	08/15/12 17:56	
n-Butylbenzene	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 17:56	
n-Propylbenzene	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 17:56	
Naphthalene	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 17:56	
o-Xylene	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 17:56	
sec-Butylbenzene	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 17:56	
Styrene	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 17:56	
tert-Butylbenzene	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 17:56	
Tetrachloroethene	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 17:56	
Toluene	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 17:56	
trans-1,2-Dichloroethene	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 17:56	
Trichloroethene	1.8	0.50	NA	1	B2H0309	08/15/2012	08/15/12 17:56	
Trichlorofluoromethane	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 17:56	
Vinyl chloride	ND	0.50	NA	1	B2H0309	08/15/2012	08/15/12 17:56	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>121 %</i>		<i>70 - 130</i>		B2H0309	08/15/2012	<i>08/15/12 17:56</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>98.6 %</i>		<i>70 - 130</i>		B2H0309	08/15/2012	<i>08/15/12 17:56</i>	
<i>Surrogate: Dibromofluoromethane</i>	<i>114 %</i>		<i>70 - 130</i>		B2H0309	08/15/2012	<i>08/15/12 17:56</i>	
<i>Surrogate: Toluene-d8</i>	<i>101 %</i>		<i>70 - 130</i>		B2H0309	08/15/2012	<i>08/15/12 17:56</i>	



Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : RAYTHEON, 532.30

Report To : Steve Netto

Reported : 08/22/2012

Client Sample ID MW-30A

Lab ID: 1202830-09

1,4-Dioxane by EPA 8270/SIM: Isotope Dilution Technique

Analyst: BB

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,4-Dioxane	ND	0.20	NA	1	B2H0298	08/14/2012	08/15/12 15:44	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	86.6 %		36 - 107		B2H0298	08/14/2012	08/15/12 15:44	
<i>Surrogate: 2-Fluorobiphenyl</i>	92.8 %		42 - 120		B2H0298	08/14/2012	08/15/12 15:44	
<i>Surrogate: 4-Terphenyl-d14</i>	93.0 %		67 - 142		B2H0298	08/14/2012	08/15/12 15:44	
<i>Surrogate: Nitrobenzene-d5</i>	64.8 %		36 - 130		B2H0298	08/14/2012	08/15/12 15:44	



Hargis & Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego , CA 92122

Project Number : RAYTHEON, 532.30
 Report To : Steve Netto
 Reported : 08/22/2012

QUALITY CONTROL SECTION

Volatile Organic Compounds by EPA 8260 - Quality Control

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B2H0309 - MSVOAW_LL

Blank (B2H0309-BLK1)

Prepared: 8/15/2012 Analyzed: 8/15/2012

1,1,1,2-Tetrachloroethane	ND	0.50			NR				
1,1,1-Trichloroethane	ND	0.50			NR				
1,1,2,2-Tetrachloroethane	ND	0.50			NR				
1,1,2-Trichloroethane	ND	0.50			NR				
1,1-Dichloroethane	ND	0.50			NR				
1,1-Dichloroethene	ND	0.50			NR				
1,1-Dichloropropene	ND	0.50			NR				
1,2,3-Trichloropropane	ND	0.50			NR				
1,2,3-Trichlorobenzene	ND	0.50			NR				
1,2,4-Trichlorobenzene	ND	0.50			NR				
1,2,4-Trimethylbenzene	ND	0.50			NR				
1,2-Dibromo-3-chloropropane	ND	0.50			NR				
1,2-Dibromoethane	ND	0.50			NR				
1,2-Dichlorobenzene	ND	0.50			NR				
1,2-Dichloroethane	ND	0.50			NR				
1,2-Dichloropropane	ND	0.50			NR				
1,3,5-Trimethylbenzene	ND	0.50			NR				
1,3-Dichlorobenzene	ND	0.50			NR				
1,3-Dichloropropane	ND	0.50			NR				
1,4-Dichlorobenzene	ND	0.50			NR				
2,2-Dichloropropane	ND	0.50			NR				
2-Chlorotoluene	ND	0.50			NR				
4-Chlorotoluene	ND	0.50			NR				
4-Isopropyltoluene	ND	0.50			NR				
Benzene	ND	0.50			NR				
Bromobenzene	ND	0.50			NR				
Bromodichloromethane	ND	0.50			NR				
Bromoform	ND	0.50			NR				
Bromomethane	ND	0.50			NR				
Carbon tetrachloride	ND	0.50			NR				
Chlorobenzene	ND	0.50			NR				
Chloroethane	ND	0.50			NR				
Chloroform	ND	0.50			NR				
Chloromethane	ND	0.50			NR				
cis-1,2-Dichloroethene	ND	0.50			NR				
cis-1,3-Dichloropropene	ND	0.50			NR				
Dibromochloromethane	ND	0.50			NR				
Dibromomethane	ND	0.50			NR				
Dichlorodifluoromethane	ND	0.50			NR				



Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : RAYTHEON, 532.30

Report To : Steve Netto

Reported : 08/22/2012

Volatile Organic Compounds by EPA 8260 - Quality Control (cont'd)

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec % Rec	% Rec Limits	RPD RPD	RPD Limit	Notes
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Batch B2H0309 - MSVOAW_LL (continued)

Blank (B2H0309-BLK1) - Continued

Prepared: 8/15/2012 Analyzed: 8/15/2012

Ethylbenzene	ND	0.50				NR			
Hexachlorobutadiene	ND	0.50				NR			
Isopropylbenzene	ND	0.50				NR			
m,p-Xylene	ND	1.0				NR			
Methylene chloride	ND	1.0				NR			
n-Butylbenzene	ND	0.50				NR			
n-Propylbenzene	ND	0.50				NR			
Naphthalene	ND	0.50				NR			
o-Xylene	ND	0.50				NR			
sec-Butylbenzene	ND	0.50				NR			
Styrene	ND	0.50				NR			
tert-Butylbenzene	ND	0.50				NR			
Tetrachloroethene	ND	0.50				NR			
Toluene	ND	0.50				NR			
trans-1,2-Dichloroethene	ND	0.50				NR			
Trichloroethene	ND	0.50				NR			
Trichlorofluoromethane	ND	0.50				NR			
Vinyl chloride	ND	0.50				NR			

<i>Surrogate: 1,2-Dichloroethane-d4</i>	28.22		25.0000		113	70 - 130			
<i>Surrogate: 4-Bromofluorobenzene</i>	24.61		25.0000		98.4	70 - 130			
<i>Surrogate: Dibromofluoromethane</i>	26.34		25.0000		105	70 - 130			
<i>Surrogate: Toluene-d8</i>	25.16		25.0000		101	70 - 130			

LCS (B2H0309-BS1)

Prepared: 8/15/2012 Analyzed: 8/15/2012

1,1-Dichloroethene	20.9700		20.0000		105	70 - 130			
Benzene	19.9700		20.0000		99.8	70 - 130			
Chlorobenzene	19.2500		20.0000		96.2	70 - 130			
MTBE	21.1700		20.0000		106	70 - 130			
Toluene	19.5100		20.0000		97.6	70 - 130			
Trichloroethene	19.7000		20.0000		98.5	70 - 130			

<i>Surrogate: 1,2-Dichloroethane-d4</i>	28.15		25.0000		113	70 - 130			
<i>Surrogate: 4-Bromofluorobenzene</i>	25.61		25.0000		102	70 - 130			
<i>Surrogate: Dibromofluoromethane</i>	26.86		25.0000		107	70 - 130			
<i>Surrogate: Toluene-d8</i>	25.29		25.0000		101	70 - 130			

LCS Dup (B2H0309-BSD1)

Prepared: 8/15/2012 Analyzed: 8/15/2012

1,1-Dichloroethene	20.2100		20.0000		101	70 - 130	3.69	20	
Benzene	19.5500		20.0000		97.8	70 - 130	2.13	20	
Chlorobenzene	18.7000		20.0000		93.5	70 - 130	2.90	20	
MTBE	20.3500		20.0000		102	70 - 130	3.95	20	
Toluene	18.8300		20.0000		94.2	70 - 130	3.55	20	



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Volatile Organic Compounds by EPA 8260 - Quality Control (cont'd)

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec % Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B2H0309 - MSVOAW_LL (continued)

LCS Dup (B2H0309-BSD1) - Continued

Prepared: 8/15/2012 Analyzed: 8/15/2012

Trichloroethene	19.1400		20.0000		95.7	70 - 130	2.88	20	
Surrogate: 1,2-Dichloroethane-d4	27.49		25.0000		110	70 - 130			
Surrogate: 4-Bromofluorobenzene	25.55		25.0000		102	70 - 130			
Surrogate: Dibromofluoromethane	26.08		25.0000		104	70 - 130			
Surrogate: Toluene-d8	25.17		25.0000		101	70 - 130			

Matrix Spike (B2H0309-MS1)

Source: 1202830-02

Prepared: 8/15/2012 Analyzed: 8/15/2012

1,1-Dichloroethene	2275.00		1000.00	1140.70	113	70 - 130			
Benzene	1053.00		1000.00	ND	105	70 - 130			
Chlorobenzene	1001.00		1000.00	ND	100	70 - 130			
MTBE	1078.00		1000.00	ND	108	70 - 130			
Toluene	1033.50		1000.00	ND	103	70 - 130			
Trichloroethene	1054.50		1000.00	ND	105	70 - 130			
Surrogate: 1,2-Dichloroethane-d4	29.92		25.0000		120	70 - 130			
Surrogate: 4-Bromofluorobenzene	25.87		25.0000		103	70 - 130			
Surrogate: Dibromofluoromethane	27.14		25.0000		109	70 - 130			
Surrogate: Toluene-d8	25.28		25.0000		101	70 - 130			

Matrix Spike Dup (B2H0309-MSD1)

Source: 1202830-02

Prepared: 8/15/2012 Analyzed: 8/15/2012

1,1-Dichloroethene	2349.00		1000.00	1140.70	121	70 - 130	3.20	20	
Benzene	1140.00		1000.00	ND	114	70 - 130	7.93	20	
Chlorobenzene	1048.50		1000.00	ND	105	70 - 130	4.64	20	
MTBE	1156.00		1000.00	ND	116	70 - 130	6.98	20	
Toluene	1108.00		1000.00	ND	111	70 - 130	6.96	20	
Trichloroethene	1142.50		1000.00	ND	114	70 - 130	8.01	20	
Surrogate: 1,2-Dichloroethane-d4	28.99		25.0000		116	70 - 130			
Surrogate: 4-Bromofluorobenzene	25.52		25.0000		102	70 - 130			
Surrogate: Dibromofluoromethane	27.03		25.0000		108	70 - 130			
Surrogate: Toluene-d8	25.67		25.0000		103	70 - 130			

Batch B2H0366 - MSVOAW_LL

Blank (B2H0366-BLK1)

Prepared: 8/17/2012 Analyzed: 8/17/2012

1,1,1,2-Tetrachloroethane	ND	0.50			NR				
1,1,1-Trichloroethane	ND	0.50			NR				
1,1,2,2-Tetrachloroethane	ND	0.50			NR				
1,1,2-Trichloroethane	ND	0.50			NR				
1,1-Dichloroethane	ND	0.50			NR				
1,1-Dichloroethene	ND	0.50			NR				
1,1-Dichloropropene	ND	0.50			NR				
1,2,3-Trichloropropane	ND	0.50			NR				



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Volatile Organic Compounds by EPA 8260 - Quality Control (cont'd)

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec % Rec	% Rec Limits	RPD RPD	RPD Limit	Notes
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Batch B2H0366 - MSVOAW_LL (continued)

Blank (B2H0366-BLK1) - Continued

Prepared: 8/17/2012 Analyzed: 8/17/2012

1,2,3-Trichlorobenzene	ND	0.50			NR
1,2,4-Trichlorobenzene	ND	0.50			NR
1,2,4-Trimethylbenzene	ND	0.50			NR
1,2-Dibromo-3-chloropropane	ND	0.50			NR
1,2-Dibromoethane	ND	0.50			NR
1,2-Dichlorobenzene	ND	0.50			NR
1,2-Dichloroethane	ND	0.50			NR
1,2-Dichloropropane	ND	0.50			NR
1,3,5-Trimethylbenzene	ND	0.50			NR
1,3-Dichlorobenzene	ND	0.50			NR
1,3-Dichloropropane	ND	0.50			NR
1,4-Dichlorobenzene	ND	0.50			NR
2,2-Dichloropropane	ND	0.50			NR
2-Chlorotoluene	ND	0.50			NR
4-Chlorotoluene	ND	0.50			NR
4-Isopropyltoluene	ND	0.50			NR
Benzene	ND	0.50			NR
Bromobenzene	ND	0.50			NR
Bromodichloromethane	ND	0.50			NR
Bromoform	ND	0.50			NR
Bromomethane	ND	0.50			NR
Carbon tetrachloride	ND	0.50			NR
Chlorobenzene	ND	0.50			NR
Chloroethane	ND	0.50			NR
Chloroform	ND	0.50			NR
Chloromethane	ND	0.50			NR
cis-1,2-Dichloroethene	ND	0.50			NR
cis-1,3-Dichloropropene	ND	0.50			NR
Dibromochloromethane	ND	0.50			NR
Dibromomethane	ND	0.50			NR
Dichlorodifluoromethane	ND	0.50			NR
Ethylbenzene	ND	0.50			NR
Hexachlorobutadiene	ND	0.50			NR
Isopropylbenzene	ND	0.50			NR
m,p-Xylene	ND	1.0			NR
Methylene chloride	ND	1.0			NR
n-Butylbenzene	ND	0.50			NR
n-Propylbenzene	ND	0.50			NR
Naphthalene	ND	0.50			NR
o-Xylene	ND	0.50			NR
sec-Butylbenzene	ND	0.50			NR
Styrene	ND	0.50			NR



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Project Number : RAYTHEON, 532.30

Report To : Steve Netto

Reported : 08/22/2012

Volatile Organic Compounds by EPA 8260 - Quality Control (cont'd)

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B2H0366 - MSVOAW_LL (continued)

Blank (B2H0366-BLK1) - Continued

Prepared: 8/17/2012 Analyzed: 8/17/2012

tert-Butylbenzene	ND	0.50			NR				
Tetrachloroethene	ND	0.50			NR				
Toluene	ND	0.50			NR				
trans-1,2-Dichloroethene	ND	0.50			NR				
Trichloroethene	ND	0.50			NR				
Trichlorofluoromethane	ND	0.50			NR				
Vinyl chloride	ND	0.50			NR				
<i>Surrogate: 1,2-Dichloroethane-d4</i>	27.67		25.0000		111	70 - 130			
<i>Surrogate: 4-Bromofluorobenzene</i>	24.19		25.0000		96.8	70 - 130			
<i>Surrogate: Dibromofluoromethane</i>	26.62		25.0000		106	70 - 130			
<i>Surrogate: Toluene-d8</i>	25.26		25.0000		101	70 - 130			

LCS (B2H0366-BS1)

Prepared: 8/17/2012 Analyzed: 8/17/2012

1,1-Dichloroethene	21.7500		20.0000		109	70 - 130			
Benzene	19.4700		20.0000		97.4	70 - 130			
Chlorobenzene	18.6000		20.0000		93.0	70 - 130			
MTBE	19.3100		20.0000		96.6	70 - 130			
Toluene	19.0400		20.0000		95.2	70 - 130			
Trichloroethene	19.1300		20.0000		95.6	70 - 130			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	27.02		25.0000		108	70 - 130			
<i>Surrogate: 4-Bromofluorobenzene</i>	24.89		25.0000		99.6	70 - 130			
<i>Surrogate: Dibromofluoromethane</i>	25.90		25.0000		104	70 - 130			
<i>Surrogate: Toluene-d8</i>	25.13		25.0000		101	70 - 130			

LCS Dup (B2H0366-BSD1)

Prepared: 8/17/2012 Analyzed: 8/17/2012

1,1-Dichloroethene	20.1400		20.0000		101	70 - 130	7.69	20	
Benzene	19.6500		20.0000		98.2	70 - 130	0.920	20	
Chlorobenzene	19.0200		20.0000		95.1	70 - 130	2.23	20	
MTBE	20.5000		20.0000		102	70 - 130	5.98	20	
Toluene	19.2900		20.0000		96.4	70 - 130	1.30	20	
Trichloroethene	19.5800		20.0000		97.9	70 - 130	2.32	20	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	27.22		25.0000		109	70 - 130			
<i>Surrogate: 4-Bromofluorobenzene</i>	25.25		25.0000		101	70 - 130			
<i>Surrogate: Dibromofluoromethane</i>	26.35		25.0000		105	70 - 130			
<i>Surrogate: Toluene-d8</i>	24.92		25.0000		99.7	70 - 130			



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Project Number : RAYTHEON, 532.30

Report To : Steve Netto

Reported : 08/22/2012

1,4-Dioxane by EPA 8270: Isotope Dilution Technique - Quality Control

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec % Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B2H0349 - MSSEMI_ISOTOPEDILN

Blank (B2H0349-BLK1)

Prepared: 8/16/2012 Analyzed: 8/22/2012

1,4-Dioxane	ND	2.0			NR				
Surrogate: 1,2-Dichlorobenzene-d4	70.87		100.000		70.9	37 - 93			
Surrogate: 2-Fluorobiphenyl	77.01		100.000		77.0	51 - 100			
Surrogate: 4-Terphenyl-d14	104.3		100.000		104	58 - 113			
Surrogate: Nitrobenzene-d5	75.75		100.000		75.8	39 - 95			

LCS (B2H0349-BS1)

Prepared: 8/16/2012 Analyzed: 8/22/2012

1,4-Dioxane	84.7100	2.0	100.000		84.7	70 - 130			
Surrogate: 1,2-Dichlorobenzene-d4	47.87		100.000		47.9	37 - 93			
Surrogate: 2-Fluorobiphenyl	64.01		100.000		64.0	51 - 100			
Surrogate: 4-Terphenyl-d14	87.85		100.000		87.8	58 - 113			
Surrogate: Nitrobenzene-d5	58.10		100.000		58.1	39 - 95			

Matrix Spike (B2H0349-MS1)

Source: 1202830-02

Prepared: 8/16/2012 Analyzed: 8/22/2012

1,4-Dioxane	346.740	2.0	100.000	254.270	92.5	70 - 130			
Surrogate: 1,2-Dichlorobenzene-d4	67.56		100.000		67.6	37 - 93			
Surrogate: 2-Fluorobiphenyl	81.02		100.000		81.0	51 - 100			
Surrogate: 4-Terphenyl-d14	89.66		100.000		89.7	58 - 113			
Surrogate: Nitrobenzene-d5	78.94		100.000		78.9	39 - 95			

Matrix Spike Dup (B2H0349-MSD1)

Source: 1202830-02

Prepared: 8/16/2012 Analyzed: 8/22/2012

1,4-Dioxane	337.670	2.0	100.000	254.270	83.4	70 - 130	2.65	20	
Surrogate: 1,2-Dichlorobenzene-d4	77.14		100.000		77.1	37 - 93			
Surrogate: 2-Fluorobiphenyl	85.77		100.000		85.8	51 - 100			
Surrogate: 4-Terphenyl-d14	95.40		100.000		95.4	58 - 113			
Surrogate: Nitrobenzene-d5	86.65		100.000		86.6	39 - 95			



Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

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Project Number : RAYTHEON, 532.30

Report To : Steve Netto

Reported : 08/22/2012

1,4-Dioxane by EPA 8270/SIM: Isotope Dilution Technique - Quality Control

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec % Rec	% Rec Limits	RPD RPD	RPD Limit	Notes
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Batch B2H0298 - MSSEMI

Blank (B2H0298-BLK1)

Prepared: 8/14/2012 Analyzed: 8/15/2012

1,4-Dioxane	ND	0.20			NR				
Surrogate: 1,2-Dichlorobenzene-d4	0.8457		1.00000		84.6	36 - 107			
Surrogate: 2-Fluorobiphenyl	0.9270		1.00000		92.7	42 - 120			
Surrogate: 4-Terphenyl-d14	0.9988		1.00000		99.9	67 - 142			
Surrogate: Nitrobenzene-d5	0.6428		1.00000		64.3	36 - 130			

LCS (B2H0298-BS1)

Prepared: 8/14/2012 Analyzed: 8/15/2012

1,4-Dioxane	0.819980	0.20	1.00000		82.0	70 - 130			
Surrogate: 1,2-Dichlorobenzene-d4	0.7831		1.00000		78.3	36 - 107			
Surrogate: 2-Fluorobiphenyl	0.8318		1.00000		83.2	42 - 120			
Surrogate: 4-Terphenyl-d14	0.7766		1.00000		77.7	67 - 142			
Surrogate: Nitrobenzene-d5	0.5856		1.00000		58.6	36 - 130			

Matrix Spike (B2H0298-MS1)

Source: 1202812-06

Prepared: 8/14/2012 Analyzed: 8/15/2012

1,4-Dioxane	0.803580	0.20	1.00000	ND	80.4	70 - 130			
Surrogate: 1,2-Dichlorobenzene-d4	0.7677		1.00000		76.8	36 - 107			
Surrogate: 2-Fluorobiphenyl	0.8541		1.00000		85.4	42 - 120			
Surrogate: 4-Terphenyl-d14	0.7151		1.00000		71.5	67 - 142			
Surrogate: Nitrobenzene-d5	0.5636		1.00000		56.4	36 - 130			

Matrix Spike Dup (B2H0298-MSD1)

Source: 1202812-06

Prepared: 8/14/2012 Analyzed: 8/15/2012

1,4-Dioxane	0.820840	0.20	1.00000	ND	82.1	70 - 130	2.13	20	
Surrogate: 1,2-Dichlorobenzene-d4	0.8008		1.00000		80.1	36 - 107			
Surrogate: 2-Fluorobiphenyl	0.8229		1.00000		82.3	42 - 120			
Surrogate: 4-Terphenyl-d14	0.7044		1.00000		70.4	67 - 142			
Surrogate: Nitrobenzene-d5	0.5932		1.00000		59.3	36 - 130			



Hargis & Associates, Inc.

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Project Number : RAYTHEON, 532.30

Report To : Steve Netto

Reported : 08/22/2012

Notes and Definitions

S6	Surrogate recovery was below laboratory acceptance limit. See Corrective Action Report for details.
D6	Sample required dilution due to high concentration of target analyte.
ND	Analyte not detected at or above reporting limit
PQL	Practical Quantitation Limit
MDL	Method Detection Limit
NR	Not Reported
RPD	Relative Percent Difference
CA1	CA-NELAP (CDPH)
CA2	CA-ELAP (CDPH)
OR1	OR-NELAP (OSPHL)
TX1	TX-NELAP (TCEQ)

CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST FORM

PROJECT NAME		PROJECT No./TASK No.		SAMPLE CONTAINERS		ANALYSIS REQUESTED		ESTIMATED CONCENTRATION RANGE (ppb) FOR VOA'S		SPECIAL HANDLING		LABORATORY INFORMATION															
RAYTHEON		532.30										ATL															
PROJECT MANAGER STEVE NETTO		Phone No. 858-455-6500										Attn: Rachelle Arada															
QA MANAGER		Fax No. 858-455-6533																									
SAMPLER (SIGNATURE)		SAMPLER (PRINTED)																									
<i>Amanda Beam</i>		DANIEL HORA ERIN HUNTER																									
AMANDA BEAM																											
LAB ID	SAMPLE ID	SAMPLE COLLECTION		MATRIX			PRESERVATION			40 ml VOA	1L Amber	VOCs 8260B	1,4-Dioxane 8270 MOD	1,4-Dioxane 8270 SIM	ESTIMATED CONCENTRATION RANGE (ppb) FOR VOA'S					STANDARD TAT	MS collected	MSD collected	REMARKS				
		Date	Time	Soil	Ground Water	Surface Water	Lab H2O	HCl	HNO3						NaOH	H2SO4	Ice	0-10	10-100					100-1,000	1,000-10,000	<10,000	
1202830-01	TR-081012	8/10/12	630				X	X			X					X											
-2	MW-3AB		744	X			X			X						X											6 VOA
	↓		↓	X						X		X															2-1 L Amber
-3	MW-3b		1033	X			X			X						X											
	MW-36		↓	X						X			X														
-4	MW-3600		1045	X			X			X						X											
	MW-3600		↓	X						X			X														
-5	MW-2B		1254	X			X			X						X											
	↓		↓	X						X			X														
				X																							
Total number of Containers per analysis:										14	4	Total No. of Containers: 18+8 (PI)															
Relinquished by:		Date	Received by:		Date	INSTRUCTIONS										Shipment Method: <u>COURIER</u>											
<i>Amanda Beam</i>		8/10/12	<i>E. M. ...</i>		8/10/12	<ol style="list-style-type: none"> Fill out form completely except for shaded areas (lab use only); sign only after verified for completeness. Complete in ballpoint pen. Draw one line through errors, initial and date correction. Indicate number of sample containers in analysis request space; indicate choice with ✓ or x. Note applicable preservatives, special instructions, and deviations from typical environmental samples. Consult project QA documents for specific instructions. 										Send Results to: <u>STEVE NETTO</u>											
H2A Inc		1550	Advanced Tech Labs		1550											<input checked="" type="checkbox"/> 9171 TOWNE CENTRE DRIVE, SUITE 375 SAN DIEGO, CA 92122 (858) 455-6500 <input type="checkbox"/> 1640 SOUTH STAPLEY DRIVE, SUITE 124 MESA, AZ 85204 (480) 345-0888 <input type="checkbox"/> 1820 EAST RIVER ROAD, SUITE 220 TUCSON, AZ 85718 (520) 881-7300											
Relinquished by:		Date	Received by:		Date	Sample Receipt:										Send invoice to San Diego, CA											
<i>E. M. ...</i>		8/10/12	<i>FPDWA</i>		8/10/12	<input type="checkbox"/> No. of containers correct <input type="checkbox"/> custody seals secure <input checked="" type="checkbox"/> Temp. @ receipt <u>2.0</u> °C <input checked="" type="checkbox"/> received good condition/cold <input type="checkbox"/> conforms to COC document										Attn: Accounts Payable											
Advanced Tech Labs		1636	ATL		1636																						

CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST FORM

PROJECT NAME RAYTHEON MAIN	PROJECT No./TASK No. 532.30	SAMPLE CONTAINERS	ANALYSIS REQUESTED	ESTIMATED CONCENTRATION RANGE (ppb) FOR VOAS	SPECIAL HANDLING	LABORATORY INFORMATION
PROJECT MANAGER STEVE NETTO	Phone No. 858-455-6500	40 ml VOA 1 L Amber	8260B VOCs 8270G MT 1,4-Dioxane (STAY)	0-50 10-100 100-1,000	STANDARD TAT	REMARKS
QA MANAGER	Fax No. 858-455-6533					
SAMPLER (SIGNATURE)	SAMPLER (PRINTED) DANIEL MOKA					

LAB ID	SAMPLE ID	SAMPLE COLLECTION		MATRIX			PRESERVATION					40 ml VOA	1 L Amber	8260B VOCs	8270G MT 1,4-Dioxane (STAY)	8270 1,4 DIOXANE (MOD)	0-50	10-100	100-1,000	STANDARD TAT	REMARKS
		Date	Time	Soil	Ground water	Surface water	Lab H2O	HCl	HNO3	NaOH	H2SO4											Ice
	MW-20	8/9/12	1808																		
1202830 - C	MW-16	8/10/12	1808	X			X				X	1	X		X		X			X	820 TIME
-7	MW-20	8/9/12	1808	X			X				X	1	X	X			X			X	
-8	MW-30B	8/10/12	1035	X			X				X	1	X	X	X		X			X	
-9	MW-30A	8/10/12	1146	X			X				X	1	X	X			X			X	

Total number of Containers per analysis: 12.6 Total No. of Containers: 18(52)

Relinquished by: <i>Chandra Blain</i>	Date 8/10/12	Received by: <i>[Signature]</i>	Date 8/10/12
Company H.A. Inc	Time 1550	Company Advanced Tech Labs	Time 1550
Relinquished by: <i>[Signature]</i>	Date 8/10/12	Received by: <i>[Signature]</i>	Date 8/10/12
Company Advanced Tech Labs	Time 1636	Company ATL	Time 1636

INSTRUCTIONS

- Fill out form completely except for shaded areas (lab use only); sign only after verified for completeness.
- Complete in ballpoint pen. Draw one line through errors, initial and date correction.
- Indicate number of sample containers in analysis request space; indicate choice with ✓ or x.
- Note applicable preservatives, special instructions, and deviations from typical environmental samples.
- Consult project QA documents for specific instructions.

Sample Receipt:

No. of containers correct received good condition/cold

custody seals secure conforms to COC document

Temp. @ receipt _____ °C

Shipment Method: Courier Pickup

Send Results to: STEVE NETTO

9171 TOWNE CENTRE DRIVE, SUITE 375
SAN DIEGO, CA 92122 (858) 455-6500

1640 SOUTH STAPLEY DRIVE, SUITE 124
MESA, AZ 85204 (480) 345-0888

1820 EAST RIVER ROAD, SUITE 220
TUCSON, AZ 85718 (520) 881-7300

Send invoice to San Diego, CA
Attn: Accounts Payable



CALSCIENCE

WORK ORDER NUMBER: 12-08-0576

The difference is service



AIR | SOIL | WATER | MARINE CHEMISTRY

Analytical Report For

Client: Hargis + Associates, Inc.

Client Project Name: Raytheon Main / 532.30

Attention: Steve Netto
9171 Towne Centre Drive, Suite 375
San Diego, CA 92122-6215

*Emma C. Domincioni
for*

Approved for release on 08/16/2012 by:
Virendra Patel
Project Manager

ResultLink ▶

Email your PM ▶



Calscience Environmental Laboratories, Inc. (Calscience) certifies that the test results provided in this report meet all NELAC requirements for parameters for which accreditation is required or available. Any exceptions to NELAC requirements are noted in the case narrative. The original report of subcontracted analyses, if any, is attached to this report. The results in this report are limited to the sample(s) tested and any reproduction thereof must be made in its entirety. The client or recipient of this report is specifically prohibited from making material changes to said report and, to the extent that such changes are made, Calscience is not responsible, legally or otherwise. The client or recipient agrees to indemnify Calscience for any litigation which may arise.



Contents

Client Project Name: Raytheon Main / 532.30

Work Order Number: 12-08-0576

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	3.2 LCS/LCSD	9
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Client: Hargis + Associates, Inc.
9171 Towne Centre Drive, Suite 375
San Diego, CA 92122-6215
Attn: Steve Netto

Work Order: 12-08-0576
Project name: Raytheon Main / 532.30
Received: 08/08/12 17:10

DETECTIONS SUMMARY

Client Sample ID	Analyte	Result	Qualifiers	Reporting Limit	Units	Method	Extraction
EW-01 (12-08-0576-2)							
	1,4-Dioxane	65		1.0	ug/L	EPA 8270C(M) Isotope Dilution	EPA 3520C
	1,1-Dichloroethene	64		1.0	ug/L	EPA 8260B	EPA 5030C

Subcontracted analyses, if any, are not included in this summary.

*MDL is shown.

Analytical Report



Hargis + Associates, Inc.
9171 Towne Centre Drive, Suite 375
San Diego, CA 92122-6215

Date Received: 08/08/12
Work Order No: 12-08-0576
Preparation: EPA 3520C
Method: EPA 8270C(M) Isotope Dilution

Project: Raytheon Main / 532.30

Page 1 of 1

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
EW-01	12-08-0576-2-D	08/06/12 16:50	Aqueous	GC/MS Y	08/09/12	08/14/12 17:57	120809L14

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qual</u>	<u>Units</u>
1,4-Dioxane	65	1.0	1		ug/L

<u>Surrogates:</u>	<u>REC (%)</u>	<u>Control Limits</u>	<u>Qual</u>
Nitrobenzene-d5	86	56-123	

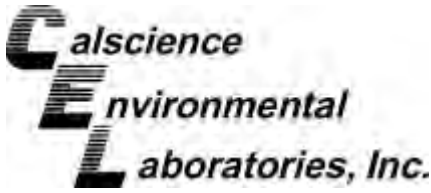
Method Blank	099-09-004-2,036	N/A	Aqueous	GC/MS Y	08/09/12	08/14/12 13:52	120809L14
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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qual</u>	<u>Units</u>
1,4-Dioxane	ND	1.0	1		ug/L

<u>Surrogates:</u>	<u>REC (%)</u>	<u>Control Limits</u>	<u>Qual</u>
Nitrobenzene-d5	91	56-123	

Return to Contents

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers



Analytical Report



Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 08/08/12
 Work Order No: 12-08-0576
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Raytheon Main / 532.30

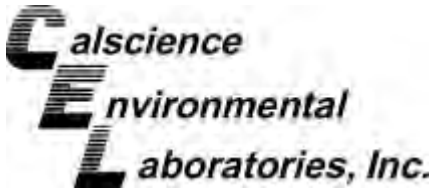
Page 1 of 3

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
TB-080612B	12-08-0576-1-B	08/06/12 16:00	Aqueous	GC/MS PP	08/10/12	08/10/12 20:00	120810L01

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Acetone	ND	20	1		1,3-Dichloropropane	ND	1.0	1	
Benzene	ND	0.50	1		2,2-Dichloropropane	ND	1.0	1	
Bromobenzene	ND	1.0	1		1,1-Dichloropropene	ND	1.0	1	
Bromochloromethane	ND	1.0	1		c-1,3-Dichloropropene	ND	0.50	1	
Bromodichloromethane	ND	1.0	1		t-1,3-Dichloropropene	ND	0.50	1	
Bromoform	ND	1.0	1		Ethylbenzene	ND	1.0	1	
Bromomethane	ND	10	1		2-Hexanone	ND	10	1	
2-Butanone	ND	10	1		Isopropylbenzene	ND	1.0	1	
n-Butylbenzene	ND	1.0	1		p-Isopropyltoluene	ND	1.0	1	
sec-Butylbenzene	ND	1.0	1		Methylene Chloride	ND	10	1	
tert-Butylbenzene	ND	1.0	1		4-Methyl-2-Pentanone	ND	10	1	
Carbon Disulfide	ND	10	1		Naphthalene	ND	10	1	
Carbon Tetrachloride	ND	0.50	1		n-Propylbenzene	ND	1.0	1	
Chlorobenzene	ND	1.0	1		Styrene	ND	1.0	1	
Chloroethane	ND	5.0	1		1,1,1,2-Tetrachloroethane	ND	1.0	1	
Chloroform	ND	1.0	1		1,1,2,2-Tetrachloroethane	ND	1.0	1	
Chloromethane	ND	10	1		Tetrachloroethene	ND	1.0	1	
2-Chlorotoluene	ND	1.0	1		Toluene	ND	1.0	1	
4-Chlorotoluene	ND	1.0	1		1,2,3-Trichlorobenzene	ND	1.0	1	
Dibromochloromethane	ND	1.0	1		1,2,4-Trichlorobenzene	ND	1.0	1	
1,2-Dibromo-3-Chloropropane	ND	5.0	1		1,1,1-Trichloroethane	ND	1.0	1	
1,2-Dibromoethane	ND	1.0	1		1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	10	1	
Dibromomethane	ND	1.0	1		1,1,2-Trichloroethane	ND	1.0	1	
1,2-Dichlorobenzene	ND	1.0	1		Trichloroethene	ND	1.0	1	
1,3-Dichlorobenzene	ND	1.0	1		Trichlorofluoromethane	ND	10	1	
1,4-Dichlorobenzene	ND	1.0	1		1,2,3-Trichloropropane	ND	5.0	1	
Dichlorodifluoromethane	ND	1.0	1		1,2,4-Trimethylbenzene	ND	1.0	1	
1,1-Dichloroethane	ND	1.0	1		1,3,5-Trimethylbenzene	ND	1.0	1	
1,2-Dichloroethane	ND	0.50	1		Vinyl Acetate	ND	10	1	
1,1-Dichloroethene	ND	1.0	1		Vinyl Chloride	ND	0.50	1	
c-1,2-Dichloroethene	ND	1.0	1		p/m-Xylene	ND	1.0	1	
t-1,2-Dichloroethene	ND	1.0	1		o-Xylene	ND	1.0	1	
1,2-Dichloropropane	ND	1.0	1						
Surrogates:	REC (%)	Control Limits	Qual		Surrogates:	REC (%)	Control Limits	Qual	
1,4-Bromofluorobenzene	98	80-120			Dibromofluoromethane	102	80-126		
1,2-Dichloroethane-d4	114	80-134			Toluene-d8	101	80-120		

Return to Contents

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers



Analytical Report



Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 08/08/12
 Work Order No: 12-08-0576
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Raytheon Main / 532.30

Page 2 of 3

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
EW-01	12-08-0576-2-A	08/06/12 16:50	Aqueous	GC/MS PP	08/10/12	08/10/12 22:53	120810L01

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Acetone	ND	20	1		1,3-Dichloropropane	ND	1.0	1	
Benzene	ND	0.50	1		2,2-Dichloropropane	ND	1.0	1	
Bromobenzene	ND	1.0	1		1,1-Dichloropropene	ND	1.0	1	
Bromochloromethane	ND	1.0	1		c-1,3-Dichloropropene	ND	0.50	1	
Bromodichloromethane	ND	1.0	1		t-1,3-Dichloropropene	ND	0.50	1	
Bromoform	ND	1.0	1		Ethylbenzene	ND	1.0	1	
Bromomethane	ND	10	1		2-Hexanone	ND	10	1	
2-Butanone	ND	10	1		Isopropylbenzene	ND	1.0	1	
n-Butylbenzene	ND	1.0	1		p-Isopropyltoluene	ND	1.0	1	
sec-Butylbenzene	ND	1.0	1		Methylene Chloride	ND	10	1	
tert-Butylbenzene	ND	1.0	1		4-Methyl-2-Pentanone	ND	10	1	
Carbon Disulfide	ND	10	1		Naphthalene	ND	10	1	
Carbon Tetrachloride	ND	0.50	1		n-Propylbenzene	ND	1.0	1	
Chlorobenzene	ND	1.0	1		Styrene	ND	1.0	1	
Chloroethane	ND	5.0	1		1,1,1,2-Tetrachloroethane	ND	1.0	1	
Chloroform	ND	1.0	1		1,1,2,2-Tetrachloroethane	ND	1.0	1	
Chloromethane	ND	10	1		Tetrachloroethene	ND	1.0	1	
2-Chlorotoluene	ND	1.0	1		Toluene	ND	1.0	1	
4-Chlorotoluene	ND	1.0	1		1,2,3-Trichlorobenzene	ND	1.0	1	
Dibromochloromethane	ND	1.0	1		1,2,4-Trichlorobenzene	ND	1.0	1	
1,2-Dibromo-3-Chloropropane	ND	5.0	1		1,1,1-Trichloroethane	ND	1.0	1	
1,2-Dibromoethane	ND	1.0	1		1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	10	1	
Dibromomethane	ND	1.0	1		1,1,2-Trichloroethane	ND	1.0	1	
1,2-Dichlorobenzene	ND	1.0	1		Trichloroethene	ND	1.0	1	
1,3-Dichlorobenzene	ND	1.0	1		Trichlorofluoromethane	ND	10	1	
1,4-Dichlorobenzene	ND	1.0	1		1,2,3-Trichloropropane	ND	5.0	1	
Dichlorodifluoromethane	ND	1.0	1		1,2,4-Trimethylbenzene	ND	1.0	1	
1,1-Dichloroethane	ND	1.0	1		1,3,5-Trimethylbenzene	ND	1.0	1	
1,2-Dichloroethane	ND	0.50	1		Vinyl Acetate	ND	10	1	
1,1-Dichloroethene	64	1.0	1		Vinyl Chloride	ND	0.50	1	
c-1,2-Dichloroethene	ND	1.0	1		p/m-Xylene	ND	1.0	1	
t-1,2-Dichloroethene	ND	1.0	1		o-Xylene	ND	1.0	1	
1,2-Dichloropropane	ND	1.0	1						
Surrogates:	REC (%)	Control Limits	Qual		Surrogates:	REC (%)	Control Limits	Qual	
1,4-Bromofluorobenzene	96	80-120			Dibromofluoromethane	103	80-126		
1,2-Dichloroethane-d4	115	80-134			Toluene-d8	103	80-120		

Return to Contents

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers



Hargis + Associates, Inc.
9171 Towne Centre Drive, Suite 375
San Diego, CA 92122-6215

Date Received: 08/08/12
Work Order No: 12-08-0576
Preparation: EPA 5030C
Method: EPA 8260B
Units: ug/L

Project: Raytheon Main / 532.30

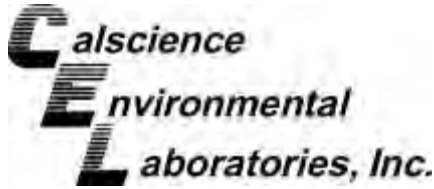
Page 3 of 3

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-14-001-8,476	N/A	Aqueous	GC/MS PP	08/10/12	08/10/12 14:41	120810L01

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Acetone	ND	20	1		1,3-Dichloropropane	ND	1.0	1	
Benzene	ND	0.50	1		2,2-Dichloropropane	ND	1.0	1	
Bromobenzene	ND	1.0	1		1,1-Dichloropropene	ND	1.0	1	
Bromochloromethane	ND	1.0	1		c-1,3-Dichloropropene	ND	0.50	1	
Bromodichloromethane	ND	1.0	1		t-1,3-Dichloropropene	ND	0.50	1	
Bromoform	ND	1.0	1		Ethylbenzene	ND	1.0	1	
Bromomethane	ND	10	1		2-Hexanone	ND	10	1	
2-Butanone	ND	10	1		Isopropylbenzene	ND	1.0	1	
n-Butylbenzene	ND	1.0	1		p-Isopropyltoluene	ND	1.0	1	
sec-Butylbenzene	ND	1.0	1		Methylene Chloride	ND	10	1	
tert-Butylbenzene	ND	1.0	1		4-Methyl-2-Pentanone	ND	10	1	
Carbon Disulfide	ND	10	1		Naphthalene	ND	10	1	
Carbon Tetrachloride	ND	0.50	1		n-Propylbenzene	ND	1.0	1	
Chlorobenzene	ND	1.0	1		Styrene	ND	1.0	1	
Chloroethane	ND	5.0	1		1,1,1,2-Tetrachloroethane	ND	1.0	1	
Chloroform	ND	1.0	1		1,1,2,2-Tetrachloroethane	ND	1.0	1	
Chloromethane	ND	10	1		Tetrachloroethene	ND	1.0	1	
2-Chlorotoluene	ND	1.0	1		Toluene	ND	1.0	1	
4-Chlorotoluene	ND	1.0	1		1,2,3-Trichlorobenzene	ND	1.0	1	
Dibromochloromethane	ND	1.0	1		1,2,4-Trichlorobenzene	ND	1.0	1	
1,2-Dibromo-3-Chloropropane	ND	5.0	1		1,1,1-Trichloroethane	ND	1.0	1	
1,2-Dibromoethane	ND	1.0	1		1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	10	1	
Dibromomethane	ND	1.0	1		1,1,2-Trichloroethane	ND	1.0	1	
1,2-Dichlorobenzene	ND	1.0	1		Trichloroethene	ND	1.0	1	
1,3-Dichlorobenzene	ND	1.0	1		Trichlorofluoromethane	ND	10	1	
1,4-Dichlorobenzene	ND	1.0	1		1,2,3-Trichloropropane	ND	5.0	1	
Dichlorodifluoromethane	ND	1.0	1		1,2,4-Trimethylbenzene	ND	1.0	1	
1,1-Dichloroethane	ND	1.0	1		1,3,5-Trimethylbenzene	ND	1.0	1	
1,2-Dichloroethane	ND	0.50	1		Vinyl Acetate	ND	10	1	
1,1-Dichloroethene	ND	1.0	1		Vinyl Chloride	ND	0.50	1	
c-1,2-Dichloroethene	ND	1.0	1		p/m-Xylene	ND	1.0	1	
t-1,2-Dichloroethene	ND	1.0	1		o-Xylene	ND	1.0	1	
1,2-Dichloropropane	ND	1.0	1						
Surrogates:	REC (%)	Control Limits	DF	Qual	Surrogates:	REC (%)	Control Limits	DF	Qual
1,4-Bromofluorobenzene	102	80-120			Dibromofluoromethane	101	80-126		
1,2-Dichloroethane-d4	113	80-134			Toluene-d8	100	80-120		

Return to Contents

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers



Quality Control - Spike/Spike Duplicate



Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 08/08/12
 Work Order No: 12-08-0576
 Preparation: EPA 5030C
 Method: EPA 8260B

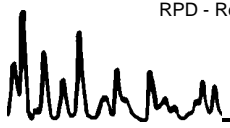
Project Raytheon Main / 532.30

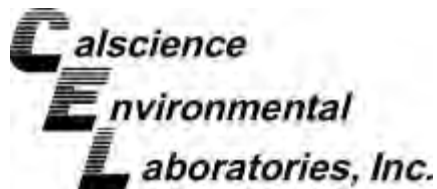
Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
12-08-0533-1	Aqueous	GC/MS PP	08/10/12	08/10/12	120810S01

Parameter	SAMPLE CONC	SPIKE ADDED	MS CONC	MS %REC	MSD CONC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Benzene	ND	50.00	48.29	97	45.55	91	78-120	6	0-20	
Carbon Tetrachloride	ND	50.00	60.36	121	57.03	114	67-139	6	0-20	
Chlorobenzene	ND	50.00	49.53	99	46.07	92	80-120	7	0-20	
1,2-Dibromoethane	ND	50.00	51.35	103	48.23	96	80-123	6	0-20	
1,2-Dichlorobenzene	ND	50.00	49.87	100	45.01	90	76-120	10	0-20	
1,2-Dichloroethane	ND	50.00	60.54	121	57.16	114	76-130	6	0-20	
1,1-Dichloroethene	ND	50.00	46.77	94	43.18	86	70-130	8	0-27	
Ethylbenzene	ND	50.00	50.24	100	47.04	94	73-127	7	0-20	
Toluene	ND	50.00	49.20	98	46.10	92	72-126	7	0-20	
Trichloroethene	ND	50.00	50.19	100	47.91	96	74-122	5	0-20	
Vinyl Chloride	ND	50.00	53.66	107	50.16	100	65-131	7	0-24	
p/m-Xylene	ND	100.0	96.95	97	91.30	91	70-130	6	0-30	
o-Xylene	ND	50.00	48.59	97	47.03	94	70-130	3	0-30	
Methyl-t-Butyl Ether (MTBE)	ND	50.00	49.49	99	46.95	94	69-123	5	0-20	

Return to Contents

RPD - Relative Percent Difference , CL - Control Limit





Quality Control - LCS/LCS Duplicate



Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: N/A
 Work Order No: 12-08-0576
 Preparation: EPA 3520C
 Method: EPA 8270C(M) Isotope Dilution

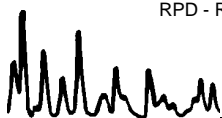
Project: Raytheon Main / 532.30

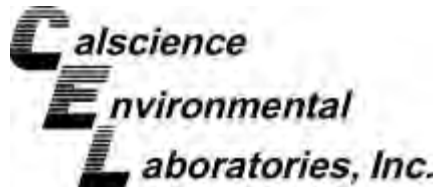
Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-09-004-2,036	Aqueous	GC/MS Y	08/09/12	08/14/12	120809L14

Parameter	<u>SPIKE ADDED</u>	<u>LCS CONC</u>	<u>LCS %REC</u>	<u>LCSD CONC</u>	<u>LCSD %REC</u>	<u>%REC CL</u>	<u>RPD</u>	<u>RPD CL</u>	<u>Qualifiers</u>
1,4-Dioxane	200.0	216.6	108	221.7	111	50-130	2	0-20	

Return to Contents

RPD - Relative Percent Difference , CL - Control Limit





Quality Control - LCS/LCS Duplicate



Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: N/A
 Work Order No: 12-08-0576
 Preparation: EPA 5030C
 Method: EPA 8260B

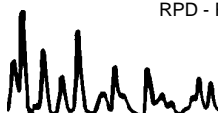
Project: Raytheon Main / 532.30

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number					
099-14-001-8,476	Aqueous	GC/MS PP	08/10/12	08/10/12	120810L01					
Parameter	<u>SPIKE ADDED</u>	<u>LCS CONC</u>	<u>LCS %REC</u>	<u>LCSD CONC</u>	<u>LCSD %REC</u>	<u>%REC CL</u>	<u>ME CL</u>	<u>RPD</u>	<u>RPD CL</u>	<u>Qualifiers</u>
Benzene	50.00	53.02	106	45.28	91	80-120	73-127	16	0-20	
Carbon Tetrachloride	50.00	60.62	121	54.28	109	66-138	54-150	11	0-20	
Chlorobenzene	50.00	52.80	106	45.96	92	80-120	73-127	14	0-20	
1,2-Dibromoethane	50.00	55.34	111	49.11	98	80-120	73-127	12	0-20	
1,2-Dichlorobenzene	50.00	53.54	107	45.11	90	80-120	73-127	17	0-20	
1,2-Dichloroethane	50.00	63.20	126	54.03	108	80-129	72-137	16	0-20	
1,1-Dichloroethene	50.00	48.73	97	42.61	85	71-131	61-141	13	0-20	
Ethylbenzene	50.00	53.85	108	48.07	96	80-123	73-130	11	0-20	
Toluene	50.00	53.39	107	45.89	92	79-121	72-128	15	0-20	
Trichloroethene	50.00	54.68	109	47.49	95	80-120	73-127	14	0-20	
Vinyl Chloride	50.00	53.16	106	49.00	98	70-136	59-147	8	0-20	
p/m-Xylene	100.0	104.0	104	92.99	93	75-125	67-133	11	0-25	
o-Xylene	50.00	52.67	105	46.73	93	75-125	67-133	12	0-25	
Methyl-t-Butyl Ether (MTBE)	50.00	49.77	100	44.30	89	72-126	63-135	12	0-22	

Total number of LCS compounds : 14
 Total number of ME compounds : 0
 Total number of ME compounds allowed : 1
 LCS ME CL validation result : Pass

Return to Contents

RPD - Relative Percent Difference , CL - Control Limit



Work Order Number: 12-08-0576

<u>Qualifier</u>	<u>Definition</u>
*	See applicable analysis comment.
<	Less than the indicated value.
>	Greater than the indicated value.
1	Surrogate compound recovery was out of control due to a required sample dilution. Therefore, the sample data was reported without further clarification.
2	Surrogate compound recovery was out of control due to matrix interference. The associated method blank surrogate spike compound was in control and, therefore, the sample data was reported without further clarification.
3	Recovery of the Matrix Spike (MS) or Matrix Spike Duplicate (MSD) compound was out of control due to matrix interference. The associated LCS and/or LCSD was in control and, therefore, the sample data was reported without further clarification.
4	The MS/MSD RPD was out of control due to matrix interference. The LCS/LCSD RPD was in control and, therefore, the sample data was reported without further clarification.
5	The PDS/PDSD or PES/PESD associated with this batch of samples was out of control due to a matrix interference effect. The associated batch LCS/LCSD was in control and, hence, the associated sample data was reported without further clarification.
6	Surrogate recovery below the acceptance limit.
7	Surrogate recovery above the acceptance limit.
B	Analyte was present in the associated method blank.
BU	Sample analyzed after holding time expired.
E	Concentration exceeds the calibration range.
ET	Sample was extracted past end of recommended max. holding time.
HD	The chromatographic pattern was inconsistent with the profile of the reference fuel standard.
HDH	The sample chromatographic pattern for TPH matches the chromatographic pattern of the specified standard but heavier hydrocarbons were also present (or detected).
HDL	The sample chromatographic pattern for TPH matches the chromatographic pattern of the specified standard but lighter hydrocarbons were also present (or detected).
J	Analyte was detected at a concentration below the reporting limit and above the laboratory method detection limit. Reported value is estimated.
ME	LCS/LCSD Recovery Percentage is within Marginal Exceedance (ME) Control Limit range.
ND	Parameter not detected at the indicated reporting limit.
Q	Spike recovery and RPD control limits do not apply resulting from the parameter concentration in the sample exceeding the spike concentration by a factor of four or greater.
SG	The sample extract was subjected to Silica Gel treatment prior to analysis.
X	% Recovery and/or RPD out-of-range.
Z	Analyte presence was not confirmed by second column or GC/MS analysis.

Solid - Unless otherwise indicated, solid sample data is reported on a wet weight basis, not corrected for % moisture. All QC results are reported on a wet weight basis.

MPN - Most Probable Number



CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST FORM

PROJECT NAME RAYTHEON MAIN	PROJECT No./TASK No. 532.30	SAMPLE CONTAINERS	ANALYSIS REQUESTED	ESTIMATED CONCENTRATION RANGE (ppb) FOR VOAS	SPECIAL HANDLING	LABORATORY INFORMATION
PROJECT MANAGER STEVE NETTO	Phone No. 858-455-6500	40 ml VOA 1 L Amber	8260B VOCs 8270C (M) 1,4-Dioxane	0-10 10-100 100-1,000	STANDARD TAT	CalScience
QA MANAGER	Fax No. 858-455-6533					ATTN: Virendra
SAMPLER (SIGNATURE) <i>Amanda Bean</i>	SAMPLER (PRINTED) Amanda Bean					

12-08-0576

LAB ID	SAMPLE ID	SAMPLE COLLECTION		MATRIX			PRESERVATION					40 ml VOA 1 L Amber	8260B VOCs 8270C (M) 1,4-Dioxane	0-10 10-100 100-1,000	STANDARD TAT	REMARKS	
		Date	Time	Soil	Ground-water	Surface water	Lab H2O	HCl	HNO3	NaOH	H2SO4						Ice
1	TB-080623	8/6/12	1600				X	X				2	X	X	X		
2	EW-01	↓	1650	X				X				3	X	X	X		
X	↓	↓	↓	X								1	X	X	X		

Total number of Containers per analysis: 51 **Total No. of Containers:** _____

Relinquished by: <i>Amanda Bean</i>	Date <u>8/8/12</u>	Received by: <i>[Signature]</i> CEL	Date <u>8/8/12</u>
H+A Inc Company	Time <u>1630</u>	Company <u>CEL</u>	Time <u>1630</u>

Relinquished by: <i>[Signature]</i>	Date <u>8/8/12</u>	Received by: <i>[Signature]</i> CEL	Date <u>8/8/12</u>
Company <u>C</u>	Time <u>1710</u>	Company <u>CEL</u>	Time <u>1710</u>

INSTRUCTIONS

- Fill out form completely except for shaded areas (lab use only); sign only after verified for completeness.
- Complete in ballpoint pen. Draw one line through errors, initial and date correction.
- Indicate number of sample containers in analysis request space; indicate choice with ✓ or x.
- Note applicable preservatives, special instructions, and deviations from typical environmental samples.
- Consult project QA documents for specific instructions.

Sample Receipt: No. of containers correct received good condition/cold
 custody seals secure conforms to COC document

Temp. @ receipt _____ °C

Shipment Method: Courier Pickup

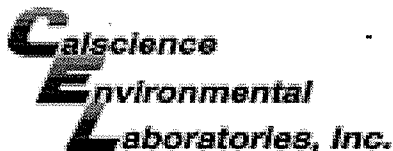
Send Results to: STEVE NETTO

9171 TOWNE CENTRE DRIVE, SUITE 375
SAN DIEGO, CA 92122 (858) 455-6500

1640 SOUTH STAPLEY DRIVE, SUITE 124
MESA, AZ 85204 (480) 345-0888

1820 EAST RIVER ROAD, SUITE 220
TUCSON, AZ 85718 (520) 881-7300

Send invoice to San Diego, CA
Attn: Accounts Payable



WORK ORDER #: 12-08-0576

SAMPLE RECEIPT FORM

Cooler 1 of 1

CLIENT: HARGIS + Associates

DATE: 08/08/12

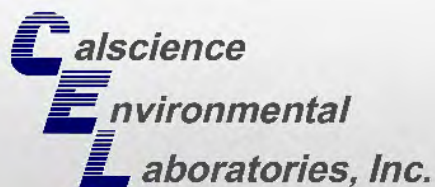
TEMPERATURE: Thermometer ID: SC2 (Criteria: 0.0°C - 6.0°C, not frozen)
Temperature 2.2°C - 0.3°C (CF) = 1.9°C
Blank Sample
Sample(s) outside temperature criteria (PM/APM contacted by: _____).
Sample(s) outside temperature criteria but received on ice/chilled on same day of sampling.
Received at ambient temperature, placed on ice for transport by Courier.
Ambient Temperature: Air Filter Initial: YL

CUSTODY SEALS INTACT:
Cooler No (Not Intact) Not Present N/A Initial: YL
Sample No (Not Intact) Not Present Initial: TS

SAMPLE CONDITION: Table with columns Yes, No, N/A and rows for Chain-Of-Custody (COC) document(s) received with samples, COC document(s) received complete, Collection date/time, matrix, and/or # of containers logged in based on sample labels, No analysis requested, Not relinquished, No date/time relinquished, Sampler's name indicated on COC, Sample container label(s) consistent with COC, Sample container(s) intact and good condition, Proper containers and sufficient volume for analyses requested, Analyses received within holding time, pH / Res. Chlorine / Diss. Sulfide / Diss. Oxygen received within 24 hours, Proper preservation noted on COC or sample container, Unpreserved vials received for Volatiles analysis, Volatile analysis container(s) free of headspace, Tedlar bag(s) free of condensation.

CONTAINER TYPE:
Solid: 4ozCGJ 8ozCGJ 16ozCGJ Sleeve () EnCores TerraCores
Water: VOA VOAh VOAna2 125AGB 125AGBh 125AGBp 1AGB 1AGBna2 1AGBs
500AGB 500AGJ 500AGJs 250AGB 250CGB 250CGBs 1PB 1PBna 500PB
250PB 250PBn 125PB 125PBzna 100PJ 100PJna2
Air: Tedlar Summa Other: Trip Blank Lot#: 12074A Labeled/Checked by: YL
Container: C: Clear A: Amber P: Plastic G: Glass J: Jar B: Bottle Z: Ziploc/Resealable Bag E: Envelope Reviewed by: TS
Preservative: h: HCL n: HNO3 na2:Na2S2O3 na: NaOH p: H3PO4 s: H2SO4 u: Ultra-pure zna: ZnAc2+NaOH f: Filtered Scanned by: TS

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CALSCIENCE

WORK ORDER NUMBER: 12-08-0801

The difference is service



AIR | SOIL | WATER | MARINE CHEMISTRY

Analytical Report For

Client: Hargis + Associates, Inc.

Client Project Name: Raytheon Main / 532.30

Attention: Steve Netto
9171 Towne Centre Drive, Suite 375
San Diego, CA 92122-6215

Approved for release on 08/23/2012 by:
Virendra Patel
Project Manager

ResultLink ▶

Email your PM ▶



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Contents

Client Project Name: Raytheon Main / 532.30

Work Order Number: 12-08-0801

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3	Quality Control Sample Data	10
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Client: Hargis + Associates, Inc.
9171 Towne Centre Drive, Suite 375
San Diego, CA 92122-6215
Attn: Steve Netto

Work Order: 12-08-0801
Project name: Raytheon Main / 532.30
Received: 08/10/12 14:30

DETECTIONS SUMMARY

Client Sample ID

Analyte	Result	Qualifiers	Reporting Limit	Units	Method	Extraction
MW-30B (12-08-0801-1)						
1,1-Dichloroethene	11		1.0	ug/L	EPA 8260B	EPA 5030C
c-1,2-Dichloroethene	3.7		1.0	ug/L	EPA 8260B	EPA 5030C
Toluene	1.8		1.0	ug/L	EPA 8260B	EPA 5030C
Trichloroethene	74		1.0	ug/L	EPA 8260B	EPA 5030C
MW-36 (12-08-0801-3)						
1,1-Dichloroethene	9.9		1.0	ug/L	EPA 8260B	EPA 5030C
Toluene	1.2		1.0	ug/L	EPA 8260B	EPA 5030C

Subcontracted analyses, if any, are not included in this summary.

*MDL is shown.

Analytical Report



Hargis + Associates, Inc.
9171 Towne Centre Drive, Suite 375
San Diego, CA 92122-6215

Date Received: 08/10/12
Work Order No: 12-08-0801
Preparation: EPA 3520C
Method: EPA 8270C(M) Isotope Dilution

Project: Raytheon Main / 532.30

Page 1 of 1

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-30B	12-08-0801-1-D	08/10/12 10:35	Aqueous	GC/MS Y	08/16/12	08/21/12 17:50	120816L15

Parameter	Result	RL	DF	Qual	Units
1,4-Dioxane	ND	1.0	1		ug/L

Surrogates:	REC (%)	Control Limits	Qual
Nitrobenzene-d5	77	56-123	

MW-36	12-08-0801-3-D	08/10/12 10:33	Aqueous	GC/MS Y	08/16/12	08/21/12 18:18	120816L15
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Comment(s): -The sample volume received was less than required resulting in an elevated reporting limit.

Parameter	Result	RL	DF	Qual	Units
1,4-Dioxane	ND	1.1	1.07		ug/L

Surrogates:	REC (%)	Control Limits	Qual
Nitrobenzene-d5	80	56-123	

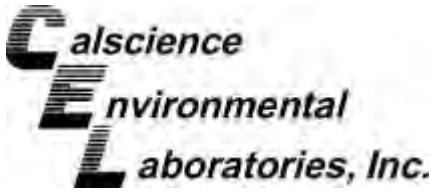
Method Blank	099-09-004-2,043	N/A	Aqueous	GC/MS Y	08/16/12	08/22/12 12:02	120816L15
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Parameter	Result	RL	DF	Qual	Units
1,4-Dioxane	ND	1.0	1		ug/L

Surrogates:	REC (%)	Control Limits	Qual
Nitrobenzene-d5	74	56-123	

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

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Analytical Report



Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 08/10/12
 Work Order No: 12-08-0801
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Raytheon Main / 532.30

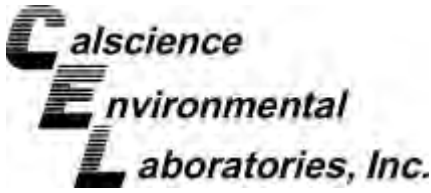
Page 1 of 5

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-30B	12-08-0801-1-C	08/10/12 10:35	Aqueous	GC/MS W	08/14/12	08/14/12 19:13	120814L01

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Acetone	ND	20	1		1,3-Dichloropropane	ND	1.0	1	
Benzene	ND	0.50	1		2,2-Dichloropropane	ND	1.0	1	
Bromobenzene	ND	1.0	1		1,1-Dichloropropene	ND	1.0	1	
Bromochloromethane	ND	1.0	1		c-1,3-Dichloropropene	ND	0.50	1	
Bromodichloromethane	ND	1.0	1		t-1,3-Dichloropropene	ND	0.50	1	
Bromoform	ND	1.0	1		Ethylbenzene	ND	1.0	1	
Bromomethane	ND	10	1		2-Hexanone	ND	10	1	
2-Butanone	ND	10	1		Isopropylbenzene	ND	1.0	1	
n-Butylbenzene	ND	1.0	1		p-Isopropyltoluene	ND	1.0	1	
sec-Butylbenzene	ND	1.0	1		Methylene Chloride	ND	10	1	
tert-Butylbenzene	ND	1.0	1		4-Methyl-2-Pentanone	ND	10	1	
Carbon Disulfide	ND	10	1		Naphthalene	ND	10	1	
Carbon Tetrachloride	ND	0.50	1		n-Propylbenzene	ND	1.0	1	
Chlorobenzene	ND	1.0	1		Styrene	ND	1.0	1	
Chloroethane	ND	5.0	1		1,1,1,2-Tetrachloroethane	ND	1.0	1	
Chloroform	ND	1.0	1		1,1,2,2-Tetrachloroethane	ND	1.0	1	
Chloromethane	ND	10	1		Tetrachloroethene	ND	1.0	1	
2-Chlorotoluene	ND	1.0	1		Toluene	1.8	1.0	1	
4-Chlorotoluene	ND	1.0	1		1,2,3-Trichlorobenzene	ND	1.0	1	
Dibromochloromethane	ND	1.0	1		1,2,4-Trichlorobenzene	ND	1.0	1	
1,2-Dibromo-3-Chloropropane	ND	5.0	1		1,1,1-Trichloroethane	ND	1.0	1	
1,2-Dibromoethane	ND	1.0	1		1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	10	1	
Dibromomethane	ND	1.0	1		1,1,2-Trichloroethane	ND	1.0	1	
1,2-Dichlorobenzene	ND	1.0	1		Trichloroethene	74	1.0	1	
1,3-Dichlorobenzene	ND	1.0	1		Trichlorofluoromethane	ND	10	1	
1,4-Dichlorobenzene	ND	1.0	1		1,2,3-Trichloropropane	ND	5.0	1	
Dichlorodifluoromethane	ND	1.0	1		1,2,4-Trimethylbenzene	ND	1.0	1	
1,1-Dichloroethane	ND	1.0	1		1,3,5-Trimethylbenzene	ND	1.0	1	
1,2-Dichloroethane	ND	0.50	1		Vinyl Acetate	ND	10	1	
1,1-Dichloroethene	11	1.0	1		Vinyl Chloride	ND	0.50	1	
c-1,2-Dichloroethene	3.7	1.0	1		p/m-Xylene	ND	1.0	1	
t-1,2-Dichloroethene	ND	1.0	1		o-Xylene	ND	1.0	1	
1,2-Dichloropropane	ND	1.0	1						
Surrogates:	REC (%)	Control Limits	Qual		Surrogates:	REC (%)	Control Limits	Qual	
1,4-Bromofluorobenzene	99	80-120			Dibromofluoromethane	99	80-126		
1,2-Dichloroethane-d4	100	80-134			Toluene-d8	101	80-120		

Return to Contents

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers



Analytical Report



Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 08/10/12
 Work Order No: 12-08-0801
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Raytheon Main / 532.30

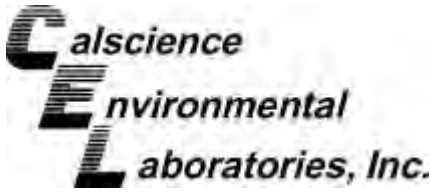
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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
TB-081012	12-08-0801-2-A	08/10/12 13:11	Aqueous	GC/MS W	08/11/12	08/11/12 20:29	120811L01

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Acetone	ND	20	1		1,3-Dichloropropane	ND	1.0	1	
Benzene	ND	0.50	1		2,2-Dichloropropane	ND	1.0	1	
Bromobenzene	ND	1.0	1		1,1-Dichloropropene	ND	1.0	1	
Bromochloromethane	ND	1.0	1		c-1,3-Dichloropropene	ND	0.50	1	
Bromodichloromethane	ND	1.0	1		t-1,3-Dichloropropene	ND	0.50	1	
Bromoform	ND	1.0	1		Ethylbenzene	ND	1.0	1	
Bromomethane	ND	10	1		2-Hexanone	ND	10	1	
2-Butanone	ND	10	1		Isopropylbenzene	ND	1.0	1	
n-Butylbenzene	ND	1.0	1		p-Isopropyltoluene	ND	1.0	1	
sec-Butylbenzene	ND	1.0	1		Methylene Chloride	ND	10	1	
tert-Butylbenzene	ND	1.0	1		4-Methyl-2-Pentanone	ND	10	1	
Carbon Disulfide	ND	10	1		Naphthalene	ND	10	1	
Carbon Tetrachloride	ND	0.50	1		n-Propylbenzene	ND	1.0	1	
Chlorobenzene	ND	1.0	1		Styrene	ND	1.0	1	
Chloroethane	ND	5.0	1		1,1,1,2-Tetrachloroethane	ND	1.0	1	
Chloroform	ND	1.0	1		1,1,2,2-Tetrachloroethane	ND	1.0	1	
Chloromethane	ND	10	1		Tetrachloroethene	ND	1.0	1	
2-Chlorotoluene	ND	1.0	1		Toluene	ND	1.0	1	
4-Chlorotoluene	ND	1.0	1		1,2,3-Trichlorobenzene	ND	1.0	1	
Dibromochloromethane	ND	1.0	1		1,2,4-Trichlorobenzene	ND	1.0	1	
1,2-Dibromo-3-Chloropropane	ND	5.0	1		1,1,1-Trichloroethane	ND	1.0	1	
1,2-Dibromoethane	ND	1.0	1		1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	10	1	
Dibromomethane	ND	1.0	1		1,1,2-Trichloroethane	ND	1.0	1	
1,2-Dichlorobenzene	ND	1.0	1		Trichloroethene	ND	1.0	1	
1,3-Dichlorobenzene	ND	1.0	1		Trichlorofluoromethane	ND	10	1	
1,4-Dichlorobenzene	ND	1.0	1		1,2,3-Trichloropropane	ND	5.0	1	
Dichlorodifluoromethane	ND	1.0	1		1,2,4-Trimethylbenzene	ND	1.0	1	
1,1-Dichloroethane	ND	1.0	1		1,3,5-Trimethylbenzene	ND	1.0	1	
1,2-Dichloroethane	ND	0.50	1		Vinyl Acetate	ND	10	1	
1,1-Dichloroethene	ND	1.0	1		Vinyl Chloride	ND	0.50	1	
c-1,2-Dichloroethene	ND	1.0	1		p/m-Xylene	ND	1.0	1	
t-1,2-Dichloroethene	ND	1.0	1		o-Xylene	ND	1.0	1	
1,2-Dichloropropane	ND	1.0	1						
Surrogates:	REC (%)	Control Limits	Qual		Surrogates:	REC (%)	Control Limits	Qual	
1,4-Bromofluorobenzene	102	80-120			Dibromofluoromethane	101	80-126		
1,2-Dichloroethane-d4	109	80-134			Toluene-d8	100	80-120		

Return to Contents

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers



Analytical Report



Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 08/10/12
 Work Order No: 12-08-0801
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Raytheon Main / 532.30

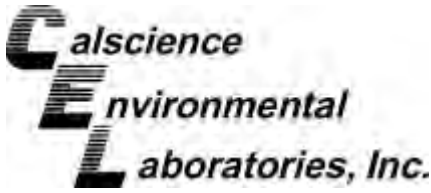
Page 3 of 5

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-36	12-08-0801-3-C	08/10/12 10:33	Aqueous	GC/MS W	08/14/12	08/14/12 19:44	120814L01

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Acetone	ND	20	1		1,3-Dichloropropane	ND	1.0	1	
Benzene	ND	0.50	1		2,2-Dichloropropane	ND	1.0	1	
Bromobenzene	ND	1.0	1		1,1-Dichloropropene	ND	1.0	1	
Bromochloromethane	ND	1.0	1		c-1,3-Dichloropropene	ND	0.50	1	
Bromodichloromethane	ND	1.0	1		t-1,3-Dichloropropene	ND	0.50	1	
Bromoform	ND	1.0	1		Ethylbenzene	ND	1.0	1	
Bromomethane	ND	10	1		2-Hexanone	ND	10	1	
2-Butanone	ND	10	1		Isopropylbenzene	ND	1.0	1	
n-Butylbenzene	ND	1.0	1		p-Isopropyltoluene	ND	1.0	1	
sec-Butylbenzene	ND	1.0	1		Methylene Chloride	ND	10	1	
tert-Butylbenzene	ND	1.0	1		4-Methyl-2-Pentanone	ND	10	1	
Carbon Disulfide	ND	10	1		Naphthalene	ND	10	1	
Carbon Tetrachloride	ND	0.50	1		n-Propylbenzene	ND	1.0	1	
Chlorobenzene	ND	1.0	1		Styrene	ND	1.0	1	
Chloroethane	ND	5.0	1		1,1,1,2-Tetrachloroethane	ND	1.0	1	
Chloroform	ND	1.0	1		1,1,2,2-Tetrachloroethane	ND	1.0	1	
Chloromethane	ND	10	1		Tetrachloroethene	ND	1.0	1	
2-Chlorotoluene	ND	1.0	1		Toluene	1.2	1.0	1	
4-Chlorotoluene	ND	1.0	1		1,2,3-Trichlorobenzene	ND	1.0	1	
Dibromochloromethane	ND	1.0	1		1,2,4-Trichlorobenzene	ND	1.0	1	
1,2-Dibromo-3-Chloropropane	ND	5.0	1		1,1,1-Trichloroethane	ND	1.0	1	
1,2-Dibromoethane	ND	1.0	1		1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	10	1	
Dibromomethane	ND	1.0	1		1,1,2-Trichloroethane	ND	1.0	1	
1,2-Dichlorobenzene	ND	1.0	1		Trichloroethene	ND	1.0	1	
1,3-Dichlorobenzene	ND	1.0	1		Trichlorofluoromethane	ND	10	1	
1,4-Dichlorobenzene	ND	1.0	1		1,2,3-Trichloropropane	ND	5.0	1	
Dichlorodifluoromethane	ND	1.0	1		1,2,4-Trimethylbenzene	ND	1.0	1	
1,1-Dichloroethane	ND	1.0	1		1,3,5-Trimethylbenzene	ND	1.0	1	
1,2-Dichloroethane	ND	0.50	1		Vinyl Acetate	ND	10	1	
1,1-Dichloroethene	9.9	1.0	1		Vinyl Chloride	ND	0.50	1	
c-1,2-Dichloroethene	ND	1.0	1		p/m-Xylene	ND	1.0	1	
t-1,2-Dichloroethene	ND	1.0	1		o-Xylene	ND	1.0	1	
1,2-Dichloropropane	ND	1.0	1						
Surrogates:	REC (%)	Control Limits	Qual		Surrogates:	REC (%)	Control Limits	Qual	
1,4-Bromofluorobenzene	98	80-120			Dibromofluoromethane	101	80-126		
1,2-Dichloroethane-d4	102	80-134			Toluene-d8	102	80-120		

Return to Contents

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers



Analytical Report



Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 08/10/12
 Work Order No: 12-08-0801
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Raytheon Main / 532.30

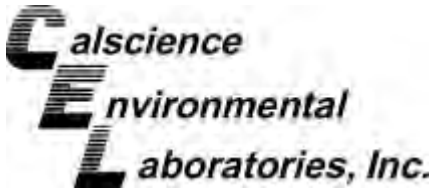
Page 4 of 5

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-14-001-8,491	N/A	Aqueous	GC/MS W	08/11/12	08/11/12 11:32	120811L01

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Acetone	ND	20	1		1,3-Dichloropropane	ND	1.0	1	
Benzene	ND	0.50	1		2,2-Dichloropropane	ND	1.0	1	
Bromobenzene	ND	1.0	1		1,1-Dichloropropene	ND	1.0	1	
Bromochloromethane	ND	1.0	1		c-1,3-Dichloropropene	ND	0.50	1	
Bromodichloromethane	ND	1.0	1		t-1,3-Dichloropropene	ND	0.50	1	
Bromoform	ND	1.0	1		Ethylbenzene	ND	1.0	1	
Bromomethane	ND	10	1		2-Hexanone	ND	10	1	
2-Butanone	ND	10	1		Isopropylbenzene	ND	1.0	1	
n-Butylbenzene	ND	1.0	1		p-Isopropyltoluene	ND	1.0	1	
sec-Butylbenzene	ND	1.0	1		Methylene Chloride	ND	10	1	
tert-Butylbenzene	ND	1.0	1		4-Methyl-2-Pentanone	ND	10	1	
Carbon Disulfide	ND	10	1		Naphthalene	ND	10	1	
Carbon Tetrachloride	ND	0.50	1		n-Propylbenzene	ND	1.0	1	
Chlorobenzene	ND	1.0	1		Styrene	ND	1.0	1	
Chloroethane	ND	5.0	1		1,1,1,2-Tetrachloroethane	ND	1.0	1	
Chloroform	ND	1.0	1		1,1,2,2-Tetrachloroethane	ND	1.0	1	
Chloromethane	ND	10	1		Tetrachloroethene	ND	1.0	1	
2-Chlorotoluene	ND	1.0	1		Toluene	ND	1.0	1	
4-Chlorotoluene	ND	1.0	1		1,2,3-Trichlorobenzene	ND	1.0	1	
Dibromochloromethane	ND	1.0	1		1,2,4-Trichlorobenzene	ND	1.0	1	
1,2-Dibromo-3-Chloropropane	ND	5.0	1		1,1,1-Trichloroethane	ND	1.0	1	
1,2-Dibromoethane	ND	1.0	1		1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	10	1	
Dibromomethane	ND	1.0	1		1,1,2-Trichloroethane	ND	1.0	1	
1,2-Dichlorobenzene	ND	1.0	1		Trichloroethene	ND	1.0	1	
1,3-Dichlorobenzene	ND	1.0	1		Trichlorofluoromethane	ND	10	1	
1,4-Dichlorobenzene	ND	1.0	1		1,2,3-Trichloropropane	ND	5.0	1	
Dichlorodifluoromethane	ND	1.0	1		1,2,4-Trimethylbenzene	ND	1.0	1	
1,1-Dichloroethane	ND	1.0	1		1,3,5-Trimethylbenzene	ND	1.0	1	
1,2-Dichloroethane	ND	0.50	1		Vinyl Acetate	ND	10	1	
1,1-Dichloroethene	ND	1.0	1		Vinyl Chloride	ND	0.50	1	
c-1,2-Dichloroethene	ND	1.0	1		p/m-Xylene	ND	1.0	1	
t-1,2-Dichloroethene	ND	1.0	1		o-Xylene	ND	1.0	1	
1,2-Dichloropropane	ND	1.0	1						
Surrogates:	REC (%)	Control Limits	DF	Qual	Surrogates:	REC (%)	Control Limits	DF	Qual
1,4-Bromofluorobenzene	100	80-120			Dibromofluoromethane	98	80-126		
1,2-Dichloroethane-d4	104	80-134			Toluene-d8	99	80-120		

Return to Contents

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers



Analytical Report



Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 08/10/12
 Work Order No: 12-08-0801
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Raytheon Main / 532.30

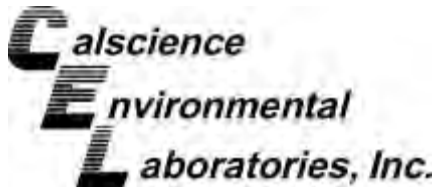
Page 5 of 5

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-14-001-8,509	N/A	Aqueous	GC/MS W	08/14/12	08/14/12 16:11	120814L01

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Acetone	ND	20	1		1,3-Dichloropropane	ND	1.0	1	
Benzene	ND	0.50	1		2,2-Dichloropropane	ND	1.0	1	
Bromobenzene	ND	1.0	1		1,1-Dichloropropene	ND	1.0	1	
Bromochloromethane	ND	1.0	1		c-1,3-Dichloropropene	ND	0.50	1	
Bromodichloromethane	ND	1.0	1		t-1,3-Dichloropropene	ND	0.50	1	
Bromoform	ND	1.0	1		Ethylbenzene	ND	1.0	1	
Bromomethane	ND	10	1		2-Hexanone	ND	10	1	
2-Butanone	ND	10	1		Isopropylbenzene	ND	1.0	1	
n-Butylbenzene	ND	1.0	1		p-Isopropyltoluene	ND	1.0	1	
sec-Butylbenzene	ND	1.0	1		Methylene Chloride	ND	10	1	
tert-Butylbenzene	ND	1.0	1		4-Methyl-2-Pentanone	ND	10	1	
Carbon Disulfide	ND	10	1		Naphthalene	ND	10	1	
Carbon Tetrachloride	ND	0.50	1		n-Propylbenzene	ND	1.0	1	
Chlorobenzene	ND	1.0	1		Styrene	ND	1.0	1	
Chloroethane	ND	5.0	1		1,1,1,2-Tetrachloroethane	ND	1.0	1	
Chloroform	ND	1.0	1		1,1,2,2-Tetrachloroethane	ND	1.0	1	
Chloromethane	ND	10	1		Tetrachloroethene	ND	1.0	1	
2-Chlorotoluene	ND	1.0	1		Toluene	ND	1.0	1	
4-Chlorotoluene	ND	1.0	1		1,2,3-Trichlorobenzene	ND	1.0	1	
Dibromochloromethane	ND	1.0	1		1,2,4-Trichlorobenzene	ND	1.0	1	
1,2-Dibromo-3-Chloropropane	ND	5.0	1		1,1,1-Trichloroethane	ND	1.0	1	
1,2-Dibromoethane	ND	1.0	1		1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	10	1	
Dibromomethane	ND	1.0	1		1,1,2-Trichloroethane	ND	1.0	1	
1,2-Dichlorobenzene	ND	1.0	1		Trichloroethene	ND	1.0	1	
1,3-Dichlorobenzene	ND	1.0	1		Trichlorofluoromethane	ND	10	1	
1,4-Dichlorobenzene	ND	1.0	1		1,2,3-Trichloropropane	ND	5.0	1	
Dichlorodifluoromethane	ND	1.0	1		1,2,4-Trimethylbenzene	ND	1.0	1	
1,1-Dichloroethane	ND	1.0	1		1,3,5-Trimethylbenzene	ND	1.0	1	
1,2-Dichloroethane	ND	0.50	1		Vinyl Acetate	ND	10	1	
1,1-Dichloroethene	ND	1.0	1		Vinyl Chloride	ND	0.50	1	
c-1,2-Dichloroethene	ND	1.0	1		p/m-Xylene	ND	1.0	1	
t-1,2-Dichloroethene	ND	1.0	1		o-Xylene	ND	1.0	1	
1,2-Dichloropropane	ND	1.0	1						
Surrogates:	REC (%)	Control Limits	DF	Qual	Surrogates:	REC (%)	Control Limits	DF	Qual
1,4-Bromofluorobenzene	101	80-120			Dibromofluoromethane	100	80-126		
1,2-Dichloroethane-d4	103	80-134			Toluene-d8	100	80-120		

Return to Contents

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers



Quality Control - Spike/Spike Duplicate



Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 08/10/12
 Work Order No: 12-08-0801
 Preparation: EPA 5030C
 Method: EPA 8260B

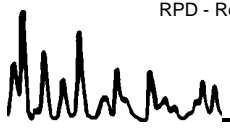
Project Raytheon Main / 532.30

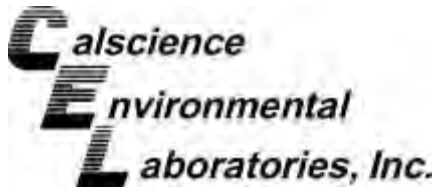
Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
12-08-0810-6	Aqueous	GC/MS W	08/11/12	08/11/12	120811S01

Parameter	SAMPLE CONC	SPIKE ADDED	MS CONC	MS %REC	MSD CONC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Benzene	ND	50.00	44.52	89	44.59	89	78-120	0	0-20	
Carbon Tetrachloride	ND	50.00	43.05	86	43.37	87	67-139	1	0-20	
Chlorobenzene	ND	50.00	44.99	90	45.22	90	80-120	1	0-20	
1,2-Dibromoethane	ND	50.00	45.41	91	45.39	91	80-123	0	0-20	
1,2-Dichlorobenzene	ND	50.00	46.64	93	47.51	95	76-120	2	0-20	
1,2-Dichloroethane	ND	50.00	48.23	96	48.84	98	76-130	1	0-20	
1,1-Dichloroethene	ND	50.00	37.65	75	38.10	76	70-130	1	0-27	
Ethylbenzene	ND	50.00	45.70	91	45.90	92	73-127	0	0-20	
Toluene	ND	50.00	44.74	89	44.89	90	72-126	0	0-20	
Trichloroethene	ND	50.00	42.66	85	42.63	85	74-122	0	0-20	
Vinyl Chloride	ND	50.00	42.03	84	41.66	83	65-131	1	0-24	
p/m-Xylene	ND	100.0	93.10	93	93.94	94	70-130	1	0-30	
o-Xylene	ND	50.00	45.65	91	46.26	93	70-130	1	0-30	
Methyl-t-Butyl Ether (MTBE)	ND	50.00	42.35	85	43.17	86	69-123	2	0-20	

Return to Contents

RPD - Relative Percent Difference , CL - Control Limit





Quality Control - Spike/Spike Duplicate



Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 08/10/12
 Work Order No: 12-08-0801
 Preparation: EPA 5030C
 Method: EPA 8260B

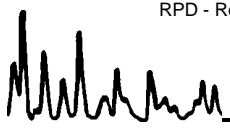
Project Raytheon Main / 532.30

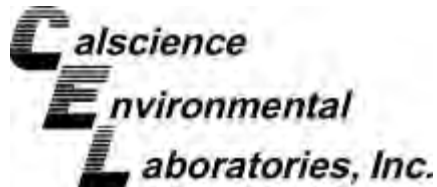
Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
12-08-0646-5	Aqueous	GC/MS W	08/14/12	08/14/12	120814S01

Parameter	SAMPLE CONC	SPIKE ADDED	MS CONC	MS %REC	MSD CONC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Benzene	18.70	50.00	65.35	93	66.32	95	78-120	1	0-20	
Carbon Tetrachloride	ND	50.00	48.73	97	48.58	97	67-139	0	0-20	
Chlorobenzene	ND	50.00	47.79	96	48.09	96	80-120	1	0-20	
1,2-Dibromoethane	ND	50.00	48.04	96	50.73	101	80-123	5	0-20	
1,2-Dichlorobenzene	ND	50.00	45.90	92	45.95	92	76-120	0	0-20	
1,2-Dichloroethane	ND	50.00	50.31	101	49.93	100	76-130	1	0-20	
1,1-Dichloroethene	ND	50.00	42.08	84	42.99	86	70-130	2	0-27	
Ethylbenzene	ND	50.00	50.12	100	50.60	101	73-127	1	0-20	
Toluene	1.800	50.00	51.24	99	51.80	100	72-126	1	0-20	
Trichloroethene	ND	50.00	47.68	95	47.99	96	74-122	1	0-20	
Vinyl Chloride	ND	50.00	45.96	92	49.84	100	65-131	8	0-24	
p/m-Xylene	ND	100.0	99.53	100	101.5	101	70-130	2	0-30	
o-Xylene	ND	50.00	51.19	102	53.00	106	70-130	3	0-30	
Methyl-t-Butyl Ether (MTBE)	6.755	50.00	49.93	86	48.99	84	69-123	2	0-20	

Return to Contents

RPD - Relative Percent Difference , CL - Control Limit





Quality Control - LCS/LCS Duplicate



Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: N/A
 Work Order No: 12-08-0801
 Preparation: EPA 3520C
 Method: EPA 8270C(M) Isotope Dilution

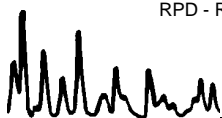
Project: Raytheon Main / 532.30

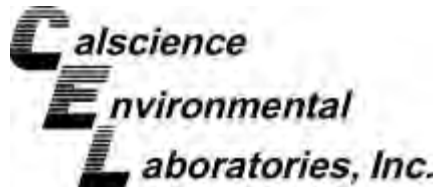
Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-09-004-2,043	Aqueous	GC/MS Y	08/16/12	08/22/12	120816L15

Parameter	<u>SPIKE ADDED</u>	<u>LCS CONC</u>	<u>LCS %REC</u>	<u>LCSD CONC</u>	<u>LCSD %REC</u>	<u>%REC CL</u>	<u>RPD</u>	<u>RPD CL</u>	<u>Qualifiers</u>
1,4-Dioxane	200.0	233.1	117	243.6	122	50-130	4	0-20	

Return to Contents

RPD - Relative Percent Difference , CL - Control Limit





Quality Control - LCS/LCS Duplicate



Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: N/A
 Work Order No: 12-08-0801
 Preparation: EPA 5030C
 Method: EPA 8260B

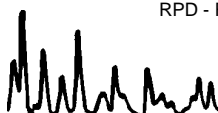
Project: Raytheon Main / 532.30

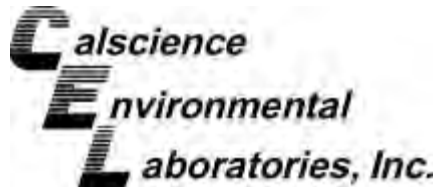
Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number					
099-14-001-8,491	Aqueous	GC/MS W	08/11/12	08/11/12	120811L01					
Parameter	<u>SPIKE ADDED</u>	<u>LCS CONC</u>	<u>LCS %REC</u>	<u>LCSD CONC</u>	<u>LCSD %REC</u>	<u>%REC CL</u>	<u>ME CL</u>	<u>RPD</u>	<u>RPD CL</u>	<u>Qualifiers</u>
Benzene	50.00	52.83	106	50.28	101	80-120	73-127	5	0-20	
Carbon Tetrachloride	50.00	52.26	105	48.73	97	66-138	54-150	7	0-20	
Chlorobenzene	50.00	52.69	105	50.84	102	80-120	73-127	4	0-20	
1,2-Dibromoethane	50.00	54.06	108	52.15	104	80-120	73-127	4	0-20	
1,2-Dichlorobenzene	50.00	54.93	110	53.48	107	80-120	73-127	3	0-20	
1,2-Dichloroethane	50.00	54.48	109	53.04	106	80-129	72-137	3	0-20	
1,1-Dichloroethene	50.00	47.38	95	43.77	88	71-131	61-141	8	0-20	
Ethylbenzene	50.00	54.48	109	51.98	104	80-123	73-130	5	0-20	
Toluene	50.00	52.11	104	50.09	100	79-121	72-128	4	0-20	
Trichloroethene	50.00	50.15	100	47.89	96	80-120	73-127	5	0-20	
Vinyl Chloride	50.00	54.35	109	49.56	99	70-136	59-147	9	0-20	
p/m-Xylene	100.0	110.8	111	106.6	107	75-125	67-133	4	0-25	
o-Xylene	50.00	54.00	108	51.83	104	75-125	67-133	4	0-25	
Methyl-t-Butyl Ether (MTBE)	50.00	51.06	102	47.80	96	72-126	63-135	7	0-22	

Total number of LCS compounds : 14
 Total number of ME compounds : 0
 Total number of ME compounds allowed : 1
 LCS ME CL validation result : Pass

Return to Contents

RPD - Relative Percent Difference , CL - Control Limit





Quality Control - LCS/LCS Duplicate



Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: N/A
 Work Order No: 12-08-0801
 Preparation: EPA 5030C
 Method: EPA 8260B

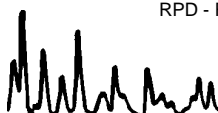
Project: Raytheon Main / 532.30

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number					
099-14-001-8,509	Aqueous	GC/MS W	08/14/12	08/14/12	120814L01					
Parameter	<u>SPIKE ADDED</u>	<u>LCS CONC</u>	<u>LCS %REC</u>	<u>LCSD CONC</u>	<u>LCSD %REC</u>	<u>%REC CL</u>	<u>ME CL</u>	<u>RPD</u>	<u>RPD CL</u>	<u>Qualifiers</u>
Benzene	50.00	53.87	108	53.90	108	80-120	73-127	0	0-20	
Carbon Tetrachloride	50.00	54.93	110	54.75	110	66-138	54-150	0	0-20	
Chlorobenzene	50.00	52.50	105	52.59	105	80-120	73-127	0	0-20	
1,2-Dibromoethane	50.00	51.77	104	51.26	103	80-120	73-127	1	0-20	
1,2-Dichlorobenzene	50.00	51.64	103	51.58	103	80-120	73-127	0	0-20	
1,2-Dichloroethane	50.00	53.68	107	53.04	106	80-129	72-137	1	0-20	
1,1-Dichloroethene	50.00	47.41	95	47.48	95	71-131	61-141	0	0-20	
Ethylbenzene	50.00	56.30	113	56.45	113	80-123	73-130	0	0-20	
Toluene	50.00	55.35	111	55.31	111	79-121	72-128	0	0-20	
Trichloroethene	50.00	52.37	105	53.30	107	80-120	73-127	2	0-20	
Vinyl Chloride	50.00	53.18	106	52.84	106	70-136	59-147	1	0-20	
p/m-Xylene	100.0	112.3	112	112.5	112	75-125	67-133	0	0-25	
o-Xylene	50.00	56.24	112	56.78	114	75-125	67-133	1	0-25	
Methyl-t-Butyl Ether (MTBE)	50.00	46.47	93	45.63	91	72-126	63-135	2	0-22	

Total number of LCS compounds : 14
 Total number of ME compounds : 0
 Total number of ME compounds allowed : 1
 LCS ME CL validation result : Pass

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RPD - Relative Percent Difference , CL - Control Limit



Work Order Number: 12-08-0801

<u>Qualifier</u>	<u>Definition</u>
*	See applicable analysis comment.
<	Less than the indicated value.
>	Greater than the indicated value.
1	Surrogate compound recovery was out of control due to a required sample dilution. Therefore, the sample data was reported without further clarification.
2	Surrogate compound recovery was out of control due to matrix interference. The associated method blank surrogate spike compound was in control and, therefore, the sample data was reported without further clarification.
3	Recovery of the Matrix Spike (MS) or Matrix Spike Duplicate (MSD) compound was out of control due to matrix interference. The associated LCS and/or LCSD was in control and, therefore, the sample data was reported without further clarification.
4	The MS/MSD RPD was out of control due to matrix interference. The LCS/LCSD RPD was in control and, therefore, the sample data was reported without further clarification.
5	The PDS/PDSD or PES/PESD associated with this batch of samples was out of control due to a matrix interference effect. The associated batch LCS/LCSD was in control and, hence, the associated sample data was reported without further clarification.
6	Surrogate recovery below the acceptance limit.
7	Surrogate recovery above the acceptance limit.
B	Analyte was present in the associated method blank.
BU	Sample analyzed after holding time expired.
E	Concentration exceeds the calibration range.
ET	Sample was extracted past end of recommended max. holding time.
HD	The chromatographic pattern was inconsistent with the profile of the reference fuel standard.
HDH	The sample chromatographic pattern for TPH matches the chromatographic pattern of the specified standard but heavier hydrocarbons were also present (or detected).
HDL	The sample chromatographic pattern for TPH matches the chromatographic pattern of the specified standard but lighter hydrocarbons were also present (or detected).
J	Analyte was detected at a concentration below the reporting limit and above the laboratory method detection limit. Reported value is estimated.
ME	LCS/LCSD Recovery Percentage is within Marginal Exceedance (ME) Control Limit range.
ND	Parameter not detected at the indicated reporting limit.
Q	Spike recovery and RPD control limits do not apply resulting from the parameter concentration in the sample exceeding the spike concentration by a factor of four or greater.
SG	The sample extract was subjected to Silica Gel treatment prior to analysis.
X	% Recovery and/or RPD out-of-range.
Z	Analyte presence was not confirmed by second column or GC/MS analysis.

Solid - Unless otherwise indicated, solid sample data is reported on a wet weight basis, not corrected for % moisture. All QC results are reported on a wet weight basis.

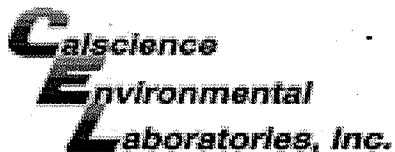
MPN - Most Probable Number



CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST FORM

PROJECT NAME RAYTHEON		PROJECT No./TASK No. 532.30		SAMPLE CONTAINERS		ANALYSIS REQUESTED		ESTIMATED CONCENTRATION RANGE (ppb) FOR VOAS		SPECIAL HANDLING		LABORATORY INFORMATION	
PROJECT MANAGER STEVE NETTO		Phone No. 858-455-6500								12-08-0801		CA SCIENCE Virendra	
QA MANAGER		Fax No. 858-455-6533											
SAMPLER (SIGNATURE) <i>[Signature]</i>		SAMPLER (PRINTED) DANIEL MORA AMANDA BEAM <i>ERIN HUNTER</i>											
LAB ID	SAMPLE ID	SAMPLE COLLECTION		MATRIX			PRESERVATION					REMARKS	
		Date	Time	Soil	Ground water	Surface water	Lab H2O	HCl	HNO3	NaOH	H2SO4		ice
	MW-31B	8/10/12	1033	X				X				X	AMB
	1 < MNV-30B		1035	X				X				X	
	2 TB-081012		1311	X			X	X				X	
	3 < MW-36	8/10/12	1033	X			X	X				X	
		8/10/12		X				X				X	
Total number of Containers per analysis: <u>8 2</u>										Total No. of Containers: <u>10</u>			

Relinquished by: <i>[Signature]</i>		Date <u>8/10/12</u>	Received by: <i>[Signature]</i>		Date <u>8/10/12</u>	INSTRUCTIONS	Shipment Method: <u>Courier</u>	
Company <u>H+A Inc</u>		Time <u>1317</u>	Company <u>CEL</u>		Time <u>1317</u>		1. Fill out form completely except for shaded areas (lab use only); sign only after verified for completeness. 2. Complete in ballpoint pen. Draw one line through errors, initial and date correction. 3. Indicate number of sample containers in analysis request space; indicate choice with ✓ or x. 4. Note applicable preservatives, special instructions, and deviations from typical environmental samples. 5. Consult project QA documents for specific instructions.	<input checked="" type="checkbox"/> 9171 TOWNE CENTRE DRIVE, SUITE 375 SAN DIEGO, CA 92122 (858) 455-6500 <input type="checkbox"/> 1640 SOUTH STAPLEY DRIVE, SUITE 124 MESA, AZ 85204 (480) 345-0888 <input type="checkbox"/> 1820 EAST RIVER ROAD, SUITE 220 TUCSON, AZ 85718 (520) 881-7300
Relinquished by: <i>[Signature]</i>		Date <u>8/10/12</u>	Received by: <i>[Signature]</i>		Date <u>8/10/12</u>	Sample Receipt: <input type="checkbox"/> No. of containers correct <input type="checkbox"/> custody seals secure	Temp. @ receipt _____ °C <input type="checkbox"/> received good condition/cold <input type="checkbox"/> conforms to COC document	
Company <u>CEL</u>		Time <u>1430</u>	Company <u>CEL</u>		Time <u>1430</u>		Send invoice to San Diego, CA Attn: Accounts Payable	



WORK ORDER #: 12-08-0801

SAMPLE RECEIPT FORM

Cooler 1 of 1

CLIENT: Hargis + Ass.

DATE: 08/10/12

TEMPERATURE: Thermometer ID: SC2 (Criteria: 0.0°C – 6.0°C, not frozen)

Temperature 4.1 °C - 0.3°C (CF) = 3.8 °C Blank Sample

- Sample(s) outside temperature criteria (PM/APM contacted by: _____).
- Sample(s) outside temperature criteria but received on ice/chilled on same day of sampling.

Received at ambient temperature, placed on ice for transport by Courier.

Ambient Temperature: Air Filter

Initial: SP

CUSTODY SEALS INTACT:

- Cooler _____ No (Not Intact) Not Present N/A
- Sample _____ No (Not Intact) Not Present

Initial: SP

Initial: ST

SAMPLE CONDITION:

	Yes	No	N/A
Chain-Of-Custody (COC) document(s) received with samples.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
COC document(s) received complete.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Collection date/time, matrix, and/or # of containers logged in based on sample labels.			
<input type="checkbox"/> No analysis requested. <input type="checkbox"/> Not relinquished. <input type="checkbox"/> No date/time relinquished.			
Sampler's name indicated on COC.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sample container label(s) consistent with COC.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sample container(s) intact and good condition.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Proper containers and sufficient volume for analyses requested.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Analyses received within holding time.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
pH / Res. Chlorine / Diss. Sulfide / Diss. Oxygen received within 24 hours...	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Proper preservation noted on COC or sample container.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Unpreserved vials received for Volatiles analysis			
Volatile analysis container(s) free of headspace.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Tedlar bag(s) free of condensation.....	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

CONTAINER TYPE:

- Solid: 4ozCGJ 8ozCGJ 16ozCGJ Sleeve (____) EnCores® TerraCores® _____
- Water: VOA VOAh VOAna₂ 125AGB 125AGBh 125AGBp 1AGB 1AGBna₂ 1AGBs
- 500AGB 500AGJ 500AGJs 250AGB 250CGB 250CGBs 1PB 1PBna 500PB
- 250PB 250PBn 125PB 125PBz_{na} 100PJ 100PJna₂ 1AGJ _____ _____

Air: Tedlar® Summa® Other: _____ Trip Blank Lot#: 120806B Labeled/Checked by: ST

Container: C: Clear A: Amber P: Plastic G: Glass J: Jar B: Bottle Z: Ziploc/Resealable Bag E: Envelope Reviewed by: bc

Preservative: h: HCL n: HNO₃ na₂: Na₂S₂O₃ na: NaOH p: H₃PO₄ s: H₂SO₄ u: Ultra-pure z_{na}: ZnAc₂+NaOH f: Filtered Scanned by: uc

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APPENDIX A
LABORATORY ANALYTICAL REPORTS
(*FOURTH QUARTER 2012*)

October 31, 2012

Steve Netto/Ken Simon
Hargis & Associates, Inc.
9171 Towne Centre Drive, Suite 375
San Diego, CA 92122
Tel: (858) 455-6500
Fax: (858) 455-6533

ACCREDITED IN ACCORDANCE WITH
nelac
ELAP No.: 1838
NELAP No.: 02107CA
CSDLAC No.: 10196
ORELAP No.: CA300003
TCEQ No.: T104704502

Re: ATL Work Order Number : 1203781
Client Reference : RAYTHEON MAIN, 532.03

Enclosed are the results for sample(s) received on October 26, 2012 by Advanced Technology Laboratories. The sample(s) are tested for the parameters as indicated on the enclosed chain of custody in accordance with applicable laboratory certifications. The laboratory results contained in this report specifically pertains to the sample(s) submitted.

Thank you for the opportunity to serve the needs of your company. If you have any questions, please feel free to contact me or your Project Manager.

Sincerely,



Eddie Rodriguez
Laboratory Director

The cover letter and the case narrative are an integral part of this analytical report and its absence renders the report invalid. Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Conference and/or applicable state-specific certification programs. The report cannot be reproduced without written permission from the client and Advanced Technology Laboratories.



Certificate of Analysis

Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : RAYTHEON MAIN, 532.03

Report To : Steve Netto/Ken Simon

Reported : 10/31/2012

SUMMARY OF SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
TB-102612A	1203781-01	Lab H2O	10/26/12 13:00	10/26/12 17:30
MW-37	1203781-02	Groundwater	10/26/12 15:20	10/26/12 17:30
MW-3700	1203781-03	Groundwater	10/26/12 17:00	10/26/12 17:30



Certificate of Analysis

Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego, CA 92122

Project Number : RAYTHEON MAIN, 532.03

Report To : Steve Netto/Ken Simon

Reported : 10/31/2012

Client Sample ID TB-102612A

Lab ID: 1203781-01

Volatile Organic Compounds by EPA 8260

Analyst: SL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	0.50	NA	1	B2J0759	10/29/2012	10/29/12 11:11	
1,1,1-Trichloroethane	ND	0.50	NA	1	B2J0759	10/29/2012	10/29/12 11:11	
1,1,2,2-Tetrachloroethane	ND	0.50	NA	1	B2J0759	10/29/2012	10/29/12 11:11	
1,1,2-Trichloroethane	ND	0.50	NA	1	B2J0759	10/29/2012	10/29/12 11:11	
1,1-Dichloroethane	ND	0.50	NA	1	B2J0759	10/29/2012	10/29/12 11:11	
1,1-Dichloroethene	ND	0.50	NA	1	B2J0759	10/29/2012	10/29/12 11:11	
1,1-Dichloropropene	ND	0.50	NA	1	B2J0759	10/29/2012	10/29/12 11:11	
1,2,3-Trichloropropane	ND	0.50	NA	1	B2J0759	10/29/2012	10/29/12 11:11	
1,2,3-Trichlorobenzene	ND	0.50	NA	1	B2J0759	10/29/2012	10/29/12 11:11	
1,2,4-Trichlorobenzene	ND	0.50	NA	1	B2J0759	10/29/2012	10/29/12 11:11	
1,2,4-Trimethylbenzene	ND	0.50	NA	1	B2J0759	10/29/2012	10/29/12 11:11	
1,2-Dibromo-3-chloropropane	ND	0.50	NA	1	B2J0759	10/29/2012	10/29/12 11:11	
1,2-Dibromoethane	ND	0.50	NA	1	B2J0759	10/29/2012	10/29/12 11:11	
1,2-Dichlorobenzene	ND	0.50	NA	1	B2J0759	10/29/2012	10/29/12 11:11	
1,2-Dichloroethane	ND	0.50	NA	1	B2J0759	10/29/2012	10/29/12 11:11	
1,2-Dichloropropane	ND	0.50	NA	1	B2J0759	10/29/2012	10/29/12 11:11	
1,3,5-Trimethylbenzene	ND	0.50	NA	1	B2J0759	10/29/2012	10/29/12 11:11	
1,3-Dichlorobenzene	ND	0.50	NA	1	B2J0759	10/29/2012	10/29/12 11:11	
1,3-Dichloropropane	ND	0.50	NA	1	B2J0759	10/29/2012	10/29/12 11:11	
1,4-Dichlorobenzene	ND	0.50	NA	1	B2J0759	10/29/2012	10/29/12 11:11	
2,2-Dichloropropane	ND	0.50	NA	1	B2J0759	10/29/2012	10/29/12 11:11	
2-Chlorotoluene	ND	0.50	NA	1	B2J0759	10/29/2012	10/29/12 11:11	
4-Chlorotoluene	ND	0.50	NA	1	B2J0759	10/29/2012	10/29/12 11:11	
4-Isopropyltoluene	ND	0.50	NA	1	B2J0759	10/29/2012	10/29/12 11:11	
Benzene	ND	0.50	NA	1	B2J0759	10/29/2012	10/29/12 11:11	
Bromobenzene	ND	0.50	NA	1	B2J0759	10/29/2012	10/29/12 11:11	
Bromodichloromethane	ND	0.50	NA	1	B2J0759	10/29/2012	10/29/12 11:11	
Bromoform	ND	0.50	NA	1	B2J0759	10/29/2012	10/29/12 11:11	
Bromomethane	ND	0.50	NA	1	B2J0759	10/29/2012	10/29/12 11:11	
Carbon tetrachloride	ND	0.50	NA	1	B2J0759	10/29/2012	10/29/12 11:11	
Chlorobenzene	ND	0.50	NA	1	B2J0759	10/29/2012	10/29/12 11:11	
Chloroethane	ND	0.50	NA	1	B2J0759	10/29/2012	10/29/12 11:11	
Chloroform	ND	0.50	NA	1	B2J0759	10/29/2012	10/29/12 11:11	
Chloromethane	ND	0.50	NA	1	B2J0759	10/29/2012	10/29/12 11:11	
cis-1,2-Dichloroethene	ND	0.50	NA	1	B2J0759	10/29/2012	10/29/12 11:11	
cis-1,3-Dichloropropene	ND	0.50	NA	1	B2J0759	10/29/2012	10/29/12 11:11	
Dibromochloromethane	ND	0.50	NA	1	B2J0759	10/29/2012	10/29/12 11:11	



Certificate of Analysis

Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego, CA 92122

Project Number : RAYTHEON MAIN, 532.03

Report To : Steve Netto/Ken Simon

Reported : 10/31/2012

Client Sample ID TB-102612A

Lab ID: 1203781-01

Volatile Organic Compounds by EPA 8260

Analyst: SL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Dibromomethane	ND	0.50	NA	1	B2J0759	10/29/2012	10/29/12 11:11	
Dichlorodifluoromethane	ND	0.50	NA	1	B2J0759	10/29/2012	10/29/12 11:11	
Ethylbenzene	ND	0.50	NA	1	B2J0759	10/29/2012	10/29/12 11:11	
Hexachlorobutadiene	ND	0.50	NA	1	B2J0759	10/29/2012	10/29/12 11:11	
Isopropylbenzene	ND	0.50	NA	1	B2J0759	10/29/2012	10/29/12 11:11	
m,p-Xylene	ND	1.0	NA	1	B2J0759	10/29/2012	10/29/12 11:11	
Methylene chloride	ND	1.0	NA	1	B2J0759	10/29/2012	10/29/12 11:11	
n-Butylbenzene	ND	0.50	NA	1	B2J0759	10/29/2012	10/29/12 11:11	
n-Propylbenzene	ND	0.50	NA	1	B2J0759	10/29/2012	10/29/12 11:11	
Naphthalene	ND	0.50	NA	1	B2J0759	10/29/2012	10/29/12 11:11	
o-Xylene	ND	0.50	NA	1	B2J0759	10/29/2012	10/29/12 11:11	
sec-Butylbenzene	ND	0.50	NA	1	B2J0759	10/29/2012	10/29/12 11:11	
Styrene	ND	0.50	NA	1	B2J0759	10/29/2012	10/29/12 11:11	
tert-Butylbenzene	ND	0.50	NA	1	B2J0759	10/29/2012	10/29/12 11:11	
Tetrachloroethene	ND	0.50	NA	1	B2J0759	10/29/2012	10/29/12 11:11	
Toluene	ND	0.50	NA	1	B2J0759	10/29/2012	10/29/12 11:11	
trans-1,2-Dichloroethene	ND	0.50	NA	1	B2J0759	10/29/2012	10/29/12 11:11	
Trichloroethene	ND	0.50	NA	1	B2J0759	10/29/2012	10/29/12 11:11	
Trichlorofluoromethane	ND	0.50	NA	1	B2J0759	10/29/2012	10/29/12 11:11	
Vinyl chloride	ND	0.50	NA	1	B2J0759	10/29/2012	10/29/12 11:11	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>96.2 %</i>		<i>70 - 130</i>		B2J0759	10/29/2012	<i>10/29/12 11:11</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>98.5 %</i>		<i>70 - 130</i>		B2J0759	10/29/2012	<i>10/29/12 11:11</i>	
<i>Surrogate: Dibromofluoromethane</i>	<i>99.9 %</i>		<i>70 - 130</i>		B2J0759	10/29/2012	<i>10/29/12 11:11</i>	
<i>Surrogate: Toluene-d8</i>	<i>101 %</i>		<i>70 - 130</i>		B2J0759	10/29/2012	<i>10/29/12 11:11</i>	



Certificate of Analysis

Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego, CA 92122

Project Number : RAYTHEON MAIN, 532.03

Report To : Steve Netto/Ken Simon

Reported : 10/31/2012

Client Sample ID MW-37

Lab ID: 1203781-02

Volatile Organic Compounds by EPA 8260

Analyst: SL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	0.50	NA	1	B2J0759	10/29/2012	10/29/12 09:11	
1,1,1-Trichloroethane	ND	0.50	NA	1	B2J0759	10/29/2012	10/29/12 09:11	
1,1,2,2-Tetrachloroethane	ND	0.50	NA	1	B2J0759	10/29/2012	10/29/12 09:11	
1,1,2-Trichloroethane	ND	0.50	NA	1	B2J0759	10/29/2012	10/29/12 09:11	
1,1-Dichloroethane	ND	0.50	NA	1	B2J0759	10/29/2012	10/29/12 09:11	
1,1-Dichloroethene	ND	0.50	NA	1	B2J0759	10/29/2012	10/29/12 09:11	
1,1-Dichloropropene	ND	0.50	NA	1	B2J0759	10/29/2012	10/29/12 09:11	
1,2,3-Trichloropropane	ND	0.50	NA	1	B2J0759	10/29/2012	10/29/12 09:11	
1,2,3-Trichlorobenzene	ND	0.50	NA	1	B2J0759	10/29/2012	10/29/12 09:11	
1,2,4-Trichlorobenzene	ND	0.50	NA	1	B2J0759	10/29/2012	10/29/12 09:11	
1,2,4-Trimethylbenzene	ND	0.50	NA	1	B2J0759	10/29/2012	10/29/12 09:11	
1,2-Dibromo-3-chloropropane	ND	0.50	NA	1	B2J0759	10/29/2012	10/29/12 09:11	
1,2-Dibromoethane	ND	0.50	NA	1	B2J0759	10/29/2012	10/29/12 09:11	
1,2-Dichlorobenzene	ND	0.50	NA	1	B2J0759	10/29/2012	10/29/12 09:11	
1,2-Dichloroethane	ND	0.50	NA	1	B2J0759	10/29/2012	10/29/12 09:11	
1,2-Dichloropropane	ND	0.50	NA	1	B2J0759	10/29/2012	10/29/12 09:11	
1,3,5-Trimethylbenzene	ND	0.50	NA	1	B2J0759	10/29/2012	10/29/12 09:11	
1,3-Dichlorobenzene	ND	0.50	NA	1	B2J0759	10/29/2012	10/29/12 09:11	
1,3-Dichloropropane	ND	0.50	NA	1	B2J0759	10/29/2012	10/29/12 09:11	
1,4-Dichlorobenzene	ND	0.50	NA	1	B2J0759	10/29/2012	10/29/12 09:11	
2,2-Dichloropropane	ND	0.50	NA	1	B2J0759	10/29/2012	10/29/12 09:11	
2-Chlorotoluene	ND	0.50	NA	1	B2J0759	10/29/2012	10/29/12 09:11	
4-Chlorotoluene	ND	0.50	NA	1	B2J0759	10/29/2012	10/29/12 09:11	
4-Isopropyltoluene	ND	0.50	NA	1	B2J0759	10/29/2012	10/29/12 09:11	
Benzene	ND	0.50	NA	1	B2J0759	10/29/2012	10/29/12 09:11	
Bromobenzene	ND	0.50	NA	1	B2J0759	10/29/2012	10/29/12 09:11	
Bromodichloromethane	ND	0.50	NA	1	B2J0759	10/29/2012	10/29/12 09:11	
Bromoform	ND	0.50	NA	1	B2J0759	10/29/2012	10/29/12 09:11	
Bromomethane	ND	0.50	NA	1	B2J0759	10/29/2012	10/29/12 09:11	
Carbon tetrachloride	ND	0.50	NA	1	B2J0759	10/29/2012	10/29/12 09:11	
Chlorobenzene	ND	0.50	NA	1	B2J0759	10/29/2012	10/29/12 09:11	
Chloroethane	ND	0.50	NA	1	B2J0759	10/29/2012	10/29/12 09:11	
Chloroform	ND	0.50	NA	1	B2J0759	10/29/2012	10/29/12 09:11	
Chloromethane	ND	0.50	NA	1	B2J0759	10/29/2012	10/29/12 09:11	
cis-1,2-Dichloroethene	ND	0.50	NA	1	B2J0759	10/29/2012	10/29/12 09:11	
cis-1,3-Dichloropropene	ND	0.50	NA	1	B2J0759	10/29/2012	10/29/12 09:11	
Dibromochloromethane	ND	0.50	NA	1	B2J0759	10/29/2012	10/29/12 09:11	



Certificate of Analysis

Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego, CA 92122

Project Number : RAYTHEON MAIN, 532.03

Report To : Steve Netto/Ken Simon

Reported : 10/31/2012

Client Sample ID MW-37

Lab ID: 1203781-02

Volatile Organic Compounds by EPA 8260

Analyst: SL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Dibromomethane	ND	0.50	NA	1	B2J0759	10/29/2012	10/29/12 09:11	
Dichlorodifluoromethane	ND	0.50	NA	1	B2J0759	10/29/2012	10/29/12 09:11	
Ethylbenzene	ND	0.50	NA	1	B2J0759	10/29/2012	10/29/12 09:11	
Hexachlorobutadiene	ND	0.50	NA	1	B2J0759	10/29/2012	10/29/12 09:11	
Isopropylbenzene	ND	0.50	NA	1	B2J0759	10/29/2012	10/29/12 09:11	
m,p-Xylene	ND	1.0	NA	1	B2J0759	10/29/2012	10/29/12 09:11	
Methylene chloride	ND	1.0	NA	1	B2J0759	10/29/2012	10/29/12 09:11	
n-Butylbenzene	ND	0.50	NA	1	B2J0759	10/29/2012	10/29/12 09:11	
n-Propylbenzene	ND	0.50	NA	1	B2J0759	10/29/2012	10/29/12 09:11	
Naphthalene	ND	0.50	NA	1	B2J0759	10/29/2012	10/29/12 09:11	
o-Xylene	ND	0.50	NA	1	B2J0759	10/29/2012	10/29/12 09:11	
sec-Butylbenzene	ND	0.50	NA	1	B2J0759	10/29/2012	10/29/12 09:11	
Styrene	ND	0.50	NA	1	B2J0759	10/29/2012	10/29/12 09:11	
tert-Butylbenzene	ND	0.50	NA	1	B2J0759	10/29/2012	10/29/12 09:11	
Tetrachloroethene	ND	0.50	NA	1	B2J0759	10/29/2012	10/29/12 09:11	
Toluene	0.73	0.50	NA	1	B2J0759	10/29/2012	10/29/12 09:11	
trans-1,2-Dichloroethene	ND	0.50	NA	1	B2J0759	10/29/2012	10/29/12 09:11	
Trichloroethene	ND	0.50	NA	1	B2J0759	10/29/2012	10/29/12 09:11	
Trichlorofluoromethane	ND	0.50	NA	1	B2J0759	10/29/2012	10/29/12 09:11	
Vinyl chloride	ND	0.50	NA	1	B2J0759	10/29/2012	10/29/12 09:11	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>92.0 %</i>		<i>70 - 130</i>		B2J0759	10/29/2012	<i>10/29/12 09:11</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>97.0 %</i>		<i>70 - 130</i>		B2J0759	10/29/2012	<i>10/29/12 09:11</i>	
<i>Surrogate: Dibromofluoromethane</i>	<i>97.5 %</i>		<i>70 - 130</i>		B2J0759	10/29/2012	<i>10/29/12 09:11</i>	
<i>Surrogate: Toluene-d8</i>	<i>101 %</i>		<i>70 - 130</i>		B2J0759	10/29/2012	<i>10/29/12 09:11</i>	



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Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego, CA 92122

Project Number : RAYTHEON MAIN, 532.03

Report To : Steve Netto/Ken Simon

Reported : 10/31/2012

Client Sample ID MW-37

Lab ID: 1203781-02

1,4-Dioxane by EPA 8270: Isotope Dilution Technique

Analyst: BB

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,4-Dioxane	ND	2.0	NA	1	B2J0771	10/29/2012	10/29/12 11:53	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	84.7 %		37 - 93		B2J0771	10/29/2012	10/29/12 11:53	
<i>Surrogate: 2-Fluorobiphenyl</i>	97.0 %		51 - 100		B2J0771	10/29/2012	10/29/12 11:53	
<i>Surrogate: 4-Terphenyl-d14</i>	152 %		58 - 113		B2J0771	10/29/2012	10/29/12 11:53	S1
<i>Surrogate: Nitrobenzene-d5</i>	81.4 %		39 - 95		B2J0771	10/29/2012	10/29/12 11:53	



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Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego, CA 92122

Project Number : RAYTHEON MAIN, 532.03

Report To : Steve Netto/Ken Simon

Reported : 10/31/2012

Client Sample ID MW-3700

Lab ID: 1203781-03

Volatile Organic Compounds by EPA 8260

Analyst: SL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	0.50	NA	1	B2J0759	10/29/2012	10/29/12 09:31	
1,1,1-Trichloroethane	ND	0.50	NA	1	B2J0759	10/29/2012	10/29/12 09:31	
1,1,2,2-Tetrachloroethane	ND	0.50	NA	1	B2J0759	10/29/2012	10/29/12 09:31	
1,1,2-Trichloroethane	ND	0.50	NA	1	B2J0759	10/29/2012	10/29/12 09:31	
1,1-Dichloroethane	ND	0.50	NA	1	B2J0759	10/29/2012	10/29/12 09:31	
1,1-Dichloroethene	ND	0.50	NA	1	B2J0759	10/29/2012	10/29/12 09:31	
1,1-Dichloropropene	ND	0.50	NA	1	B2J0759	10/29/2012	10/29/12 09:31	
1,2,3-Trichloropropane	ND	0.50	NA	1	B2J0759	10/29/2012	10/29/12 09:31	
1,2,3-Trichlorobenzene	ND	0.50	NA	1	B2J0759	10/29/2012	10/29/12 09:31	
1,2,4-Trichlorobenzene	ND	0.50	NA	1	B2J0759	10/29/2012	10/29/12 09:31	
1,2,4-Trimethylbenzene	ND	0.50	NA	1	B2J0759	10/29/2012	10/29/12 09:31	
1,2-Dibromo-3-chloropropane	ND	0.50	NA	1	B2J0759	10/29/2012	10/29/12 09:31	
1,2-Dibromoethane	ND	0.50	NA	1	B2J0759	10/29/2012	10/29/12 09:31	
1,2-Dichlorobenzene	ND	0.50	NA	1	B2J0759	10/29/2012	10/29/12 09:31	
1,2-Dichloroethane	ND	0.50	NA	1	B2J0759	10/29/2012	10/29/12 09:31	
1,2-Dichloropropane	ND	0.50	NA	1	B2J0759	10/29/2012	10/29/12 09:31	
1,3,5-Trimethylbenzene	ND	0.50	NA	1	B2J0759	10/29/2012	10/29/12 09:31	
1,3-Dichlorobenzene	ND	0.50	NA	1	B2J0759	10/29/2012	10/29/12 09:31	
1,3-Dichloropropane	ND	0.50	NA	1	B2J0759	10/29/2012	10/29/12 09:31	
1,4-Dichlorobenzene	ND	0.50	NA	1	B2J0759	10/29/2012	10/29/12 09:31	
2,2-Dichloropropane	ND	0.50	NA	1	B2J0759	10/29/2012	10/29/12 09:31	
2-Chlorotoluene	ND	0.50	NA	1	B2J0759	10/29/2012	10/29/12 09:31	
4-Chlorotoluene	ND	0.50	NA	1	B2J0759	10/29/2012	10/29/12 09:31	
4-Isopropyltoluene	ND	0.50	NA	1	B2J0759	10/29/2012	10/29/12 09:31	
Benzene	ND	0.50	NA	1	B2J0759	10/29/2012	10/29/12 09:31	
Bromobenzene	ND	0.50	NA	1	B2J0759	10/29/2012	10/29/12 09:31	
Bromodichloromethane	ND	0.50	NA	1	B2J0759	10/29/2012	10/29/12 09:31	
Bromoform	ND	0.50	NA	1	B2J0759	10/29/2012	10/29/12 09:31	
Bromomethane	ND	0.50	NA	1	B2J0759	10/29/2012	10/29/12 09:31	
Carbon tetrachloride	ND	0.50	NA	1	B2J0759	10/29/2012	10/29/12 09:31	
Chlorobenzene	ND	0.50	NA	1	B2J0759	10/29/2012	10/29/12 09:31	
Chloroethane	ND	0.50	NA	1	B2J0759	10/29/2012	10/29/12 09:31	
Chloroform	ND	0.50	NA	1	B2J0759	10/29/2012	10/29/12 09:31	
Chloromethane	ND	0.50	NA	1	B2J0759	10/29/2012	10/29/12 09:31	
cis-1,2-Dichloroethene	ND	0.50	NA	1	B2J0759	10/29/2012	10/29/12 09:31	
cis-1,3-Dichloropropene	ND	0.50	NA	1	B2J0759	10/29/2012	10/29/12 09:31	
Dibromochloromethane	ND	0.50	NA	1	B2J0759	10/29/2012	10/29/12 09:31	



Certificate of Analysis

Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego, CA 92122

Project Number : RAYTHEON MAIN, 532.03

Report To : Steve Netto/Ken Simon

Reported : 10/31/2012

Client Sample ID MW-3700

Lab ID: 1203781-03

Volatile Organic Compounds by EPA 8260

Analyst: SL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Dibromomethane	ND	0.50	NA	1	B2J0759	10/29/2012	10/29/12 09:31	
Dichlorodifluoromethane	ND	0.50	NA	1	B2J0759	10/29/2012	10/29/12 09:31	
Ethylbenzene	ND	0.50	NA	1	B2J0759	10/29/2012	10/29/12 09:31	
Hexachlorobutadiene	ND	0.50	NA	1	B2J0759	10/29/2012	10/29/12 09:31	
Isopropylbenzene	ND	0.50	NA	1	B2J0759	10/29/2012	10/29/12 09:31	
m,p-Xylene	ND	1.0	NA	1	B2J0759	10/29/2012	10/29/12 09:31	
Methylene chloride	ND	1.0	NA	1	B2J0759	10/29/2012	10/29/12 09:31	
n-Butylbenzene	ND	0.50	NA	1	B2J0759	10/29/2012	10/29/12 09:31	
n-Propylbenzene	ND	0.50	NA	1	B2J0759	10/29/2012	10/29/12 09:31	
Naphthalene	ND	0.50	NA	1	B2J0759	10/29/2012	10/29/12 09:31	
o-Xylene	ND	0.50	NA	1	B2J0759	10/29/2012	10/29/12 09:31	
sec-Butylbenzene	ND	0.50	NA	1	B2J0759	10/29/2012	10/29/12 09:31	
Styrene	ND	0.50	NA	1	B2J0759	10/29/2012	10/29/12 09:31	
tert-Butylbenzene	ND	0.50	NA	1	B2J0759	10/29/2012	10/29/12 09:31	
Tetrachloroethene	ND	0.50	NA	1	B2J0759	10/29/2012	10/29/12 09:31	
Toluene	1.3	0.50	NA	1	B2J0759	10/29/2012	10/29/12 09:31	
trans-1,2-Dichloroethene	ND	0.50	NA	1	B2J0759	10/29/2012	10/29/12 09:31	
Trichloroethene	ND	0.50	NA	1	B2J0759	10/29/2012	10/29/12 09:31	
Trichlorofluoromethane	ND	0.50	NA	1	B2J0759	10/29/2012	10/29/12 09:31	
Vinyl chloride	ND	0.50	NA	1	B2J0759	10/29/2012	10/29/12 09:31	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>92.6 %</i>		<i>70 - 130</i>		B2J0759	10/29/2012	<i>10/29/12 09:31</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>97.0 %</i>		<i>70 - 130</i>		B2J0759	10/29/2012	<i>10/29/12 09:31</i>	
<i>Surrogate: Dibromofluoromethane</i>	<i>97.7 %</i>		<i>70 - 130</i>		B2J0759	10/29/2012	<i>10/29/12 09:31</i>	
<i>Surrogate: Toluene-d8</i>	<i>100 %</i>		<i>70 - 130</i>		B2J0759	10/29/2012	<i>10/29/12 09:31</i>	



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Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego, CA 92122

Project Number : RAYTHEON MAIN, 532.03

Report To : Steve Netto/Ken Simon

Reported : 10/31/2012

Client Sample ID MW-3700

Lab ID: 1203781-03

1,4-Dioxane by EPA 8270: Isotope Dilution Technique

Analyst: BB

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,4-Dioxane	ND	2.0	NA	1	B2J0771	10/29/2012	10/29/12 12:21	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	82.7 %		37 - 93		B2J0771	10/29/2012	10/29/12 12:21	
<i>Surrogate: 2-Fluorobiphenyl</i>	89.7 %		51 - 100		B2J0771	10/29/2012	10/29/12 12:21	
<i>Surrogate: 4-Terphenyl-d14</i>	149 %		58 - 113		B2J0771	10/29/2012	10/29/12 12:21	S1
<i>Surrogate: Nitrobenzene-d5</i>	79.3 %		39 - 95		B2J0771	10/29/2012	10/29/12 12:21	



Certificate of Analysis

Hargis & Associates, Inc.

Project Number : RAYTHEON MAIN, 532.03

9171 Towne Centre Drive, Suite 375

Report To : Steve Netto/Ken Simon

San Diego , CA 92122

Reported : 10/31/2012

QUALITY CONTROL SECTION

Volatile Organic Compounds by EPA 8260 - Quality Control

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B2J0759 - MSVOAW_LL

Blank (B2J0759-BLK1)

Prepared: 10/29/2012 Analyzed: 10/29/2012

1,1,1,2-Tetrachloroethane	ND	0.50				NR			
1,1,1-Trichloroethane	ND	0.50				NR			
1,1,2,2-Tetrachloroethane	ND	0.50				NR			
1,1,2-Trichloroethane	ND	0.50				NR			
1,1-Dichloroethane	ND	0.50				NR			
1,1-Dichloroethene	ND	0.50				NR			
1,1-Dichloropropene	ND	0.50				NR			
1,2,3-Trichloropropane	ND	0.50				NR			
1,2,3-Trichlorobenzene	ND	0.50				NR			
1,2,4-Trichlorobenzene	ND	0.50				NR			
1,2,4-Trimethylbenzene	ND	0.50				NR			
1,2-Dibromo-3-chloropropane	ND	0.50				NR			
1,2-Dibromoethane	ND	0.50				NR			
1,2-Dichlorobenzene	ND	0.50				NR			
1,2-Dichloroethane	ND	0.50				NR			
1,2-Dichloropropane	ND	0.50				NR			
1,3,5-Trimethylbenzene	ND	0.50				NR			
1,3-Dichlorobenzene	ND	0.50				NR			
1,3-Dichloropropane	ND	0.50				NR			
1,4-Dichlorobenzene	ND	0.50				NR			
2,2-Dichloropropane	ND	0.50				NR			
2-Chlorotoluene	ND	0.50				NR			
4-Chlorotoluene	ND	0.50				NR			
4-Isopropyltoluene	ND	0.50				NR			
Benzene	ND	0.50				NR			
Bromobenzene	ND	0.50				NR			
Bromodichloromethane	ND	0.50				NR			
Bromoform	ND	0.50				NR			
Bromomethane	ND	0.50				NR			
Carbon tetrachloride	ND	0.50				NR			
Chlorobenzene	ND	0.50				NR			
Chloroethane	ND	0.50				NR			
Chloroform	ND	0.50				NR			
Chloromethane	ND	0.50				NR			
cis-1,2-Dichloroethene	ND	0.50				NR			
cis-1,3-Dichloropropene	ND	0.50				NR			
Dibromochloromethane	ND	0.50				NR			
Dibromomethane	ND	0.50				NR			
Dichlorodifluoromethane	ND	0.50				NR			



Certificate of Analysis

Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : RAYTHEON MAIN, 532.03

Report To : Steve Netto/Ken Simon

Reported : 10/31/2012

Volatile Organic Compounds by EPA 8260 - Quality Control (cont'd)

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B2J0759 - MSVOAW_LL (continued)

Blank (B2J0759-BLK1) - Continued

Prepared: 10/29/2012 Analyzed: 10/29/2012

Ethylbenzene	ND	0.50				NR			
Hexachlorobutadiene	ND	0.50				NR			
Isopropylbenzene	ND	0.50				NR			
m,p-Xylene	ND	1.0				NR			
Methylene chloride	ND	1.0				NR			
n-Butylbenzene	ND	0.50				NR			
n-Propylbenzene	ND	0.50				NR			
Naphthalene	ND	0.50				NR			
o-Xylene	ND	0.50				NR			
sec-Butylbenzene	ND	0.50				NR			
Styrene	ND	0.50				NR			
tert-Butylbenzene	ND	0.50				NR			
Tetrachloroethene	ND	0.50				NR			
Toluene	ND	0.50				NR			
trans-1,2-Dichloroethene	ND	0.50				NR			
Trichloroethene	ND	0.50				NR			
Trichlorofluoromethane	ND	0.50				NR			
Vinyl chloride	ND	0.50				NR			

<i>Surrogate: 1,2-Dichloroethane-d4</i>	22.66		25.0000		90.6	70 - 130			
<i>Surrogate: 4-Bromofluorobenzene</i>	24.27		25.0000		97.1	70 - 130			
<i>Surrogate: Dibromofluoromethane</i>	24.67		25.0000		98.7	70 - 130			
<i>Surrogate: Toluene-d8</i>	25.15		25.0000		101	70 - 130			

LCS (B2J0759-BS1)

Prepared: 10/29/2012 Analyzed: 10/29/2012

1,1-Dichloroethene	21.7700		20.0000		109	70 - 130			
Benzene	39.1600		40.0000		97.9	70 - 130			
Chlorobenzene	20.0300		20.0000		100	70 - 130			
MTBE	20.7800		20.0000		104	70 - 130			
Toluene	39.9800		40.0000		100	70 - 130			
Trichloroethene	20.9300		20.0000		105	70 - 130			

<i>Surrogate: 1,2-Dichloroethane-d4</i>	23.13		25.0000		92.5	70 - 130			
<i>Surrogate: 4-Bromofluorobenzene</i>	24.96		25.0000		99.8	70 - 130			
<i>Surrogate: Dibromofluoromethane</i>	24.25		25.0000		97.0	70 - 130			
<i>Surrogate: Toluene-d8</i>	24.99		25.0000		100	70 - 130			

LCS Dup (B2J0759-BSD1)

Prepared: 10/29/2012 Analyzed: 10/29/2012

1,1-Dichloroethene	21.2500		20.0000		106	70 - 130	2.42	20	
Benzene	38.7200		40.0000		96.8	70 - 130	1.13	20	
Chlorobenzene	19.5200		20.0000		97.6	70 - 130	2.58	20	
MTBE	21.2200		20.0000		106	70 - 130	2.10	20	
Toluene	39.4900		40.0000		98.7	70 - 130	1.23	20	



Certificate of Analysis

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9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : RAYTHEON MAIN, 532.03

Report To : Steve Netto/Ken Simon

Reported : 10/31/2012

Volatile Organic Compounds by EPA 8260 - Quality Control (cont'd)

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B2J0759 - MSVOAW_LL (continued)

LCS Dup (B2J0759-BSD1) - Continued

Prepared: 10/29/2012 Analyzed: 10/29/2012

Trichloroethene	20.0300		20.0000		100	70 - 130	4.39	20	
Surrogate: 1,2-Dichloroethane-d4	24.33		25.0000		97.3	70 - 130			
Surrogate: 4-Bromofluorobenzene	25.32		25.0000		101	70 - 130			
Surrogate: Dibromofluoromethane	24.90		25.0000		99.6	70 - 130			
Surrogate: Toluene-d8	25.33		25.0000		101	70 - 130			



Certificate of Analysis

Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego, CA 92122

Project Number : RAYTHEON MAIN, 532.03

Report To : Steve Netto/Ken Simon

Reported : 10/31/2012

1,4-Dioxane by EPA 8270: Isotope Dilution Technique - Quality Control

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec % Rec	% Rec Limits	RPD RPD	RPD Limit	Notes
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Batch B2J0771 - MSSEMI_ISOTOPEDILN

Blank (B2J0771-BLK1)

Prepared: 10/29/2012 Analyzed: 10/29/2012

1,4-Dioxane	ND	2.0			NR				
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	83.58		100.000		83.6	37 - 93			
<i>Surrogate: 2-Fluorobiphenyl</i>	95.41		100.000		95.4	51 - 100			
<i>Surrogate: 4-Terphenyl-d14</i>	146.1		100.000		146	58 - 113			S1
<i>Surrogate: Nitrobenzene-d5</i>	83.96		100.000		84.0	39 - 95			

LCS (B2J0771-BS1)

Prepared: 10/29/2012 Analyzed: 10/29/2012

1,4-Dioxane	110.820	2.0	100.000		111	70 - 130			
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	64.01		100.000		64.0	37 - 93			
<i>Surrogate: 2-Fluorobiphenyl</i>	84.52		100.000		84.5	51 - 100			
<i>Surrogate: 4-Terphenyl-d14</i>	96.86		100.000		96.9	58 - 113			
<i>Surrogate: Nitrobenzene-d5</i>	71.32		100.000		71.3	39 - 95			

LCS Dup (B2J0771-BSD1)

Prepared: 10/29/2012 Analyzed: 10/29/2012

1,4-Dioxane	111.110	2.0	100.000		111	70 - 130	0.261	20	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	64.72		100.000		64.7	37 - 93			
<i>Surrogate: 2-Fluorobiphenyl</i>	83.78		100.000		83.8	51 - 100			
<i>Surrogate: 4-Terphenyl-d14</i>	94.53		100.000		94.5	58 - 113			
<i>Surrogate: Nitrobenzene-d5</i>	72.91		100.000		72.9	39 - 95			



Certificate of Analysis

Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : RAYTHEON MAIN, 532.03

Report To : Steve Netto/Ken Simon

Reported : 10/31/2012

Notes and Definitions

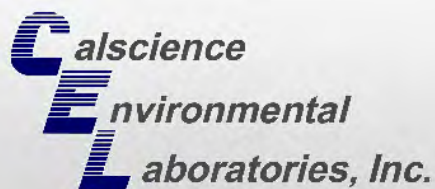
S1	Surrogate recovery was above laboratory acceptance limit. No target analyte was detected in the sample.
ND	Analyte not detected at or above reporting limit
PQL	Practical Quantitation Limit
MDL	Method Detection Limit
NR	Not Reported
RPD	Relative Percent Difference
CA1	CA-NELAP (CDPH)
CA2	CA-ELAP (CDPH)
OR1	OR-NELAP (OSPHL)
TX1	TX-NELAP (TCEQ)

Notes:

(1) The reported MDL and PQL are based on prep ratio variation and analytical dilution.

CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST FORM

PROJECT NAME		PROJECT No./TASK No.		SAMPLE CONTAINERS		ANALYSIS REQUESTED		ESTIMATED CONCENTRATION RANGE (ppb) FOR VOAS		SPECIAL HANDLING		LABORATORY INFORMATION		
DAVTHEON MAIN		532.03										ATL		
PROJECT MANAGER CHILLS ROSS		Phone No. 8584556500												
QA MANAGER STEVE NETTO		Fax No. 8584556533												
SAMPLER (SIGNATURE)		SAMPLER (PRINTED)												
[Signature]		DANIEL MOICA												
		KEN SIMON												
LAB ID	SAMPLE ID	SAMPLE COLLECTION		MATRIX			PRESERVATION					REMARKS		
		Date	Time	Soil	Ground Water	Surface Water	HCl	HNO ₃	NaOH	H ₂ SO ₄	Ice			
1203781-01	TB-102612A	10/26/12	1300			X	X			X				
	-02 MW-37	↓	1520	X		X				X				
	-03 MW-3700	↓	1700	X		X				X				
Total number of Containers per analysis:				8		2						Total No. of Containers: 10		
Relinquished by:		Date	Received by:		Date	INSTRUCTIONS						Shipment Method: DROP-OFF		
[Signature]		10/26/12	[Signature]		10/26/12	<ol style="list-style-type: none"> Fill out form completely except for shaded areas (lab use only); sign only after verified for completeness. Complete in ballpoint pen. Draw one line through errors, initial and date correction. Indicate number of sample containers in analysis request space; indicate choice with ✓ or x. Note applicable preservatives, special instructions, and deviations from typical environmental samples. Consult project QA documents for specific instructions. 						Send Results to: S. NETTO / K. SIMON		
Company		Time	Company		Time							<input checked="" type="checkbox"/> 9171 TOWNE CENTRE DRIVE, SUITE 375 SAN DIEGO, CA 92122 (858) 455-6500		
MHA INC.		1730	[Signature]		1730							<input type="checkbox"/> 1640 SOUTH STAPLEY DRIVE, SUITE 124 MESA, AZ 85204 (480) 345-0888		
Relinquished by:		Date	Received by:		Date	1. Fill out form completely except for shaded areas (lab use only); sign only after verified for completeness. 2. Complete in ballpoint pen. Draw one line through errors, initial and date correction. 3. Indicate number of sample containers in analysis request space; indicate choice with ✓ or x. 4. Note applicable preservatives, special instructions, and deviations from typical environmental samples. 5. Consult project QA documents for specific instructions.						<input type="checkbox"/> 1820 EAST RIVER ROAD, SUITE 220 TUCSON, AZ 85718 (520) 881-7300		
Company		Time	Company		Time	Sample Receipt: <input type="checkbox"/> No. of containers correct <input type="checkbox"/> received good condition/cold <input type="checkbox"/> custody seals secure <input type="checkbox"/> conforms to COC document						Send invoice to San Diego, CA Attn: Accounts Payable		



CALSCIENCE

WORK ORDER NUMBER: 12-10-1926

The difference is service



AIR | SOIL | WATER | MARINE CHEMISTRY

Analytical Report For

Client: Hargis + Associates, Inc.

Client Project Name: Raytheon Main / 532.03

Attention: Steve Netto
9171 Towne Centre Drive, Suite 375
San Diego, CA 92122-6215

Approved for release on 11/9/2012 by:
Virendra Patel
Project Manager

ResultLink ▶

Email your PM ▶



Calscience Environmental Laboratories, Inc. (Calscience) certifies that the test results provided in this report meet all NELAC requirements for parameters for which accreditation is required or available. Any exceptions to NELAC requirements are noted in the case narrative. The original report of subcontracted analyses, if any, is attached to this report. The results in this report are limited to the sample(s) tested and any reproduction thereof must be made in its entirety. The client or recipient of this report is specifically prohibited from making material changes to said report and, to the extent that such changes are made, Calscience is not responsible, legally or otherwise. The client or recipient agrees to indemnify Calscience for any litigation which may arise.



Contents

Client Project Name: Raytheon Main / 532.03

Work Order Number: 12-10-1926

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Client: Hargis + Associates, Inc.
9171 Towne Centre Drive, Suite 375
San Diego, CA 92122-6215
Attn: Steve Netto

Work Order: 12-10-1926
Project name: Raytheon Main / 532.03
Received: 10/26/12 18:00

DETECTIONS SUMMARY

Client Sample ID	Analyte	Result	Qualifiers	Reporting Limit	Units	Method	Extraction
MW-37 (12-10-1926-2)	Toluene	1.4		1.0	ug/L	EPA 8260B	EPA 5030C

Subcontracted analyses, if any, are not included in this summary.

*MDL is shown.

Analytical Report



Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 10/26/12
 Work Order No: 12-10-1926
 Preparation: EPA 3520C
 Method: EPA 8270C(M) Isotope Dilution

Project: Raytheon Main / 532.03

Page 1 of 1

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-37	12-10-1926-2-D	10/26/12 15:25	Aqueous	GC/MS Y	10/29/12	11/07/12 00:49	121029L15

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qual</u>	<u>Units</u>
1,4-Dioxane	ND	1.0	1		ug/L

<u>Surrogates:</u>	<u>REC (%)</u>	<u>Control Limits</u>	<u>Qual</u>
Nitrobenzene-d5	82	56-123	

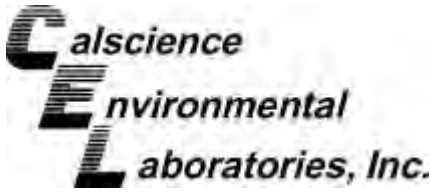
Method Blank	099-09-004-2,112	N/A	Aqueous	GC/MS Y	10/29/12	11/01/12 13:51	121029L15
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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qual</u>	<u>Units</u>
1,4-Dioxane	ND	1.0	1		ug/L

<u>Surrogates:</u>	<u>REC (%)</u>	<u>Control Limits</u>	<u>Qual</u>
Nitrobenzene-d5	82	56-123	

Return to Contents

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers



Analytical Report



Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 10/26/12
 Work Order No: 12-10-1926
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Raytheon Main / 532.03

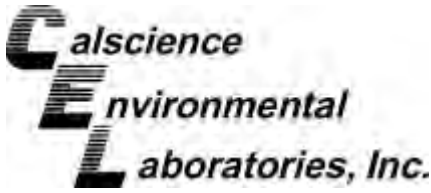
Page 1 of 3

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
TB-102612B	12-10-1926-1-A	10/26/12 13:05	Aqueous	GC/MS JJ	10/31/12	10/31/12 20:55	121031L01

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Acetone	ND	20	1		1,3-Dichloropropane	ND	1.0	1	
Benzene	ND	0.50	1		2,2-Dichloropropane	ND	1.0	1	
Bromobenzene	ND	1.0	1		1,1-Dichloropropene	ND	1.0	1	
Bromochloromethane	ND	1.0	1		c-1,3-Dichloropropene	ND	0.50	1	
Bromodichloromethane	ND	1.0	1		t-1,3-Dichloropropene	ND	0.50	1	
Bromoform	ND	1.0	1		Ethylbenzene	ND	1.0	1	
Bromomethane	ND	10	1		2-Hexanone	ND	10	1	
2-Butanone	ND	10	1		Isopropylbenzene	ND	1.0	1	
n-Butylbenzene	ND	1.0	1		p-Isopropyltoluene	ND	1.0	1	
sec-Butylbenzene	ND	1.0	1		Methylene Chloride	ND	10	1	
tert-Butylbenzene	ND	1.0	1		4-Methyl-2-Pentanone	ND	10	1	
Carbon Disulfide	ND	10	1		Naphthalene	ND	10	1	
Carbon Tetrachloride	ND	0.50	1		n-Propylbenzene	ND	1.0	1	
Chlorobenzene	ND	1.0	1		Styrene	ND	1.0	1	
Chloroethane	ND	5.0	1		1,1,1,2-Tetrachloroethane	ND	1.0	1	
Chloroform	ND	1.0	1		1,1,2,2-Tetrachloroethane	ND	1.0	1	
Chloromethane	ND	10	1		Tetrachloroethene	ND	1.0	1	
2-Chlorotoluene	ND	1.0	1		Toluene	ND	1.0	1	
4-Chlorotoluene	ND	1.0	1		1,2,3-Trichlorobenzene	ND	1.0	1	
Dibromochloromethane	ND	1.0	1		1,2,4-Trichlorobenzene	ND	1.0	1	
1,2-Dibromo-3-Chloropropane	ND	5.0	1		1,1,1-Trichloroethane	ND	1.0	1	
1,2-Dibromoethane	ND	1.0	1		1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	10	1	
Dibromomethane	ND	1.0	1		1,1,2-Trichloroethane	ND	1.0	1	
1,2-Dichlorobenzene	ND	1.0	1		Trichloroethene	ND	1.0	1	
1,3-Dichlorobenzene	ND	1.0	1		Trichlorofluoromethane	ND	10	1	
1,4-Dichlorobenzene	ND	1.0	1		1,2,3-Trichloropropane	ND	5.0	1	
Dichlorodifluoromethane	ND	1.0	1		1,2,4-Trimethylbenzene	ND	1.0	1	
1,1-Dichloroethane	ND	1.0	1		1,3,5-Trimethylbenzene	ND	1.0	1	
1,2-Dichloroethane	ND	0.50	1		Vinyl Acetate	ND	10	1	
1,1-Dichloroethene	ND	1.0	1		Vinyl Chloride	ND	0.50	1	
c-1,2-Dichloroethene	ND	1.0	1		p/m-Xylene	ND	1.0	1	
t-1,2-Dichloroethene	ND	1.0	1		o-Xylene	ND	1.0	1	
1,2-Dichloropropane	ND	1.0	1		Methyl-t-Butyl Ether (MTBE)	ND	1.0	1	
Surrogates:	REC (%)	Control Limits	Qual		Surrogates:	REC (%)	Control Limits	Qual	
1,4-Bromofluorobenzene	86	80-120			Dibromofluoromethane	102	80-126		
1,2-Dichloroethane-d4	97	80-134			Toluene-d8	87	80-120		

Return to Contents

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers



Analytical Report



Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 10/26/12
 Work Order No: 12-10-1926
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Raytheon Main / 532.03

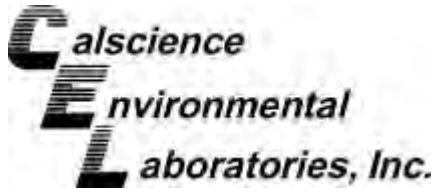
Page 2 of 3

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-37	12-10-1926-2-A	10/26/12 15:25	Aqueous	GC/MS JJ	10/31/12	10/31/12 21:26	121031L01

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Acetone	ND	20	1		1,3-Dichloropropane	ND	1.0	1	
Benzene	ND	0.50	1		2,2-Dichloropropane	ND	1.0	1	
Bromobenzene	ND	1.0	1		1,1-Dichloropropene	ND	1.0	1	
Bromochloromethane	ND	1.0	1		c-1,3-Dichloropropene	ND	0.50	1	
Bromodichloromethane	ND	1.0	1		t-1,3-Dichloropropene	ND	0.50	1	
Bromoform	ND	1.0	1		Ethylbenzene	ND	1.0	1	
Bromomethane	ND	10	1		2-Hexanone	ND	10	1	
2-Butanone	ND	10	1		Isopropylbenzene	ND	1.0	1	
n-Butylbenzene	ND	1.0	1		p-Isopropyltoluene	ND	1.0	1	
sec-Butylbenzene	ND	1.0	1		Methylene Chloride	ND	10	1	
tert-Butylbenzene	ND	1.0	1		4-Methyl-2-Pentanone	ND	10	1	
Carbon Disulfide	ND	10	1		Naphthalene	ND	10	1	
Carbon Tetrachloride	ND	0.50	1		n-Propylbenzene	ND	1.0	1	
Chlorobenzene	ND	1.0	1		Styrene	ND	1.0	1	
Chloroethane	ND	5.0	1		1,1,1,2-Tetrachloroethane	ND	1.0	1	
Chloroform	ND	1.0	1		1,1,2,2-Tetrachloroethane	ND	1.0	1	
Chloromethane	ND	10	1		Tetrachloroethene	ND	1.0	1	
2-Chlorotoluene	ND	1.0	1		Toluene	1.4	1.0	1	
4-Chlorotoluene	ND	1.0	1		1,2,3-Trichlorobenzene	ND	1.0	1	
Dibromochloromethane	ND	1.0	1		1,2,4-Trichlorobenzene	ND	1.0	1	
1,2-Dibromo-3-Chloropropane	ND	5.0	1		1,1,1-Trichloroethane	ND	1.0	1	
1,2-Dibromoethane	ND	1.0	1		1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	10	1	
Dibromomethane	ND	1.0	1		1,1,2-Trichloroethane	ND	1.0	1	
1,2-Dichlorobenzene	ND	1.0	1		Trichloroethene	ND	1.0	1	
1,3-Dichlorobenzene	ND	1.0	1		Trichlorofluoromethane	ND	10	1	
1,4-Dichlorobenzene	ND	1.0	1		1,2,3-Trichloropropane	ND	5.0	1	
Dichlorodifluoromethane	ND	1.0	1		1,2,4-Trimethylbenzene	ND	1.0	1	
1,1-Dichloroethane	ND	1.0	1		1,3,5-Trimethylbenzene	ND	1.0	1	
1,2-Dichloroethane	ND	0.50	1		Vinyl Acetate	ND	10	1	
1,1-Dichloroethene	ND	1.0	1		Vinyl Chloride	ND	0.50	1	
c-1,2-Dichloroethene	ND	1.0	1		p/m-Xylene	ND	1.0	1	
t-1,2-Dichloroethene	ND	1.0	1		o-Xylene	ND	1.0	1	
1,2-Dichloropropane	ND	1.0	1		Methyl-t-Butyl Ether (MTBE)	ND	1.0	1	
Surrogates:	REC (%)	Control Limits	Qual		Surrogates:	REC (%)	Control Limits	Qual	
1,4-Bromofluorobenzene	86	80-120			Dibromofluoromethane	108	80-126		
1,2-Dichloroethane-d4	103	80-134			Toluene-d8	98	80-120		

Return to Contents

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers



Analytical Report



Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 10/26/12
 Work Order No: 12-10-1926
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Raytheon Main / 532.03

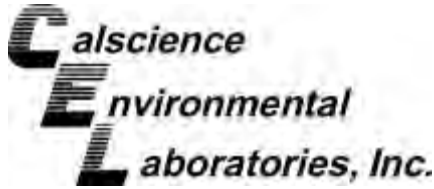
Page 3 of 3

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-14-001-9,220	N/A	Aqueous	GC/MS JJ	10/31/12	10/31/12 12:21	121031L01

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Acetone	ND	20	1		1,3-Dichloropropane	ND	1.0	1	
Benzene	ND	0.50	1		2,2-Dichloropropane	ND	1.0	1	
Bromobenzene	ND	1.0	1		1,1-Dichloropropene	ND	1.0	1	
Bromochloromethane	ND	1.0	1		c-1,3-Dichloropropene	ND	0.50	1	
Bromodichloromethane	ND	1.0	1		t-1,3-Dichloropropene	ND	0.50	1	
Bromoform	ND	1.0	1		Ethylbenzene	ND	1.0	1	
Bromomethane	ND	10	1		2-Hexanone	ND	10	1	
2-Butanone	ND	10	1		Isopropylbenzene	ND	1.0	1	
n-Butylbenzene	ND	1.0	1		p-Isopropyltoluene	ND	1.0	1	
sec-Butylbenzene	ND	1.0	1		Methylene Chloride	ND	10	1	
tert-Butylbenzene	ND	1.0	1		4-Methyl-2-Pentanone	ND	10	1	
Carbon Disulfide	ND	10	1		Naphthalene	ND	10	1	
Carbon Tetrachloride	ND	0.50	1		n-Propylbenzene	ND	1.0	1	
Chlorobenzene	ND	1.0	1		Styrene	ND	1.0	1	
Chloroethane	ND	5.0	1		1,1,1,2-Tetrachloroethane	ND	1.0	1	
Chloroform	ND	1.0	1		1,1,2,2-Tetrachloroethane	ND	1.0	1	
Chloromethane	ND	10	1		Tetrachloroethene	ND	1.0	1	
2-Chlorotoluene	ND	1.0	1		Toluene	ND	1.0	1	
4-Chlorotoluene	ND	1.0	1		1,2,3-Trichlorobenzene	ND	1.0	1	
Dibromochloromethane	ND	1.0	1		1,2,4-Trichlorobenzene	ND	1.0	1	
1,2-Dibromo-3-Chloropropane	ND	5.0	1		1,1,1-Trichloroethane	ND	1.0	1	
1,2-Dibromoethane	ND	1.0	1		1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	10	1	
Dibromomethane	ND	1.0	1		1,1,2-Trichloroethane	ND	1.0	1	
1,2-Dichlorobenzene	ND	1.0	1		Trichloroethene	ND	1.0	1	
1,3-Dichlorobenzene	ND	1.0	1		Trichlorofluoromethane	ND	10	1	
1,4-Dichlorobenzene	ND	1.0	1		1,2,3-Trichloropropane	ND	5.0	1	
Dichlorodifluoromethane	ND	1.0	1		1,2,4-Trimethylbenzene	ND	1.0	1	
1,1-Dichloroethane	ND	1.0	1		1,3,5-Trimethylbenzene	ND	1.0	1	
1,2-Dichloroethane	ND	0.50	1		Vinyl Acetate	ND	10	1	
1,1-Dichloroethene	ND	1.0	1		Vinyl Chloride	ND	0.50	1	
c-1,2-Dichloroethene	ND	1.0	1		p/m-Xylene	ND	1.0	1	
t-1,2-Dichloroethene	ND	1.0	1		o-Xylene	ND	1.0	1	
1,2-Dichloropropane	ND	1.0	1		Methyl-t-Butyl Ether (MTBE)	ND	1.0	1	
Surrogates:	REC (%)	Control Limits	DF	Qual	Surrogates:	REC (%)	Control Limits	DF	Qual
1,4-Bromofluorobenzene	88	80-120			Dibromofluoromethane	101	80-126		
1,2-Dichloroethane-d4	102	80-134			Toluene-d8	94	80-120		

Return to Contents

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers



Quality Control - Spike/Spike Duplicate



Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 10/26/12
 Work Order No: 12-10-1926
 Preparation: EPA 5030C
 Method: EPA 8260B

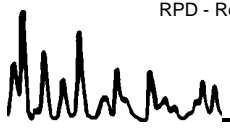
Project Raytheon Main / 532.03

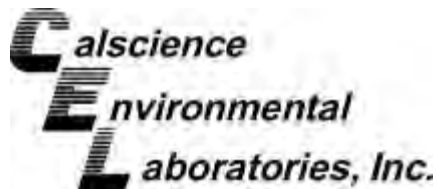
Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
12-10-2095-4	Aqueous	GC/MS JJ	10/31/12	10/31/12	121031S01

Parameter	SAMPLE CONC	SPIKE ADDED	MS CONC	MS %REC	MSD CONC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Benzene	ND	50.00	49.85	100	53.25	106	78-120	7	0-20	
Carbon Tetrachloride	ND	50.00	48.57	97	47.32	95	67-139	3	0-20	
Chlorobenzene	ND	50.00	56.53	113	57.78	116	80-120	2	0-20	
1,2-Dibromoethane	ND	50.00	57.36	115	58.05	116	80-123	1	0-20	
1,2-Dichlorobenzene	ND	50.00	54.19	108	57.94	116	76-120	7	0-20	
1,2-Dichloroethane	ND	50.00	48.48	97	50.88	102	76-130	5	0-20	
1,1-Dichloroethene	ND	50.00	48.43	97	46.56	93	70-130	4	0-27	
Ethylbenzene	ND	50.00	55.50	111	56.63	113	73-127	2	0-20	
Toluene	ND	50.00	51.73	103	54.89	110	72-126	6	0-20	
Trichloroethene	ND	50.00	49.46	99	51.19	102	74-122	3	0-20	
Vinyl Chloride	ND	50.00	57.78	116	61.04	122	65-131	5	0-24	
p/m-Xylene	ND	100.0	109.6	110	111.1	111	70-130	1	0-30	
o-Xylene	ND	50.00	55.15	110	56.12	112	70-130	2	0-30	
Methyl-t-Butyl Ether (MTBE)	ND	50.00	48.28	97	46.43	93	69-123	4	0-20	

Return to Contents

RPD - Relative Percent Difference , CL - Control Limit





Quality Control - LCS/LCS Duplicate



Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: N/A
 Work Order No: 12-10-1926
 Preparation: EPA 3520C
 Method: EPA 8270C(M) Isotope Dilution

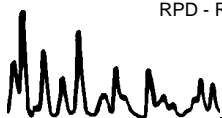
Project: Raytheon Main / 532.03

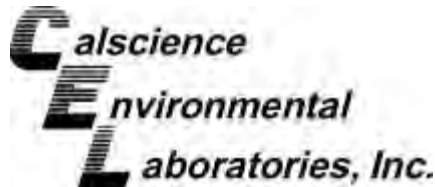
Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-09-004-2,112	Aqueous	GC/MS Y	10/29/12	11/01/12	121029L15

Parameter	<u>SPIKE ADDED</u>	<u>LCS CONC</u>	<u>LCS %REC</u>	<u>LCSD CONC</u>	<u>LCSD %REC</u>	<u>%REC CL</u>	<u>RPD</u>	<u>RPD CL</u>	<u>Qualifiers</u>
1,4-Dioxane	200.0	253.7	127	219.6	110	50-130	14	0-20	

Return to Contents

RPD - Relative Percent Difference , CL - Control Limit





Quality Control - LCS/LCS Duplicate



Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: N/A
 Work Order No: 12-10-1926
 Preparation: EPA 5030C
 Method: EPA 8260B

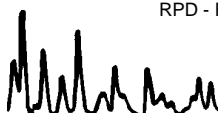
Project: Raytheon Main / 532.03

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number					
099-14-001-9,220	Aqueous	GC/MS JJ	10/31/12	10/31/12	121031L01					
Parameter	<u>SPIKE ADDED</u>	<u>LCS CONC</u>	<u>LCS %REC</u>	<u>LCSD CONC</u>	<u>LCSD %REC</u>	<u>%REC CL</u>	<u>ME CL</u>	<u>RPD</u>	<u>RPD CL</u>	<u>Qualifiers</u>
Benzene	50.00	48.39	97	51.77	104	80-120	73-127	7	0-20	
Carbon Tetrachloride	50.00	42.31	85	43.35	87	66-138	54-150	2	0-20	
Chlorobenzene	50.00	56.84	114	56.02	112	80-120	73-127	1	0-20	
1,2-Dibromoethane	50.00	59.21	118	58.43	117	80-120	73-127	1	0-20	
1,2-Dichlorobenzene	50.00	53.42	107	56.44	113	80-120	73-127	5	0-20	
1,2-Dichloroethane	50.00	44.71	89	45.46	91	80-129	72-137	2	0-20	
1,1-Dichloroethene	50.00	37.36	75	39.05	78	71-131	61-141	4	0-20	
Ethylbenzene	50.00	55.16	110	54.62	109	80-123	73-130	1	0-20	
Toluene	50.00	50.34	101	52.30	105	79-121	72-128	4	0-20	
Trichloroethene	50.00	48.80	98	50.62	101	80-120	73-127	4	0-20	
Vinyl Chloride	50.00	46.31	93	48.57	97	70-136	59-147	5	0-20	
p/m-Xylene	100.0	107.0	107	105.9	106	75-125	67-133	1	0-25	
o-Xylene	50.00	53.65	107	52.88	106	75-125	67-133	1	0-25	
Methyl-t-Butyl Ether (MTBE)	50.00	38.07	76	40.06	80	72-126	63-135	5	0-22	

Total number of LCS compounds : 14
 Total number of ME compounds : 0
 Total number of ME compounds allowed : 1
 LCS ME CL validation result : Pass

Return to Contents

RPD - Relative Percent Difference , CL - Control Limit



Work Order Number: 12-10-1926

<u>Qualifier</u>	<u>Definition</u>
*	See applicable analysis comment.
<	Less than the indicated value.
>	Greater than the indicated value.
1	Surrogate compound recovery was out of control due to a required sample dilution. Therefore, the sample data was reported without further clarification.
2	Surrogate compound recovery was out of control due to matrix interference. The associated method blank surrogate spike compound was in control and, therefore, the sample data was reported without further clarification.
3	Recovery of the Matrix Spike (MS) or Matrix Spike Duplicate (MSD) compound was out of control due to matrix interference. The associated LCS and/or LCSD was in control and, therefore, the sample data was reported without further clarification.
4	The MS/MSD RPD was out of control due to matrix interference. The LCS/LCSD RPD was in control and, therefore, the sample data was reported without further clarification.
5	The PDS/PDSD or PES/PESD associated with this batch of samples was out of control due to a matrix interference effect. The associated batch LCS/LCSD was in control and, hence, the associated sample data was reported without further clarification.
6	Surrogate recovery below the acceptance limit.
7	Surrogate recovery above the acceptance limit.
B	Analyte was present in the associated method blank.
BU	Sample analyzed after holding time expired.
E	Concentration exceeds the calibration range.
ET	Sample was extracted past end of recommended max. holding time.
HD	The chromatographic pattern was inconsistent with the profile of the reference fuel standard.
HDH	The sample chromatographic pattern for TPH matches the chromatographic pattern of the specified standard but heavier hydrocarbons were also present (or detected).
HDL	The sample chromatographic pattern for TPH matches the chromatographic pattern of the specified standard but lighter hydrocarbons were also present (or detected).
J	Analyte was detected at a concentration below the reporting limit and above the laboratory method detection limit. Reported value is estimated.
ME	LCS/LCSD Recovery Percentage is within Marginal Exceedance (ME) Control Limit range.
ND	Parameter not detected at the indicated reporting limit.
Q	Spike recovery and RPD control limits do not apply resulting from the parameter concentration in the sample exceeding the spike concentration by a factor of four or greater.
SG	The sample extract was subjected to Silica Gel treatment prior to analysis.
X	% Recovery and/or RPD out-of-range.
Z	Analyte presence was not confirmed by second column or GC/MS analysis.

Solid - Unless otherwise indicated, solid sample data is reported on a wet weight basis, not corrected for % moisture. All QC results are reported on a wet weight basis.

MPN - Most Probable Number



CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST FORM

PROJECT NAME CANTHEEN MAIN		PROJECT No./TASK No. 532.03		SAMPLE CONTAINERS		ANALYSIS REQUESTED		ESTIMATED CONCENTRATION RANGE (ppb) FOR VOA'S		SPECIAL HANDLING		LABORATORY INFORMATION	
PROJECT MANAGER CHRIS ROSS		Phone No. 8584556500		40 ML VOA 1/1 AMBER		8260B VOCs 8270 MOD, 1,4 DIOXANE		0-10		STANDARD TAT		CAL SCIENCE 12-10-1926	
QA MANAGER STEVE NETTO		Fax No. 8584556533											
SAMPLER (SIGNATURE) <i>[Signature]</i>		SAMPLER (PRINTED) DANIEL MOIZA											
LAB ID		SAMPLE ID		SAMPLE COLLECTION		MATRIX		PRESERVATION		REMARKS			
				Date		Time		Soil					
1		B-102612B		10/26/12		1305		X		X		X	
2		MW-37		↓		1525		X		X		X	

Total number of Containers per analysis: **51**

Total No. of Containers: **6**

Relinquished by: <i>[Signature]</i>	Date: 10/26/12	Received by: <i>[Signature]</i>	Date: 10/26/12
Company: H+A, INC	Time: 1800	Company: WZ	Time: 1800

Relinquished by:	Date:	Received by:	Date:
Company:	Time:	Company:	Time:

INSTRUCTIONS

1. Fill out form completely except for shaded areas (lab use only); sign only after verified for completeness.
2. Complete in ballpoint pen. Draw one line through errors, initial and date correction.
3. Indicate number of sample containers in analysis request space; indicate choice with ✓ or x.
4. Note applicable preservatives, special instructions, and deviations from typical environmental samples.
5. Consult project QA documents for specific instructions.

Sample Receipt:

- No. of containers correct
- custody seals secure

Temp. @ receipt _____ °C

- received good condition/cold
- conforms to COC document

Shipment Method: **DISP-OFF**

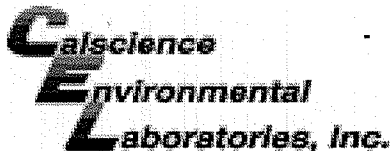
Send Results to: **S. NETTO**
K. SIMON

9171 TOWNE CENTRE DRIVE, SUITE 375
SAN DIEGO, CA 92122 (858) 455-6500

1640 SOUTH STAPLEY DRIVE, SUITE 124
MESA, AZ 85204 (480) 345-0888

1820 EAST RIVER ROAD, SUITE 220
TUCSON, AZ 85718 (520) 881-7300

Send invoice to San Diego, CA
Attn: Accounts Payable



WORK ORDER #: 12-10-11 09 2 6

SAMPLE RECEIPT FORM

Cooler 1 of 1

CLIENT: HARGIS & ASSOCIATES, INC.

DATE: 10/26/12

TEMPERATURE: Thermometer ID: SC4 (Criteria: 0.0°C - 6.0°C, not frozen)
Temperature 2.7°C - 0.3°C (CF) = 2.4°C
Ambient Temperature: Air Filter Initial: PS

CUSTODY SEALS INTACT:
Cooler Sample No (Not Intact) Not Present N/A Initial: PS PL

SAMPLE CONDITION:
Chain-Of-Custody (COC) document(s) received with samples...
COC document(s) received complete...
Sampler's name indicated on COC...
Sample container label(s) consistent with COC...
Sample container(s) intact and good condition...
Proper containers and sufficient volume for analyses requested...
Analyses received within holding time...
pH / Res. Chlorine / Diss. Sulfide / Diss. Oxygen received within 24 hours...
Proper preservation noted on COC or sample container...
Volatile analysis container(s) free of headspace...
Tedlar bag(s) free of condensation...

CONTAINER TYPE:
Solid: 4ozCGJ 8ozCGJ 16ozCGJ Sleeve EnCores TerraCores
Water: VOA VOAh VOAna2 125AGB 125AGBh 125AGBp 1AGB 1AGBna2 1AGBs
Air: Tedlar Canister Other: Trip Blank Lot#: N/A Labeled/Checked by: PL
Reviewed by: PL Scanned by: PL

Return to Contents

November 15, 2012

Steve Netto
Hargis & Associates, Inc.
9171 Towne Centre Drive, Suite 375
San Diego, CA 92122
Tel: (619) 249-3166
Fax: (858) 455-6533



Re: ATL Work Order Number : 1203871
Client Reference : Raytheon, 532.30

Enclosed are the results for sample(s) received on November 05, 2012 by Advanced Technology Laboratories. The sample(s) are tested for the parameters as indicated on the enclosed chain of custody in accordance with applicable laboratory certifications. The laboratory results contained in this report specifically pertains to the sample(s) submitted.

Thank you for the opportunity to serve the needs of your company. If you have any questions, please feel free to contact me or your Project Manager.

Sincerely,

Eddie Rodriguez
Laboratory Director

The cover letter and the case narrative are an integral part of this analytical report and its absence renders the report invalid. Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Conference and/or applicable state-specific certification programs. The report cannot be reproduced without written permission from the client and Advanced Technology Laboratories.



Certificate of Analysis

Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : Raytheon, 532.30

Report To : Steve Netto

Reported : 11/15/2012

SUMMARY OF SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
TB-110512	1203871-01	Lab H2O	11/05/12 14:00	11/05/12 17:02
EW-01	1203871-02	Groundwater	11/05/12 14:05	11/05/12 17:02
MW-21	1203871-03	Groundwater	11/05/12 14:15	11/05/12 17:02



Certificate of Analysis

Hargis & Associates, Inc.

Project Number : Raytheon, 532.30

9171 Towne Centre Drive, Suite 375

Report To : Steve Netto

San Diego , CA 92122

Reported : 11/15/2012

Client Sample ID TB-110512

Lab ID: 1203871-01

Volatile Organic Compounds by EPA 8260

Analyst: SL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	0.50	NA	1	B2K0150	11/08/2012	11/08/12 09:53	
1,1,1-Trichloroethane	ND	0.50	NA	1	B2K0150	11/08/2012	11/08/12 09:53	
1,1,2,2-Tetrachloroethane	ND	0.50	NA	1	B2K0150	11/08/2012	11/08/12 09:53	
1,1,2-Trichloroethane	ND	0.50	NA	1	B2K0150	11/08/2012	11/08/12 09:53	
1,1-Dichloroethane	ND	0.50	NA	1	B2K0150	11/08/2012	11/08/12 09:53	
1,1-Dichloroethene	ND	0.50	NA	1	B2K0150	11/08/2012	11/08/12 09:53	
1,1-Dichloropropene	ND	0.50	NA	1	B2K0150	11/08/2012	11/08/12 09:53	
1,2,3-Trichloropropane	ND	0.50	NA	1	B2K0150	11/08/2012	11/08/12 09:53	
1,2,3-Trichlorobenzene	ND	0.50	NA	1	B2K0150	11/08/2012	11/08/12 09:53	
1,2,4-Trichlorobenzene	ND	0.50	NA	1	B2K0150	11/08/2012	11/08/12 09:53	
1,2,4-Trimethylbenzene	ND	0.50	NA	1	B2K0150	11/08/2012	11/08/12 09:53	
1,2-Dibromo-3-chloropropane	ND	0.50	NA	1	B2K0150	11/08/2012	11/08/12 09:53	
1,2-Dibromoethane	ND	0.50	NA	1	B2K0150	11/08/2012	11/08/12 09:53	
1,2-Dichlorobenzene	ND	0.50	NA	1	B2K0150	11/08/2012	11/08/12 09:53	
1,2-Dichloroethane	ND	0.50	NA	1	B2K0150	11/08/2012	11/08/12 09:53	
1,2-Dichloropropane	ND	0.50	NA	1	B2K0150	11/08/2012	11/08/12 09:53	
1,3,5-Trimethylbenzene	ND	0.50	NA	1	B2K0150	11/08/2012	11/08/12 09:53	
1,3-Dichlorobenzene	ND	0.50	NA	1	B2K0150	11/08/2012	11/08/12 09:53	
1,3-Dichloropropane	ND	0.50	NA	1	B2K0150	11/08/2012	11/08/12 09:53	
1,4-Dichlorobenzene	ND	0.50	NA	1	B2K0150	11/08/2012	11/08/12 09:53	
2,2-Dichloropropane	ND	0.50	NA	1	B2K0150	11/08/2012	11/08/12 09:53	
2-Chlorotoluene	ND	0.50	NA	1	B2K0150	11/08/2012	11/08/12 09:53	
4-Chlorotoluene	ND	0.50	NA	1	B2K0150	11/08/2012	11/08/12 09:53	
4-Isopropyltoluene	ND	0.50	NA	1	B2K0150	11/08/2012	11/08/12 09:53	
Benzene	ND	0.50	NA	1	B2K0150	11/08/2012	11/08/12 09:53	
Bromobenzene	ND	0.50	NA	1	B2K0150	11/08/2012	11/08/12 09:53	
Bromodichloromethane	ND	0.50	NA	1	B2K0150	11/08/2012	11/08/12 09:53	
Bromoform	ND	0.50	NA	1	B2K0150	11/08/2012	11/08/12 09:53	
Bromomethane	ND	0.50	NA	1	B2K0150	11/08/2012	11/08/12 09:53	
Carbon tetrachloride	ND	0.50	NA	1	B2K0150	11/08/2012	11/08/12 09:53	
Chlorobenzene	ND	0.50	NA	1	B2K0150	11/08/2012	11/08/12 09:53	
Chloroethane	ND	0.50	NA	1	B2K0150	11/08/2012	11/08/12 09:53	
Chloroform	ND	0.50	NA	1	B2K0150	11/08/2012	11/08/12 09:53	
Chloromethane	ND	0.50	NA	1	B2K0150	11/08/2012	11/08/12 09:53	
cis-1,2-Dichloroethene	ND	0.50	NA	1	B2K0150	11/08/2012	11/08/12 09:53	
cis-1,3-Dichloropropene	ND	0.50	NA	1	B2K0150	11/08/2012	11/08/12 09:53	
Dibromochloromethane	ND	0.50	NA	1	B2K0150	11/08/2012	11/08/12 09:53	



Certificate of Analysis

Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego, CA 92122

Project Number : Raytheon, 532.30

Report To : Steve Netto

Reported : 11/15/2012

Client Sample ID TB-110512

Lab ID: 1203871-01

Volatile Organic Compounds by EPA 8260

Analyst: SL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Dibromomethane	ND	0.50	NA	1	B2K0150	11/08/2012	11/08/12 09:53	
Dichlorodifluoromethane	ND	0.50	NA	1	B2K0150	11/08/2012	11/08/12 09:53	
Ethylbenzene	ND	0.50	NA	1	B2K0150	11/08/2012	11/08/12 09:53	
Hexachlorobutadiene	ND	0.50	NA	1	B2K0150	11/08/2012	11/08/12 09:53	
Isopropylbenzene	ND	0.50	NA	1	B2K0150	11/08/2012	11/08/12 09:53	
m,p-Xylene	ND	1.0	NA	1	B2K0150	11/08/2012	11/08/12 09:53	
Methylene chloride	ND	1.0	NA	1	B2K0150	11/08/2012	11/08/12 09:53	
n-Butylbenzene	ND	0.50	NA	1	B2K0150	11/08/2012	11/08/12 09:53	
n-Propylbenzene	ND	0.50	NA	1	B2K0150	11/08/2012	11/08/12 09:53	
Naphthalene	ND	0.50	NA	1	B2K0150	11/08/2012	11/08/12 09:53	
o-Xylene	ND	0.50	NA	1	B2K0150	11/08/2012	11/08/12 09:53	
sec-Butylbenzene	ND	0.50	NA	1	B2K0150	11/08/2012	11/08/12 09:53	
Styrene	ND	0.50	NA	1	B2K0150	11/08/2012	11/08/12 09:53	
tert-Butylbenzene	ND	0.50	NA	1	B2K0150	11/08/2012	11/08/12 09:53	
Tetrachloroethene	ND	0.50	NA	1	B2K0150	11/08/2012	11/08/12 09:53	
Toluene	ND	0.50	NA	1	B2K0150	11/08/2012	11/08/12 09:53	
trans-1,2-Dichloroethene	ND	0.50	NA	1	B2K0150	11/08/2012	11/08/12 09:53	
Trichloroethene	ND	0.50	NA	1	B2K0150	11/08/2012	11/08/12 09:53	
Trichlorofluoromethane	ND	0.50	NA	1	B2K0150	11/08/2012	11/08/12 09:53	
Vinyl chloride	ND	0.50	NA	1	B2K0150	11/08/2012	11/08/12 09:53	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>83.3 %</i>		<i>70 - 130</i>		B2K0150	11/08/2012	<i>11/08/12 09:53</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>78.0 %</i>		<i>70 - 130</i>		B2K0150	11/08/2012	<i>11/08/12 09:53</i>	
<i>Surrogate: Dibromofluoromethane</i>	<i>84.7 %</i>		<i>70 - 130</i>		B2K0150	11/08/2012	<i>11/08/12 09:53</i>	
<i>Surrogate: Toluene-d8</i>	<i>80.6 %</i>		<i>70 - 130</i>		B2K0150	11/08/2012	<i>11/08/12 09:53</i>	



Certificate of Analysis

Hargis & Associates, Inc.

Project Number : Raytheon, 532.30

9171 Towne Centre Drive, Suite 375

Report To : Steve Netto

San Diego , CA 92122

Reported : 11/15/2012

Client Sample ID EW-01

Lab ID: 1203871-02

Volatile Organic Compounds by EPA 8260

Analyst: SL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	0.50	NA	1	B2K0150	11/08/2012	11/08/12 14:17	
1,1,1-Trichloroethane	ND	0.50	NA	1	B2K0150	11/08/2012	11/08/12 14:17	
1,1,2,2-Tetrachloroethane	ND	0.50	NA	1	B2K0150	11/08/2012	11/08/12 14:17	
1,1,2-Trichloroethane	0.75	0.50	NA	1	B2K0150	11/08/2012	11/08/12 14:17	
1,1-Dichloroethane	1.8	0.50	NA	1	B2K0150	11/08/2012	11/08/12 14:17	
1,1-Dichloroethene	190	5.0	NA	10	B2K0198	11/09/2012	11/09/12 12:24	
1,1-Dichloropropene	ND	0.50	NA	1	B2K0150	11/08/2012	11/08/12 14:17	
1,2,3-Trichloropropane	ND	0.50	NA	1	B2K0150	11/08/2012	11/08/12 14:17	
1,2,3-Trichlorobenzene	ND	0.50	NA	1	B2K0150	11/08/2012	11/08/12 14:17	
1,2,4-Trichlorobenzene	ND	0.50	NA	1	B2K0150	11/08/2012	11/08/12 14:17	
1,2,4-Trimethylbenzene	ND	0.50	NA	1	B2K0150	11/08/2012	11/08/12 14:17	
1,2-Dibromo-3-chloropropane	ND	0.50	NA	1	B2K0150	11/08/2012	11/08/12 14:17	
1,2-Dibromoethane	ND	0.50	NA	1	B2K0150	11/08/2012	11/08/12 14:17	
1,2-Dichlorobenzene	ND	0.50	NA	1	B2K0150	11/08/2012	11/08/12 14:17	
1,2-Dichloroethane	ND	0.50	NA	1	B2K0150	11/08/2012	11/08/12 14:17	
1,2-Dichloropropane	ND	0.50	NA	1	B2K0150	11/08/2012	11/08/12 14:17	
1,3,5-Trimethylbenzene	ND	0.50	NA	1	B2K0150	11/08/2012	11/08/12 14:17	
1,3-Dichlorobenzene	ND	0.50	NA	1	B2K0150	11/08/2012	11/08/12 14:17	
1,3-Dichloropropane	ND	0.50	NA	1	B2K0150	11/08/2012	11/08/12 14:17	
1,4-Dichlorobenzene	ND	0.50	NA	1	B2K0150	11/08/2012	11/08/12 14:17	
2,2-Dichloropropane	ND	0.50	NA	1	B2K0150	11/08/2012	11/08/12 14:17	
2-Chlorotoluene	ND	0.50	NA	1	B2K0150	11/08/2012	11/08/12 14:17	
4-Chlorotoluene	ND	0.50	NA	1	B2K0150	11/08/2012	11/08/12 14:17	
4-Isopropyltoluene	ND	0.50	NA	1	B2K0150	11/08/2012	11/08/12 14:17	
Benzene	ND	0.50	NA	1	B2K0150	11/08/2012	11/08/12 14:17	
Bromobenzene	ND	0.50	NA	1	B2K0150	11/08/2012	11/08/12 14:17	
Bromodichloromethane	ND	0.50	NA	1	B2K0150	11/08/2012	11/08/12 14:17	
Bromoform	ND	0.50	NA	1	B2K0150	11/08/2012	11/08/12 14:17	
Bromomethane	ND	0.50	NA	1	B2K0150	11/08/2012	11/08/12 14:17	
Carbon tetrachloride	ND	0.50	NA	1	B2K0150	11/08/2012	11/08/12 14:17	
Chlorobenzene	ND	0.50	NA	1	B2K0150	11/08/2012	11/08/12 14:17	
Chloroethane	ND	0.50	NA	1	B2K0150	11/08/2012	11/08/12 14:17	
Chloroform	ND	0.50	NA	1	B2K0150	11/08/2012	11/08/12 14:17	
Chloromethane	ND	0.50	NA	1	B2K0150	11/08/2012	11/08/12 14:17	
cis-1,2-Dichloroethene	ND	0.50	NA	1	B2K0150	11/08/2012	11/08/12 14:17	
cis-1,3-Dichloropropene	ND	0.50	NA	1	B2K0150	11/08/2012	11/08/12 14:17	
Dibromochloromethane	ND	0.50	NA	1	B2K0150	11/08/2012	11/08/12 14:17	



Certificate of Analysis

Hargis & Associates, Inc.

Project Number : Raytheon, 532.30

9171 Towne Centre Drive, Suite 375

Report To : Steve Netto

San Diego , CA 92122

Reported : 11/15/2012

Client Sample ID EW-01

Lab ID: 1203871-02

Volatile Organic Compounds by EPA 8260

Analyst: SL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Dibromomethane	ND	0.50	NA	1	B2K0150	11/08/2012	11/08/12 14:17	
Dichlorodifluoromethane	ND	0.50	NA	1	B2K0150	11/08/2012	11/08/12 14:17	
Ethylbenzene	ND	0.50	NA	1	B2K0150	11/08/2012	11/08/12 14:17	
Hexachlorobutadiene	ND	0.50	NA	1	B2K0150	11/08/2012	11/08/12 14:17	
Isopropylbenzene	ND	0.50	NA	1	B2K0150	11/08/2012	11/08/12 14:17	
m,p-Xylene	ND	1.0	NA	1	B2K0150	11/08/2012	11/08/12 14:17	
Methylene chloride	ND	1.0	NA	1	B2K0150	11/08/2012	11/08/12 14:17	
n-Butylbenzene	ND	0.50	NA	1	B2K0150	11/08/2012	11/08/12 14:17	
n-Propylbenzene	ND	0.50	NA	1	B2K0150	11/08/2012	11/08/12 14:17	
Naphthalene	ND	0.50	NA	1	B2K0150	11/08/2012	11/08/12 14:17	
o-Xylene	ND	0.50	NA	1	B2K0150	11/08/2012	11/08/12 14:17	
sec-Butylbenzene	ND	0.50	NA	1	B2K0150	11/08/2012	11/08/12 14:17	
Styrene	ND	0.50	NA	1	B2K0150	11/08/2012	11/08/12 14:17	
tert-Butylbenzene	ND	0.50	NA	1	B2K0150	11/08/2012	11/08/12 14:17	
Tetrachloroethene	ND	0.50	NA	1	B2K0150	11/08/2012	11/08/12 14:17	
Toluene	ND	0.50	NA	1	B2K0150	11/08/2012	11/08/12 14:17	
trans-1,2-Dichloroethene	ND	0.50	NA	1	B2K0150	11/08/2012	11/08/12 14:17	
Trichloroethene	ND	0.50	NA	1	B2K0150	11/08/2012	11/08/12 14:17	
Trichlorofluoromethane	ND	0.50	NA	1	B2K0150	11/08/2012	11/08/12 14:17	
Vinyl chloride	ND	0.50	NA	1	B2K0150	11/08/2012	11/08/12 14:17	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>84.4 %</i>		<i>70 - 130</i>		B2K0150	11/08/2012	<i>11/08/12 14:17</i>	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>97.7 %</i>		<i>70 - 130</i>		B2K0198	11/09/2012	<i>11/09/12 12:24</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>77.9 %</i>		<i>70 - 130</i>		B2K0150	11/08/2012	<i>11/08/12 14:17</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>92.6 %</i>		<i>70 - 130</i>		B2K0198	11/09/2012	<i>11/09/12 12:24</i>	
<i>Surrogate: Dibromofluoromethane</i>	<i>87.8 %</i>		<i>70 - 130</i>		B2K0198	11/09/2012	<i>11/09/12 12:24</i>	
<i>Surrogate: Dibromofluoromethane</i>	<i>85.4 %</i>		<i>70 - 130</i>		B2K0150	11/08/2012	<i>11/08/12 14:17</i>	
<i>Surrogate: Toluene-d8</i>	<i>81.0 %</i>		<i>70 - 130</i>		B2K0198	11/09/2012	<i>11/09/12 12:24</i>	
<i>Surrogate: Toluene-d8</i>	<i>81.6 %</i>		<i>70 - 130</i>		B2K0150	11/08/2012	<i>11/08/12 14:17</i>	



Certificate of Analysis

Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego, CA 92122

Project Number : Raytheon, 532.30

Report To : Steve Netto

Reported : 11/15/2012

Client Sample ID EW-01

Lab ID: 1203871-02

1,4-Dioxane by EPA 8270: Isotope Dilution Technique

Analyst: MR

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,4-Dioxane	83	2.0	NA	1	B2K0236	11/09/2012	11/11/12 19:13	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	<i>68.1 %</i>		<i>37 - 93</i>		B2K0236	11/09/2012	<i>11/11/12 19:13</i>	
<i>Surrogate: 2-Fluorobiphenyl</i>	<i>76.9 %</i>		<i>51 - 100</i>		B2K0236	11/09/2012	<i>11/11/12 19:13</i>	
<i>Surrogate: 4-Terphenyl-d14</i>	<i>97.3 %</i>		<i>58 - 113</i>		B2K0236	11/09/2012	<i>11/11/12 19:13</i>	
<i>Surrogate: Nitrobenzene-d5</i>	<i>76.1 %</i>		<i>39 - 95</i>		B2K0236	11/09/2012	<i>11/11/12 19:13</i>	



Certificate of Analysis

Hargis & Associates, Inc.

Project Number : Raytheon, 532.30

9171 Towne Centre Drive, Suite 375

Report To : Steve Netto

San Diego , CA 92122

Reported : 11/15/2012

Client Sample ID MW-21

Lab ID: 1203871-03

Volatile Organic Compounds by EPA 8260

Analyst: SL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	5.0	NA	10	B2K0198	11/09/2012	11/09/12 12:01	D6
1,1,1-Trichloroethane	ND	5.0	NA	10	B2K0198	11/09/2012	11/09/12 12:01	D6
1,1,2,2-Tetrachloroethane	ND	5.0	NA	10	B2K0198	11/09/2012	11/09/12 12:01	D6
1,1,2-Trichloroethane	6.8	5.0	NA	10	B2K0198	11/09/2012	11/09/12 12:01	D6
1,1-Dichloroethane	24	5.0	NA	10	B2K0198	11/09/2012	11/09/12 12:01	D6
1,1-Dichloroethene	2000	50	NA	100	B2K0150	11/08/2012	11/08/12 14:37	
1,1-Dichloropropene	ND	5.0	NA	10	B2K0198	11/09/2012	11/09/12 12:01	D6
1,2,3-Trichloropropane	ND	5.0	NA	10	B2K0198	11/09/2012	11/09/12 12:01	D6
1,2,3-Trichlorobenzene	ND	5.0	NA	10	B2K0198	11/09/2012	11/09/12 12:01	D6
1,2,4-Trichlorobenzene	ND	5.0	NA	10	B2K0198	11/09/2012	11/09/12 12:01	D6
1,2,4-Trimethylbenzene	ND	5.0	NA	10	B2K0198	11/09/2012	11/09/12 12:01	D6
1,2-Dibromo-3-chloropropane	ND	5.0	NA	10	B2K0198	11/09/2012	11/09/12 12:01	D6
1,2-Dibromoethane	ND	5.0	NA	10	B2K0198	11/09/2012	11/09/12 12:01	D6
1,2-Dichlorobenzene	ND	5.0	NA	10	B2K0198	11/09/2012	11/09/12 12:01	D6
1,2-Dichloroethane	ND	5.0	NA	10	B2K0198	11/09/2012	11/09/12 12:01	D6
1,2-Dichloropropane	ND	5.0	NA	10	B2K0198	11/09/2012	11/09/12 12:01	D6
1,3,5-Trimethylbenzene	ND	5.0	NA	10	B2K0198	11/09/2012	11/09/12 12:01	D6
1,3-Dichlorobenzene	ND	5.0	NA	10	B2K0198	11/09/2012	11/09/12 12:01	D6
1,3-Dichloropropane	ND	5.0	NA	10	B2K0198	11/09/2012	11/09/12 12:01	D6
1,4-Dichlorobenzene	ND	5.0	NA	10	B2K0198	11/09/2012	11/09/12 12:01	D6
2,2-Dichloropropane	ND	5.0	NA	10	B2K0198	11/09/2012	11/09/12 12:01	D6
2-Chlorotoluene	ND	5.0	NA	10	B2K0198	11/09/2012	11/09/12 12:01	D6
4-Chlorotoluene	ND	5.0	NA	10	B2K0198	11/09/2012	11/09/12 12:01	D6
4-Isopropyltoluene	ND	5.0	NA	10	B2K0198	11/09/2012	11/09/12 12:01	D6
Benzene	ND	5.0	NA	10	B2K0198	11/09/2012	11/09/12 12:01	D6
Bromobenzene	ND	5.0	NA	10	B2K0198	11/09/2012	11/09/12 12:01	D6
Bromodichloromethane	ND	5.0	NA	10	B2K0198	11/09/2012	11/09/12 12:01	D6
Bromoform	ND	5.0	NA	10	B2K0198	11/09/2012	11/09/12 12:01	D6
Bromomethane	ND	5.0	NA	10	B2K0198	11/09/2012	11/09/12 12:01	D6
Carbon tetrachloride	ND	5.0	NA	10	B2K0198	11/09/2012	11/09/12 12:01	D6
Chlorobenzene	ND	5.0	NA	10	B2K0198	11/09/2012	11/09/12 12:01	D6
Chloroethane	ND	5.0	NA	10	B2K0198	11/09/2012	11/09/12 12:01	D6
Chloroform	ND	5.0	NA	10	B2K0198	11/09/2012	11/09/12 12:01	D6
Chloromethane	ND	5.0	NA	10	B2K0198	11/09/2012	11/09/12 12:01	D6
cis-1,2-Dichloroethene	ND	5.0	NA	10	B2K0198	11/09/2012	11/09/12 12:01	D6
cis-1,3-Dichloropropane	ND	5.0	NA	10	B2K0198	11/09/2012	11/09/12 12:01	D6
Dibromochloromethane	ND	5.0	NA	10	B2K0198	11/09/2012	11/09/12 12:01	D6



Certificate of Analysis

Hargis & Associates, Inc.

Project Number : Raytheon, 532.30

9171 Towne Centre Drive, Suite 375

Report To : Steve Netto

San Diego , CA 92122

Reported : 11/15/2012

Client Sample ID MW-21

Lab ID: 1203871-03

Volatile Organic Compounds by EPA 8260

Analyst: SL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Dibromomethane	ND	5.0	NA	10	B2K0198	11/09/2012	11/09/12 12:01	D6
Dichlorodifluoromethane	ND	5.0	NA	10	B2K0198	11/09/2012	11/09/12 12:01	D6
Ethylbenzene	ND	5.0	NA	10	B2K0198	11/09/2012	11/09/12 12:01	D6
Hexachlorobutadiene	ND	5.0	NA	10	B2K0198	11/09/2012	11/09/12 12:01	D6
Isopropylbenzene	ND	5.0	NA	10	B2K0198	11/09/2012	11/09/12 12:01	D6
m,p-Xylene	ND	10	NA	10	B2K0198	11/09/2012	11/09/12 12:01	D6
Methylene chloride	ND	10	NA	10	B2K0198	11/09/2012	11/09/12 12:01	D6
n-Butylbenzene	ND	5.0	NA	10	B2K0198	11/09/2012	11/09/12 12:01	D6
n-Propylbenzene	ND	5.0	NA	10	B2K0198	11/09/2012	11/09/12 12:01	D6
Naphthalene	ND	5.0	NA	10	B2K0198	11/09/2012	11/09/12 12:01	D6
o-Xylene	ND	5.0	NA	10	B2K0198	11/09/2012	11/09/12 12:01	D6
sec-Butylbenzene	ND	5.0	NA	10	B2K0198	11/09/2012	11/09/12 12:01	D6
Styrene	ND	5.0	NA	10	B2K0198	11/09/2012	11/09/12 12:01	D6
tert-Butylbenzene	ND	5.0	NA	10	B2K0198	11/09/2012	11/09/12 12:01	D6
Tetrachloroethene	6.1	5.0	NA	10	B2K0198	11/09/2012	11/09/12 12:01	D6
Toluene	ND	5.0	NA	10	B2K0198	11/09/2012	11/09/12 12:01	D6
trans-1,2-Dichloroethene	ND	5.0	NA	10	B2K0198	11/09/2012	11/09/12 12:01	D6
Trichloroethene	16	5.0	NA	10	B2K0198	11/09/2012	11/09/12 12:01	D6
Trichlorofluoromethane	ND	5.0	NA	10	B2K0198	11/09/2012	11/09/12 12:01	D6
Vinyl chloride	ND	5.0	NA	10	B2K0198	11/09/2012	11/09/12 12:01	D6
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>83.7 %</i>		<i>70 - 130</i>		B2K0150	11/08/2012	<i>11/08/12 14:37</i>	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>99.3 %</i>		<i>70 - 130</i>		B2K0198	11/09/2012	<i>11/09/12 12:01</i>	D6
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>78.7 %</i>		<i>70 - 130</i>		B2K0150	11/08/2012	<i>11/08/12 14:37</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>95.5 %</i>		<i>70 - 130</i>		B2K0198	11/09/2012	<i>11/09/12 12:01</i>	D6
<i>Surrogate: Dibromofluoromethane</i>	<i>90.4 %</i>		<i>70 - 130</i>		B2K0198	11/09/2012	<i>11/09/12 12:01</i>	D6
<i>Surrogate: Dibromofluoromethane</i>	<i>85.3 %</i>		<i>70 - 130</i>		B2K0150	11/08/2012	<i>11/08/12 14:37</i>	
<i>Surrogate: Toluene-d8</i>	<i>81.3 %</i>		<i>70 - 130</i>		B2K0198	11/09/2012	<i>11/09/12 12:01</i>	D6
<i>Surrogate: Toluene-d8</i>	<i>80.9 %</i>		<i>70 - 130</i>		B2K0150	11/08/2012	<i>11/08/12 14:37</i>	



Certificate of Analysis

Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego, CA 92122

Project Number : Raytheon, 532.30

Report To : Steve Netto

Reported : 11/15/2012

Client Sample ID MW-21

Lab ID: 1203871-03

1,4-Dioxane by EPA 8270: Isotope Dilution Technique

Analyst: MR

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,4-Dioxane	240	10	NA	5	B2K0236	11/09/2012	11/12/12 10:25	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	<i>68.3 %</i>		<i>37 - 93</i>		B2K0236	11/09/2012	<i>11/12/12 10:25</i>	
<i>Surrogate: 2-Fluorobiphenyl</i>	<i>76.0 %</i>		<i>51 - 100</i>		B2K0236	11/09/2012	<i>11/12/12 10:25</i>	
<i>Surrogate: 4-Terphenyl-d14</i>	<i>104 %</i>		<i>58 - 113</i>		B2K0236	11/09/2012	<i>11/12/12 10:25</i>	
<i>Surrogate: Nitrobenzene-d5</i>	<i>72.8 %</i>		<i>39 - 95</i>		B2K0236	11/09/2012	<i>11/12/12 10:25</i>	



Certificate of Analysis

Hargis & Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego , CA 92122

Project Number : Raytheon, 532.30
 Report To : Steve Netto
 Reported : 11/15/2012

QUALITY CONTROL SECTION

Volatile Organic Compounds by EPA 8260 - Quality Control

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec % Rec	% Rec Limits	RPD RPD	RPD Limit	Notes
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Batch B2K0150 - MSVOAW_LL

Blank (B2K0150-BLK1)

Prepared: 11/8/2012 Analyzed: 11/8/2012

1,1,1,2-Tetrachloroethane	ND	0.50			NR
1,1,1-Trichloroethane	ND	0.50			NR
1,1,2,2-Tetrachloroethane	ND	0.50			NR
1,1,2-Trichloroethane	ND	0.50			NR
1,1-Dichloroethane	ND	0.50			NR
1,1-Dichloroethene	ND	0.50			NR
1,1-Dichloropropene	ND	0.50			NR
1,2,3-Trichloropropane	ND	0.50			NR
1,2,3-Trichlorobenzene	ND	0.50			NR
1,2,4-Trichlorobenzene	ND	0.50			NR
1,2,4-Trimethylbenzene	ND	0.50			NR
1,2-Dibromo-3-chloropropane	ND	0.50			NR
1,2-Dibromoethane	ND	0.50			NR
1,2-Dichlorobenzene	ND	0.50			NR
1,2-Dichloroethane	ND	0.50			NR
1,2-Dichloropropane	ND	0.50			NR
1,3,5-Trimethylbenzene	ND	0.50			NR
1,3-Dichlorobenzene	ND	0.50			NR
1,3-Dichloropropane	ND	0.50			NR
1,4-Dichlorobenzene	ND	0.50			NR
2,2-Dichloropropane	ND	0.50			NR
2-Chlorotoluene	ND	0.50			NR
4-Chlorotoluene	ND	0.50			NR
4-Isopropyltoluene	ND	0.50			NR
Benzene	ND	0.50			NR
Bromobenzene	ND	0.50			NR
Bromodichloromethane	ND	0.50			NR
Bromoform	ND	0.50			NR
Bromomethane	ND	0.50			NR
Carbon tetrachloride	ND	0.50			NR
Chlorobenzene	ND	0.50			NR
Chloroethane	ND	0.50			NR
Chloroform	ND	0.50			NR
Chloromethane	ND	0.50			NR
cis-1,2-Dichloroethene	ND	0.50			NR
cis-1,3-Dichloropropene	ND	0.50			NR
Dibromochloromethane	ND	0.50			NR
Dibromomethane	ND	0.50			NR
Dichlorodifluoromethane	ND	0.50			NR



Certificate of Analysis

Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego, CA 92122

Project Number : Raytheon, 532.30

Report To : Steve Netto

Reported : 11/15/2012

Volatile Organic Compounds by EPA 8260 - Quality Control (cont'd)

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B2K0150 - MSVOAW_LL (continued)

Blank (B2K0150-BLK1) - Continued

Prepared: 11/8/2012 Analyzed: 11/8/2012

Ethylbenzene	ND	0.50				NR			
Hexachlorobutadiene	ND	0.50				NR			
Isopropylbenzene	ND	0.50				NR			
m,p-Xylene	ND	1.0				NR			
Methylene chloride	ND	1.0				NR			
n-Butylbenzene	ND	0.50				NR			
n-Propylbenzene	ND	0.50				NR			
Naphthalene	ND	0.50				NR			
o-Xylene	ND	0.50				NR			
sec-Butylbenzene	ND	0.50				NR			
Styrene	ND	0.50				NR			
tert-Butylbenzene	ND	0.50				NR			
Tetrachloroethene	ND	0.50				NR			
Toluene	ND	0.50				NR			
trans-1,2-Dichloroethene	ND	0.50				NR			
Trichloroethene	ND	0.50				NR			
Trichlorofluoromethane	ND	0.50				NR			
Vinyl chloride	ND	0.50				NR			

<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>19.70</i>		<i>25.0000</i>		<i>78.8</i>	<i>70 - 130</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>19.58</i>		<i>25.0000</i>		<i>78.3</i>	<i>70 - 130</i>			
<i>Surrogate: Dibromofluoromethane</i>	<i>20.81</i>		<i>25.0000</i>		<i>83.2</i>	<i>70 - 130</i>			
<i>Surrogate: Toluene-d8</i>	<i>20.10</i>		<i>25.0000</i>		<i>80.4</i>	<i>70 - 130</i>			

LCS (B2K0150-BS1)

Prepared: 11/8/2012 Analyzed: 11/8/2012

1,1-Dichloroethene	20.5700		20.0000		103	70 - 130			
Benzene	35.6100		40.0000		89.0	70 - 130			
Chlorobenzene	18.2800		20.0000		91.4	70 - 130			
MTBE	17.5100		20.0000		87.6	70 - 130			
Toluene	36.2400		40.0000		90.6	70 - 130			
Trichloroethene	18.4800		20.0000		92.4	70 - 130			

<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>19.72</i>		<i>25.0000</i>		<i>78.9</i>	<i>70 - 130</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>20.77</i>		<i>25.0000</i>		<i>83.1</i>	<i>70 - 130</i>			
<i>Surrogate: Dibromofluoromethane</i>	<i>20.56</i>		<i>25.0000</i>		<i>82.2</i>	<i>70 - 130</i>			
<i>Surrogate: Toluene-d8</i>	<i>20.28</i>		<i>25.0000</i>		<i>81.1</i>	<i>70 - 130</i>			

LCS Dup (B2K0150-BSD1)

Prepared: 11/8/2012 Analyzed: 11/8/2012

1,1-Dichloroethene	19.4400		20.0000		97.2	70 - 130	5.65	20	
Benzene	35.1800		40.0000		88.0	70 - 130	1.21	20	
Chlorobenzene	17.8400		20.0000		89.2	70 - 130	2.44	20	
MTBE	17.1800		20.0000		85.9	70 - 130	1.90	20	
Toluene	35.5900		40.0000		89.0	70 - 130	1.81	20	



Certificate of Analysis

Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : Raytheon, 532.30

Report To : Steve Netto

Reported : 11/15/2012

Volatile Organic Compounds by EPA 8260 - Quality Control (cont'd)

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec % Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B2K0150 - MSVOAW_LL (continued)

LCS Dup (B2K0150-BSD1) - Continued

Prepared: 11/8/2012 Analyzed: 11/8/2012

Trichloroethene	18.0800		20.0000		90.4	70 - 130	2.19	20	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>19.16</i>		<i>25.0000</i>		<i>76.6</i>	<i>70 - 130</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>20.72</i>		<i>25.0000</i>		<i>82.9</i>	<i>70 - 130</i>			
<i>Surrogate: Dibromofluoromethane</i>	<i>19.86</i>		<i>25.0000</i>		<i>79.4</i>	<i>70 - 130</i>			
<i>Surrogate: Toluene-d8</i>	<i>20.20</i>		<i>25.0000</i>		<i>80.8</i>	<i>70 - 130</i>			

Matrix Spike (B2K0150-MS1)

Source: 1203894-02

Prepared: 11/8/2012 Analyzed: 11/8/2012

1,1-Dichloroethene	22.8400		20.0000	ND	114	70 - 130			
Benzene	37.2700		40.0000	ND	93.2	70 - 130			
Chlorobenzene	18.7800		20.0000	ND	93.9	70 - 130			
MTBE	16.2800		20.0000	ND	81.4	70 - 130			
Toluene	38.1400		40.0000	ND	95.4	70 - 130			
Trichloroethene	19.4800		20.0000	ND	97.4	70 - 130			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>20.53</i>		<i>25.0000</i>		<i>82.1</i>	<i>70 - 130</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>21.56</i>		<i>25.0000</i>		<i>86.2</i>	<i>70 - 130</i>			
<i>Surrogate: Dibromofluoromethane</i>	<i>20.62</i>		<i>25.0000</i>		<i>82.5</i>	<i>70 - 130</i>			
<i>Surrogate: Toluene-d8</i>	<i>20.41</i>		<i>25.0000</i>		<i>81.6</i>	<i>70 - 130</i>			

Matrix Spike Dup (B2K0150-MSD1)

Source: 1203894-02

Prepared: 11/8/2012 Analyzed: 11/8/2012

1,1-Dichloroethene	21.4200		20.0000	ND	107	70 - 130	6.42	20	
Benzene	36.7600		40.0000	ND	91.9	70 - 130	1.38	20	
Chlorobenzene	18.6100		20.0000	ND	93.0	70 - 130	0.909	20	
MTBE	17.8600		20.0000	ND	89.3	70 - 130	9.26	20	
Toluene	37.3400		40.0000	ND	93.4	70 - 130	2.12	20	
Trichloroethene	19.2600		20.0000	ND	96.3	70 - 130	1.14	20	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>20.05</i>		<i>25.0000</i>		<i>80.2</i>	<i>70 - 130</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>21.32</i>		<i>25.0000</i>		<i>85.3</i>	<i>70 - 130</i>			
<i>Surrogate: Dibromofluoromethane</i>	<i>20.25</i>		<i>25.0000</i>		<i>81.0</i>	<i>70 - 130</i>			
<i>Surrogate: Toluene-d8</i>	<i>20.32</i>		<i>25.0000</i>		<i>81.3</i>	<i>70 - 130</i>			

Batch B2K0198 - MSVOAW_LL

Blank (B2K0198-BLK1)

Prepared: 11/9/2012 Analyzed: 11/9/2012

1,1,1,2-Tetrachloroethane	ND	0.50		NR					
1,1,1-Trichloroethane	ND	0.50		NR					
1,1,2,2-Tetrachloroethane	ND	0.50		NR					
1,1,2-Trichloroethane	ND	0.50		NR					
1,1-Dichloroethane	ND	0.50		NR					
1,1-Dichloroethene	ND	0.50		NR					
1,1-Dichloropropene	ND	0.50		NR					
1,2,3-Trichloropropane	ND	0.50		NR					



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Project Number : Raytheon, 532.30

Report To : Steve Netto

Reported : 11/15/2012

Volatile Organic Compounds by EPA 8260 - Quality Control (cont'd)

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec % Rec	Limits	RPD	RPD Limit	Notes
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Batch B2K0198 - MSVOAW_LL (continued)

Blank (B2K0198-BLK1) - Continued

Prepared: 11/9/2012 Analyzed: 11/9/2012

1,2,3-Trichlorobenzene	ND	0.50			NR				
1,2,4-Trichlorobenzene	ND	0.50			NR				
1,2,4-Trimethylbenzene	ND	0.50			NR				
1,2-Dibromo-3-chloropropane	ND	0.50			NR				
1,2-Dibromoethane	ND	0.50			NR				
1,2-Dichlorobenzene	ND	0.50			NR				
1,2-Dichloroethane	ND	0.50			NR				
1,2-Dichloropropane	ND	0.50			NR				
1,3,5-Trimethylbenzene	ND	0.50			NR				
1,3-Dichlorobenzene	ND	0.50			NR				
1,3-Dichloropropane	ND	0.50			NR				
1,4-Dichlorobenzene	ND	0.50			NR				
2,2-Dichloropropane	ND	0.50			NR				
2-Chlorotoluene	ND	0.50			NR				
4-Chlorotoluene	ND	0.50			NR				
4-Isopropyltoluene	ND	0.50			NR				
Benzene	ND	0.50			NR				
Bromobenzene	ND	0.50			NR				
Bromodichloromethane	ND	0.50			NR				
Bromoform	ND	0.50			NR				
Bromomethane	ND	0.50			NR				
Carbon tetrachloride	ND	0.50			NR				
Chlorobenzene	ND	0.50			NR				
Chloroethane	ND	0.50			NR				
Chloroform	ND	0.50			NR				
Chloromethane	ND	0.50			NR				
cis-1,2-Dichloroethene	ND	0.50			NR				
cis-1,3-Dichloropropene	ND	0.50			NR				
Dibromochloromethane	ND	0.50			NR				
Dibromomethane	ND	0.50			NR				
Dichlorodifluoromethane	ND	0.50			NR				
Ethylbenzene	ND	0.50			NR				
Hexachlorobutadiene	ND	0.50			NR				
Isopropylbenzene	ND	0.50			NR				
m,p-Xylene	ND	1.0			NR				
Methylene chloride	ND	1.0			NR				
n-Butylbenzene	ND	0.50			NR				
n-Propylbenzene	ND	0.50			NR				
Naphthalene	ND	0.50			NR				
o-Xylene	ND	0.50			NR				
sec-Butylbenzene	ND	0.50			NR				
Styrene	ND	0.50			NR				



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Project Number : Raytheon, 532.30
 Report To : Steve Netto
 Reported : 11/15/2012

Volatile Organic Compounds by EPA 8260 - Quality Control (cont'd)

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec % Rec	% Rec Limits	RPD RPD	RPD Limit	Notes
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Batch B2K0198 - MSVOAW_LL (continued)

Blank (B2K0198-BLK1) - Continued

Prepared: 11/9/2012 Analyzed: 11/9/2012

tert-Butylbenzene	ND	0.50			NR				
Tetrachloroethene	ND	0.50			NR				
Toluene	ND	0.50			NR				
trans-1,2-Dichloroethene	ND	0.50			NR				
Trichloroethene	ND	0.50			NR				
Trichlorofluoromethane	ND	0.50			NR				
Vinyl chloride	ND	0.50			NR				
<hr/>									
Surrogate: 1,2-Dichloroethane-d4	24.95		25.0000		99.8	70 - 130			
Surrogate: 4-Bromofluorobenzene	24.26		25.0000		97.0	70 - 130			
Surrogate: Dibromofluoromethane	23.58		25.0000		94.3	70 - 130			
Surrogate: Toluene-d8	22.24		25.0000		89.0	70 - 130			

LCS (B2K0198-BS1)

Prepared: 11/9/2012 Analyzed: 11/9/2012

1,1-Dichloroethene	18.5000		20.0000		92.5	70 - 130			
Benzene	40.5000		40.0000		101	70 - 130			
Chlorobenzene	20.6100		20.0000		103	70 - 130			
MTBE	19.6700		20.0000		98.4	70 - 130			
Toluene	40.7200		40.0000		102	70 - 130			
Trichloroethene	20.0500		20.0000		100	70 - 130			
<hr/>									
Surrogate: 1,2-Dichloroethane-d4	23.40		25.0000		93.6	70 - 130			
Surrogate: 4-Bromofluorobenzene	23.85		25.0000		95.4	70 - 130			
Surrogate: Dibromofluoromethane	22.57		25.0000		90.3	70 - 130			
Surrogate: Toluene-d8	22.60		25.0000		90.4	70 - 130			

LCS Dup (B2K0198-BSD1)

Prepared: 11/9/2012 Analyzed: 11/9/2012

1,1-Dichloroethene	18.5300		20.0000	92.6	70 - 130	0.162	20		
Benzene	40.0800		40.0000	100	70 - 130	1.04	20		
Chlorobenzene	20.2000		20.0000	101	70 - 130	2.01	20		
MTBE	21.1300		20.0000	106	70 - 130	7.16	20		
Toluene	41.0100		40.0000	103	70 - 130	0.710	20		
Trichloroethene	19.8500		20.0000	99.2	70 - 130	1.00	20		
<hr/>									
Surrogate: 1,2-Dichloroethane-d4	23.87		25.0000	95.5	70 - 130				
Surrogate: 4-Bromofluorobenzene	22.36		25.0000	89.4	70 - 130				
Surrogate: Dibromofluoromethane	22.11		25.0000	88.4	70 - 130				
Surrogate: Toluene-d8	22.31		25.0000	89.2	70 - 130				

Matrix Spike (B2K0198-MS1)

Source: 1203913-10

Prepared: 11/9/2012 Analyzed: 11/9/2012

1,1-Dichloroethene	537.380		20.0000	498.140	196	70 - 130			M3
Benzene	42.0800		40.0000	ND	105	70 - 130			
Chlorobenzene	22.9200		20.0000	ND	115	70 - 130			
MTBE	19.7300		20.0000	ND	98.6	70 - 130			



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Reported : 11/15/2012

Volatile Organic Compounds by EPA 8260 - Quality Control (cont'd)

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B2K0198 - MSVOAW_LL (continued)

Matrix Spike (B2K0198-MS1) - Continued

Source: 1203913-10

Prepared: 11/9/2012 Analyzed: 11/9/2012

Toluene	43.7700		40.0000	ND	109	70 - 130			
Trichloroethene	22.2800		20.0000	1.40000	104	70 - 130			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>22.90</i>		<i>25.0000</i>		<i>91.6</i>	<i>70 - 130</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>23.19</i>		<i>25.0000</i>		<i>92.8</i>	<i>70 - 130</i>			
<i>Surrogate: Dibromofluoromethane</i>	<i>21.56</i>		<i>25.0000</i>		<i>86.2</i>	<i>70 - 130</i>			
<i>Surrogate: Toluene-d8</i>	<i>21.57</i>		<i>25.0000</i>		<i>86.3</i>	<i>70 - 130</i>			

Matrix Spike Dup (B2K0198-MSD1)

Source: 1203913-10

Prepared: 11/9/2012 Analyzed: 11/9/2012

1,1-Dichloroethene	478.880		20.0000	498.140	-96.3	70 - 130	11.5	20	M3
Benzene	39.7000		40.0000	ND	99.2	70 - 130	5.82	20	
Chlorobenzene	22.3400		20.0000	ND	112	70 - 130	2.56	20	
MTBE	19.1200		20.0000	ND	95.6	70 - 130	3.14	20	
Toluene	40.9800		40.0000	ND	102	70 - 130	6.58	20	
Trichloroethene	21.6000		20.0000	1.40000	101	70 - 130	3.10	20	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>21.60</i>		<i>25.0000</i>		<i>86.4</i>	<i>70 - 130</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>22.22</i>		<i>25.0000</i>		<i>88.9</i>	<i>70 - 130</i>			
<i>Surrogate: Dibromofluoromethane</i>	<i>20.23</i>		<i>25.0000</i>		<i>80.9</i>	<i>70 - 130</i>			
<i>Surrogate: Toluene-d8</i>	<i>20.57</i>		<i>25.0000</i>		<i>82.3</i>	<i>70 - 130</i>			



Certificate of Analysis

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 San Diego , CA 92122

Project Number : Raytheon, 532.30
 Report To : Steve Netto
 Reported : 11/15/2012

1,4-Dioxane by EPA 8270: Isotope Dilution Technique - Quality Control

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec % Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B2K0236 - MSSEMI

Blank (B2K0236-BLK1)

Prepared: 11/9/2012 Analyzed: 11/11/2012

1,4-Dioxane	ND	2.0			NR				
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	74.88		100.000		74.9	37 - 93			
<i>Surrogate: 2-Fluorobiphenyl</i>	84.12		100.000		84.1	51 - 100			
<i>Surrogate: 4-Terphenyl-d14</i>	109.9		100.000		110	58 - 113			
<i>Surrogate: Nitrobenzene-d5</i>	78.10		100.000		78.1	39 - 95			

LCS (B2K0236-BS1)

Prepared: 11/9/2012 Analyzed: 11/11/2012

1,4-Dioxane	106.930	2.0	100.000		107	70 - 130			
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	70.75		100.000		70.8	37 - 93			
<i>Surrogate: 2-Fluorobiphenyl</i>	85.82		100.000		85.8	51 - 100			
<i>Surrogate: 4-Terphenyl-d14</i>	109.2		100.000		109	58 - 113			
<i>Surrogate: Nitrobenzene-d5</i>	81.21		100.000		81.2	39 - 95			

Matrix Spike (B2K0236-MS1)

Source: 1203913-10

Prepared: 11/9/2012 Analyzed: 11/12/2012

1,4-Dioxane	377.125	10	100.000	256.655	120	70 - 130			
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	63.80		100.000		63.8	37 - 93			
<i>Surrogate: 2-Fluorobiphenyl</i>	77.50		100.000		77.5	51 - 100			
<i>Surrogate: 4-Terphenyl-d14</i>	98.50		100.000		98.5	58 - 113			
<i>Surrogate: Nitrobenzene-d5</i>	73.80		100.000		73.8	39 - 95			

Matrix Spike Dup (B2K0236-MSD1)

Source: 1203913-10

Prepared: 11/9/2012 Analyzed: 11/12/2012

1,4-Dioxane	377.050	10	100.000	256.655	120	70 - 130	0.0199	20	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	67.90		100.000		67.9	37 - 93			
<i>Surrogate: 2-Fluorobiphenyl</i>	78.05		100.000		78.0	51 - 100			
<i>Surrogate: 4-Terphenyl-d14</i>	98.60		100.000		98.6	58 - 113			
<i>Surrogate: Nitrobenzene-d5</i>	75.90		100.000		75.9	39 - 95			



Certificate of Analysis

Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego, CA 92122

Project Number : Raytheon, 532.30

Report To : Steve Netto

Reported : 11/15/2012

Notes and Definitions

M3	Matrix spike recovery outside of acceptance limit due to disproportionate concentration of the analyte to spike level. The analytical batch was validated by the laboratory control sample.
D6	Sample required dilution due to high concentration of target analyte.
ND	Analyte not detected at or above reporting limit
PQL	Practical Quantitation Limit
MDL	Method Detection Limit
NR	Not Reported
RPD	Relative Percent Difference
CA1	CA-NELAP (CDPH)
CA2	CA-ELAP (CDPH)
OR1	OR-NELAP (OSPHL)
TX1	TX-NELAP (TCEQ)

Notes:

(1) The reported MDL and PQL are based on prep ratio variation and analytical dilution.

CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST FORM

DATE 11/05/12 PAGE 1 OF 1

PROJECT NAME Raytheon				PROJECT No./TASK No. 532.30				SAMPLE CONTAINERS		ANALYSIS REQUESTED		ESTIMATED CONCENTRATION RANGE (ppb) FOR VOAS		SPECIAL HANDLING		LABORATORY INFORMATION																
PROJECT MANAGER Steve Netto				Phone No. 858-455-6500												ATL																
QA MANAGER				Fax No. 858-455-6533												Attn: Rachelle Arada																
SAMPLER (SIGNATURE) <i>[Signature]</i>				SAMPLER (PRINTED) EDIN HUNTER MARCO RODRIGUEZ																												
LAB ID	SAMPLE ID	SAMPLE COLLECTION		MATRIX			PRESERVATION					40 ml VOA	1L Amber	VOCs 8260B	1,4-Dioxane 8270 MDD	1,4-Dioxane 8270 STM	ESTIMATED CONCENTRATION RANGE (ppb) FOR VOAS					Standard TAT	MS collected	HSD collected	REMARKS							
		Date	Time	Soil	Ground water	Surface water	Lab H2O	HCl	HNO3	NaOH	H2SO4						Ice	0-10	10-100	100-1,000	1,000-10,000					>10,000						
1203871-01	TB-110512	11/05/12	1400				X	X			X							X				X										
-	RW-01	}	1405	X				X			X										X			X								
-3	MW-21		1415	X			X				X											X			X							
					X						X														X							
					X						X														X							

Total number of Containers per analysis: 8 2 Total No. of Containers: 10

Relinquished by: <i>[Signature]</i> H+A, Inc Company		Date <u>11/05/12</u> Time <u>16:23</u>	Received by: <i>[Signature]</i> Advanced Tech Labs Company		Date <u>11/5/12</u> Time <u>1623</u>	INSTRUCTIONS 1. Fill out form completely except for shaded areas (lab use only); sign only after verified for completeness. 2. Complete in ballpoint pen. Draw one line through errors, initial and date correction. 3. Indicate number of sample containers in analysis request space; indicate choice with ✓ or x. 4. Note applicable preservatives, special instructions, and deviations from typical environmental samples. 5. Consult project QA documents for specific instructions.	Shipment Method: <u>Courier</u>	
Relinquished by: <i>[Signature]</i> Advanced Tech Labs Company		Date <u>11/5/12</u> Time <u>1702</u>	Received by: <i>[Signature]</i> Company		Date <u>11/5/12</u> Time <u>1702</u>		<input checked="" type="checkbox"/> 9171 TOWNE CENTRE DRIVE, SUITE 375 SAN DIEGO, CA 92122 (858) 455-6500 <input type="checkbox"/> 1640 SOUTH STAPLEY DRIVE, SUITE 124 MESA, AZ 85204 (480) 345-0888 <input type="checkbox"/> 1820 EAST RIVER ROAD, SUITE 220 TUCSON, AZ 85718 (520) 881-7300	
Sample Receipt:			Temp. @ receipt <u>5.0</u> °C			Send invoice to San Diego, CA Attn: Accounts Payable		
<input type="checkbox"/> No. of containers correct <input type="checkbox"/> custody seals secure			<input checked="" type="checkbox"/> received good condition/cold <input type="checkbox"/> conforms to COC document					

Page 19 of 19

November 16, 2012

Steve Netto
Hargis & Associates, Inc.
9171 Towne Centre Drive, Suite 375
San Diego, CA 92122
Tel: (619) 249-3166
Fax: (858) 455-6533



Re: ATL Work Order Number : 1203894
Client Reference : Raytheon, 532.30

Enclosed are the results for sample(s) received on November 06, 2012 by Advanced Technology Laboratories. The sample(s) are tested for the parameters as indicated on the enclosed chain of custody in accordance with applicable laboratory certifications. The laboratory results contained in this report specifically pertains to the sample(s) submitted.

Thank you for the opportunity to serve the needs of your company. If you have any questions, please feel free to contact me or your Project Manager.

Sincerely,

Eddie Rodriguez
Laboratory Director

The cover letter and the case narrative are an integral part of this analytical report and its absence renders the report invalid. Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Conference and/or applicable state-specific certification programs. The report cannot be reproduced without written permission from the client and Advanced Technology Laboratories.



Certificate of Analysis

Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : Raytheon, 532.30

Report To : Steve Netto

Reported : 11/16/2012

SUMMARY OF SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
TB-110612	1203894-01	Lab H2O	11/06/12 8:30	11/06/12 17:05
MW-35A	1203894-02	Groundwater	11/06/12 10:25	11/06/12 17:05
MW-35B	1203894-03	Groundwater	11/06/12 11:35	11/06/12 17:05
MW-35C	1203894-04	Groundwater	11/06/12 13:18	11/06/12 17:05
MW-33	1203894-05	Groundwater	11/06/12 16:30	11/06/12 17:05
MW-34A	1203894-06	Groundwater	11/06/12 16:50	11/06/12 17:05
MW-31	1203894-07	Groundwater	11/06/12 12:05	11/06/12 17:05
MW-30A	1203894-08	Groundwater	11/06/12 13:05	11/06/12 17:05
MW-30B	1203894-09	Groundwater	11/06/12 13:43	11/06/12 17:05
MW-34C	1203894-10	Groundwater	11/06/12 15:58	11/06/12 17:05



Certificate of Analysis

Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : Raytheon, 532.30

Report To : Steve Netto

Reported : 11/16/2012

Client Sample ID TB-110612

Lab ID: 1203894-01

Volatile Organic Compounds by EPA 8260

Analyst: SL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	0.50	NA	1	B2K0150	11/08/2012	11/08/12 10:13	
1,1,1-Trichloroethane	ND	0.50	NA	1	B2K0150	11/08/2012	11/08/12 10:13	
1,1,2,2-Tetrachloroethane	ND	0.50	NA	1	B2K0150	11/08/2012	11/08/12 10:13	
1,1,2-Trichloroethane	ND	0.50	NA	1	B2K0150	11/08/2012	11/08/12 10:13	
1,1-Dichloroethane	ND	0.50	NA	1	B2K0150	11/08/2012	11/08/12 10:13	
1,1-Dichloroethene	ND	0.50	NA	1	B2K0150	11/08/2012	11/08/12 10:13	
1,1-Dichloropropene	ND	0.50	NA	1	B2K0150	11/08/2012	11/08/12 10:13	
1,2,3-Trichloropropane	ND	0.50	NA	1	B2K0150	11/08/2012	11/08/12 10:13	
1,2,3-Trichlorobenzene	ND	0.50	NA	1	B2K0150	11/08/2012	11/08/12 10:13	
1,2,4-Trichlorobenzene	ND	0.50	NA	1	B2K0150	11/08/2012	11/08/12 10:13	
1,2,4-Trimethylbenzene	ND	0.50	NA	1	B2K0150	11/08/2012	11/08/12 10:13	
1,2-Dibromo-3-chloropropane	ND	0.50	NA	1	B2K0150	11/08/2012	11/08/12 10:13	
1,2-Dibromoethane	ND	0.50	NA	1	B2K0150	11/08/2012	11/08/12 10:13	
1,2-Dichlorobenzene	ND	0.50	NA	1	B2K0150	11/08/2012	11/08/12 10:13	
1,2-Dichloroethane	ND	0.50	NA	1	B2K0150	11/08/2012	11/08/12 10:13	
1,2-Dichloropropane	ND	0.50	NA	1	B2K0150	11/08/2012	11/08/12 10:13	
1,3,5-Trimethylbenzene	ND	0.50	NA	1	B2K0150	11/08/2012	11/08/12 10:13	
1,3-Dichlorobenzene	ND	0.50	NA	1	B2K0150	11/08/2012	11/08/12 10:13	
1,3-Dichloropropane	ND	0.50	NA	1	B2K0150	11/08/2012	11/08/12 10:13	
1,4-Dichlorobenzene	ND	0.50	NA	1	B2K0150	11/08/2012	11/08/12 10:13	
2,2-Dichloropropane	ND	0.50	NA	1	B2K0150	11/08/2012	11/08/12 10:13	
2-Chlorotoluene	ND	0.50	NA	1	B2K0150	11/08/2012	11/08/12 10:13	
4-Chlorotoluene	ND	0.50	NA	1	B2K0150	11/08/2012	11/08/12 10:13	
4-Isopropyltoluene	ND	0.50	NA	1	B2K0150	11/08/2012	11/08/12 10:13	
Benzene	ND	0.50	NA	1	B2K0150	11/08/2012	11/08/12 10:13	
Bromobenzene	ND	0.50	NA	1	B2K0150	11/08/2012	11/08/12 10:13	
Bromodichloromethane	ND	0.50	NA	1	B2K0150	11/08/2012	11/08/12 10:13	
Bromoform	ND	0.50	NA	1	B2K0150	11/08/2012	11/08/12 10:13	
Bromomethane	ND	0.50	NA	1	B2K0150	11/08/2012	11/08/12 10:13	
Carbon tetrachloride	ND	0.50	NA	1	B2K0150	11/08/2012	11/08/12 10:13	
Chlorobenzene	ND	0.50	NA	1	B2K0150	11/08/2012	11/08/12 10:13	
Chloroethane	ND	0.50	NA	1	B2K0150	11/08/2012	11/08/12 10:13	
Chloroform	ND	0.50	NA	1	B2K0150	11/08/2012	11/08/12 10:13	
Chloromethane	ND	0.50	NA	1	B2K0150	11/08/2012	11/08/12 10:13	
cis-1,2-Dichloroethene	ND	0.50	NA	1	B2K0150	11/08/2012	11/08/12 10:13	
cis-1,3-Dichloropropene	ND	0.50	NA	1	B2K0150	11/08/2012	11/08/12 10:13	
Dibromochloromethane	ND	0.50	NA	1	B2K0150	11/08/2012	11/08/12 10:13	



Certificate of Analysis

Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego, CA 92122

Project Number : Raytheon, 532.30

Report To : Steve Netto

Reported : 11/16/2012

Client Sample ID TB-110612

Lab ID: 1203894-01

Volatile Organic Compounds by EPA 8260

Analyst: SL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Dibromomethane	ND	0.50	NA	1	B2K0150	11/08/2012	11/08/12 10:13	
Dichlorodifluoromethane	ND	0.50	NA	1	B2K0150	11/08/2012	11/08/12 10:13	
Ethylbenzene	ND	0.50	NA	1	B2K0150	11/08/2012	11/08/12 10:13	
Hexachlorobutadiene	ND	0.50	NA	1	B2K0150	11/08/2012	11/08/12 10:13	
Isopropylbenzene	ND	0.50	NA	1	B2K0150	11/08/2012	11/08/12 10:13	
m,p-Xylene	ND	1.0	NA	1	B2K0150	11/08/2012	11/08/12 10:13	
Methylene chloride	ND	1.0	NA	1	B2K0150	11/08/2012	11/08/12 10:13	
n-Butylbenzene	ND	0.50	NA	1	B2K0150	11/08/2012	11/08/12 10:13	
n-Propylbenzene	ND	0.50	NA	1	B2K0150	11/08/2012	11/08/12 10:13	
Naphthalene	ND	0.50	NA	1	B2K0150	11/08/2012	11/08/12 10:13	
o-Xylene	ND	0.50	NA	1	B2K0150	11/08/2012	11/08/12 10:13	
sec-Butylbenzene	ND	0.50	NA	1	B2K0150	11/08/2012	11/08/12 10:13	
Styrene	ND	0.50	NA	1	B2K0150	11/08/2012	11/08/12 10:13	
tert-Butylbenzene	ND	0.50	NA	1	B2K0150	11/08/2012	11/08/12 10:13	
Tetrachloroethene	ND	0.50	NA	1	B2K0150	11/08/2012	11/08/12 10:13	
Toluene	ND	0.50	NA	1	B2K0150	11/08/2012	11/08/12 10:13	
trans-1,2-Dichloroethene	ND	0.50	NA	1	B2K0150	11/08/2012	11/08/12 10:13	
Trichloroethene	ND	0.50	NA	1	B2K0150	11/08/2012	11/08/12 10:13	
Trichlorofluoromethane	ND	0.50	NA	1	B2K0150	11/08/2012	11/08/12 10:13	
Vinyl chloride	ND	0.50	NA	1	B2K0150	11/08/2012	11/08/12 10:13	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>82.9 %</i>		<i>70 - 130</i>		B2K0150	11/08/2012	<i>11/08/12 10:13</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>78.6 %</i>		<i>70 - 130</i>		B2K0150	11/08/2012	<i>11/08/12 10:13</i>	
<i>Surrogate: Dibromofluoromethane</i>	<i>84.8 %</i>		<i>70 - 130</i>		B2K0150	11/08/2012	<i>11/08/12 10:13</i>	
<i>Surrogate: Toluene-d8</i>	<i>80.8 %</i>		<i>70 - 130</i>		B2K0150	11/08/2012	<i>11/08/12 10:13</i>	



Certificate of Analysis

Hargis & Associates, Inc.

Project Number : Raytheon, 532.30

9171 Towne Centre Drive, Suite 375

Report To : Steve Netto

San Diego , CA 92122

Reported : 11/16/2012

Client Sample ID MW-35A

Lab ID: 1203894-02

Volatile Organic Compounds by EPA 8260

Analyst: SL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	0.50	NA	1	B2K0150	11/08/2012	11/08/12 10:33	
1,1,1-Trichloroethane	ND	0.50	NA	1	B2K0150	11/08/2012	11/08/12 10:33	
1,1,2,2-Tetrachloroethane	ND	0.50	NA	1	B2K0150	11/08/2012	11/08/12 10:33	
1,1,2-Trichloroethane	ND	0.50	NA	1	B2K0150	11/08/2012	11/08/12 10:33	
1,1-Dichloroethane	ND	0.50	NA	1	B2K0150	11/08/2012	11/08/12 10:33	
1,1-Dichloroethene	ND	0.50	NA	1	B2K0150	11/08/2012	11/08/12 10:33	
1,1-Dichloropropene	ND	0.50	NA	1	B2K0150	11/08/2012	11/08/12 10:33	
1,2,3-Trichloropropane	ND	0.50	NA	1	B2K0150	11/08/2012	11/08/12 10:33	
1,2,3-Trichlorobenzene	ND	0.50	NA	1	B2K0150	11/08/2012	11/08/12 10:33	
1,2,4-Trichlorobenzene	ND	0.50	NA	1	B2K0150	11/08/2012	11/08/12 10:33	
1,2,4-Trimethylbenzene	ND	0.50	NA	1	B2K0150	11/08/2012	11/08/12 10:33	
1,2-Dibromo-3-chloropropane	ND	0.50	NA	1	B2K0150	11/08/2012	11/08/12 10:33	
1,2-Dibromoethane	ND	0.50	NA	1	B2K0150	11/08/2012	11/08/12 10:33	
1,2-Dichlorobenzene	ND	0.50	NA	1	B2K0150	11/08/2012	11/08/12 10:33	
1,2-Dichloroethane	ND	0.50	NA	1	B2K0150	11/08/2012	11/08/12 10:33	
1,2-Dichloropropane	ND	0.50	NA	1	B2K0150	11/08/2012	11/08/12 10:33	
1,3,5-Trimethylbenzene	ND	0.50	NA	1	B2K0150	11/08/2012	11/08/12 10:33	
1,3-Dichlorobenzene	ND	0.50	NA	1	B2K0150	11/08/2012	11/08/12 10:33	
1,3-Dichloropropane	ND	0.50	NA	1	B2K0150	11/08/2012	11/08/12 10:33	
1,4-Dichlorobenzene	ND	0.50	NA	1	B2K0150	11/08/2012	11/08/12 10:33	
2,2-Dichloropropane	ND	0.50	NA	1	B2K0150	11/08/2012	11/08/12 10:33	
2-Chlorotoluene	ND	0.50	NA	1	B2K0150	11/08/2012	11/08/12 10:33	
4-Chlorotoluene	ND	0.50	NA	1	B2K0150	11/08/2012	11/08/12 10:33	
4-Isopropyltoluene	ND	0.50	NA	1	B2K0150	11/08/2012	11/08/12 10:33	
Benzene	ND	0.50	NA	1	B2K0150	11/08/2012	11/08/12 10:33	
Bromobenzene	ND	0.50	NA	1	B2K0150	11/08/2012	11/08/12 10:33	
Bromodichloromethane	ND	0.50	NA	1	B2K0150	11/08/2012	11/08/12 10:33	
Bromoform	ND	0.50	NA	1	B2K0150	11/08/2012	11/08/12 10:33	
Bromomethane	ND	0.50	NA	1	B2K0150	11/08/2012	11/08/12 10:33	
Carbon tetrachloride	ND	0.50	NA	1	B2K0150	11/08/2012	11/08/12 10:33	
Chlorobenzene	ND	0.50	NA	1	B2K0150	11/08/2012	11/08/12 10:33	
Chloroethane	ND	0.50	NA	1	B2K0150	11/08/2012	11/08/12 10:33	
Chloroform	0.72	0.50	NA	1	B2K0150	11/08/2012	11/08/12 10:33	
Chloromethane	ND	0.50	NA	1	B2K0150	11/08/2012	11/08/12 10:33	
cis-1,2-Dichloroethene	ND	0.50	NA	1	B2K0150	11/08/2012	11/08/12 10:33	
cis-1,3-Dichloropropene	ND	0.50	NA	1	B2K0150	11/08/2012	11/08/12 10:33	
Dibromochloromethane	ND	0.50	NA	1	B2K0150	11/08/2012	11/08/12 10:33	



Certificate of Analysis

Hargis & Associates, Inc.

Project Number : Raytheon, 532.30

9171 Towne Centre Drive, Suite 375

Report To : Steve Netto

San Diego , CA 92122

Reported : 11/16/2012

Client Sample ID MW-35A

Lab ID: 1203894-02

Volatile Organic Compounds by EPA 8260

Analyst: SL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Dibromomethane	ND	0.50	NA	1	B2K0150	11/08/2012	11/08/12 10:33	
Dichlorodifluoromethane	ND	0.50	NA	1	B2K0150	11/08/2012	11/08/12 10:33	
Ethylbenzene	ND	0.50	NA	1	B2K0150	11/08/2012	11/08/12 10:33	
Hexachlorobutadiene	ND	0.50	NA	1	B2K0150	11/08/2012	11/08/12 10:33	
Isopropylbenzene	ND	0.50	NA	1	B2K0150	11/08/2012	11/08/12 10:33	
m,p-Xylene	ND	1.0	NA	1	B2K0150	11/08/2012	11/08/12 10:33	
Methylene chloride	ND	1.0	NA	1	B2K0150	11/08/2012	11/08/12 10:33	
n-Butylbenzene	ND	0.50	NA	1	B2K0150	11/08/2012	11/08/12 10:33	
n-Propylbenzene	ND	0.50	NA	1	B2K0150	11/08/2012	11/08/12 10:33	
Naphthalene	ND	0.50	NA	1	B2K0150	11/08/2012	11/08/12 10:33	
o-Xylene	ND	0.50	NA	1	B2K0150	11/08/2012	11/08/12 10:33	
sec-Butylbenzene	ND	0.50	NA	1	B2K0150	11/08/2012	11/08/12 10:33	
Styrene	ND	0.50	NA	1	B2K0150	11/08/2012	11/08/12 10:33	
tert-Butylbenzene	ND	0.50	NA	1	B2K0150	11/08/2012	11/08/12 10:33	
Tetrachloroethene	ND	0.50	NA	1	B2K0150	11/08/2012	11/08/12 10:33	
Toluene	ND	0.50	NA	1	B2K0150	11/08/2012	11/08/12 10:33	
trans-1,2-Dichloroethene	ND	0.50	NA	1	B2K0150	11/08/2012	11/08/12 10:33	
Trichloroethene	ND	0.50	NA	1	B2K0150	11/08/2012	11/08/12 10:33	
Trichlorofluoromethane	ND	0.50	NA	1	B2K0150	11/08/2012	11/08/12 10:33	
Vinyl chloride	ND	0.50	NA	1	B2K0150	11/08/2012	11/08/12 10:33	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>85.1 %</i>		<i>70 - 130</i>		B2K0150	11/08/2012	<i>11/08/12 10:33</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>79.6 %</i>		<i>70 - 130</i>		B2K0150	11/08/2012	<i>11/08/12 10:33</i>	
<i>Surrogate: Dibromofluoromethane</i>	<i>86.4 %</i>		<i>70 - 130</i>		B2K0150	11/08/2012	<i>11/08/12 10:33</i>	
<i>Surrogate: Toluene-d8</i>	<i>80.7 %</i>		<i>70 - 130</i>		B2K0150	11/08/2012	<i>11/08/12 10:33</i>	



Certificate of Analysis

Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : Raytheon, 532.30

Report To : Steve Netto

Reported : 11/16/2012

Client Sample ID MW-35A

Lab ID: 1203894-02

1,4-Dioxane by EPA 8270/SIM: Isotope Dilution Technique

Analyst: MR

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,4-Dioxane	ND	0.20	0.13	1	B2K0208	11/09/2012	11/09/12 18:04	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	<i>94.7 %</i>		<i>36 - 107</i>		B2K0208	11/09/2012	<i>11/09/12 18:04</i>	
<i>Surrogate: 2-Fluorobiphenyl</i>	<i>104 %</i>		<i>42 - 120</i>		B2K0208	11/09/2012	<i>11/09/12 18:04</i>	
<i>Surrogate: 4-Terphenyl-d14</i>	<i>99.4 %</i>		<i>67 - 142</i>		B2K0208	11/09/2012	<i>11/09/12 18:04</i>	
<i>Surrogate: Nitrobenzene-d5</i>	<i>112 %</i>		<i>36 - 130</i>		B2K0208	11/09/2012	<i>11/09/12 18:04</i>	



Certificate of Analysis

Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego, CA 92122

Project Number : Raytheon, 532.30

Report To : Steve Netto

Reported : 11/16/2012

Client Sample ID MW-35B

Lab ID: 1203894-03

Volatile Organic Compounds by EPA 8260

Analyst: SL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 16:54	
1,1,1-Trichloroethane	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 16:54	
1,1,2,2-Tetrachloroethane	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 16:54	
1,1,2-Trichloroethane	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 16:54	
1,1-Dichloroethane	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 16:54	
1,1-Dichloroethene	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 16:54	
1,1-Dichloropropene	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 16:54	
1,2,3-Trichloropropane	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 16:54	
1,2,3-Trichlorobenzene	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 16:54	
1,2,4-Trichlorobenzene	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 16:54	
1,2,4-Trimethylbenzene	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 16:54	
1,2-Dibromo-3-chloropropane	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 16:54	
1,2-Dibromoethane	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 16:54	
1,2-Dichlorobenzene	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 16:54	
1,2-Dichloroethane	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 16:54	
1,2-Dichloropropane	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 16:54	
1,3,5-Trimethylbenzene	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 16:54	
1,3-Dichlorobenzene	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 16:54	
1,3-Dichloropropane	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 16:54	
1,4-Dichlorobenzene	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 16:54	
2,2-Dichloropropane	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 16:54	
2-Chlorotoluene	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 16:54	
4-Chlorotoluene	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 16:54	
4-Isopropyltoluene	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 16:54	
Benzene	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 16:54	
Bromobenzene	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 16:54	
Bromodichloromethane	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 16:54	
Bromoform	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 16:54	
Bromomethane	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 16:54	
Carbon tetrachloride	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 16:54	
Chlorobenzene	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 16:54	
Chloroethane	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 16:54	
Chloroform	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 16:54	
Chloromethane	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 16:54	
cis-1,2-Dichloroethene	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 16:54	
cis-1,3-Dichloropropene	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 16:54	
Dibromochloromethane	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 16:54	



Certificate of Analysis

Hargis & Associates, Inc.

Project Number : Raytheon, 532.30

9171 Towne Centre Drive, Suite 375

Report To : Steve Netto

San Diego , CA 92122

Reported : 11/16/2012

Client Sample ID MW-35B

Lab ID: 1203894-03

Volatile Organic Compounds by EPA 8260

Analyst: SL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Dibromomethane	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 16:54	
Dichlorodifluoromethane	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 16:54	
Ethylbenzene	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 16:54	
Hexachlorobutadiene	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 16:54	
Isopropylbenzene	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 16:54	
m,p-Xylene	ND	1.0	NA	1	B2K0198	11/09/2012	11/09/12 16:54	
Methylene chloride	ND	1.0	NA	1	B2K0198	11/09/2012	11/09/12 16:54	
n-Butylbenzene	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 16:54	
n-Propylbenzene	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 16:54	
Naphthalene	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 16:54	
o-Xylene	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 16:54	
sec-Butylbenzene	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 16:54	
Styrene	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 16:54	
tert-Butylbenzene	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 16:54	
Tetrachloroethene	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 16:54	
Toluene	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 16:54	
trans-1,2-Dichloroethene	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 16:54	
Trichloroethene	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 16:54	
Trichlorofluoromethane	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 16:54	
Vinyl chloride	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 16:54	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>92.0 %</i>		<i>70 - 130</i>		B2K0198	11/09/2012	<i>11/09/12 16:54</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>95.0 %</i>		<i>70 - 130</i>		B2K0198	11/09/2012	<i>11/09/12 16:54</i>	
<i>Surrogate: Dibromofluoromethane</i>	<i>86.6 %</i>		<i>70 - 130</i>		B2K0198	11/09/2012	<i>11/09/12 16:54</i>	
<i>Surrogate: Toluene-d8</i>	<i>79.5 %</i>		<i>70 - 130</i>		B2K0198	11/09/2012	<i>11/09/12 16:54</i>	



Certificate of Analysis

Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego, CA 92122

Project Number : Raytheon, 532.30

Report To : Steve Netto

Reported : 11/16/2012

Client Sample ID MW-35B

Lab ID: 1203894-03

1,4-Dioxane by EPA 8270/SIM: Isotope Dilution Technique

Analyst: MR

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,4-Dioxane	ND	0.20	0.13	1	B2K0208	11/09/2012	11/09/12 18:28	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	<i>90.9 %</i>		<i>36 - 107</i>		B2K0208	11/09/2012	<i>11/09/12 18:28</i>	
<i>Surrogate: 2-Fluorobiphenyl</i>	<i>103 %</i>		<i>42 - 120</i>		B2K0208	11/09/2012	<i>11/09/12 18:28</i>	
<i>Surrogate: 4-Terphenyl-d14</i>	<i>103 %</i>		<i>67 - 142</i>		B2K0208	11/09/2012	<i>11/09/12 18:28</i>	
<i>Surrogate: Nitrobenzene-d5</i>	<i>115 %</i>		<i>36 - 130</i>		B2K0208	11/09/2012	<i>11/09/12 18:28</i>	



Certificate of Analysis

Hargis & Associates, Inc.

Project Number : Raytheon, 532.30

9171 Towne Centre Drive, Suite 375

Report To : Steve Netto

San Diego , CA 92122

Reported : 11/16/2012

Client Sample ID MW-35C

Lab ID: 1203894-04

Volatile Organic Compounds by EPA 8260

Analyst: SL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 17:14	
1,1,1-Trichloroethane	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 17:14	
1,1,2,2-Tetrachloroethane	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 17:14	
1,1,2-Trichloroethane	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 17:14	
1,1-Dichloroethane	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 17:14	
1,1-Dichloroethene	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 17:14	
1,1-Dichloropropene	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 17:14	
1,2,3-Trichloropropane	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 17:14	
1,2,3-Trichlorobenzene	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 17:14	
1,2,4-Trichlorobenzene	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 17:14	
1,2,4-Trimethylbenzene	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 17:14	
1,2-Dibromo-3-chloropropane	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 17:14	
1,2-Dibromoethane	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 17:14	
1,2-Dichlorobenzene	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 17:14	
1,2-Dichloroethane	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 17:14	
1,2-Dichloropropane	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 17:14	
1,3,5-Trimethylbenzene	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 17:14	
1,3-Dichlorobenzene	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 17:14	
1,3-Dichloropropane	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 17:14	
1,4-Dichlorobenzene	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 17:14	
2,2-Dichloropropane	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 17:14	
2-Chlorotoluene	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 17:14	
4-Chlorotoluene	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 17:14	
4-Isopropyltoluene	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 17:14	
Benzene	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 17:14	
Bromobenzene	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 17:14	
Bromodichloromethane	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 17:14	
Bromoform	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 17:14	
Bromomethane	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 17:14	
Carbon tetrachloride	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 17:14	
Chlorobenzene	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 17:14	
Chloroethane	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 17:14	
Chloroform	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 17:14	
Chloromethane	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 17:14	
cis-1,2-Dichloroethene	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 17:14	
cis-1,3-Dichloropropene	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 17:14	
Dibromochloromethane	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 17:14	



Certificate of Analysis

Hargis & Associates, Inc.

Project Number : Raytheon, 532.30

9171 Towne Centre Drive, Suite 375

Report To : Steve Netto

San Diego , CA 92122

Reported : 11/16/2012

Client Sample ID MW-35C

Lab ID: 1203894-04

Volatile Organic Compounds by EPA 8260

Analyst: SL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Dibromomethane	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 17:14	
Dichlorodifluoromethane	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 17:14	
Ethylbenzene	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 17:14	
Hexachlorobutadiene	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 17:14	
Isopropylbenzene	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 17:14	
m,p-Xylene	ND	1.0	NA	1	B2K0198	11/09/2012	11/09/12 17:14	
Methylene chloride	ND	1.0	NA	1	B2K0198	11/09/2012	11/09/12 17:14	
n-Butylbenzene	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 17:14	
n-Propylbenzene	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 17:14	
Naphthalene	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 17:14	
o-Xylene	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 17:14	
sec-Butylbenzene	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 17:14	
Styrene	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 17:14	
tert-Butylbenzene	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 17:14	
Tetrachloroethene	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 17:14	
Toluene	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 17:14	
trans-1,2-Dichloroethene	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 17:14	
Trichloroethene	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 17:14	
Trichlorofluoromethane	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 17:14	
Vinyl chloride	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 17:14	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>93.1 %</i>		<i>70 - 130</i>		B2K0198	11/09/2012	<i>11/09/12 17:14</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>93.5 %</i>		<i>70 - 130</i>		B2K0198	11/09/2012	<i>11/09/12 17:14</i>	
<i>Surrogate: Dibromofluoromethane</i>	<i>87.6 %</i>		<i>70 - 130</i>		B2K0198	11/09/2012	<i>11/09/12 17:14</i>	
<i>Surrogate: Toluene-d8</i>	<i>77.8 %</i>		<i>70 - 130</i>		B2K0198	11/09/2012	<i>11/09/12 17:14</i>	



Certificate of Analysis

Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego, CA 92122

Project Number : Raytheon, 532.30

Report To : Steve Netto

Reported : 11/16/2012

Client Sample ID MW-35C

Lab ID: 1203894-04

1,4-Dioxane by EPA 8270/SIM: Isotope Dilution Technique

Analyst: MR

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,4-Dioxane	ND	0.20	0.13	1	B2K0208	11/09/2012	11/09/12 18:53	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	<i>92.9 %</i>		<i>36 - 107</i>		B2K0208	11/09/2012	<i>11/09/12 18:53</i>	
<i>Surrogate: 2-Fluorobiphenyl</i>	<i>103 %</i>		<i>42 - 120</i>		B2K0208	11/09/2012	<i>11/09/12 18:53</i>	
<i>Surrogate: 4-Terphenyl-d14</i>	<i>103 %</i>		<i>67 - 142</i>		B2K0208	11/09/2012	<i>11/09/12 18:53</i>	
<i>Surrogate: Nitrobenzene-d5</i>	<i>112 %</i>		<i>36 - 130</i>		B2K0208	11/09/2012	<i>11/09/12 18:53</i>	



Certificate of Analysis

Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego, CA 92122

Project Number : Raytheon, 532.30

Report To : Steve Netto

Reported : 11/16/2012

Client Sample ID MW-33

Lab ID: 1203894-05

Volatile Organic Compounds by EPA 8260

Analyst: SL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	0.50	NA	1	B2K0230	11/09/2012	11/09/12 19:47	
1,1,1-Trichloroethane	ND	0.50	NA	1	B2K0230	11/09/2012	11/09/12 19:47	
1,1,2,2-Tetrachloroethane	ND	0.50	NA	1	B2K0230	11/09/2012	11/09/12 19:47	
1,1,2-Trichloroethane	ND	0.50	NA	1	B2K0230	11/09/2012	11/09/12 19:47	
1,1-Dichloroethane	ND	0.50	NA	1	B2K0230	11/09/2012	11/09/12 19:47	
1,1-Dichloroethene	4.6	0.50	NA	1	B2K0230	11/09/2012	11/09/12 19:47	
1,1-Dichloropropene	ND	0.50	NA	1	B2K0230	11/09/2012	11/09/12 19:47	
1,2,3-Trichloropropane	ND	0.50	NA	1	B2K0230	11/09/2012	11/09/12 19:47	
1,2,3-Trichlorobenzene	ND	0.50	NA	1	B2K0230	11/09/2012	11/09/12 19:47	
1,2,4-Trichlorobenzene	ND	0.50	NA	1	B2K0230	11/09/2012	11/09/12 19:47	
1,2,4-Trimethylbenzene	ND	0.50	NA	1	B2K0230	11/09/2012	11/09/12 19:47	
1,2-Dibromo-3-chloropropane	ND	0.50	NA	1	B2K0230	11/09/2012	11/09/12 19:47	
1,2-Dibromoethane	ND	0.50	NA	1	B2K0230	11/09/2012	11/09/12 19:47	
1,2-Dichlorobenzene	ND	0.50	NA	1	B2K0230	11/09/2012	11/09/12 19:47	
1,2-Dichloroethane	ND	0.50	NA	1	B2K0230	11/09/2012	11/09/12 19:47	
1,2-Dichloropropane	ND	0.50	NA	1	B2K0230	11/09/2012	11/09/12 19:47	
1,3,5-Trimethylbenzene	ND	0.50	NA	1	B2K0230	11/09/2012	11/09/12 19:47	
1,3-Dichlorobenzene	ND	0.50	NA	1	B2K0230	11/09/2012	11/09/12 19:47	
1,3-Dichloropropane	ND	0.50	NA	1	B2K0230	11/09/2012	11/09/12 19:47	
1,4-Dichlorobenzene	ND	0.50	NA	1	B2K0230	11/09/2012	11/09/12 19:47	
2,2-Dichloropropane	ND	0.50	NA	1	B2K0230	11/09/2012	11/09/12 19:47	
2-Chlorotoluene	ND	0.50	NA	1	B2K0230	11/09/2012	11/09/12 19:47	
4-Chlorotoluene	ND	0.50	NA	1	B2K0230	11/09/2012	11/09/12 19:47	
4-Isopropyltoluene	ND	0.50	NA	1	B2K0230	11/09/2012	11/09/12 19:47	
Benzene	ND	0.50	NA	1	B2K0230	11/09/2012	11/09/12 19:47	
Bromobenzene	ND	0.50	NA	1	B2K0230	11/09/2012	11/09/12 19:47	
Bromodichloromethane	ND	0.50	NA	1	B2K0230	11/09/2012	11/09/12 19:47	
Bromoform	ND	0.50	NA	1	B2K0230	11/09/2012	11/09/12 19:47	
Bromomethane	ND	0.50	NA	1	B2K0230	11/09/2012	11/09/12 19:47	
Carbon tetrachloride	ND	0.50	NA	1	B2K0230	11/09/2012	11/09/12 19:47	
Chlorobenzene	ND	0.50	NA	1	B2K0230	11/09/2012	11/09/12 19:47	
Chloroethane	ND	0.50	NA	1	B2K0230	11/09/2012	11/09/12 19:47	
Chloroform	ND	0.50	NA	1	B2K0230	11/09/2012	11/09/12 19:47	
Chloromethane	ND	0.50	NA	1	B2K0230	11/09/2012	11/09/12 19:47	
cis-1,2-Dichloroethene	ND	0.50	NA	1	B2K0230	11/09/2012	11/09/12 19:47	
cis-1,3-Dichloropropene	ND	0.50	NA	1	B2K0230	11/09/2012	11/09/12 19:47	
Dibromochloromethane	ND	0.50	NA	1	B2K0230	11/09/2012	11/09/12 19:47	



Certificate of Analysis

Hargis & Associates, Inc.

Project Number : Raytheon, 532.30

9171 Towne Centre Drive, Suite 375

Report To : Steve Netto

San Diego , CA 92122

Reported : 11/16/2012

Client Sample ID MW-33

Lab ID: 1203894-05

Volatile Organic Compounds by EPA 8260

Analyst: SL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Dibromomethane	ND	0.50	NA	1	B2K0230	11/09/2012	11/09/12 19:47	
Dichlorodifluoromethane	ND	0.50	NA	1	B2K0230	11/09/2012	11/09/12 19:47	
Ethylbenzene	ND	0.50	NA	1	B2K0230	11/09/2012	11/09/12 19:47	
Hexachlorobutadiene	ND	0.50	NA	1	B2K0230	11/09/2012	11/09/12 19:47	
Isopropylbenzene	ND	0.50	NA	1	B2K0230	11/09/2012	11/09/12 19:47	
m,p-Xylene	ND	1.0	NA	1	B2K0230	11/09/2012	11/09/12 19:47	
Methylene chloride	ND	1.0	NA	1	B2K0230	11/09/2012	11/09/12 19:47	
n-Butylbenzene	ND	0.50	NA	1	B2K0230	11/09/2012	11/09/12 19:47	
n-Propylbenzene	ND	0.50	NA	1	B2K0230	11/09/2012	11/09/12 19:47	
Naphthalene	ND	0.50	NA	1	B2K0230	11/09/2012	11/09/12 19:47	
o-Xylene	ND	0.50	NA	1	B2K0230	11/09/2012	11/09/12 19:47	
sec-Butylbenzene	ND	0.50	NA	1	B2K0230	11/09/2012	11/09/12 19:47	
Styrene	ND	0.50	NA	1	B2K0230	11/09/2012	11/09/12 19:47	
tert-Butylbenzene	ND	0.50	NA	1	B2K0230	11/09/2012	11/09/12 19:47	
Tetrachloroethene	ND	0.50	NA	1	B2K0230	11/09/2012	11/09/12 19:47	
Toluene	ND	0.50	NA	1	B2K0230	11/09/2012	11/09/12 19:47	
trans-1,2-Dichloroethene	ND	0.50	NA	1	B2K0230	11/09/2012	11/09/12 19:47	
Trichloroethene	0.79	0.50	NA	1	B2K0230	11/09/2012	11/09/12 19:47	
Trichlorofluoromethane	ND	0.50	NA	1	B2K0230	11/09/2012	11/09/12 19:47	
Vinyl chloride	ND	0.50	NA	1	B2K0230	11/09/2012	11/09/12 19:47	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>86.2 %</i>		<i>70 - 130</i>		B2K0230	11/09/2012	<i>11/09/12 19:47</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>77.2 %</i>		<i>70 - 130</i>		B2K0230	11/09/2012	<i>11/09/12 19:47</i>	
<i>Surrogate: Dibromofluoromethane</i>	<i>86.2 %</i>		<i>70 - 130</i>		B2K0230	11/09/2012	<i>11/09/12 19:47</i>	
<i>Surrogate: Toluene-d8</i>	<i>81.1 %</i>		<i>70 - 130</i>		B2K0230	11/09/2012	<i>11/09/12 19:47</i>	



Certificate of Analysis

Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego, CA 92122

Project Number : Raytheon, 532.30

Report To : Steve Netto

Reported : 11/16/2012

Client Sample ID MW-33

Lab ID: 1203894-05

1,4-Dioxane by EPA 8270/SIM: Isotope Dilution Technique

Analyst: MR

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,4-Dioxane	ND	0.20	0.13	1	B2K0208	11/09/2012	11/09/12 19:17	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	86.3 %		36 - 107		B2K0208	11/09/2012	11/09/12 19:17	
<i>Surrogate: 2-Fluorobiphenyl</i>	99.0 %		42 - 120		B2K0208	11/09/2012	11/09/12 19:17	
<i>Surrogate: 4-Terphenyl-d14</i>	96.0 %		67 - 142		B2K0208	11/09/2012	11/09/12 19:17	
<i>Surrogate: Nitrobenzene-d5</i>	108 %		36 - 130		B2K0208	11/09/2012	11/09/12 19:17	



Certificate of Analysis

Hargis & Associates, Inc.

Project Number : Raytheon, 532.30

9171 Towne Centre Drive, Suite 375

Report To : Steve Netto

San Diego , CA 92122

Reported : 11/16/2012

Client Sample ID MW-34A

Lab ID: 1203894-06

Volatile Organic Compounds by EPA 8260

Analyst: SL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 17:34	
1,1,1-Trichloroethane	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 17:34	
1,1,2,2-Tetrachloroethane	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 17:34	
1,1,2-Trichloroethane	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 17:34	
1,1-Dichloroethane	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 17:34	
1,1-Dichloroethene	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 17:34	
1,1-Dichloropropene	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 17:34	
1,2,3-Trichloropropane	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 17:34	
1,2,3-Trichlorobenzene	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 17:34	
1,2,4-Trichlorobenzene	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 17:34	
1,2,4-Trimethylbenzene	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 17:34	
1,2-Dibromo-3-chloropropane	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 17:34	
1,2-Dibromoethane	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 17:34	
1,2-Dichlorobenzene	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 17:34	
1,2-Dichloroethane	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 17:34	
1,2-Dichloropropane	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 17:34	
1,3,5-Trimethylbenzene	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 17:34	
1,3-Dichlorobenzene	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 17:34	
1,3-Dichloropropane	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 17:34	
1,4-Dichlorobenzene	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 17:34	
2,2-Dichloropropane	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 17:34	
2-Chlorotoluene	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 17:34	
4-Chlorotoluene	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 17:34	
4-Isopropyltoluene	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 17:34	
Benzene	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 17:34	
Bromobenzene	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 17:34	
Bromodichloromethane	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 17:34	
Bromoform	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 17:34	
Bromomethane	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 17:34	
Carbon tetrachloride	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 17:34	
Chlorobenzene	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 17:34	
Chloroethane	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 17:34	
Chloroform	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 17:34	
Chloromethane	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 17:34	
cis-1,2-Dichloroethene	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 17:34	
cis-1,3-Dichloropropene	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 17:34	
Dibromochloromethane	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 17:34	



Certificate of Analysis

Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego, CA 92122

Project Number : Raytheon, 532.30

Report To : Steve Netto

Reported : 11/16/2012

Client Sample ID MW-34A

Lab ID: 1203894-06

Volatile Organic Compounds by EPA 8260

Analyst: SL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Dibromomethane	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 17:34	
Dichlorodifluoromethane	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 17:34	
Ethylbenzene	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 17:34	
Hexachlorobutadiene	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 17:34	
Isopropylbenzene	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 17:34	
m,p-Xylene	ND	1.0	NA	1	B2K0198	11/09/2012	11/09/12 17:34	
Methylene chloride	ND	1.0	NA	1	B2K0198	11/09/2012	11/09/12 17:34	
n-Butylbenzene	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 17:34	
n-Propylbenzene	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 17:34	
Naphthalene	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 17:34	
o-Xylene	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 17:34	
sec-Butylbenzene	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 17:34	
Styrene	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 17:34	
tert-Butylbenzene	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 17:34	
Tetrachloroethene	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 17:34	
Toluene	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 17:34	
trans-1,2-Dichloroethene	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 17:34	
Trichloroethene	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 17:34	
Trichlorofluoromethane	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 17:34	
Vinyl chloride	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 17:34	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>99.8 %</i>		<i>70 - 130</i>		B2K0198	11/09/2012	<i>11/09/12 17:34</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>94.4 %</i>		<i>70 - 130</i>		B2K0198	11/09/2012	<i>11/09/12 17:34</i>	
<i>Surrogate: Dibromofluoromethane</i>	<i>89.1 %</i>		<i>70 - 130</i>		B2K0198	11/09/2012	<i>11/09/12 17:34</i>	
<i>Surrogate: Toluene-d8</i>	<i>81.1 %</i>		<i>70 - 130</i>		B2K0198	11/09/2012	<i>11/09/12 17:34</i>	



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Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego, CA 92122

Project Number : Raytheon, 532.30

Report To : Steve Netto

Reported : 11/16/2012

Client Sample ID MW-34A

Lab ID: 1203894-06

1,4-Dioxane by EPA 8270/SIM: Isotope Dilution Technique

Analyst: MR

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,4-Dioxane	ND	0.20	0.13	1	B2K0208	11/09/2012	11/09/12 19:41	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	<i>85.9 %</i>		<i>36 - 107</i>		B2K0208	11/09/2012	<i>11/09/12 19:41</i>	
<i>Surrogate: 2-Fluorobiphenyl</i>	<i>100 %</i>		<i>42 - 120</i>		B2K0208	11/09/2012	<i>11/09/12 19:41</i>	
<i>Surrogate: 4-Terphenyl-d14</i>	<i>101 %</i>		<i>67 - 142</i>		B2K0208	11/09/2012	<i>11/09/12 19:41</i>	
<i>Surrogate: Nitrobenzene-d5</i>	<i>108 %</i>		<i>36 - 130</i>		B2K0208	11/09/2012	<i>11/09/12 19:41</i>	



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Hargis & Associates, Inc.

Project Number : Raytheon, 532.30

9171 Towne Centre Drive, Suite 375

Report To : Steve Netto

San Diego , CA 92122

Reported : 11/16/2012

Client Sample ID MW-31

Lab ID: 1203894-07

Volatile Organic Compounds by EPA 8260

Analyst: SL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	0.50	NA	1	B2K0230	11/09/2012	11/09/12 20:07	
1,1,1-Trichloroethane	ND	0.50	NA	1	B2K0230	11/09/2012	11/09/12 20:07	
1,1,2,2-Tetrachloroethane	ND	0.50	NA	1	B2K0230	11/09/2012	11/09/12 20:07	
1,1,2-Trichloroethane	ND	0.50	NA	1	B2K0230	11/09/2012	11/09/12 20:07	
1,1-Dichloroethane	0.81	0.50	NA	1	B2K0230	11/09/2012	11/09/12 20:07	
1,1-Dichloroethene	170	5.0	NA	10	B2K0263	11/12/2012	11/12/12 13:31	
1,1-Dichloropropene	ND	0.50	NA	1	B2K0230	11/09/2012	11/09/12 20:07	
1,2,3-Trichloropropane	ND	0.50	NA	1	B2K0230	11/09/2012	11/09/12 20:07	
1,2,3-Trichlorobenzene	ND	0.50	NA	1	B2K0230	11/09/2012	11/09/12 20:07	
1,2,4-Trichlorobenzene	ND	0.50	NA	1	B2K0230	11/09/2012	11/09/12 20:07	
1,2,4-Trimethylbenzene	ND	0.50	NA	1	B2K0230	11/09/2012	11/09/12 20:07	
1,2-Dibromo-3-chloropropane	ND	0.50	NA	1	B2K0230	11/09/2012	11/09/12 20:07	
1,2-Dibromoethane	ND	0.50	NA	1	B2K0230	11/09/2012	11/09/12 20:07	
1,2-Dichlorobenzene	ND	0.50	NA	1	B2K0230	11/09/2012	11/09/12 20:07	
1,2-Dichloroethane	ND	0.50	NA	1	B2K0230	11/09/2012	11/09/12 20:07	
1,2-Dichloropropane	ND	0.50	NA	1	B2K0230	11/09/2012	11/09/12 20:07	
1,3,5-Trimethylbenzene	ND	0.50	NA	1	B2K0230	11/09/2012	11/09/12 20:07	
1,3-Dichlorobenzene	ND	0.50	NA	1	B2K0230	11/09/2012	11/09/12 20:07	
1,3-Dichloropropane	ND	0.50	NA	1	B2K0230	11/09/2012	11/09/12 20:07	
1,4-Dichlorobenzene	ND	0.50	NA	1	B2K0230	11/09/2012	11/09/12 20:07	
2,2-Dichloropropane	ND	0.50	NA	1	B2K0230	11/09/2012	11/09/12 20:07	
2-Chlorotoluene	ND	0.50	NA	1	B2K0230	11/09/2012	11/09/12 20:07	
4-Chlorotoluene	ND	0.50	NA	1	B2K0230	11/09/2012	11/09/12 20:07	
4-Isopropyltoluene	ND	0.50	NA	1	B2K0230	11/09/2012	11/09/12 20:07	
Benzene	ND	0.50	NA	1	B2K0230	11/09/2012	11/09/12 20:07	
Bromobenzene	ND	0.50	NA	1	B2K0230	11/09/2012	11/09/12 20:07	
Bromodichloromethane	ND	0.50	NA	1	B2K0230	11/09/2012	11/09/12 20:07	
Bromoform	ND	0.50	NA	1	B2K0230	11/09/2012	11/09/12 20:07	
Bromomethane	ND	0.50	NA	1	B2K0230	11/09/2012	11/09/12 20:07	
Carbon tetrachloride	ND	0.50	NA	1	B2K0230	11/09/2012	11/09/12 20:07	
Chlorobenzene	ND	0.50	NA	1	B2K0230	11/09/2012	11/09/12 20:07	
Chloroethane	ND	0.50	NA	1	B2K0230	11/09/2012	11/09/12 20:07	
Chloroform	ND	0.50	NA	1	B2K0230	11/09/2012	11/09/12 20:07	
Chloromethane	ND	0.50	NA	1	B2K0230	11/09/2012	11/09/12 20:07	
cis-1,2-Dichloroethene	ND	0.50	NA	1	B2K0230	11/09/2012	11/09/12 20:07	
cis-1,3-Dichloropropene	ND	0.50	NA	1	B2K0230	11/09/2012	11/09/12 20:07	
Dibromochloromethane	ND	0.50	NA	1	B2K0230	11/09/2012	11/09/12 20:07	



Certificate of Analysis

Hargis & Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego , CA 92122

Project Number : Raytheon, 532.30
 Report To : Steve Netto
 Reported : 11/16/2012

Client Sample ID MW-31

Lab ID: 1203894-07

Volatile Organic Compounds by EPA 8260

Analyst: SL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Dibromomethane	ND	0.50	NA	1	B2K0230	11/09/2012	11/09/12 20:07	
Dichlorodifluoromethane	ND	0.50	NA	1	B2K0230	11/09/2012	11/09/12 20:07	
Ethylbenzene	ND	0.50	NA	1	B2K0230	11/09/2012	11/09/12 20:07	
Hexachlorobutadiene	ND	0.50	NA	1	B2K0230	11/09/2012	11/09/12 20:07	
Isopropylbenzene	ND	0.50	NA	1	B2K0230	11/09/2012	11/09/12 20:07	
m,p-Xylene	ND	1.0	NA	1	B2K0230	11/09/2012	11/09/12 20:07	
Methylene chloride	ND	1.0	NA	1	B2K0230	11/09/2012	11/09/12 20:07	
n-Butylbenzene	ND	0.50	NA	1	B2K0230	11/09/2012	11/09/12 20:07	
n-Propylbenzene	ND	0.50	NA	1	B2K0230	11/09/2012	11/09/12 20:07	
Naphthalene	ND	0.50	NA	1	B2K0230	11/09/2012	11/09/12 20:07	
o-Xylene	ND	0.50	NA	1	B2K0230	11/09/2012	11/09/12 20:07	
sec-Butylbenzene	ND	0.50	NA	1	B2K0230	11/09/2012	11/09/12 20:07	
Styrene	ND	0.50	NA	1	B2K0230	11/09/2012	11/09/12 20:07	
tert-Butylbenzene	ND	0.50	NA	1	B2K0230	11/09/2012	11/09/12 20:07	
Tetrachloroethene	ND	0.50	NA	1	B2K0230	11/09/2012	11/09/12 20:07	
Toluene	ND	0.50	NA	1	B2K0230	11/09/2012	11/09/12 20:07	
trans-1,2-Dichloroethene	ND	0.50	NA	1	B2K0230	11/09/2012	11/09/12 20:07	
Trichloroethene	9.2	0.50	NA	1	B2K0230	11/09/2012	11/09/12 20:07	
Trichlorofluoromethane	ND	0.50	NA	1	B2K0230	11/09/2012	11/09/12 20:07	
Vinyl chloride	ND	0.50	NA	1	B2K0230	11/09/2012	11/09/12 20:07	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>87.0 %</i>		<i>70 - 130</i>		B2K0263	11/12/2012	<i>11/12/12 13:31</i>	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>87.5 %</i>		<i>70 - 130</i>		B2K0230	11/09/2012	<i>11/09/12 20:07</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>78.9 %</i>		<i>70 - 130</i>		B2K0263	11/12/2012	<i>11/12/12 13:31</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>79.8 %</i>		<i>70 - 130</i>		B2K0230	11/09/2012	<i>11/09/12 20:07</i>	
<i>Surrogate: Dibromofluoromethane</i>	<i>85.7 %</i>		<i>70 - 130</i>		B2K0230	11/09/2012	<i>11/09/12 20:07</i>	
<i>Surrogate: Dibromofluoromethane</i>	<i>87.0 %</i>		<i>70 - 130</i>		B2K0263	11/12/2012	<i>11/12/12 13:31</i>	
<i>Surrogate: Toluene-d8</i>	<i>81.3 %</i>		<i>70 - 130</i>		B2K0263	11/12/2012	<i>11/12/12 13:31</i>	
<i>Surrogate: Toluene-d8</i>	<i>78.8 %</i>		<i>70 - 130</i>		B2K0230	11/09/2012	<i>11/09/12 20:07</i>	



Certificate of Analysis

Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego, CA 92122

Project Number : Raytheon, 532.30

Report To : Steve Netto

Reported : 11/16/2012

Client Sample ID MW-31

Lab ID: 1203894-07

1,4-Dioxane by EPA 8270/SIM: Isotope Dilution Technique

Analyst: MR

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,4-Dioxane	2.3	0.20	0.13	1	B2K0208	11/09/2012	11/09/12 20:05	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	<i>84.5 %</i>		<i>36 - 107</i>		B2K0208	11/09/2012	<i>11/09/12 20:05</i>	
<i>Surrogate: 2-Fluorobiphenyl</i>	<i>95.1 %</i>		<i>42 - 120</i>		B2K0208	11/09/2012	<i>11/09/12 20:05</i>	
<i>Surrogate: 4-Terphenyl-d14</i>	<i>97.8 %</i>		<i>67 - 142</i>		B2K0208	11/09/2012	<i>11/09/12 20:05</i>	
<i>Surrogate: Nitrobenzene-d5</i>	<i>108 %</i>		<i>36 - 130</i>		B2K0208	11/09/2012	<i>11/09/12 20:05</i>	



Certificate of Analysis

Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego, CA 92122

Project Number : Raytheon, 532.30

Report To : Steve Netto

Reported : 11/16/2012

Client Sample ID MW-30A

Lab ID: 1203894-08

Volatile Organic Compounds by EPA 8260

Analyst: SL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 09:46	
1,1,1-Trichloroethane	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 09:46	
1,1,2,2-Tetrachloroethane	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 09:46	
1,1,2-Trichloroethane	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 09:46	
1,1-Dichloroethane	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 09:46	
1,1-Dichloroethene	0.84	0.50	NA	1	B2K0263	11/12/2012	11/12/12 09:46	
1,1-Dichloropropene	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 09:46	
1,2,3-Trichloropropane	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 09:46	
1,2,3-Trichlorobenzene	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 09:46	
1,2,4-Trichlorobenzene	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 09:46	
1,2,4-Trimethylbenzene	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 09:46	
1,2-Dibromo-3-chloropropane	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 09:46	
1,2-Dibromoethane	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 09:46	
1,2-Dichlorobenzene	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 09:46	
1,2-Dichloroethane	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 09:46	
1,2-Dichloropropane	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 09:46	
1,3,5-Trimethylbenzene	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 09:46	
1,3-Dichlorobenzene	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 09:46	
1,3-Dichloropropane	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 09:46	
1,4-Dichlorobenzene	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 09:46	
2,2-Dichloropropane	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 09:46	
2-Chlorotoluene	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 09:46	
4-Chlorotoluene	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 09:46	
4-Isopropyltoluene	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 09:46	
Benzene	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 09:46	
Bromobenzene	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 09:46	
Bromodichloromethane	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 09:46	
Bromoform	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 09:46	
Bromomethane	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 09:46	
Carbon tetrachloride	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 09:46	
Chlorobenzene	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 09:46	
Chloroethane	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 09:46	
Chloroform	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 09:46	
Chloromethane	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 09:46	
cis-1,2-Dichloroethene	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 09:46	
cis-1,3-Dichloropropene	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 09:46	
Dibromochloromethane	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 09:46	



Certificate of Analysis

Hargis & Associates, Inc.

Project Number : Raytheon, 532.30

9171 Towne Centre Drive, Suite 375

Report To : Steve Netto

San Diego , CA 92122

Reported : 11/16/2012

Client Sample ID MW-30A

Lab ID: 1203894-08

Volatile Organic Compounds by EPA 8260

Analyst: SL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Dibromomethane	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 09:46	
Dichlorodifluoromethane	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 09:46	
Ethylbenzene	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 09:46	
Hexachlorobutadiene	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 09:46	
Isopropylbenzene	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 09:46	
m,p-Xylene	ND	1.0	NA	1	B2K0263	11/12/2012	11/12/12 09:46	
Methylene chloride	ND	1.0	NA	1	B2K0263	11/12/2012	11/12/12 09:46	
n-Butylbenzene	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 09:46	
n-Propylbenzene	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 09:46	
Naphthalene	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 09:46	
o-Xylene	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 09:46	
sec-Butylbenzene	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 09:46	
Styrene	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 09:46	
tert-Butylbenzene	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 09:46	
Tetrachloroethene	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 09:46	
Toluene	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 09:46	
trans-1,2-Dichloroethene	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 09:46	
Trichloroethene	0.98	0.50	NA	1	B2K0263	11/12/2012	11/12/12 09:46	
Trichlorofluoromethane	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 09:46	
Vinyl chloride	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 09:46	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>83.8 %</i>		<i>70 - 130</i>		B2K0263	11/12/2012	<i>11/12/12 09:46</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>80.2 %</i>		<i>70 - 130</i>		B2K0263	11/12/2012	<i>11/12/12 09:46</i>	
<i>Surrogate: Dibromofluoromethane</i>	<i>83.8 %</i>		<i>70 - 130</i>		B2K0263	11/12/2012	<i>11/12/12 09:46</i>	
<i>Surrogate: Toluene-d8</i>	<i>80.3 %</i>		<i>70 - 130</i>		B2K0263	11/12/2012	<i>11/12/12 09:46</i>	



Certificate of Analysis

Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego, CA 92122

Project Number : Raytheon, 532.30

Report To : Steve Netto

Reported : 11/16/2012

Client Sample ID MW-30A

Lab ID: 1203894-08

1,4-Dioxane by EPA 8270/SIM: Isotope Dilution Technique

Analyst: MR

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,4-Dioxane	ND	0.20	0.13	1	B2K0208	11/09/2012	11/09/12 20:29	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	<i>60.2 %</i>		<i>36 - 107</i>		B2K0208	11/09/2012	<i>11/09/12 20:29</i>	
<i>Surrogate: 2-Fluorobiphenyl</i>	<i>71.0 %</i>		<i>42 - 120</i>		B2K0208	11/09/2012	<i>11/09/12 20:29</i>	
<i>Surrogate: 4-Terphenyl-d14</i>	<i>89.4 %</i>		<i>67 - 142</i>		B2K0208	11/09/2012	<i>11/09/12 20:29</i>	
<i>Surrogate: Nitrobenzene-d5</i>	<i>88.4 %</i>		<i>36 - 130</i>		B2K0208	11/09/2012	<i>11/09/12 20:29</i>	



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Hargis & Associates, Inc.

Project Number : Raytheon, 532.30

9171 Towne Centre Drive, Suite 375

Report To : Steve Netto

San Diego , CA 92122

Reported : 11/16/2012

Client Sample ID MW-30B

Lab ID: 1203894-09

Volatile Organic Compounds by EPA 8260

Analyst: SL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	0.50	NA	1	B2K0230	11/09/2012	11/09/12 20:47	
1,1,1-Trichloroethane	ND	0.50	NA	1	B2K0230	11/09/2012	11/09/12 20:47	
1,1,2,2-Tetrachloroethane	ND	0.50	NA	1	B2K0230	11/09/2012	11/09/12 20:47	
1,1,2-Trichloroethane	ND	0.50	NA	1	B2K0230	11/09/2012	11/09/12 20:47	
1,1-Dichloroethane	ND	0.50	NA	1	B2K0230	11/09/2012	11/09/12 20:47	
1,1-Dichloroethene	14	0.50	NA	1	B2K0230	11/09/2012	11/09/12 20:47	
1,1-Dichloropropene	ND	0.50	NA	1	B2K0230	11/09/2012	11/09/12 20:47	
1,2,3-Trichloropropane	ND	0.50	NA	1	B2K0230	11/09/2012	11/09/12 20:47	
1,2,3-Trichlorobenzene	ND	0.50	NA	1	B2K0230	11/09/2012	11/09/12 20:47	
1,2,4-Trichlorobenzene	ND	0.50	NA	1	B2K0230	11/09/2012	11/09/12 20:47	
1,2,4-Trimethylbenzene	ND	0.50	NA	1	B2K0230	11/09/2012	11/09/12 20:47	
1,2-Dibromo-3-chloropropane	ND	0.50	NA	1	B2K0230	11/09/2012	11/09/12 20:47	
1,2-Dibromoethane	ND	0.50	NA	1	B2K0230	11/09/2012	11/09/12 20:47	
1,2-Dichlorobenzene	ND	0.50	NA	1	B2K0230	11/09/2012	11/09/12 20:47	
1,2-Dichloroethane	ND	0.50	NA	1	B2K0230	11/09/2012	11/09/12 20:47	
1,2-Dichloropropane	ND	0.50	NA	1	B2K0230	11/09/2012	11/09/12 20:47	
1,3,5-Trimethylbenzene	ND	0.50	NA	1	B2K0230	11/09/2012	11/09/12 20:47	
1,3-Dichlorobenzene	ND	0.50	NA	1	B2K0230	11/09/2012	11/09/12 20:47	
1,3-Dichloropropane	ND	0.50	NA	1	B2K0230	11/09/2012	11/09/12 20:47	
1,4-Dichlorobenzene	ND	0.50	NA	1	B2K0230	11/09/2012	11/09/12 20:47	
2,2-Dichloropropane	ND	0.50	NA	1	B2K0230	11/09/2012	11/09/12 20:47	
2-Chlorotoluene	ND	0.50	NA	1	B2K0230	11/09/2012	11/09/12 20:47	
4-Chlorotoluene	ND	0.50	NA	1	B2K0230	11/09/2012	11/09/12 20:47	
4-Isopropyltoluene	ND	0.50	NA	1	B2K0230	11/09/2012	11/09/12 20:47	
Benzene	ND	0.50	NA	1	B2K0230	11/09/2012	11/09/12 20:47	
Bromobenzene	ND	0.50	NA	1	B2K0230	11/09/2012	11/09/12 20:47	
Bromodichloromethane	ND	0.50	NA	1	B2K0230	11/09/2012	11/09/12 20:47	
Bromoform	ND	0.50	NA	1	B2K0230	11/09/2012	11/09/12 20:47	
Bromomethane	ND	0.50	NA	1	B2K0230	11/09/2012	11/09/12 20:47	
Carbon tetrachloride	ND	0.50	NA	1	B2K0230	11/09/2012	11/09/12 20:47	
Chlorobenzene	ND	0.50	NA	1	B2K0230	11/09/2012	11/09/12 20:47	
Chloroethane	ND	0.50	NA	1	B2K0230	11/09/2012	11/09/12 20:47	
Chloroform	ND	0.50	NA	1	B2K0230	11/09/2012	11/09/12 20:47	
Chloromethane	ND	0.50	NA	1	B2K0230	11/09/2012	11/09/12 20:47	
cis-1,2-Dichloroethene	3.2	0.50	NA	1	B2K0230	11/09/2012	11/09/12 20:47	
cis-1,3-Dichloropropene	ND	0.50	NA	1	B2K0230	11/09/2012	11/09/12 20:47	
Dibromochloromethane	ND	0.50	NA	1	B2K0230	11/09/2012	11/09/12 20:47	



Certificate of Analysis

Hargis & Associates, Inc.

Project Number : Raytheon, 532.30

9171 Towne Centre Drive, Suite 375

Report To : Steve Netto

San Diego , CA 92122

Reported : 11/16/2012

Client Sample ID MW-30B

Lab ID: 1203894-09

Volatile Organic Compounds by EPA 8260

Analyst: SL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Dibromomethane	ND	0.50	NA	1	B2K0230	11/09/2012	11/09/12 20:47	
Dichlorodifluoromethane	ND	0.50	NA	1	B2K0230	11/09/2012	11/09/12 20:47	
Ethylbenzene	ND	0.50	NA	1	B2K0230	11/09/2012	11/09/12 20:47	
Hexachlorobutadiene	ND	0.50	NA	1	B2K0230	11/09/2012	11/09/12 20:47	
Isopropylbenzene	ND	0.50	NA	1	B2K0230	11/09/2012	11/09/12 20:47	
m,p-Xylene	ND	1.0	NA	1	B2K0230	11/09/2012	11/09/12 20:47	
Methylene chloride	ND	1.0	NA	1	B2K0230	11/09/2012	11/09/12 20:47	
n-Butylbenzene	ND	0.50	NA	1	B2K0230	11/09/2012	11/09/12 20:47	
n-Propylbenzene	ND	0.50	NA	1	B2K0230	11/09/2012	11/09/12 20:47	
Naphthalene	ND	0.50	NA	1	B2K0230	11/09/2012	11/09/12 20:47	
o-Xylene	ND	0.50	NA	1	B2K0230	11/09/2012	11/09/12 20:47	
sec-Butylbenzene	ND	0.50	NA	1	B2K0230	11/09/2012	11/09/12 20:47	
Styrene	ND	0.50	NA	1	B2K0230	11/09/2012	11/09/12 20:47	
tert-Butylbenzene	ND	0.50	NA	1	B2K0230	11/09/2012	11/09/12 20:47	
Tetrachloroethene	ND	0.50	NA	1	B2K0230	11/09/2012	11/09/12 20:47	
Toluene	1.6	0.50	NA	1	B2K0230	11/09/2012	11/09/12 20:47	
trans-1,2-Dichloroethene	ND	0.50	NA	1	B2K0230	11/09/2012	11/09/12 20:47	
Trichloroethene	68	0.50	NA	1	B2K0230	11/09/2012	11/09/12 20:47	
Trichlorofluoromethane	ND	0.50	NA	1	B2K0230	11/09/2012	11/09/12 20:47	
Vinyl chloride	ND	0.50	NA	1	B2K0230	11/09/2012	11/09/12 20:47	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>87.3 %</i>		<i>70 - 130</i>		B2K0230	11/09/2012	<i>11/09/12 20:47</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>78.8 %</i>		<i>70 - 130</i>		B2K0230	11/09/2012	<i>11/09/12 20:47</i>	
<i>Surrogate: Dibromofluoromethane</i>	<i>86.5 %</i>		<i>70 - 130</i>		B2K0230	11/09/2012	<i>11/09/12 20:47</i>	
<i>Surrogate: Toluene-d8</i>	<i>77.2 %</i>		<i>70 - 130</i>		B2K0230	11/09/2012	<i>11/09/12 20:47</i>	



Certificate of Analysis

Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego, CA 92122

Project Number : Raytheon, 532.30

Report To : Steve Netto

Reported : 11/16/2012

Client Sample ID MW-30B

Lab ID: 1203894-09

1,4-Dioxane by EPA 8270/SIM: Isotope Dilution Technique

Analyst: MR

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,4-Dioxane	ND	0.20	0.13	1	B2K0208	11/09/2012	11/09/12 20:53	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	<i>76.0 %</i>		<i>36 - 107</i>		B2K0208	11/09/2012	<i>11/09/12 20:53</i>	
<i>Surrogate: 2-Fluorobiphenyl</i>	<i>92.3 %</i>		<i>42 - 120</i>		B2K0208	11/09/2012	<i>11/09/12 20:53</i>	
<i>Surrogate: 4-Terphenyl-d14</i>	<i>92.5 %</i>		<i>67 - 142</i>		B2K0208	11/09/2012	<i>11/09/12 20:53</i>	
<i>Surrogate: Nitrobenzene-d5</i>	<i>102 %</i>		<i>36 - 130</i>		B2K0208	11/09/2012	<i>11/09/12 20:53</i>	



Certificate of Analysis

Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego, CA 92122

Project Number : Raytheon, 532.30

Report To : Steve Netto

Reported : 11/16/2012

Client Sample ID MW-34C

Lab ID: 1203894-10

Volatile Organic Compounds by EPA 8260

Analyst: SL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 17:54	
1,1,1-Trichloroethane	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 17:54	
1,1,2,2-Tetrachloroethane	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 17:54	
1,1,2-Trichloroethane	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 17:54	
1,1-Dichloroethane	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 17:54	
1,1-Dichloroethene	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 17:54	
1,1-Dichloropropene	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 17:54	
1,2,3-Trichloropropane	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 17:54	
1,2,3-Trichlorobenzene	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 17:54	
1,2,4-Trichlorobenzene	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 17:54	
1,2,4-Trimethylbenzene	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 17:54	
1,2-Dibromo-3-chloropropane	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 17:54	
1,2-Dibromoethane	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 17:54	
1,2-Dichlorobenzene	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 17:54	
1,2-Dichloroethane	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 17:54	
1,2-Dichloropropane	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 17:54	
1,3,5-Trimethylbenzene	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 17:54	
1,3-Dichlorobenzene	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 17:54	
1,3-Dichloropropane	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 17:54	
1,4-Dichlorobenzene	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 17:54	
2,2-Dichloropropane	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 17:54	
2-Chlorotoluene	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 17:54	
4-Chlorotoluene	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 17:54	
4-Isopropyltoluene	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 17:54	
Benzene	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 17:54	
Bromobenzene	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 17:54	
Bromodichloromethane	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 17:54	
Bromoform	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 17:54	
Bromomethane	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 17:54	
Carbon tetrachloride	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 17:54	
Chlorobenzene	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 17:54	
Chloroethane	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 17:54	
Chloroform	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 17:54	
Chloromethane	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 17:54	
cis-1,2-Dichloroethene	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 17:54	
cis-1,3-Dichloropropene	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 17:54	
Dibromochloromethane	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 17:54	



Certificate of Analysis

Hargis & Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego , CA 92122

Project Number : Raytheon, 532.30
 Report To : Steve Netto
 Reported : 11/16/2012

Client Sample ID MW-34C

Lab ID: 1203894-10

Volatile Organic Compounds by EPA 8260

Analyst: SL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Dibromomethane	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 17:54	
Dichlorodifluoromethane	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 17:54	
Ethylbenzene	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 17:54	
Hexachlorobutadiene	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 17:54	
Isopropylbenzene	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 17:54	
m,p-Xylene	ND	1.0	NA	1	B2K0198	11/09/2012	11/09/12 17:54	
Methylene chloride	ND	1.0	NA	1	B2K0198	11/09/2012	11/09/12 17:54	
n-Butylbenzene	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 17:54	
n-Propylbenzene	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 17:54	
Naphthalene	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 17:54	
o-Xylene	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 17:54	
sec-Butylbenzene	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 17:54	
Styrene	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 17:54	
tert-Butylbenzene	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 17:54	
Tetrachloroethene	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 17:54	
Toluene	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 17:54	
trans-1,2-Dichloroethene	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 17:54	
Trichloroethene	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 17:54	
Trichlorofluoromethane	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 17:54	
Vinyl chloride	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 17:54	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>99.7 %</i>		<i>70 - 130</i>		B2K0198	11/09/2012	<i>11/09/12 17:54</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>99.3 %</i>		<i>70 - 130</i>		B2K0198	11/09/2012	<i>11/09/12 17:54</i>	
<i>Surrogate: Dibromofluoromethane</i>	<i>91.0 %</i>		<i>70 - 130</i>		B2K0198	11/09/2012	<i>11/09/12 17:54</i>	
<i>Surrogate: Toluene-d8</i>	<i>82.2 %</i>		<i>70 - 130</i>		B2K0198	11/09/2012	<i>11/09/12 17:54</i>	



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Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego, CA 92122

Project Number : Raytheon, 532.30

Report To : Steve Netto

Reported : 11/16/2012

Client Sample ID MW-34C

Lab ID: 1203894-10

1,4-Dioxane by EPA 8270/SIM: Isotope Dilution Technique

Analyst: MR

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,4-Dioxane	ND	0.20	0.13	1	B2K0208	11/09/2012	11/09/12 21:18	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	<i>64.0 %</i>		<i>36 - 107</i>		B2K0208	11/09/2012	<i>11/09/12 21:18</i>	
<i>Surrogate: 2-Fluorobiphenyl</i>	<i>77.8 %</i>		<i>42 - 120</i>		B2K0208	11/09/2012	<i>11/09/12 21:18</i>	
<i>Surrogate: 4-Terphenyl-d14</i>	<i>89.5 %</i>		<i>67 - 142</i>		B2K0208	11/09/2012	<i>11/09/12 21:18</i>	
<i>Surrogate: Nitrobenzene-d5</i>	<i>92.1 %</i>		<i>36 - 130</i>		B2K0208	11/09/2012	<i>11/09/12 21:18</i>	



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Hargis & Associates, Inc.
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 San Diego , CA 92122

Project Number : Raytheon, 532.30
 Report To : Steve Netto
 Reported : 11/16/2012

QUALITY CONTROL SECTION

Volatile Organic Compounds by EPA 8260 - Quality Control

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec % Rec	% Rec Limits	RPD RPD	RPD Limit	Notes
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Batch B2K0150 - MSVOAW_LL

Blank (B2K0150-BLK1)

Prepared: 11/8/2012 Analyzed: 11/8/2012

1,1,1,2-Tetrachloroethane	ND	0.50			NR				
1,1,1-Trichloroethane	ND	0.50			NR				
1,1,2,2-Tetrachloroethane	ND	0.50			NR				
1,1,2-Trichloroethane	ND	0.50			NR				
1,1-Dichloroethane	ND	0.50			NR				
1,1-Dichloroethene	ND	0.50			NR				
1,1-Dichloropropene	ND	0.50			NR				
1,2,3-Trichloropropane	ND	0.50			NR				
1,2,3-Trichlorobenzene	ND	0.50			NR				
1,2,4-Trichlorobenzene	ND	0.50			NR				
1,2,4-Trimethylbenzene	ND	0.50			NR				
1,2-Dibromo-3-chloropropane	ND	0.50			NR				
1,2-Dibromoethane	ND	0.50			NR				
1,2-Dichlorobenzene	ND	0.50			NR				
1,2-Dichloroethane	ND	0.50			NR				
1,2-Dichloropropane	ND	0.50			NR				
1,3,5-Trimethylbenzene	ND	0.50			NR				
1,3-Dichlorobenzene	ND	0.50			NR				
1,3-Dichloropropane	ND	0.50			NR				
1,4-Dichlorobenzene	ND	0.50			NR				
2,2-Dichloropropane	ND	0.50			NR				
2-Chlorotoluene	ND	0.50			NR				
4-Chlorotoluene	ND	0.50			NR				
4-Isopropyltoluene	ND	0.50			NR				
Benzene	ND	0.50			NR				
Bromobenzene	ND	0.50			NR				
Bromodichloromethane	ND	0.50			NR				
Bromoform	ND	0.50			NR				
Bromomethane	ND	0.50			NR				
Carbon tetrachloride	ND	0.50			NR				
Chlorobenzene	ND	0.50			NR				
Chloroethane	ND	0.50			NR				
Chloroform	ND	0.50			NR				
Chloromethane	ND	0.50			NR				
cis-1,2-Dichloroethene	ND	0.50			NR				
cis-1,3-Dichloropropene	ND	0.50			NR				
Dibromochloromethane	ND	0.50			NR				
Dibromomethane	ND	0.50			NR				
Dichlorodifluoromethane	ND	0.50			NR				



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Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : Raytheon, 532.30

Report To : Steve Netto

Reported : 11/16/2012

Volatile Organic Compounds by EPA 8260 - Quality Control (cont'd)

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec % Rec	Limits Limits	RPD RPD	Limit Limit	Notes
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Batch B2K0150 - MSVOAW_LL (continued)

Blank (B2K0150-BLK1) - Continued

Prepared: 11/8/2012 Analyzed: 11/8/2012

Ethylbenzene	ND	0.50			NR				
Hexachlorobutadiene	ND	0.50			NR				
Isopropylbenzene	ND	0.50			NR				
m,p-Xylene	ND	1.0			NR				
Methylene chloride	ND	1.0			NR				
n-Butylbenzene	ND	0.50			NR				
n-Propylbenzene	ND	0.50			NR				
Naphthalene	ND	0.50			NR				
o-Xylene	ND	0.50			NR				
sec-Butylbenzene	ND	0.50			NR				
Styrene	ND	0.50			NR				
tert-Butylbenzene	ND	0.50			NR				
Tetrachloroethene	ND	0.50			NR				
Toluene	ND	0.50			NR				
trans-1,2-Dichloroethene	ND	0.50			NR				
Trichloroethene	ND	0.50			NR				
Trichlorofluoromethane	ND	0.50			NR				
Vinyl chloride	ND	0.50			NR				

<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>19.70</i>		<i>25.0000</i>		<i>78.8</i>	<i>70 - 130</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>19.58</i>		<i>25.0000</i>		<i>78.3</i>	<i>70 - 130</i>			
<i>Surrogate: Dibromofluoromethane</i>	<i>20.81</i>		<i>25.0000</i>		<i>83.2</i>	<i>70 - 130</i>			
<i>Surrogate: Toluene-d8</i>	<i>20.10</i>		<i>25.0000</i>		<i>80.4</i>	<i>70 - 130</i>			

LCS (B2K0150-BS1)

Prepared: 11/8/2012 Analyzed: 11/8/2012

1,1-Dichloroethene	20.5700		20.0000		103	70 - 130			
Benzene	35.6100		40.0000		89.0	70 - 130			
Chlorobenzene	18.2800		20.0000		91.4	70 - 130			
MTBE	17.5100		20.0000		87.6	70 - 130			
Toluene	36.2400		40.0000		90.6	70 - 130			
Trichloroethene	18.4800		20.0000		92.4	70 - 130			

<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>19.72</i>		<i>25.0000</i>		<i>78.9</i>	<i>70 - 130</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>20.77</i>		<i>25.0000</i>		<i>83.1</i>	<i>70 - 130</i>			
<i>Surrogate: Dibromofluoromethane</i>	<i>20.56</i>		<i>25.0000</i>		<i>82.2</i>	<i>70 - 130</i>			
<i>Surrogate: Toluene-d8</i>	<i>20.28</i>		<i>25.0000</i>		<i>81.1</i>	<i>70 - 130</i>			

LCS Dup (B2K0150-BSD1)

Prepared: 11/8/2012 Analyzed: 11/8/2012

1,1-Dichloroethene	19.4400		20.0000		97.2	70 - 130	5.65	20	
Benzene	35.1800		40.0000		88.0	70 - 130	1.21	20	
Chlorobenzene	17.8400		20.0000		89.2	70 - 130	2.44	20	
MTBE	17.1800		20.0000		85.9	70 - 130	1.90	20	
Toluene	35.5900		40.0000		89.0	70 - 130	1.81	20	



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Hargis & Associates, Inc.

Project Number : Raytheon, 532.30

9171 Towne Centre Drive, Suite 375

Report To : Steve Netto

San Diego , CA 92122

Reported : 11/16/2012

Volatile Organic Compounds by EPA 8260 - Quality Control (cont'd)

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec % Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B2K0150 - MSVOAW_LL (continued)

LCS Dup (B2K0150-BSD1) - Continued

Prepared: 11/8/2012 Analyzed: 11/8/2012

Trichloroethene	18.0800		20.0000		90.4	70 - 130	2.19	20	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>19.16</i>		<i>25.0000</i>		<i>76.6</i>	<i>70 - 130</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>20.72</i>		<i>25.0000</i>		<i>82.9</i>	<i>70 - 130</i>			
<i>Surrogate: Dibromofluoromethane</i>	<i>19.86</i>		<i>25.0000</i>		<i>79.4</i>	<i>70 - 130</i>			
<i>Surrogate: Toluene-d8</i>	<i>20.20</i>		<i>25.0000</i>		<i>80.8</i>	<i>70 - 130</i>			

Matrix Spike (B2K0150-MS1)

Source: 1203894-02

Prepared: 11/8/2012 Analyzed: 11/8/2012

1,1-Dichloroethene	22.8400		20.0000	ND	114	70 - 130			
Benzene	37.2700		40.0000	ND	93.2	70 - 130			
Chlorobenzene	18.7800		20.0000	ND	93.9	70 - 130			
MTBE	16.2800		20.0000	ND	81.4	70 - 130			
Toluene	38.1400		40.0000	ND	95.4	70 - 130			
Trichloroethene	19.4800		20.0000	ND	97.4	70 - 130			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>20.53</i>		<i>25.0000</i>		<i>82.1</i>	<i>70 - 130</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>21.56</i>		<i>25.0000</i>		<i>86.2</i>	<i>70 - 130</i>			
<i>Surrogate: Dibromofluoromethane</i>	<i>20.62</i>		<i>25.0000</i>		<i>82.5</i>	<i>70 - 130</i>			
<i>Surrogate: Toluene-d8</i>	<i>20.41</i>		<i>25.0000</i>		<i>81.6</i>	<i>70 - 130</i>			

Matrix Spike Dup (B2K0150-MSD1)

Source: 1203894-02

Prepared: 11/8/2012 Analyzed: 11/8/2012

1,1-Dichloroethene	21.4200		20.0000	ND	107	70 - 130	6.42	20	
Benzene	36.7600		40.0000	ND	91.9	70 - 130	1.38	20	
Chlorobenzene	18.6100		20.0000	ND	93.0	70 - 130	0.909	20	
MTBE	17.8600		20.0000	ND	89.3	70 - 130	9.26	20	
Toluene	37.3400		40.0000	ND	93.4	70 - 130	2.12	20	
Trichloroethene	19.2600		20.0000	ND	96.3	70 - 130	1.14	20	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>20.05</i>		<i>25.0000</i>		<i>80.2</i>	<i>70 - 130</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>21.32</i>		<i>25.0000</i>		<i>85.3</i>	<i>70 - 130</i>			
<i>Surrogate: Dibromofluoromethane</i>	<i>20.25</i>		<i>25.0000</i>		<i>81.0</i>	<i>70 - 130</i>			
<i>Surrogate: Toluene-d8</i>	<i>20.32</i>		<i>25.0000</i>		<i>81.3</i>	<i>70 - 130</i>			

Batch B2K0198 - MSVOAW_LL

Blank (B2K0198-BLK1)

Prepared: 11/9/2012 Analyzed: 11/9/2012

1,1,1,2-Tetrachloroethane	ND	0.50		NR					
1,1,1-Trichloroethane	ND	0.50		NR					
1,1,2,2-Tetrachloroethane	ND	0.50		NR					
1,1,2-Trichloroethane	ND	0.50		NR					
1,1-Dichloroethane	ND	0.50		NR					
1,1-Dichloroethene	ND	0.50		NR					
1,1-Dichloropropene	ND	0.50		NR					
1,2,3-Trichloropropane	ND	0.50		NR					



Certificate of Analysis

Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : Raytheon, 532.30

Report To : Steve Netto

Reported : 11/16/2012

Volatile Organic Compounds by EPA 8260 - Quality Control (cont'd)

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec % Rec	Limits	RPD RPD	RPD Limit	Notes
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Batch B2K0198 - MSVOAW_LL (continued)

Blank (B2K0198-BLK1) - Continued

Prepared: 11/9/2012 Analyzed: 11/9/2012

1,2,3-Trichlorobenzene	ND	0.50			NR				
1,2,4-Trichlorobenzene	ND	0.50			NR				
1,2,4-Trimethylbenzene	ND	0.50			NR				
1,2-Dibromo-3-chloropropane	ND	0.50			NR				
1,2-Dibromoethane	ND	0.50			NR				
1,2-Dichlorobenzene	ND	0.50			NR				
1,2-Dichloroethane	ND	0.50			NR				
1,2-Dichloropropane	ND	0.50			NR				
1,3,5-Trimethylbenzene	ND	0.50			NR				
1,3-Dichlorobenzene	ND	0.50			NR				
1,3-Dichloropropane	ND	0.50			NR				
1,4-Dichlorobenzene	ND	0.50			NR				
2,2-Dichloropropane	ND	0.50			NR				
2-Chlorotoluene	ND	0.50			NR				
4-Chlorotoluene	ND	0.50			NR				
4-Isopropyltoluene	ND	0.50			NR				
Benzene	ND	0.50			NR				
Bromobenzene	ND	0.50			NR				
Bromodichloromethane	ND	0.50			NR				
Bromoform	ND	0.50			NR				
Bromomethane	ND	0.50			NR				
Carbon tetrachloride	ND	0.50			NR				
Chlorobenzene	ND	0.50			NR				
Chloroethane	ND	0.50			NR				
Chloroform	ND	0.50			NR				
Chloromethane	ND	0.50			NR				
cis-1,2-Dichloroethene	ND	0.50			NR				
cis-1,3-Dichloropropene	ND	0.50			NR				
Dibromochloromethane	ND	0.50			NR				
Dibromomethane	ND	0.50			NR				
Dichlorodifluoromethane	ND	0.50			NR				
Ethylbenzene	ND	0.50			NR				
Hexachlorobutadiene	ND	0.50			NR				
Isopropylbenzene	ND	0.50			NR				
m,p-Xylene	ND	1.0			NR				
Methylene chloride	ND	1.0			NR				
n-Butylbenzene	ND	0.50			NR				
n-Propylbenzene	ND	0.50			NR				
Naphthalene	ND	0.50			NR				
o-Xylene	ND	0.50			NR				
sec-Butylbenzene	ND	0.50			NR				
Styrene	ND	0.50			NR				



Certificate of Analysis

Hargis & Associates, Inc.

Project Number : Raytheon, 532.30

9171 Towne Centre Drive, Suite 375

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Volatile Organic Compounds by EPA 8260 - Quality Control (cont'd)

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec % Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B2K0198 - MSVOAW_LL (continued)

Blank (B2K0198-BLK1) - Continued

Prepared: 11/9/2012 Analyzed: 11/9/2012

tert-Butylbenzene	ND	0.50			NR				
Tetrachloroethene	ND	0.50			NR				
Toluene	ND	0.50			NR				
trans-1,2-Dichloroethene	ND	0.50			NR				
Trichloroethene	ND	0.50			NR				
Trichlorofluoromethane	ND	0.50			NR				
Vinyl chloride	ND	0.50			NR				
<hr/>									
<i>Surrogate: 1,2-Dichloroethane-d4</i>	24.95		25.0000		99.8	70 - 130			
<i>Surrogate: 4-Bromofluorobenzene</i>	24.26		25.0000		97.0	70 - 130			
<i>Surrogate: Dibromofluoromethane</i>	23.58		25.0000		94.3	70 - 130			
<i>Surrogate: Toluene-d8</i>	22.24		25.0000		89.0	70 - 130			

LCS (B2K0198-BS1)

Prepared: 11/9/2012 Analyzed: 11/9/2012

1,1-Dichloroethene	18.5000		20.0000		92.5	70 - 130			
Benzene	40.5000		40.0000		101	70 - 130			
Chlorobenzene	20.6100		20.0000		103	70 - 130			
MTBE	19.6700		20.0000		98.4	70 - 130			
Toluene	40.7200		40.0000		102	70 - 130			
Trichloroethene	20.0500		20.0000		100	70 - 130			
<hr/>									
<i>Surrogate: 1,2-Dichloroethane-d4</i>	23.40		25.0000		93.6	70 - 130			
<i>Surrogate: 4-Bromofluorobenzene</i>	23.85		25.0000		95.4	70 - 130			
<i>Surrogate: Dibromofluoromethane</i>	22.57		25.0000		90.3	70 - 130			
<i>Surrogate: Toluene-d8</i>	22.60		25.0000		90.4	70 - 130			

LCS Dup (B2K0198-BSD1)

Prepared: 11/9/2012 Analyzed: 11/9/2012

1,1-Dichloroethene	18.5300		20.0000	92.6	70 - 130	0.162	20		
Benzene	40.0800		40.0000	100	70 - 130	1.04	20		
Chlorobenzene	20.2000		20.0000	101	70 - 130	2.01	20		
MTBE	21.1300		20.0000	106	70 - 130	7.16	20		
Toluene	41.0100		40.0000	103	70 - 130	0.710	20		
Trichloroethene	19.8500		20.0000	99.2	70 - 130	1.00	20		
<hr/>									
<i>Surrogate: 1,2-Dichloroethane-d4</i>	23.87		25.0000	95.5	70 - 130				
<i>Surrogate: 4-Bromofluorobenzene</i>	22.36		25.0000	89.4	70 - 130				
<i>Surrogate: Dibromofluoromethane</i>	22.11		25.0000	88.4	70 - 130				
<i>Surrogate: Toluene-d8</i>	22.31		25.0000	89.2	70 - 130				

Matrix Spike (B2K0198-MS1)

Source: 1203913-10

Prepared: 11/9/2012 Analyzed: 11/9/2012

1,1-Dichloroethene	537.380		20.0000	498.140	196	70 - 130			M3
Benzene	42.0800		40.0000	ND	105	70 - 130			
Chlorobenzene	22.9200		20.0000	ND	115	70 - 130			
MTBE	19.7300		20.0000	ND	98.6	70 - 130			



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San Diego , CA 92122

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Volatile Organic Compounds by EPA 8260 - Quality Control (cont'd)

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B2K0198 - MSVOAW_LL (continued)

Matrix Spike (B2K0198-MS1) - Continued

Source: 1203913-10

Prepared: 11/9/2012 Analyzed: 11/9/2012

Toluene	43.7700		40.0000	ND	109	70 - 130			
Trichloroethene	22.2800		20.0000	1.40000	104	70 - 130			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>22.90</i>		<i>25.0000</i>		<i>91.6</i>	<i>70 - 130</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>23.19</i>		<i>25.0000</i>		<i>92.8</i>	<i>70 - 130</i>			
<i>Surrogate: Dibromofluoromethane</i>	<i>21.56</i>		<i>25.0000</i>		<i>86.2</i>	<i>70 - 130</i>			
<i>Surrogate: Toluene-d8</i>	<i>21.57</i>		<i>25.0000</i>		<i>86.3</i>	<i>70 - 130</i>			

Matrix Spike Dup (B2K0198-MSD1)

Source: 1203913-10

Prepared: 11/9/2012 Analyzed: 11/9/2012

1,1-Dichloroethene	478.880		20.0000	498.140	-96.3	70 - 130	11.5	20	M3
Benzene	39.7000		40.0000	ND	99.2	70 - 130	5.82	20	
Chlorobenzene	22.3400		20.0000	ND	112	70 - 130	2.56	20	
MTBE	19.1200		20.0000	ND	95.6	70 - 130	3.14	20	
Toluene	40.9800		40.0000	ND	102	70 - 130	6.58	20	
Trichloroethene	21.6000		20.0000	1.40000	101	70 - 130	3.10	20	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>21.60</i>		<i>25.0000</i>		<i>86.4</i>	<i>70 - 130</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>22.22</i>		<i>25.0000</i>		<i>88.9</i>	<i>70 - 130</i>			
<i>Surrogate: Dibromofluoromethane</i>	<i>20.23</i>		<i>25.0000</i>		<i>80.9</i>	<i>70 - 130</i>			
<i>Surrogate: Toluene-d8</i>	<i>20.57</i>		<i>25.0000</i>		<i>82.3</i>	<i>70 - 130</i>			

Batch B2K0230 - MSVOAW_LL

Blank (B2K0230-BLK1)

Prepared: 11/9/2012 Analyzed: 11/9/2012

1,1,1,2-Tetrachloroethane	ND	0.50			NR			
1,1,1-Trichloroethane	ND	0.50			NR			
1,1,2,2-Tetrachloroethane	ND	0.50			NR			
1,1,2-Trichloroethane	ND	0.50			NR			
1,1-Dichloroethane	ND	0.50			NR			
1,1-Dichloroethene	ND	0.50			NR			
1,1-Dichloropropene	ND	0.50			NR			
1,2,3-Trichloropropane	ND	0.50			NR			
1,2,3-Trichlorobenzene	ND	0.50			NR			
1,2,4-Trichlorobenzene	ND	0.50			NR			
1,2,4-Trimethylbenzene	ND	0.50			NR			
1,2-Dibromo-3-chloropropane	ND	0.50			NR			
1,2-Dibromoethane	ND	0.50			NR			
1,2-Dichlorobenzene	ND	0.50			NR			
1,2-Dichloroethane	ND	0.50			NR			
1,2-Dichloropropane	ND	0.50			NR			
1,3,5-Trimethylbenzene	ND	0.50			NR			
1,3-Dichlorobenzene	ND	0.50			NR			
1,3-Dichloropropane	ND	0.50			NR			



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Volatile Organic Compounds by EPA 8260 - Quality Control (cont'd)

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B2K0230 - MSVOAW_LL (continued)

Blank (B2K0230-BLK1) - Continued

Prepared: 11/9/2012 Analyzed: 11/9/2012

1,4-Dichlorobenzene	ND	0.50				NR			
2,2-Dichloropropane	ND	0.50				NR			
2-Chlorotoluene	ND	0.50				NR			
4-Chlorotoluene	ND	0.50				NR			
4-Isopropyltoluene	ND	0.50				NR			
Benzene	ND	0.50				NR			
Bromobenzene	ND	0.50				NR			
Bromodichloromethane	ND	0.50				NR			
Bromoform	ND	0.50				NR			
Bromomethane	ND	0.50				NR			
Carbon tetrachloride	ND	0.50				NR			
Chlorobenzene	ND	0.50				NR			
Chloroethane	ND	0.50				NR			
Chloroform	ND	0.50				NR			
Chloromethane	ND	0.50				NR			
cis-1,2-Dichloroethene	ND	0.50				NR			
cis-1,3-Dichloropropene	ND	0.50				NR			
Dibromochloromethane	ND	0.50				NR			
Dibromomethane	ND	0.50				NR			
Dichlorodifluoromethane	ND	0.50				NR			
Ethylbenzene	ND	0.50				NR			
Hexachlorobutadiene	ND	0.50				NR			
Isopropylbenzene	ND	0.50				NR			
m,p-Xylene	ND	1.0				NR			
Methylene chloride	ND	1.0				NR			
n-Butylbenzene	ND	0.50				NR			
n-Propylbenzene	ND	0.50				NR			
Naphthalene	ND	0.50				NR			
o-Xylene	ND	0.50				NR			
sec-Butylbenzene	ND	0.50				NR			
Styrene	ND	0.50				NR			
tert-Butylbenzene	ND	0.50				NR			
Tetrachloroethene	ND	0.50				NR			
Toluene	ND	0.50				NR			
trans-1,2-Dichloroethene	ND	0.50				NR			
Trichloroethene	ND	0.50				NR			
Trichlorofluoromethane	ND	0.50				NR			
Vinyl chloride	ND	0.50				NR			
<hr/>									
Surrogate: 1,2-Dichloroethane-d4	19.86		25.0000		79.4	70 - 130			
Surrogate: 4-Bromofluorobenzene	19.84		25.0000		79.4	70 - 130			
Surrogate: Dibromofluoromethane	20.83		25.0000		83.3	70 - 130			



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Volatile Organic Compounds by EPA 8260 - Quality Control (cont'd)

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec % Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B2K0230 - MSVOAW_LL (continued)

Blank (B2K0230-BLK1) - Continued

Prepared: 11/9/2012 Analyzed: 11/9/2012

Surrogate: Toluene-d8 19.91 25.0000 79.6 70 - 130

LCS (B2K0230-BS1)

Prepared: 11/9/2012 Analyzed: 11/9/2012

1,1-Dichloroethene	21.6600	20.0000	108	70 - 130
Benzene	38.9900	40.0000	97.5	70 - 130
Chlorobenzene	20.1900	20.0000	101	70 - 130
MTBE	19.5600	20.0000	97.8	70 - 130
Toluene	39.7300	40.0000	99.3	70 - 130
Trichloroethene	20.1200	20.0000	101	70 - 130

<i>Surrogate: 1,2-Dichloroethane-d4</i>	19.82	25.0000	79.3	70 - 130
<i>Surrogate: 4-Bromofluorobenzene</i>	20.93	25.0000	83.7	70 - 130
<i>Surrogate: Dibromofluoromethane</i>	20.16	25.0000	80.6	70 - 130
<i>Surrogate: Toluene-d8</i>	20.30	25.0000	81.2	70 - 130

LCS Dup (B2K0230-BSD1)

Prepared: 11/9/2012 Analyzed: 11/9/2012

1,1-Dichloroethene	20.8400	20.0000	104	70 - 130	3.86	20
Benzene	37.8100	40.0000	94.5	70 - 130	3.07	20
Chlorobenzene	19.1700	20.0000	95.8	70 - 130	5.18	20
MTBE	19.0200	20.0000	95.1	70 - 130	2.80	20
Toluene	38.3000	40.0000	95.8	70 - 130	3.67	20
Trichloroethene	19.4300	20.0000	97.2	70 - 130	3.49	20

<i>Surrogate: 1,2-Dichloroethane-d4</i>	19.52	25.0000	78.1	70 - 130
<i>Surrogate: 4-Bromofluorobenzene</i>	20.52	25.0000	82.1	70 - 130
<i>Surrogate: Dibromofluoromethane</i>	19.89	25.0000	79.6	70 - 130
<i>Surrogate: Toluene-d8</i>	20.58	25.0000	82.3	70 - 130

Batch B2K0263 - MSVOAW_LL

Blank (B2K0263-BLK1)

Prepared: 11/12/2012 Analyzed: 11/12/2012

1,1,1,2-Tetrachloroethane	ND	0.50	NR
1,1,1-Trichloroethane	ND	0.50	NR
1,1,2,2-Tetrachloroethane	ND	0.50	NR
1,1,2-Trichloroethane	ND	0.50	NR
1,1-Dichloroethane	ND	0.50	NR
1,1-Dichloroethene	ND	0.50	NR
1,1-Dichloropropene	ND	0.50	NR
1,2,3-Trichloropropane	ND	0.50	NR
1,2,3-Trichlorobenzene	ND	0.50	NR
1,2,4-Trichlorobenzene	ND	0.50	NR
1,2,4-Trimethylbenzene	ND	0.50	NR
1,2-Dibromo-3-chloropropane	ND	0.50	NR



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Volatile Organic Compounds by EPA 8260 - Quality Control (cont'd)

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B2K0263 - MSVOAW_LL (continued)

Blank (B2K0263-BLK1) - Continued

Prepared: 11/12/2012 Analyzed: 11/12/2012

1,2-Dibromoethane	ND	0.50				NR			
1,2-Dichlorobenzene	ND	0.50				NR			
1,2-Dichloroethane	ND	0.50				NR			
1,2-Dichloropropane	ND	0.50				NR			
1,3,5-Trimethylbenzene	ND	0.50				NR			
1,3-Dichlorobenzene	ND	0.50				NR			
1,3-Dichloropropane	ND	0.50				NR			
1,4-Dichlorobenzene	ND	0.50				NR			
2,2-Dichloropropane	ND	0.50				NR			
2-Chlorotoluene	ND	0.50				NR			
4-Chlorotoluene	ND	0.50				NR			
4-Isopropyltoluene	ND	0.50				NR			
Benzene	ND	0.50				NR			
Bromobenzene	ND	0.50				NR			
Bromodichloromethane	ND	0.50				NR			
Bromoform	ND	0.50				NR			
Bromomethane	ND	0.50				NR			
Carbon tetrachloride	ND	0.50				NR			
Chlorobenzene	ND	0.50				NR			
Chloroethane	ND	0.50				NR			
Chloroform	ND	0.50				NR			
Chloromethane	ND	0.50				NR			
cis-1,2-Dichloroethene	ND	0.50				NR			
cis-1,3-Dichloropropene	ND	0.50				NR			
Dibromochloromethane	ND	0.50				NR			
Dibromomethane	ND	0.50				NR			
Dichlorodifluoromethane	ND	0.50				NR			
Ethylbenzene	ND	0.50				NR			
Hexachlorobutadiene	ND	0.50				NR			
Isopropylbenzene	ND	0.50				NR			
m,p-Xylene	ND	1.0				NR			
Methylene chloride	ND	1.0				NR			
n-Butylbenzene	ND	0.50				NR			
n-Propylbenzene	ND	0.50				NR			
Naphthalene	ND	0.50				NR			
o-Xylene	ND	0.50				NR			
sec-Butylbenzene	ND	0.50				NR			
Styrene	ND	0.50				NR			
tert-Butylbenzene	ND	0.50				NR			
Tetrachloroethene	ND	0.50				NR			
Toluene	ND	0.50				NR			
trans-1,2-Dichloroethene	ND	0.50				NR			



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Volatile Organic Compounds by EPA 8260 - Quality Control (cont'd)

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B2K0263 - MSVOAW_LL (continued)

Blank (B2K0263-BLK1) - Continued

Prepared: 11/12/2012 Analyzed: 11/12/2012

Trichloroethene	ND	0.50			NR				
Trichlorofluoromethane	ND	0.50			NR				
Vinyl chloride	ND	0.50			NR				
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>20.37</i>		<i>25.0000</i>		<i>81.5</i>	<i>70 - 130</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>19.75</i>		<i>25.0000</i>		<i>79.0</i>	<i>70 - 130</i>			
<i>Surrogate: Dibromofluoromethane</i>	<i>21.20</i>		<i>25.0000</i>		<i>84.8</i>	<i>70 - 130</i>			
<i>Surrogate: Toluene-d8</i>	<i>20.13</i>		<i>25.0000</i>		<i>80.5</i>	<i>70 - 130</i>			

LCS (B2K0263-BS1)

Prepared: 11/12/2012 Analyzed: 11/12/2012

1,1-Dichloroethene	21.0300		20.0000		105	70 - 130			
Benzene	37.1100		40.0000		92.8	70 - 130			
Chlorobenzene	19.2500		20.0000		96.2	70 - 130			
MTBE	18.5000		20.0000		92.5	70 - 130			
Toluene	37.6300		40.0000		94.1	70 - 130			
Trichloroethene	19.2300		20.0000		96.2	70 - 130			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>19.45</i>		<i>25.0000</i>		<i>77.8</i>	<i>70 - 130</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>21.14</i>		<i>25.0000</i>		<i>84.6</i>	<i>70 - 130</i>			
<i>Surrogate: Dibromofluoromethane</i>	<i>19.89</i>		<i>25.0000</i>		<i>79.6</i>	<i>70 - 130</i>			
<i>Surrogate: Toluene-d8</i>	<i>20.21</i>		<i>25.0000</i>		<i>80.8</i>	<i>70 - 130</i>			

LCS Dup (B2K0263-BSD1)

Prepared: 11/12/2012 Analyzed: 11/12/2012

1,1-Dichloroethene	20.1500		20.0000		101	70 - 130	4.27	20	
Benzene	36.3200		40.0000		90.8	70 - 130	2.15	20	
Chlorobenzene	18.4700		20.0000		92.4	70 - 130	4.14	20	
MTBE	18.9000		20.0000		94.5	70 - 130	2.14	20	
Toluene	36.9100		40.0000		92.3	70 - 130	1.93	20	
Trichloroethene	18.5600		20.0000		92.8	70 - 130	3.55	20	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>19.62</i>		<i>25.0000</i>		<i>78.5</i>	<i>70 - 130</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>20.96</i>		<i>25.0000</i>		<i>83.8</i>	<i>70 - 130</i>			
<i>Surrogate: Dibromofluoromethane</i>	<i>20.20</i>		<i>25.0000</i>		<i>80.8</i>	<i>70 - 130</i>			
<i>Surrogate: Toluene-d8</i>	<i>20.32</i>		<i>25.0000</i>		<i>81.3</i>	<i>70 - 130</i>			



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Project Number : Raytheon, 532.30
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1,4-Dioxane by EPA 8270/SIM: Isotope Dilution Technique - Quality Control

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec % Rec	% Rec Limits	RPD RPD	RPD Limit	Notes
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Batch B2K0208 - MSSEMI_ISOTOPEDILN

Blank (B2K0208-BLK1)

Prepared: 11/9/2012 Analyzed: 11/9/2012

1,4-Dioxane	ND	0.20			NR				
Surrogate: 1,2-Dichlorobenzene-d4	0.8566		1.00000		85.7	36 - 107			
Surrogate: 2-Fluorobiphenyl	0.9764		1.00000		97.6	42 - 120			
Surrogate: 4-Terphenyl-d14	0.9616		1.00000		96.2	67 - 142			
Surrogate: Nitrobenzene-d5	1.110		1.00000		111	36 - 130			

LCS (B2K0208-BS1)

Prepared: 11/9/2012 Analyzed: 11/9/2012

1,4-Dioxane	1.25676	0.20	1.00000		126	70 - 130			
Surrogate: 1,2-Dichlorobenzene-d4	0.8548		1.00000		85.5	36 - 107			
Surrogate: 2-Fluorobiphenyl	0.9432		1.00000		94.3	42 - 120			
Surrogate: 4-Terphenyl-d14	0.9566		1.00000		95.7	67 - 142			
Surrogate: Nitrobenzene-d5	1.134		1.00000		113	36 - 130			

LCS Dup (B2K0208-BSD1)

Prepared: 11/9/2012 Analyzed: 11/9/2012

1,4-Dioxane	1.29409	0.20	1.00000		129	70 - 130	2.93	20	
Surrogate: 1,2-Dichlorobenzene-d4	0.8684		1.00000		86.8	36 - 107			
Surrogate: 2-Fluorobiphenyl	0.9847		1.00000		98.5	42 - 120			
Surrogate: 4-Terphenyl-d14	0.9992		1.00000		99.9	67 - 142			
Surrogate: Nitrobenzene-d5	1.140		1.00000		114	36 - 130			

Matrix Spike (B2K0208-MS1)

Source: 1203894-02

Prepared: 11/9/2012 Analyzed: 11/9/2012

1,4-Dioxane	ND	0.20	1.00000	ND	NR	70 - 130			M1
Surrogate: 1,2-Dichlorobenzene-d4	0.9287		1.00000		92.9	36 - 107			
Surrogate: 2-Fluorobiphenyl	1.070		1.00000		107	42 - 120			
Surrogate: 4-Terphenyl-d14	1.057		1.00000		106	67 - 142			
Surrogate: Nitrobenzene-d5	1.139		1.00000		114	36 - 130			

Matrix Spike Dup (B2K0208-MSD1)

Source: 1203894-02

Prepared: 11/9/2012 Analyzed: 11/9/2012

1,4-Dioxane	ND	0.20	1.00000	ND	NR	70 - 130		20	M1
Surrogate: 1,2-Dichlorobenzene-d4	0.8845		1.00000		88.5	36 - 107			
Surrogate: 2-Fluorobiphenyl	1.009		1.00000		101	42 - 120			
Surrogate: 4-Terphenyl-d14	1.051		1.00000		105	67 - 142			
Surrogate: Nitrobenzene-d5	1.115		1.00000		111	36 - 130			



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Reported : 11/16/2012


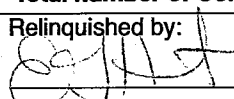
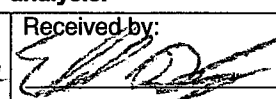
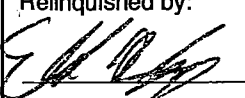
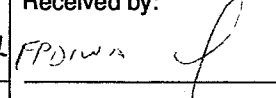
Notes and Definitions

- M3 Matrix spike recovery outside of acceptance limit due to disproportionate concentration of the analyte to spike level. The analytical batch was validated by the laboratory control sample.
- M1 Matrix spike recovery outside of acceptance limit. The analytical batch was validated by the laboratory control sample.
- ND Analyte not detected at or above reporting limit
- PQL Practical Quantitation Limit
- MDL Method Detection Limit
- NR Not Reported
- RPD Relative Percent Difference
- CA1 CA-NELAP (CDPH)
- CA2 CA-ELAP (CDPH)
- OR1 OR-NELAP (OSPHL)
- TX1 TX-NELAP (TCEQ)

Notes:

(1) The reported MDL and PQL are based on prep ratio variation and analytical dilution.

CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST FORM

PROJECT NAME Raytheon		PROJECT No./TASK No. 532.30				SAMPLE CONTAINERS		ANALYSIS REQUESTED		ESTIMATED CONCENTRATION RANGE (ppb) FOR VOAs		SPECIAL HANDLING		LABORATORY INFORMATION		
PROJECT MANAGER Steve Netto		Phone No. 858-455-6500				40 ml VOA 1L Amber VOCs 8260B 1,4-Dioxane 8276 M00 1,4-Dioxane 8270 SIM		0-10 10-100 100-1,000 1,000-10,000 >10,000		Standard TAT MS collected MSD collected		ATL Attn: Rachelle Arada				
QA MANAGER		Fax No. 858-455-6533														
SAMPLER (SIGNATURE) 		SAMPLER (PRINTED) Avielle Ferber Eric Hunter														
LAB ID	SAMPLE ID	SAMPLE COLLECTION		MATRIX			PRESERVATION					REMARKS				
		Date	Time	Soil	Ground water	Surface water	Lab H2O	HCl	HNO3	NaOH	H2SO4			Ice		
1203894-1	TB-110612	11/6/12	0830			X	X				X	2				
-	MW-35A		1025	X			X				X	3				10 VOAs collected 2 1L Ambers collected
-3	MW-35B		1135	X			X				X	3				
-4	MW-35C		1318	X			X				X	3				
-5	MW-33		1030	X			X				X	3				
-6	MW-34A		1600	X			X				X	3				
				X			X				X	1				
Total number of Containers per analysis:						7	5							Total No. of Containers:	27	
Relinquished by:  HHA, Inc Company		Date 11/6/12	Received by:  Advanced Tech Labs Company		Date 11/6/12	INSTRUCTIONS 1. Fill out form completely except for shaded areas (lab use only); sign only after verified for completeness. 2. Complete in ballpoint pen. Draw one line through errors, initial and date correction. 3. Indicate number of sample containers in analysis request space; indicate choice with ✓ or x. 4. Note applicable preservatives, special instructions, and deviations from typical environmental samples. 5. Consult project QA documents for specific instructions.						Shipment Method: Courier				
Relinquished by:  Advanced Tech Labs Company		Date 11/6/12	Received by:  ATL Company		Date 11/6/12							Send Results to: Steve Netto				
		Time 1805	Time 1725		Time 1804	Sample Receipt: <input type="checkbox"/> No. of containers correct <input type="checkbox"/> custody seals secure		Temp. @ receipt <u>7.9</u> °C <input checked="" type="checkbox"/> received good condition/cold <input type="checkbox"/> conforms to COC document		<input checked="" type="checkbox"/> 9171 TOWNE CENTRE DRIVE, SUITE 375 SAN DIEGO, CA 92122 (858) 455-6500 <input type="checkbox"/> 1640 SOUTH STAPLEY DRIVE, SUITE 124 MESA, AZ 85204 (480) 345-0888 <input type="checkbox"/> 1820 EAST RIVER ROAD, SUITE 220 TUCSON, AZ 85718 (520) 881-7300						
		Time 1804	Time 1804				Send invoice to San Diego, CA Attn: Accounts Payable									

PROJECT NAME Raytheon	PROJECT No./TASK No. 532.30	SAMPLE CONTAINERS	ANALYSIS REQUESTED	ESTIMATED CONCENTRATION RANGE (ppb) FOR VOAS	SPECIAL HANDLING	LABORATORY INFORMATION
PROJECT MANAGER Steve Netto	Phone No. 858-455-6500					ATL
QA MANAGER ERIN HUNTER	Fax No. 858-455-6533					Attn: Rachele Arada
SAMPLER (SIGNATURE) 	SAMPLER (PRINTED) DANIEL MORA					

LAB ID	SAMPLE ID	SAMPLE COLLECTION		MATRIX			PRESERVATION					40 ml VOA	1L Amber	VOCS 8260B	1,4-Dioxane 8270 MHD	1,4-Dioxane 8270 SIM	ESTIMATED CONCENTRATION RANGE (ppb) FOR VOAS					Standard TAT	MS collected	MSD collected	REMARKS						
		Date	Time	Soil	Ground water	Surface water	Lab H2O	HCl	HNO3	NaOH	H2SO4						Ice	0-10	10-100	100-1,000	1,000-10,000					>10,000					
1203894-7	MW-31	11/6/12	1205	X			X			X																					
-8	MW-30A	↓	1305	X			X			X																					
-9	MW-30B	↓	1343	X			X			X																					
-10	MW-34C	↓	155B	X			X			X																					

Total number of Containers per analysis: **124** Total No. of Containers: **16**

Relinquished by: HTA Company	Date 11/6/12 Time 1705	Received by: ERIN HUNTER Company	Date 11/6/12 Time 1705	INSTRUCTIONS <ol style="list-style-type: none"> Fill out form completely except for shaded areas (lab use only); sign only after verified for completeness. Complete in ballpoint pen. Draw one line through errors, initial and date correction. Indicate number of sample containers in analysis request space; indicate choice with √ or x. Note applicable preservatives, special instructions, and deviations from typical environmental samples. Consult project QA documents for specific instructions. 	Shipment Method: Courier Send Results to: Steve Netto / ERIN HUNTER <input checked="" type="checkbox"/> 9171 TOWNE CENTRE DRIVE, SUITE 375 SAN DIEGO, CA 92122 (858) 455-6500 <input type="checkbox"/> 1640 SOUTH STAPLEY DRIVE, SUITE 124 MESA, AZ 85204 (480) 345-0888 <input type="checkbox"/> 1820 EAST RIVER ROAD, SUITE 220 TUCSON, AZ 85718 (520) 881-7300
Relinquished by: Advanced Tech Labs Company	Date 11/6/12 Time 1804	Received by: FPD Company	Date 11/6/12 Time 1804	Sample Receipt: <input type="checkbox"/> No. of containers correct <input type="checkbox"/> custody seals secure	Temp. @ receipt 7.9 °C <input type="checkbox"/> received good condition/cold <input type="checkbox"/> conforms to COC document

Page 45 of 46

Rachelle Arada

From: Erin Hunter [EHunter@HARGIS.COM]
Sent: Thursday, November 08, 2012 11:21 AM
To: Rachelle Arada
Subject: 532 Sample TAT's - upgrade to 48 hr TAT?
Importance: High

Rachelle –

Would it be possible to upgrade the sample TAT's for a few samples from Standard TAT to 48 hour TAT?

If it is possible we would like all samples collected at MW-34B, MW-32B, MW-33, and MW-36 upgraded to 48 hr TAT.

Thanks,
Erin

Erin J. Hunter
Hydrogeologist
Hargis + Associates, Inc.
858.455.6500 ext. 115
ehunter@hargis.com

November 19, 2012

Steve Netto
Hargis & Associates, Inc.
9171 Towne Centre Drive, Suite 375
San Diego, CA 92122
Tel: (619) 249-3166
Fax: (858) 455-6533



Re: ATL Work Order Number : 1203913
Client Reference : Raytheon, 532.30

Enclosed are the results for sample(s) received on November 07, 2012 by Advanced Technology Laboratories. The sample(s) are tested for the parameters as indicated on the enclosed chain of custody in accordance with applicable laboratory certifications. The laboratory results contained in this report specifically pertains to the sample(s) submitted.

Thank you for the opportunity to serve the needs of your company. If you have any questions, please feel free to contact me or your Project Manager.

Sincerely,

Eddie Rodriguez
Laboratory Director

The cover letter and the case narrative are an integral part of this analytical report and its absence renders the report invalid. Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Conference and/or applicable state-specific certification programs. The report cannot be reproduced without written permission from the client and Advanced Technology Laboratories.



Certificate of Analysis

Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : Raytheon, 532.30

Report To : Steve Netto

Reported : 11/19/2012

SUMMARY OF SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
TB-110712	1203913-01	Lab H2O	11/07/12 7:53	11/07/12 17:05
MW-32B	1203913-02	Groundwater	11/07/12 10:17	11/07/12 17:05
MW-37	1203913-03	Groundwater	11/07/12 12:02	11/07/12 17:05
MW-3700	1203913-04	Groundwater	11/07/12 13:00	11/07/12 17:05
MW-36	1203913-05	Groundwater	11/07/12 16:05	11/07/12 17:05
MW-3600	1203913-06	Groundwater	11/07/12 15:00	11/07/12 17:05
MW-28	1203913-07	Groundwater	11/07/12 8:36	11/07/12 17:05
MW-29	1203913-08	Groundwater	11/07/12 9:37	11/07/12 17:05
MW-26C	1203913-09	Groundwater	11/07/12 12:30	11/07/12 17:05
MW-34B	1203913-10	Groundwater	11/07/12 13:43	11/07/12 17:05
MW-08	1203913-11	Groundwater	11/07/12 16:45	11/07/12 17:05
RB-11072012	1203913-12	Lab H2O	11/07/12 15:40	11/07/12 17:05



Certificate of Analysis

Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego, CA 92122

Project Number : Raytheon, 532.30

Report To : Steve Netto

Reported : 11/19/2012

Client Sample ID TB-110712

Lab ID: 1203913-01

Volatile Organic Compounds by EPA 8260

Analyst: SL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 09:55	
1,1,1-Trichloroethane	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 09:55	
1,1,2,2-Tetrachloroethane	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 09:55	
1,1,2-Trichloroethane	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 09:55	
1,1-Dichloroethane	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 09:55	
1,1-Dichloroethene	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 09:55	
1,1-Dichloropropene	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 09:55	
1,2,3-Trichloropropane	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 09:55	
1,2,3-Trichlorobenzene	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 09:55	
1,2,4-Trichlorobenzene	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 09:55	
1,2,4-Trimethylbenzene	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 09:55	
1,2-Dibromo-3-chloropropane	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 09:55	
1,2-Dibromoethane	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 09:55	
1,2-Dichlorobenzene	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 09:55	
1,2-Dichloroethane	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 09:55	
1,2-Dichloropropane	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 09:55	
1,3,5-Trimethylbenzene	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 09:55	
1,3-Dichlorobenzene	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 09:55	
1,3-Dichloropropane	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 09:55	
1,4-Dichlorobenzene	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 09:55	
2,2-Dichloropropane	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 09:55	
2-Chlorotoluene	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 09:55	
4-Chlorotoluene	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 09:55	
4-Isopropyltoluene	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 09:55	
Benzene	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 09:55	
Bromobenzene	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 09:55	
Bromodichloromethane	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 09:55	
Bromoform	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 09:55	
Bromomethane	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 09:55	
Carbon tetrachloride	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 09:55	
Chlorobenzene	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 09:55	
Chloroethane	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 09:55	
Chloroform	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 09:55	
Chloromethane	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 09:55	
cis-1,2-Dichloroethene	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 09:55	
cis-1,3-Dichloropropene	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 09:55	
Dibromochloromethane	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 09:55	



Certificate of Analysis

Hargis & Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego , CA 92122

Project Number : Raytheon, 532.30
 Report To : Steve Netto
 Reported : 11/19/2012

Client Sample ID TB-110712

Lab ID: 1203913-01

Volatile Organic Compounds by EPA 8260

Analyst: SL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Dibromomethane	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 09:55	
Dichlorodifluoromethane	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 09:55	
Ethylbenzene	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 09:55	
Hexachlorobutadiene	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 09:55	
Isopropylbenzene	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 09:55	
m,p-Xylene	ND	1.0	NA	1	B2K0198	11/09/2012	11/09/12 09:55	
Methylene chloride	ND	1.0	NA	1	B2K0198	11/09/2012	11/09/12 09:55	
n-Butylbenzene	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 09:55	
n-Propylbenzene	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 09:55	
Naphthalene	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 09:55	
o-Xylene	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 09:55	
sec-Butylbenzene	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 09:55	
Styrene	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 09:55	
tert-Butylbenzene	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 09:55	
Tetrachloroethene	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 09:55	
Toluene	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 09:55	
trans-1,2-Dichloroethene	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 09:55	
Trichloroethene	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 09:55	
Trichlorofluoromethane	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 09:55	
Vinyl chloride	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 09:55	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>105 %</i>		<i>70 - 130</i>		B2K0198	11/09/2012	<i>11/09/12 09:55</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>95.8 %</i>		<i>70 - 130</i>		B2K0198	11/09/2012	<i>11/09/12 09:55</i>	
<i>Surrogate: Dibromofluoromethane</i>	<i>99.5 %</i>		<i>70 - 130</i>		B2K0198	11/09/2012	<i>11/09/12 09:55</i>	
<i>Surrogate: Toluene-d8</i>	<i>91.0 %</i>		<i>70 - 130</i>		B2K0198	11/09/2012	<i>11/09/12 09:55</i>	



Certificate of Analysis

Hargis & Associates, Inc.

Project Number : Raytheon, 532.30

9171 Towne Centre Drive, Suite 375

Report To : Steve Netto

San Diego , CA 92122

Reported : 11/19/2012

Client Sample ID MW-32B

Lab ID: 1203913-02

Volatile Organic Compounds by EPA 8260

Analyst: SL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 11:17	
1,1,1-Trichloroethane	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 11:17	
1,1,2,2-Tetrachloroethane	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 11:17	
1,1,2-Trichloroethane	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 11:17	
1,1-Dichloroethane	0.92	0.50	NA	1	B2K0198	11/09/2012	11/09/12 11:17	
1,1-Dichloroethene	100	5.0	NA	10	B2K0198	11/09/2012	11/09/12 12:44	
1,1-Dichloropropene	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 11:17	
1,2,3-Trichloropropane	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 11:17	
1,2,3-Trichlorobenzene	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 11:17	
1,2,4-Trichlorobenzene	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 11:17	
1,2,4-Trimethylbenzene	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 11:17	
1,2-Dibromo-3-chloropropane	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 11:17	
1,2-Dibromoethane	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 11:17	
1,2-Dichlorobenzene	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 11:17	
1,2-Dichloroethane	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 11:17	
1,2-Dichloropropane	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 11:17	
1,3,5-Trimethylbenzene	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 11:17	
1,3-Dichlorobenzene	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 11:17	
1,3-Dichloropropane	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 11:17	
1,4-Dichlorobenzene	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 11:17	
2,2-Dichloropropane	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 11:17	
2-Chlorotoluene	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 11:17	
4-Chlorotoluene	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 11:17	
4-Isopropyltoluene	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 11:17	
Benzene	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 11:17	
Bromobenzene	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 11:17	
Bromodichloromethane	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 11:17	
Bromoform	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 11:17	
Bromomethane	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 11:17	
Carbon tetrachloride	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 11:17	
Chlorobenzene	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 11:17	
Chloroethane	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 11:17	
Chloroform	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 11:17	
Chloromethane	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 11:17	
cis-1,2-Dichloroethene	5.4	0.50	NA	1	B2K0198	11/09/2012	11/09/12 11:17	
cis-1,3-Dichloropropene	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 11:17	
Dibromochloromethane	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 11:17	



Certificate of Analysis

Hargis & Associates, Inc.

Project Number : Raytheon, 532.30

9171 Towne Centre Drive, Suite 375

Report To : Steve Netto

San Diego , CA 92122

Reported : 11/19/2012

Client Sample ID MW-32B

Lab ID: 1203913-02

Volatile Organic Compounds by EPA 8260

Analyst: SL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Dibromomethane	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 11:17	
Dichlorodifluoromethane	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 11:17	
Ethylbenzene	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 11:17	
Hexachlorobutadiene	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 11:17	
Isopropylbenzene	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 11:17	
m,p-Xylene	ND	1.0	NA	1	B2K0198	11/09/2012	11/09/12 11:17	
Methylene chloride	ND	1.0	NA	1	B2K0198	11/09/2012	11/09/12 11:17	
n-Butylbenzene	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 11:17	
n-Propylbenzene	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 11:17	
Naphthalene	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 11:17	
o-Xylene	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 11:17	
sec-Butylbenzene	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 11:17	
Styrene	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 11:17	
tert-Butylbenzene	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 11:17	
Tetrachloroethene	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 11:17	
Toluene	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 11:17	
trans-1,2-Dichloroethene	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 11:17	
Trichloroethene	66	0.50	NA	1	B2K0198	11/09/2012	11/09/12 11:17	
Trichlorofluoromethane	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 11:17	
Vinyl chloride	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 11:17	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>101 %</i>		<i>70 - 130</i>		B2K0198	11/09/2012	<i>11/09/12 12:44</i>	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>99.4 %</i>		<i>70 - 130</i>		B2K0198	11/09/2012	<i>11/09/12 11:17</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>91.0 %</i>		<i>70 - 130</i>		B2K0198	11/09/2012	<i>11/09/12 12:44</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>95.6 %</i>		<i>70 - 130</i>		B2K0198	11/09/2012	<i>11/09/12 11:17</i>	
<i>Surrogate: Dibromofluoromethane</i>	<i>93.0 %</i>		<i>70 - 130</i>		B2K0198	11/09/2012	<i>11/09/12 11:17</i>	
<i>Surrogate: Dibromofluoromethane</i>	<i>91.6 %</i>		<i>70 - 130</i>		B2K0198	11/09/2012	<i>11/09/12 12:44</i>	
<i>Surrogate: Toluene-d8</i>	<i>82.2 %</i>		<i>70 - 130</i>		B2K0198	11/09/2012	<i>11/09/12 12:44</i>	
<i>Surrogate: Toluene-d8</i>	<i>80.6 %</i>		<i>70 - 130</i>		B2K0198	11/09/2012	<i>11/09/12 11:17</i>	



Certificate of Analysis

Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego, CA 92122

Project Number : Raytheon, 532.30

Report To : Steve Netto

Reported : 11/19/2012

Client Sample ID MW-32B

Lab ID: 1203913-02

1,4-Dioxane by EPA 8270/SIM: Isotope Dilution Technique

Analyst: MR

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,4-Dioxane	3.4	0.20	0.13	1	B2K0208	11/09/2012	11/09/12 21:42	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	<i>67.6 %</i>		<i>36 - 107</i>		B2K0208	11/09/2012	<i>11/09/12 21:42</i>	
<i>Surrogate: 2-Fluorobiphenyl</i>	<i>81.9 %</i>		<i>42 - 120</i>		B2K0208	11/09/2012	<i>11/09/12 21:42</i>	
<i>Surrogate: 4-Terphenyl-d14</i>	<i>95.3 %</i>		<i>67 - 142</i>		B2K0208	11/09/2012	<i>11/09/12 21:42</i>	
<i>Surrogate: Nitrobenzene-d5</i>	<i>93.5 %</i>		<i>36 - 130</i>		B2K0208	11/09/2012	<i>11/09/12 21:42</i>	



Certificate of Analysis

Hargis & Associates, Inc.

Project Number : Raytheon, 532.30

9171 Towne Centre Drive, Suite 375

Report To : Steve Netto

San Diego , CA 92122

Reported : 11/19/2012

Client Sample ID MW-37

Lab ID: 1203913-03

Volatile Organic Compounds by EPA 8260

Analyst: SL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	0.50	NA	1	B2K0150	11/08/2012	11/08/12 10:53	
1,1,1-Trichloroethane	ND	0.50	NA	1	B2K0150	11/08/2012	11/08/12 10:53	
1,1,2,2-Tetrachloroethane	ND	0.50	NA	1	B2K0150	11/08/2012	11/08/12 10:53	
1,1,2-Trichloroethane	ND	0.50	NA	1	B2K0150	11/08/2012	11/08/12 10:53	
1,1-Dichloroethane	ND	0.50	NA	1	B2K0150	11/08/2012	11/08/12 10:53	
1,1-Dichloroethene	ND	0.50	NA	1	B2K0150	11/08/2012	11/08/12 10:53	
1,1-Dichloropropene	ND	0.50	NA	1	B2K0150	11/08/2012	11/08/12 10:53	
1,2,3-Trichloropropane	ND	0.50	NA	1	B2K0150	11/08/2012	11/08/12 10:53	
1,2,3-Trichlorobenzene	ND	0.50	NA	1	B2K0150	11/08/2012	11/08/12 10:53	
1,2,4-Trichlorobenzene	ND	0.50	NA	1	B2K0150	11/08/2012	11/08/12 10:53	
1,2,4-Trimethylbenzene	ND	0.50	NA	1	B2K0150	11/08/2012	11/08/12 10:53	
1,2-Dibromo-3-chloropropane	ND	0.50	NA	1	B2K0150	11/08/2012	11/08/12 10:53	
1,2-Dibromoethane	ND	0.50	NA	1	B2K0150	11/08/2012	11/08/12 10:53	
1,2-Dichlorobenzene	ND	0.50	NA	1	B2K0150	11/08/2012	11/08/12 10:53	
1,2-Dichloroethane	ND	0.50	NA	1	B2K0150	11/08/2012	11/08/12 10:53	
1,2-Dichloropropane	ND	0.50	NA	1	B2K0150	11/08/2012	11/08/12 10:53	
1,3,5-Trimethylbenzene	ND	0.50	NA	1	B2K0150	11/08/2012	11/08/12 10:53	
1,3-Dichlorobenzene	ND	0.50	NA	1	B2K0150	11/08/2012	11/08/12 10:53	
1,3-Dichloropropane	ND	0.50	NA	1	B2K0150	11/08/2012	11/08/12 10:53	
1,4-Dichlorobenzene	ND	0.50	NA	1	B2K0150	11/08/2012	11/08/12 10:53	
2,2-Dichloropropane	ND	0.50	NA	1	B2K0150	11/08/2012	11/08/12 10:53	
2-Chlorotoluene	ND	0.50	NA	1	B2K0150	11/08/2012	11/08/12 10:53	
4-Chlorotoluene	ND	0.50	NA	1	B2K0150	11/08/2012	11/08/12 10:53	
4-Isopropyltoluene	ND	0.50	NA	1	B2K0150	11/08/2012	11/08/12 10:53	
Benzene	ND	0.50	NA	1	B2K0150	11/08/2012	11/08/12 10:53	
Bromobenzene	ND	0.50	NA	1	B2K0150	11/08/2012	11/08/12 10:53	
Bromodichloromethane	ND	0.50	NA	1	B2K0150	11/08/2012	11/08/12 10:53	
Bromoform	ND	0.50	NA	1	B2K0150	11/08/2012	11/08/12 10:53	
Bromomethane	ND	0.50	NA	1	B2K0150	11/08/2012	11/08/12 10:53	
Carbon tetrachloride	ND	0.50	NA	1	B2K0150	11/08/2012	11/08/12 10:53	
Chlorobenzene	ND	0.50	NA	1	B2K0150	11/08/2012	11/08/12 10:53	
Chloroethane	ND	0.50	NA	1	B2K0150	11/08/2012	11/08/12 10:53	
Chloroform	ND	0.50	NA	1	B2K0150	11/08/2012	11/08/12 10:53	
Chloromethane	ND	0.50	NA	1	B2K0150	11/08/2012	11/08/12 10:53	
cis-1,2-Dichloroethene	ND	0.50	NA	1	B2K0150	11/08/2012	11/08/12 10:53	
cis-1,3-Dichloropropene	ND	0.50	NA	1	B2K0150	11/08/2012	11/08/12 10:53	
Dibromochloromethane	ND	0.50	NA	1	B2K0150	11/08/2012	11/08/12 10:53	



Certificate of Analysis

Hargis & Associates, Inc.

Project Number : Raytheon, 532.30

9171 Towne Centre Drive, Suite 375

Report To : Steve Netto

San Diego , CA 92122

Reported : 11/19/2012

Client Sample ID MW-37

Lab ID: 1203913-03

Volatile Organic Compounds by EPA 8260

Analyst: SL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Dibromomethane	ND	0.50	NA	1	B2K0150	11/08/2012	11/08/12 10:53	
Dichlorodifluoromethane	ND	0.50	NA	1	B2K0150	11/08/2012	11/08/12 10:53	
Ethylbenzene	ND	0.50	NA	1	B2K0150	11/08/2012	11/08/12 10:53	
Hexachlorobutadiene	ND	0.50	NA	1	B2K0150	11/08/2012	11/08/12 10:53	
Isopropylbenzene	ND	0.50	NA	1	B2K0150	11/08/2012	11/08/12 10:53	
m,p-Xylene	ND	1.0	NA	1	B2K0150	11/08/2012	11/08/12 10:53	
Methylene chloride	ND	1.0	NA	1	B2K0150	11/08/2012	11/08/12 10:53	
n-Butylbenzene	ND	0.50	NA	1	B2K0150	11/08/2012	11/08/12 10:53	
n-Propylbenzene	ND	0.50	NA	1	B2K0150	11/08/2012	11/08/12 10:53	
Naphthalene	ND	0.50	NA	1	B2K0150	11/08/2012	11/08/12 10:53	
o-Xylene	ND	0.50	NA	1	B2K0150	11/08/2012	11/08/12 10:53	
sec-Butylbenzene	ND	0.50	NA	1	B2K0150	11/08/2012	11/08/12 10:53	
Styrene	ND	0.50	NA	1	B2K0150	11/08/2012	11/08/12 10:53	
tert-Butylbenzene	ND	0.50	NA	1	B2K0150	11/08/2012	11/08/12 10:53	
Tetrachloroethene	ND	0.50	NA	1	B2K0150	11/08/2012	11/08/12 10:53	
Toluene	ND	0.50	NA	1	B2K0150	11/08/2012	11/08/12 10:53	
trans-1,2-Dichloroethene	ND	0.50	NA	1	B2K0150	11/08/2012	11/08/12 10:53	
Trichloroethene	ND	0.50	NA	1	B2K0150	11/08/2012	11/08/12 10:53	
Trichlorofluoromethane	ND	0.50	NA	1	B2K0150	11/08/2012	11/08/12 10:53	
Vinyl chloride	ND	0.50	NA	1	B2K0150	11/08/2012	11/08/12 10:53	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>84.8 %</i>		<i>70 - 130</i>		B2K0150	11/08/2012	<i>11/08/12 10:53</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>79.2 %</i>		<i>70 - 130</i>		B2K0150	11/08/2012	<i>11/08/12 10:53</i>	
<i>Surrogate: Dibromofluoromethane</i>	<i>85.8 %</i>		<i>70 - 130</i>		B2K0150	11/08/2012	<i>11/08/12 10:53</i>	
<i>Surrogate: Toluene-d8</i>	<i>80.0 %</i>		<i>70 - 130</i>		B2K0150	11/08/2012	<i>11/08/12 10:53</i>	



Certificate of Analysis

Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego, CA 92122

Project Number : Raytheon, 532.30

Report To : Steve Netto

Reported : 11/19/2012

Client Sample ID MW-37

Lab ID: 1203913-03

1,4-Dioxane by EPA 8270/SIM: Isotope Dilution Technique

Analyst: BB

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,4-Dioxane	ND	0.20	0.13	1	B2K0149	11/07/2012	11/08/12 10:44	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	<i>69.1 %</i>		<i>36 - 107</i>		B2K0149	11/07/2012	<i>11/08/12 10:44</i>	
<i>Surrogate: 2-Fluorobiphenyl</i>	<i>81.8 %</i>		<i>42 - 120</i>		B2K0149	11/07/2012	<i>11/08/12 10:44</i>	
<i>Surrogate: 4-Terphenyl-d14</i>	<i>92.0 %</i>		<i>67 - 142</i>		B2K0149	11/07/2012	<i>11/08/12 10:44</i>	
<i>Surrogate: Nitrobenzene-d5</i>	<i>100 %</i>		<i>36 - 130</i>		B2K0149	11/07/2012	<i>11/08/12 10:44</i>	



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Hargis & Associates, Inc.

Project Number : Raytheon, 532.30

9171 Towne Centre Drive, Suite 375

Report To : Steve Netto

San Diego , CA 92122

Reported : 11/19/2012

Client Sample ID MW-3700

Lab ID: 1203913-04

Volatile Organic Compounds by EPA 8260

Analyst: SL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 10:26	
1,1,1-Trichloroethane	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 10:26	
1,1,2,2-Tetrachloroethane	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 10:26	
1,1,2-Trichloroethane	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 10:26	
1,1-Dichloroethane	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 10:26	
1,1-Dichloroethene	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 10:26	
1,1-Dichloropropene	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 10:26	
1,2,3-Trichloropropane	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 10:26	
1,2,3-Trichlorobenzene	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 10:26	
1,2,4-Trichlorobenzene	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 10:26	
1,2,4-Trimethylbenzene	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 10:26	
1,2-Dibromo-3-chloropropane	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 10:26	
1,2-Dibromoethane	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 10:26	
1,2-Dichlorobenzene	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 10:26	
1,2-Dichloroethane	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 10:26	
1,2-Dichloropropane	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 10:26	
1,3,5-Trimethylbenzene	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 10:26	
1,3-Dichlorobenzene	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 10:26	
1,3-Dichloropropane	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 10:26	
1,4-Dichlorobenzene	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 10:26	
2,2-Dichloropropane	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 10:26	
2-Chlorotoluene	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 10:26	
4-Chlorotoluene	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 10:26	
4-Isopropyltoluene	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 10:26	
Benzene	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 10:26	
Bromobenzene	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 10:26	
Bromodichloromethane	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 10:26	
Bromoform	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 10:26	
Bromomethane	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 10:26	
Carbon tetrachloride	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 10:26	
Chlorobenzene	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 10:26	
Chloroethane	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 10:26	
Chloroform	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 10:26	
Chloromethane	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 10:26	
cis-1,2-Dichloroethene	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 10:26	
cis-1,3-Dichloropropene	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 10:26	
Dibromochloromethane	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 10:26	



Certificate of Analysis

Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego, CA 92122

Project Number : Raytheon, 532.30

Report To : Steve Netto

Reported : 11/19/2012

Client Sample ID MW-3700

Lab ID: 1203913-04

Volatile Organic Compounds by EPA 8260

Analyst: SL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Dibromomethane	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 10:26	
Dichlorodifluoromethane	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 10:26	
Ethylbenzene	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 10:26	
Hexachlorobutadiene	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 10:26	
Isopropylbenzene	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 10:26	
m,p-Xylene	ND	1.0	NA	1	B2K0263	11/12/2012	11/12/12 10:26	
Methylene chloride	ND	1.0	NA	1	B2K0263	11/12/2012	11/12/12 10:26	
n-Butylbenzene	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 10:26	
n-Propylbenzene	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 10:26	
Naphthalene	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 10:26	
o-Xylene	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 10:26	
sec-Butylbenzene	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 10:26	
Styrene	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 10:26	
tert-Butylbenzene	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 10:26	
Tetrachloroethene	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 10:26	
Toluene	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 10:26	
trans-1,2-Dichloroethene	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 10:26	
Trichloroethene	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 10:26	
Trichlorofluoromethane	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 10:26	
Vinyl chloride	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 10:26	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>85.9 %</i>		<i>70 - 130</i>		B2K0263	11/12/2012	<i>11/12/12 10:26</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>79.5 %</i>		<i>70 - 130</i>		B2K0263	11/12/2012	<i>11/12/12 10:26</i>	
<i>Surrogate: Dibromofluoromethane</i>	<i>86.7 %</i>		<i>70 - 130</i>		B2K0263	11/12/2012	<i>11/12/12 10:26</i>	
<i>Surrogate: Toluene-d8</i>	<i>82.1 %</i>		<i>70 - 130</i>		B2K0263	11/12/2012	<i>11/12/12 10:26</i>	



Certificate of Analysis

Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego, CA 92122

Project Number : Raytheon, 532.30

Report To : Steve Netto

Reported : 11/19/2012

Client Sample ID MW-3700

Lab ID: 1203913-04

1,4-Dioxane by EPA 8270/SIM: Isotope Dilution Technique

Analyst: MR

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,4-Dioxane	ND	0.20	0.13	1	B2K0208	11/09/2012	11/09/12 22:06	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	88.8 %		36 - 107		B2K0208	11/09/2012	11/09/12 22:06	
<i>Surrogate: 2-Fluorobiphenyl</i>	107 %		42 - 120		B2K0208	11/09/2012	11/09/12 22:06	
<i>Surrogate: 4-Terphenyl-d14</i>	106 %		67 - 142		B2K0208	11/09/2012	11/09/12 22:06	
<i>Surrogate: Nitrobenzene-d5</i>	110 %		36 - 130		B2K0208	11/09/2012	11/09/12 22:06	



Certificate of Analysis

Hargis & Associates, Inc.

Project Number : Raytheon, 532.30

9171 Towne Centre Drive, Suite 375

Report To : Steve Netto

San Diego , CA 92122

Reported : 11/19/2012

Client Sample ID MW-36

Lab ID: 1203913-05

Volatile Organic Compounds by EPA 8260

Analyst: SL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 10:36	
1,1,1-Trichloroethane	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 10:36	
1,1,2,2-Tetrachloroethane	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 10:36	
1,1,2-Trichloroethane	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 10:36	
1,1-Dichloroethane	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 10:36	
1,1-Dichloroethene	27	0.50	NA	1	B2K0198	11/09/2012	11/09/12 10:36	
1,1-Dichloropropene	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 10:36	
1,2,3-Trichloropropane	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 10:36	
1,2,3-Trichlorobenzene	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 10:36	
1,2,4-Trichlorobenzene	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 10:36	
1,2,4-Trimethylbenzene	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 10:36	
1,2-Dibromo-3-chloropropane	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 10:36	
1,2-Dibromoethane	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 10:36	
1,2-Dichlorobenzene	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 10:36	
1,2-Dichloroethane	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 10:36	
1,2-Dichloropropane	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 10:36	
1,3,5-Trimethylbenzene	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 10:36	
1,3-Dichlorobenzene	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 10:36	
1,3-Dichloropropane	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 10:36	
1,4-Dichlorobenzene	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 10:36	
2,2-Dichloropropane	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 10:36	
2-Chlorotoluene	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 10:36	
4-Chlorotoluene	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 10:36	
4-Isopropyltoluene	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 10:36	
Benzene	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 10:36	
Bromobenzene	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 10:36	
Bromodichloromethane	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 10:36	
Bromoform	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 10:36	
Bromomethane	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 10:36	
Carbon tetrachloride	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 10:36	
Chlorobenzene	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 10:36	
Chloroethane	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 10:36	
Chloroform	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 10:36	
Chloromethane	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 10:36	
cis-1,2-Dichloroethene	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 10:36	
cis-1,3-Dichloropropane	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 10:36	
Dibromochloromethane	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 10:36	



Certificate of Analysis

Hargis & Associates, Inc.

Project Number : Raytheon, 532.30

9171 Towne Centre Drive, Suite 375

Report To : Steve Netto

San Diego , CA 92122

Reported : 11/19/2012

Client Sample ID MW-36

Lab ID: 1203913-05

Volatile Organic Compounds by EPA 8260

Analyst: SL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Dibromomethane	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 10:36	
Dichlorodifluoromethane	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 10:36	
Ethylbenzene	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 10:36	
Hexachlorobutadiene	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 10:36	
Isopropylbenzene	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 10:36	
m,p-Xylene	ND	1.0	NA	1	B2K0198	11/09/2012	11/09/12 10:36	
Methylene chloride	ND	1.0	NA	1	B2K0198	11/09/2012	11/09/12 10:36	
n-Butylbenzene	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 10:36	
n-Propylbenzene	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 10:36	
Naphthalene	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 10:36	
o-Xylene	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 10:36	
sec-Butylbenzene	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 10:36	
Styrene	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 10:36	
tert-Butylbenzene	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 10:36	
Tetrachloroethene	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 10:36	
Toluene	0.88	0.50	NA	1	B2K0198	11/09/2012	11/09/12 10:36	
trans-1,2-Dichloroethene	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 10:36	
Trichloroethene	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 10:36	
Trichlorofluoromethane	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 10:36	
Vinyl chloride	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 10:36	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>100 %</i>		<i>70 - 130</i>		B2K0198	11/09/2012	<i>11/09/12 10:36</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>96.6 %</i>		<i>70 - 130</i>		B2K0198	11/09/2012	<i>11/09/12 10:36</i>	
<i>Surrogate: Dibromofluoromethane</i>	<i>96.9 %</i>		<i>70 - 130</i>		B2K0198	11/09/2012	<i>11/09/12 10:36</i>	
<i>Surrogate: Toluene-d8</i>	<i>86.6 %</i>		<i>70 - 130</i>		B2K0198	11/09/2012	<i>11/09/12 10:36</i>	



Certificate of Analysis

Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego, CA 92122

Project Number : Raytheon, 532.30

Report To : Steve Netto

Reported : 11/19/2012

Client Sample ID MW-36

Lab ID: 1203913-05

1,4-Dioxane by EPA 8270/SIM: Isotope Dilution Technique

Analyst: MR

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,4-Dioxane	1.4	0.20	0.13	1	B2K0208	11/09/2012	11/09/12 22:31	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	<i>77.4 %</i>		<i>36 - 107</i>		B2K0208	11/09/2012	<i>11/09/12 22:31</i>	
<i>Surrogate: 2-Fluorobiphenyl</i>	<i>92.7 %</i>		<i>42 - 120</i>		B2K0208	11/09/2012	<i>11/09/12 22:31</i>	
<i>Surrogate: 4-Terphenyl-d14</i>	<i>97.3 %</i>		<i>67 - 142</i>		B2K0208	11/09/2012	<i>11/09/12 22:31</i>	
<i>Surrogate: Nitrobenzene-d5</i>	<i>101 %</i>		<i>36 - 130</i>		B2K0208	11/09/2012	<i>11/09/12 22:31</i>	



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Hargis & Associates, Inc.

Project Number : Raytheon, 532.30

9171 Towne Centre Drive, Suite 375

Report To : Steve Netto

San Diego , CA 92122

Reported : 11/19/2012

Client Sample ID MW-3600

Lab ID: 1203913-06

Volatile Organic Compounds by EPA 8260

Analyst: SL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 10:46	
1,1,1-Trichloroethane	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 10:46	
1,1,2,2-Tetrachloroethane	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 10:46	
1,1,2-Trichloroethane	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 10:46	
1,1-Dichloroethane	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 10:46	
1,1-Dichloroethene	25	0.50	NA	1	B2K0263	11/12/2012	11/12/12 10:46	
1,1-Dichloropropene	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 10:46	
1,2,3-Trichloropropane	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 10:46	
1,2,3-Trichlorobenzene	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 10:46	
1,2,4-Trichlorobenzene	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 10:46	
1,2,4-Trimethylbenzene	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 10:46	
1,2-Dibromo-3-chloropropane	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 10:46	
1,2-Dibromoethane	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 10:46	
1,2-Dichlorobenzene	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 10:46	
1,2-Dichloroethane	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 10:46	
1,2-Dichloropropane	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 10:46	
1,3,5-Trimethylbenzene	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 10:46	
1,3-Dichlorobenzene	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 10:46	
1,3-Dichloropropane	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 10:46	
1,4-Dichlorobenzene	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 10:46	
2,2-Dichloropropane	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 10:46	
2-Chlorotoluene	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 10:46	
4-Chlorotoluene	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 10:46	
4-Isopropyltoluene	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 10:46	
Benzene	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 10:46	
Bromobenzene	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 10:46	
Bromodichloromethane	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 10:46	
Bromoform	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 10:46	
Bromomethane	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 10:46	
Carbon tetrachloride	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 10:46	
Chlorobenzene	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 10:46	
Chloroethane	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 10:46	
Chloroform	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 10:46	
Chloromethane	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 10:46	
cis-1,2-Dichloroethene	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 10:46	
cis-1,3-Dichloropropene	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 10:46	
Dibromochloromethane	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 10:46	



Certificate of Analysis

Hargis & Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego , CA 92122

Project Number : Raytheon, 532.30
 Report To : Steve Netto
 Reported : 11/19/2012

Client Sample ID MW-3600

Lab ID: 1203913-06

Volatile Organic Compounds by EPA 8260

Analyst: SL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Dibromomethane	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 10:46	
Dichlorodifluoromethane	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 10:46	
Ethylbenzene	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 10:46	
Hexachlorobutadiene	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 10:46	
Isopropylbenzene	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 10:46	
m,p-Xylene	ND	1.0	NA	1	B2K0263	11/12/2012	11/12/12 10:46	
Methylene chloride	ND	1.0	NA	1	B2K0263	11/12/2012	11/12/12 10:46	
n-Butylbenzene	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 10:46	
n-Propylbenzene	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 10:46	
Naphthalene	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 10:46	
o-Xylene	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 10:46	
sec-Butylbenzene	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 10:46	
Styrene	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 10:46	
tert-Butylbenzene	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 10:46	
Tetrachloroethene	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 10:46	
Toluene	0.59	0.50	NA	1	B2K0263	11/12/2012	11/12/12 10:46	
trans-1,2-Dichloroethene	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 10:46	
Trichloroethene	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 10:46	
Trichlorofluoromethane	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 10:46	
Vinyl chloride	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 10:46	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>84.4 %</i>		<i>70 - 130</i>		B2K0263	11/12/2012	<i>11/12/12 10:46</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>79.6 %</i>		<i>70 - 130</i>		B2K0263	11/12/2012	<i>11/12/12 10:46</i>	
<i>Surrogate: Dibromofluoromethane</i>	<i>84.7 %</i>		<i>70 - 130</i>		B2K0263	11/12/2012	<i>11/12/12 10:46</i>	
<i>Surrogate: Toluene-d8</i>	<i>80.0 %</i>		<i>70 - 130</i>		B2K0263	11/12/2012	<i>11/12/12 10:46</i>	



Certificate of Analysis

Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego, CA 92122

Project Number : Raytheon, 532.30

Report To : Steve Netto

Reported : 11/19/2012

Client Sample ID MW-3600

Lab ID: 1203913-06

1,4-Dioxane by EPA 8270/SIM: Isotope Dilution Technique

Analyst: MR

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,4-Dioxane	1.4	0.20	0.13	1	B2K0208	11/09/2012	11/09/12 22:55	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	78.9 %		36 - 107		B2K0208	11/09/2012	11/09/12 22:55	
<i>Surrogate: 2-Fluorobiphenyl</i>	94.0 %		42 - 120		B2K0208	11/09/2012	11/09/12 22:55	
<i>Surrogate: 4-Terphenyl-d14</i>	98.1 %		67 - 142		B2K0208	11/09/2012	11/09/12 22:55	
<i>Surrogate: Nitrobenzene-d5</i>	99.5 %		36 - 130		B2K0208	11/09/2012	11/09/12 22:55	



Certificate of Analysis

Hargis & Associates, Inc.

Project Number : Raytheon, 532.30

9171 Towne Centre Drive, Suite 375

Report To : Steve Netto

San Diego , CA 92122

Reported : 11/19/2012

Client Sample ID MW-28

Lab ID: 1203913-07

Volatile Organic Compounds by EPA 8260

Analyst: SL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 11:06	
1,1,1-Trichloroethane	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 11:06	
1,1,2,2-Tetrachloroethane	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 11:06	
1,1,2-Trichloroethane	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 11:06	
1,1-Dichloroethane	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 11:06	
1,1-Dichloroethene	5.2	0.50	NA	1	B2K0263	11/12/2012	11/12/12 11:06	
1,1-Dichloropropene	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 11:06	
1,2,3-Trichloropropane	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 11:06	
1,2,3-Trichlorobenzene	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 11:06	
1,2,4-Trichlorobenzene	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 11:06	
1,2,4-Trimethylbenzene	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 11:06	
1,2-Dibromo-3-chloropropane	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 11:06	
1,2-Dibromoethane	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 11:06	
1,2-Dichlorobenzene	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 11:06	
1,2-Dichloroethane	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 11:06	
1,2-Dichloropropane	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 11:06	
1,3,5-Trimethylbenzene	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 11:06	
1,3-Dichlorobenzene	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 11:06	
1,3-Dichloropropane	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 11:06	
1,4-Dichlorobenzene	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 11:06	
2,2-Dichloropropane	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 11:06	
2-Chlorotoluene	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 11:06	
4-Chlorotoluene	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 11:06	
4-Isopropyltoluene	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 11:06	
Benzene	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 11:06	
Bromobenzene	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 11:06	
Bromodichloromethane	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 11:06	
Bromoform	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 11:06	
Bromomethane	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 11:06	
Carbon tetrachloride	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 11:06	
Chlorobenzene	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 11:06	
Chloroethane	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 11:06	
Chloroform	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 11:06	
Chloromethane	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 11:06	
cis-1,2-Dichloroethene	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 11:06	
cis-1,3-Dichloropropane	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 11:06	
Dibromochloromethane	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 11:06	



Certificate of Analysis

Hargis & Associates, Inc.

Project Number : Raytheon, 532.30

9171 Towne Centre Drive, Suite 375

Report To : Steve Netto

San Diego , CA 92122

Reported : 11/19/2012

Client Sample ID MW-28

Lab ID: 1203913-07

Volatile Organic Compounds by EPA 8260

Analyst: SL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Dibromomethane	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 11:06	
Dichlorodifluoromethane	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 11:06	
Ethylbenzene	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 11:06	
Hexachlorobutadiene	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 11:06	
Isopropylbenzene	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 11:06	
m,p-Xylene	ND	1.0	NA	1	B2K0263	11/12/2012	11/12/12 11:06	
Methylene chloride	ND	1.0	NA	1	B2K0263	11/12/2012	11/12/12 11:06	
n-Butylbenzene	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 11:06	
n-Propylbenzene	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 11:06	
Naphthalene	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 11:06	
o-Xylene	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 11:06	
sec-Butylbenzene	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 11:06	
Styrene	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 11:06	
tert-Butylbenzene	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 11:06	
Tetrachloroethene	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 11:06	
Toluene	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 11:06	
trans-1,2-Dichloroethene	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 11:06	
Trichloroethene	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 11:06	
Trichlorofluoromethane	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 11:06	
Vinyl chloride	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 11:06	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>86.6 %</i>		<i>70 - 130</i>		B2K0263	11/12/2012	<i>11/12/12 11:06</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>80.2 %</i>		<i>70 - 130</i>		B2K0263	11/12/2012	<i>11/12/12 11:06</i>	
<i>Surrogate: Dibromofluoromethane</i>	<i>87.0 %</i>		<i>70 - 130</i>		B2K0263	11/12/2012	<i>11/12/12 11:06</i>	
<i>Surrogate: Toluene-d8</i>	<i>81.8 %</i>		<i>70 - 130</i>		B2K0263	11/12/2012	<i>11/12/12 11:06</i>	



Certificate of Analysis

Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego, CA 92122

Project Number : Raytheon, 532.30

Report To : Steve Netto

Reported : 11/19/2012

Client Sample ID MW-28

Lab ID: 1203913-07

1,4-Dioxane by EPA 8270/SIM: Isotope Dilution Technique

Analyst: MR

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,4-Dioxane	2.2	0.20	0.13	1	B2K0208	11/09/2012	11/09/12 23:19	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	<i>83.3 %</i>		<i>36 - 107</i>		B2K0208	11/09/2012	<i>11/09/12 23:19</i>	
<i>Surrogate: 2-Fluorobiphenyl</i>	<i>101 %</i>		<i>42 - 120</i>		B2K0208	11/09/2012	<i>11/09/12 23:19</i>	
<i>Surrogate: 4-Terphenyl-d14</i>	<i>102 %</i>		<i>67 - 142</i>		B2K0208	11/09/2012	<i>11/09/12 23:19</i>	
<i>Surrogate: Nitrobenzene-d5</i>	<i>106 %</i>		<i>36 - 130</i>		B2K0208	11/09/2012	<i>11/09/12 23:19</i>	



Certificate of Analysis

Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego, CA 92122

Project Number : Raytheon, 532.30

Report To : Steve Netto

Reported : 11/19/2012

Client Sample ID MW-29

Lab ID: 1203913-08

Volatile Organic Compounds by EPA 8260

Analyst: SL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	1.0	NA	2	B2K0263	11/12/2012	11/12/12 13:11	D6
1,1,1-Trichloroethane	ND	1.0	NA	2	B2K0263	11/12/2012	11/12/12 13:11	D6
1,1,2,2-Tetrachloroethane	ND	1.0	NA	2	B2K0263	11/12/2012	11/12/12 13:11	D6
1,1,2-Trichloroethane	1.6	1.0	NA	2	B2K0263	11/12/2012	11/12/12 13:11	D6
1,1-Dichloroethane	4.6	1.0	NA	2	B2K0263	11/12/2012	11/12/12 13:11	D6
1,1-Dichloroethene	560	10	NA	20	B2K0263	11/12/2012	11/12/12 12:07	
1,1-Dichloropropene	ND	1.0	NA	2	B2K0263	11/12/2012	11/12/12 13:11	D6
1,2,3-Trichloropropane	ND	1.0	NA	2	B2K0263	11/12/2012	11/12/12 13:11	D6
1,2,3-Trichlorobenzene	ND	1.0	NA	2	B2K0263	11/12/2012	11/12/12 13:11	D6
1,2,4-Trichlorobenzene	ND	1.0	NA	2	B2K0263	11/12/2012	11/12/12 13:11	D6
1,2,4-Trimethylbenzene	ND	1.0	NA	2	B2K0263	11/12/2012	11/12/12 13:11	D6
1,2-Dibromo-3-chloropropane	ND	1.0	NA	2	B2K0263	11/12/2012	11/12/12 13:11	D6
1,2-Dibromoethane	ND	1.0	NA	2	B2K0263	11/12/2012	11/12/12 13:11	D6
1,2-Dichlorobenzene	ND	1.0	NA	2	B2K0263	11/12/2012	11/12/12 13:11	D6
1,2-Dichloroethane	1.2	1.0	NA	2	B2K0263	11/12/2012	11/12/12 13:11	D6
1,2-Dichloropropane	ND	1.0	NA	2	B2K0263	11/12/2012	11/12/12 13:11	D6
1,3,5-Trimethylbenzene	ND	1.0	NA	2	B2K0263	11/12/2012	11/12/12 13:11	D6
1,3-Dichlorobenzene	ND	1.0	NA	2	B2K0263	11/12/2012	11/12/12 13:11	D6
1,3-Dichloropropane	ND	1.0	NA	2	B2K0263	11/12/2012	11/12/12 13:11	D6
1,4-Dichlorobenzene	ND	1.0	NA	2	B2K0263	11/12/2012	11/12/12 13:11	D6
2,2-Dichloropropane	ND	1.0	NA	2	B2K0263	11/12/2012	11/12/12 13:11	D6
2-Chlorotoluene	ND	1.0	NA	2	B2K0263	11/12/2012	11/12/12 13:11	D6
4-Chlorotoluene	ND	1.0	NA	2	B2K0263	11/12/2012	11/12/12 13:11	D6
4-Isopropyltoluene	ND	1.0	NA	2	B2K0263	11/12/2012	11/12/12 13:11	D6
Benzene	ND	1.0	NA	2	B2K0263	11/12/2012	11/12/12 13:11	D6
Bromobenzene	ND	1.0	NA	2	B2K0263	11/12/2012	11/12/12 13:11	D6
Bromodichloromethane	ND	1.0	NA	2	B2K0263	11/12/2012	11/12/12 13:11	D6
Bromoform	ND	1.0	NA	2	B2K0263	11/12/2012	11/12/12 13:11	D6
Bromomethane	ND	1.0	NA	2	B2K0263	11/12/2012	11/12/12 13:11	D6
Carbon tetrachloride	ND	1.0	NA	2	B2K0263	11/12/2012	11/12/12 13:11	D6
Chlorobenzene	ND	1.0	NA	2	B2K0263	11/12/2012	11/12/12 13:11	D6
Chloroethane	ND	1.0	NA	2	B2K0263	11/12/2012	11/12/12 13:11	D6
Chloroform	ND	1.0	NA	2	B2K0263	11/12/2012	11/12/12 13:11	D6
Chloromethane	ND	1.0	NA	2	B2K0263	11/12/2012	11/12/12 13:11	D6
cis-1,2-Dichloroethene	ND	1.0	NA	2	B2K0263	11/12/2012	11/12/12 13:11	D6
cis-1,3-Dichloropropane	ND	1.0	NA	2	B2K0263	11/12/2012	11/12/12 13:11	D6
Dibromochloromethane	ND	1.0	NA	2	B2K0263	11/12/2012	11/12/12 13:11	D6



Certificate of Analysis

Hargis & Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122

Project Number : Raytheon, 532.30
 Report To : Steve Netto
 Reported : 11/19/2012

Client Sample ID MW-29
Lab ID: 1203913-08

Volatile Organic Compounds by EPA 8260

Analyst: SL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Dibromomethane	ND	1.0	NA	2	B2K0263	11/12/2012	11/12/12 13:11	D6
Dichlorodifluoromethane	ND	1.0	NA	2	B2K0263	11/12/2012	11/12/12 13:11	D6
Ethylbenzene	ND	1.0	NA	2	B2K0263	11/12/2012	11/12/12 13:11	D6
Hexachlorobutadiene	ND	1.0	NA	2	B2K0263	11/12/2012	11/12/12 13:11	D6
Isopropylbenzene	ND	1.0	NA	2	B2K0263	11/12/2012	11/12/12 13:11	D6
m,p-Xylene	ND	2.0	NA	2	B2K0263	11/12/2012	11/12/12 13:11	D6
Methylene chloride	ND	2.0	NA	2	B2K0263	11/12/2012	11/12/12 13:11	D6
n-Butylbenzene	ND	1.0	NA	2	B2K0263	11/12/2012	11/12/12 13:11	D6
n-Propylbenzene	ND	1.0	NA	2	B2K0263	11/12/2012	11/12/12 13:11	D6
Naphthalene	ND	1.0	NA	2	B2K0263	11/12/2012	11/12/12 13:11	D6
o-Xylene	ND	1.0	NA	2	B2K0263	11/12/2012	11/12/12 13:11	D6
sec-Butylbenzene	ND	1.0	NA	2	B2K0263	11/12/2012	11/12/12 13:11	D6
Styrene	ND	1.0	NA	2	B2K0263	11/12/2012	11/12/12 13:11	D6
tert-Butylbenzene	ND	1.0	NA	2	B2K0263	11/12/2012	11/12/12 13:11	D6
Tetrachloroethene	6.6	1.0	NA	2	B2K0263	11/12/2012	11/12/12 13:11	D6
Toluene	ND	1.0	NA	2	B2K0263	11/12/2012	11/12/12 13:11	D6
trans-1,2-Dichloroethene	ND	1.0	NA	2	B2K0263	11/12/2012	11/12/12 13:11	D6
Trichloroethene	5.0	1.0	NA	2	B2K0263	11/12/2012	11/12/12 13:11	D6
Trichlorofluoromethane	1.7	1.0	NA	2	B2K0263	11/12/2012	11/12/12 13:11	D6
Vinyl chloride	ND	1.0	NA	2	B2K0263	11/12/2012	11/12/12 13:11	D6
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>87.2 %</i>		<i>70 - 130</i>		B2K0263	11/12/2012	<i>11/12/12 12:07</i>	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>84.8 %</i>		<i>70 - 130</i>		B2K0263	11/12/2012	<i>11/12/12 13:11</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>78.0 %</i>		<i>70 - 130</i>		B2K0263	11/12/2012	<i>11/12/12 12:07</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>77.6 %</i>		<i>70 - 130</i>		B2K0263	11/12/2012	<i>11/12/12 13:11</i>	
<i>Surrogate: Dibromofluoromethane</i>	<i>85.8 %</i>		<i>70 - 130</i>		B2K0263	11/12/2012	<i>11/12/12 13:11</i>	
<i>Surrogate: Dibromofluoromethane</i>	<i>87.1 %</i>		<i>70 - 130</i>		B2K0263	11/12/2012	<i>11/12/12 12:07</i>	
<i>Surrogate: Toluene-d8</i>	<i>81.7 %</i>		<i>70 - 130</i>		B2K0263	11/12/2012	<i>11/12/12 12:07</i>	
<i>Surrogate: Toluene-d8</i>	<i>80.4 %</i>		<i>70 - 130</i>		B2K0263	11/12/2012	<i>11/12/12 13:11</i>	



Certificate of Analysis

Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego, CA 92122

Project Number : Raytheon, 532.30

Report To : Steve Netto

Reported : 11/19/2012

Client Sample ID MW-29

Lab ID: 1203913-08

1,4-Dioxane by EPA 8270: Isotope Dilution Technique

Analyst: MR

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,4-Dioxane	250	10	NA	5	B2K0236	11/09/2012	11/11/12 20:34	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	<i>60.4 %</i>		<i>37 - 93</i>		B2K0236	11/09/2012	<i>11/11/12 20:34</i>	
<i>Surrogate: 2-Fluorobiphenyl</i>	<i>66.2 %</i>		<i>51 - 100</i>		B2K0236	11/09/2012	<i>11/11/12 20:34</i>	
<i>Surrogate: 4-Terphenyl-d14</i>	<i>95.7 %</i>		<i>58 - 113</i>		B2K0236	11/09/2012	<i>11/11/12 20:34</i>	
<i>Surrogate: Nitrobenzene-d5</i>	<i>60.4 %</i>		<i>39 - 95</i>		B2K0236	11/09/2012	<i>11/11/12 20:34</i>	



Certificate of Analysis

Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : Raytheon, 532.30

Report To : Steve Netto

Reported : 11/19/2012

Client Sample ID MW-26C

Lab ID: 1203913-09

Volatile Organic Compounds by EPA 8260

Analyst: SL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 09:23	
1,1,1-Trichloroethane	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 09:23	
1,1,2,2-Tetrachloroethane	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 09:23	
1,1,2-Trichloroethane	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 09:23	
1,1-Dichloroethane	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 09:23	
1,1-Dichloroethene	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 09:23	
1,1-Dichloropropene	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 09:23	
1,2,3-Trichloropropane	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 09:23	
1,2,3-Trichlorobenzene	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 09:23	
1,2,4-Trichlorobenzene	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 09:23	
1,2,4-Trimethylbenzene	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 09:23	
1,2-Dibromo-3-chloropropane	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 09:23	
1,2-Dibromoethane	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 09:23	
1,2-Dichlorobenzene	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 09:23	
1,2-Dichloroethane	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 09:23	
1,2-Dichloropropane	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 09:23	
1,3,5-Trimethylbenzene	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 09:23	
1,3-Dichlorobenzene	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 09:23	
1,3-Dichloropropane	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 09:23	
1,4-Dichlorobenzene	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 09:23	
2,2-Dichloropropane	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 09:23	
2-Chlorotoluene	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 09:23	
4-Chlorotoluene	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 09:23	
4-Isopropyltoluene	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 09:23	
Benzene	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 09:23	
Bromobenzene	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 09:23	
Bromodichloromethane	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 09:23	
Bromoform	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 09:23	
Bromomethane	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 09:23	
Carbon tetrachloride	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 09:23	
Chlorobenzene	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 09:23	
Chloroethane	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 09:23	
Chloroform	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 09:23	
Chloromethane	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 09:23	
cis-1,2-Dichloroethene	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 09:23	
cis-1,3-Dichloropropene	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 09:23	
Dibromochloromethane	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 09:23	



Certificate of Analysis

Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego, CA 92122

Project Number : Raytheon, 532.30

Report To : Steve Netto

Reported : 11/19/2012

Client Sample ID MW-26C

Lab ID: 1203913-09

Volatile Organic Compounds by EPA 8260

Analyst: SL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Dibromomethane	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 09:23	
Dichlorodifluoromethane	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 09:23	
Ethylbenzene	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 09:23	
Hexachlorobutadiene	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 09:23	
Isopropylbenzene	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 09:23	
m,p-Xylene	ND	1.0	NA	1	B2K0263	11/12/2012	11/12/12 09:23	
Methylene chloride	ND	1.0	NA	1	B2K0263	11/12/2012	11/12/12 09:23	
n-Butylbenzene	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 09:23	
n-Propylbenzene	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 09:23	
Naphthalene	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 09:23	
o-Xylene	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 09:23	
sec-Butylbenzene	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 09:23	
Styrene	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 09:23	
tert-Butylbenzene	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 09:23	
Tetrachloroethene	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 09:23	
Toluene	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 09:23	
trans-1,2-Dichloroethene	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 09:23	
Trichloroethene	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 09:23	
Trichlorofluoromethane	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 09:23	
Vinyl chloride	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 09:23	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>83.8 %</i>		<i>70 - 130</i>		B2K0263	11/12/2012	<i>11/12/12 09:23</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>79.2 %</i>		<i>70 - 130</i>		B2K0263	11/12/2012	<i>11/12/12 09:23</i>	
<i>Surrogate: Dibromofluoromethane</i>	<i>84.2 %</i>		<i>70 - 130</i>		B2K0263	11/12/2012	<i>11/12/12 09:23</i>	
<i>Surrogate: Toluene-d8</i>	<i>80.6 %</i>		<i>70 - 130</i>		B2K0263	11/12/2012	<i>11/12/12 09:23</i>	



Certificate of Analysis

Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego, CA 92122

Project Number : Raytheon, 532.30

Report To : Steve Netto

Reported : 11/19/2012

Client Sample ID MW-26C

Lab ID: 1203913-09

1,4-Dioxane by EPA 8270/SIM: Isotope Dilution Technique

Analyst: MR

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,4-Dioxane	ND	0.20	0.13	1	B2K0208	11/09/2012	11/09/12 23:43	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	<i>87.5 %</i>		<i>36 - 107</i>		B2K0208	11/09/2012	<i>11/09/12 23:43</i>	
<i>Surrogate: 2-Fluorobiphenyl</i>	<i>105 %</i>		<i>42 - 120</i>		B2K0208	11/09/2012	<i>11/09/12 23:43</i>	
<i>Surrogate: 4-Terphenyl-d14</i>	<i>109 %</i>		<i>67 - 142</i>		B2K0208	11/09/2012	<i>11/09/12 23:43</i>	
<i>Surrogate: Nitrobenzene-d5</i>	<i>109 %</i>		<i>36 - 130</i>		B2K0208	11/09/2012	<i>11/09/12 23:43</i>	



Certificate of Analysis

Hargis & Associates, Inc.

Project Number : Raytheon, 532.30

9171 Towne Centre Drive, Suite 375

Report To : Steve Netto

San Diego , CA 92122

Reported : 11/19/2012

Client Sample ID MW-34B

Lab ID: 1203913-10

Volatile Organic Compounds by EPA 8260

Analyst: SL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	1.0	NA	2	B2K0198	11/09/2012	11/09/12 11:37	D6
1,1,1-Trichloroethane	ND	1.0	NA	2	B2K0198	11/09/2012	11/09/12 11:37	D6
1,1,2,2-Tetrachloroethane	ND	1.0	NA	2	B2K0198	11/09/2012	11/09/12 11:37	D6
1,1,2-Trichloroethane	2.6	1.0	NA	2	B2K0198	11/09/2012	11/09/12 11:37	D6
1,1-Dichloroethane	7.9	1.0	NA	2	B2K0198	11/09/2012	11/09/12 11:37	D6
1,1-Dichloroethene	590	10	NA	20	B2K0198	11/09/2012	11/09/12 10:57	
1,1-Dichloropropene	ND	1.0	NA	2	B2K0198	11/09/2012	11/09/12 11:37	D6
1,2,3-Trichloropropane	ND	1.0	NA	2	B2K0198	11/09/2012	11/09/12 11:37	D6
1,2,3-Trichlorobenzene	ND	1.0	NA	2	B2K0198	11/09/2012	11/09/12 11:37	D6
1,2,4-Trichlorobenzene	ND	1.0	NA	2	B2K0198	11/09/2012	11/09/12 11:37	D6
1,2,4-Trimethylbenzene	ND	1.0	NA	2	B2K0198	11/09/2012	11/09/12 11:37	D6
1,2-Dibromo-3-chloropropane	ND	1.0	NA	2	B2K0198	11/09/2012	11/09/12 11:37	D6
1,2-Dibromoethane	ND	1.0	NA	2	B2K0198	11/09/2012	11/09/12 11:37	D6
1,2-Dichlorobenzene	ND	1.0	NA	2	B2K0198	11/09/2012	11/09/12 11:37	D6
1,2-Dichloroethane	1.7	1.0	NA	2	B2K0198	11/09/2012	11/09/12 11:37	D6
1,2-Dichloropropane	ND	1.0	NA	2	B2K0198	11/09/2012	11/09/12 11:37	D6
1,3,5-Trimethylbenzene	ND	1.0	NA	2	B2K0198	11/09/2012	11/09/12 11:37	D6
1,3-Dichlorobenzene	ND	1.0	NA	2	B2K0198	11/09/2012	11/09/12 11:37	D6
1,3-Dichloropropane	ND	1.0	NA	2	B2K0198	11/09/2012	11/09/12 11:37	D6
1,4-Dichlorobenzene	ND	1.0	NA	2	B2K0198	11/09/2012	11/09/12 11:37	D6
2,2-Dichloropropane	ND	1.0	NA	2	B2K0198	11/09/2012	11/09/12 11:37	D6
2-Chlorotoluene	ND	1.0	NA	2	B2K0198	11/09/2012	11/09/12 11:37	D6
4-Chlorotoluene	ND	1.0	NA	2	B2K0198	11/09/2012	11/09/12 11:37	D6
4-Isopropyltoluene	ND	1.0	NA	2	B2K0198	11/09/2012	11/09/12 11:37	D6
Benzene	ND	1.0	NA	2	B2K0198	11/09/2012	11/09/12 11:37	D6
Bromobenzene	ND	1.0	NA	2	B2K0198	11/09/2012	11/09/12 11:37	D6
Bromodichloromethane	ND	1.0	NA	2	B2K0198	11/09/2012	11/09/12 11:37	D6
Bromoform	ND	1.0	NA	2	B2K0198	11/09/2012	11/09/12 11:37	D6
Bromomethane	ND	1.0	NA	2	B2K0198	11/09/2012	11/09/12 11:37	D6
Carbon tetrachloride	ND	1.0	NA	2	B2K0198	11/09/2012	11/09/12 11:37	D6
Chlorobenzene	ND	1.0	NA	2	B2K0198	11/09/2012	11/09/12 11:37	D6
Chloroethane	ND	1.0	NA	2	B2K0198	11/09/2012	11/09/12 11:37	D6
Chloroform	ND	1.0	NA	2	B2K0198	11/09/2012	11/09/12 11:37	D6
Chloromethane	ND	1.0	NA	2	B2K0198	11/09/2012	11/09/12 11:37	D6
cis-1,2-Dichloroethene	ND	1.0	NA	2	B2K0198	11/09/2012	11/09/12 11:37	D6
cis-1,3-Dichloropropane	ND	1.0	NA	2	B2K0198	11/09/2012	11/09/12 11:37	D6
Dibromochloromethane	ND	1.0	NA	2	B2K0198	11/09/2012	11/09/12 11:37	D6



Certificate of Analysis

Hargis & Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122

Project Number : Raytheon, 532.30
 Report To : Steve Netto
 Reported : 11/19/2012

Client Sample ID MW-34B
Lab ID: 1203913-10

Volatile Organic Compounds by EPA 8260

Analyst: SL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Dibromomethane	ND	1.0	NA	2	B2K0198	11/09/2012	11/09/12 11:37	D6
Dichlorodifluoromethane	ND	1.0	NA	2	B2K0198	11/09/2012	11/09/12 11:37	D6
Ethylbenzene	ND	1.0	NA	2	B2K0198	11/09/2012	11/09/12 11:37	D6
Hexachlorobutadiene	ND	1.0	NA	2	B2K0198	11/09/2012	11/09/12 11:37	D6
Isopropylbenzene	ND	1.0	NA	2	B2K0198	11/09/2012	11/09/12 11:37	D6
m,p-Xylene	ND	2.0	NA	2	B2K0198	11/09/2012	11/09/12 11:37	D6
Methylene chloride	ND	2.0	NA	2	B2K0198	11/09/2012	11/09/12 11:37	D6
n-Butylbenzene	ND	1.0	NA	2	B2K0198	11/09/2012	11/09/12 11:37	D6
n-Propylbenzene	ND	1.0	NA	2	B2K0198	11/09/2012	11/09/12 11:37	D6
Naphthalene	ND	1.0	NA	2	B2K0198	11/09/2012	11/09/12 11:37	D6
o-Xylene	ND	1.0	NA	2	B2K0198	11/09/2012	11/09/12 11:37	D6
sec-Butylbenzene	ND	1.0	NA	2	B2K0198	11/09/2012	11/09/12 11:37	D6
Styrene	ND	1.0	NA	2	B2K0198	11/09/2012	11/09/12 11:37	D6
tert-Butylbenzene	ND	1.0	NA	2	B2K0198	11/09/2012	11/09/12 11:37	D6
Tetrachloroethene	ND	1.0	NA	2	B2K0198	11/09/2012	11/09/12 11:37	D6
Toluene	ND	1.0	NA	2	B2K0198	11/09/2012	11/09/12 11:37	D6
trans-1,2-Dichloroethene	ND	1.0	NA	2	B2K0198	11/09/2012	11/09/12 11:37	D6
Trichloroethene	1.4	1.0	NA	2	B2K0198	11/09/2012	11/09/12 11:37	D6
Trichlorofluoromethane	ND	1.0	NA	2	B2K0198	11/09/2012	11/09/12 11:37	D6
Vinyl chloride	ND	1.0	NA	2	B2K0198	11/09/2012	11/09/12 11:37	D6
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>100 %</i>		<i>70 - 130</i>		B2K0198	11/09/2012	<i>11/09/12 11:37</i>	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>100 %</i>		<i>70 - 130</i>		B2K0198	11/09/2012	<i>11/09/12 10:57</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>93.3 %</i>		<i>70 - 130</i>		B2K0198	11/09/2012	<i>11/09/12 11:37</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>92.4 %</i>		<i>70 - 130</i>		B2K0198	11/09/2012	<i>11/09/12 10:57</i>	
<i>Surrogate: Dibromofluoromethane</i>	<i>94.3 %</i>		<i>70 - 130</i>		B2K0198	11/09/2012	<i>11/09/12 10:57</i>	
<i>Surrogate: Dibromofluoromethane</i>	<i>93.7 %</i>		<i>70 - 130</i>		B2K0198	11/09/2012	<i>11/09/12 11:37</i>	
<i>Surrogate: Toluene-d8</i>	<i>82.6 %</i>		<i>70 - 130</i>		B2K0198	11/09/2012	<i>11/09/12 11:37</i>	
<i>Surrogate: Toluene-d8</i>	<i>85.2 %</i>		<i>70 - 130</i>		B2K0198	11/09/2012	<i>11/09/12 10:57</i>	



Certificate of Analysis

Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego, CA 92122

Project Number : Raytheon, 532.30

Report To : Steve Netto

Reported : 11/19/2012

Client Sample ID MW-34B

Lab ID: 1203913-10

1,4-Dioxane by EPA 8270: Isotope Dilution Technique

Analyst: MR

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,4-Dioxane	260	10	NA	5	B2K0236	11/09/2012	11/11/12 20:07	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	<i>66.2 %</i>		<i>37 - 93</i>		B2K0236	11/09/2012	<i>11/11/12 20:07</i>	
<i>Surrogate: 2-Fluorobiphenyl</i>	<i>73.4 %</i>		<i>51 - 100</i>		B2K0236	11/09/2012	<i>11/11/12 20:07</i>	
<i>Surrogate: 4-Terphenyl-d14</i>	<i>93.6 %</i>		<i>58 - 113</i>		B2K0236	11/09/2012	<i>11/11/12 20:07</i>	
<i>Surrogate: Nitrobenzene-d5</i>	<i>67.2 %</i>		<i>39 - 95</i>		B2K0236	11/09/2012	<i>11/11/12 20:07</i>	



Certificate of Analysis

Hargis & Associates, Inc.

Project Number : Raytheon, 532.30

9171 Towne Centre Drive, Suite 375

Report To : Steve Netto

San Diego , CA 92122

Reported : 11/19/2012

Client Sample ID MW-08

Lab ID: 1203913-11

Volatile Organic Compounds by EPA 8260

Analyst: SL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 11:26	
1,1,1-Trichloroethane	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 11:26	
1,1,2,2-Tetrachloroethane	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 11:26	
1,1,2-Trichloroethane	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 11:26	
1,1-Dichloroethane	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 11:26	
1,1-Dichloroethene	22	0.50	NA	1	B2K0263	11/12/2012	11/12/12 11:26	
1,1-Dichloropropene	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 11:26	
1,2,3-Trichloropropane	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 11:26	
1,2,3-Trichlorobenzene	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 11:26	
1,2,4-Trichlorobenzene	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 11:26	
1,2,4-Trimethylbenzene	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 11:26	
1,2-Dibromo-3-chloropropane	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 11:26	
1,2-Dibromoethane	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 11:26	
1,2-Dichlorobenzene	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 11:26	
1,2-Dichloroethane	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 11:26	
1,2-Dichloropropane	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 11:26	
1,3,5-Trimethylbenzene	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 11:26	
1,3-Dichlorobenzene	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 11:26	
1,3-Dichloropropane	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 11:26	
1,4-Dichlorobenzene	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 11:26	
2,2-Dichloropropane	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 11:26	
2-Chlorotoluene	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 11:26	
4-Chlorotoluene	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 11:26	
4-Isopropyltoluene	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 11:26	
Benzene	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 11:26	
Bromobenzene	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 11:26	
Bromodichloromethane	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 11:26	
Bromoform	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 11:26	
Bromomethane	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 11:26	
Carbon tetrachloride	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 11:26	
Chlorobenzene	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 11:26	
Chloroethane	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 11:26	
Chloroform	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 11:26	
Chloromethane	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 11:26	
cis-1,2-Dichloroethene	2.6	0.50	NA	1	B2K0263	11/12/2012	11/12/12 11:26	
cis-1,3-Dichloropropane	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 11:26	
Dibromochloromethane	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 11:26	



Certificate of Analysis

Hargis & Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego , CA 92122

Project Number : Raytheon, 532.30
 Report To : Steve Netto
 Reported : 11/19/2012

Client Sample ID MW-08
Lab ID: 1203913-11

Volatile Organic Compounds by EPA 8260

Analyst: SL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Dibromomethane	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 11:26	
Dichlorodifluoromethane	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 11:26	
Ethylbenzene	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 11:26	
Hexachlorobutadiene	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 11:26	
Isopropylbenzene	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 11:26	
m,p-Xylene	ND	1.0	NA	1	B2K0263	11/12/2012	11/12/12 11:26	
Methylene chloride	ND	1.0	NA	1	B2K0263	11/12/2012	11/12/12 11:26	
n-Butylbenzene	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 11:26	
n-Propylbenzene	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 11:26	
Naphthalene	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 11:26	
o-Xylene	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 11:26	
sec-Butylbenzene	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 11:26	
Styrene	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 11:26	
tert-Butylbenzene	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 11:26	
Tetrachloroethene	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 11:26	
Toluene	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 11:26	
trans-1,2-Dichloroethene	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 11:26	
Trichloroethene	57	0.50	NA	1	B2K0263	11/12/2012	11/12/12 11:26	
Trichlorofluoromethane	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 11:26	
Vinyl chloride	ND	0.50	NA	1	B2K0263	11/12/2012	11/12/12 11:26	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>85.4 %</i>		<i>70 - 130</i>		B2K0263	11/12/2012	<i>11/12/12 11:26</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>81.0 %</i>		<i>70 - 130</i>		B2K0263	11/12/2012	<i>11/12/12 11:26</i>	
<i>Surrogate: Dibromofluoromethane</i>	<i>86.4 %</i>		<i>70 - 130</i>		B2K0263	11/12/2012	<i>11/12/12 11:26</i>	
<i>Surrogate: Toluene-d8</i>	<i>77.9 %</i>		<i>70 - 130</i>		B2K0263	11/12/2012	<i>11/12/12 11:26</i>	



Certificate of Analysis

Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego, CA 92122

Project Number : Raytheon, 532.30

Report To : Steve Netto

Reported : 11/19/2012

Client Sample ID MW-08

Lab ID: 1203913-11

1,4-Dioxane by EPA 8270: Isotope Dilution Technique

Analyst: MR

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,4-Dioxane	4.4	2.0	NA	1	B2K0236	11/09/2012	11/11/12 18:46	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	<i>64.4 %</i>		<i>37 - 93</i>		B2K0236	11/09/2012	<i>11/11/12 18:46</i>	
<i>Surrogate: 2-Fluorobiphenyl</i>	<i>73.9 %</i>		<i>51 - 100</i>		B2K0236	11/09/2012	<i>11/11/12 18:46</i>	
<i>Surrogate: 4-Terphenyl-d14</i>	<i>106 %</i>		<i>58 - 113</i>		B2K0236	11/09/2012	<i>11/11/12 18:46</i>	
<i>Surrogate: Nitrobenzene-d5</i>	<i>73.9 %</i>		<i>39 - 95</i>		B2K0236	11/09/2012	<i>11/11/12 18:46</i>	



Certificate of Analysis

Hargis & Associates, Inc.

Project Number : Raytheon, 532.30

9171 Towne Centre Drive, Suite 375

Report To : Steve Netto

San Diego , CA 92122

Reported : 11/19/2012

Client Sample ID RB-11072012

Lab ID: 1203913-12

Volatile Organic Compounds by EPA 8260

Analyst: SL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 10:16	
1,1,1-Trichloroethane	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 10:16	
1,1,2,2-Tetrachloroethane	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 10:16	
1,1,2-Trichloroethane	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 10:16	
1,1-Dichloroethane	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 10:16	
1,1-Dichloroethene	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 10:16	
1,1-Dichloropropene	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 10:16	
1,2,3-Trichloropropane	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 10:16	
1,2,3-Trichlorobenzene	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 10:16	
1,2,4-Trichlorobenzene	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 10:16	
1,2,4-Trimethylbenzene	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 10:16	
1,2-Dibromo-3-chloropropane	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 10:16	
1,2-Dibromoethane	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 10:16	
1,2-Dichlorobenzene	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 10:16	
1,2-Dichloroethane	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 10:16	
1,2-Dichloropropane	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 10:16	
1,3,5-Trimethylbenzene	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 10:16	
1,3-Dichlorobenzene	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 10:16	
1,3-Dichloropropane	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 10:16	
1,4-Dichlorobenzene	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 10:16	
2,2-Dichloropropane	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 10:16	
2-Chlorotoluene	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 10:16	
4-Chlorotoluene	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 10:16	
4-Isopropyltoluene	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 10:16	
Benzene	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 10:16	
Bromobenzene	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 10:16	
Bromodichloromethane	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 10:16	
Bromoform	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 10:16	
Bromomethane	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 10:16	
Carbon tetrachloride	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 10:16	
Chlorobenzene	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 10:16	
Chloroethane	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 10:16	
Chloroform	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 10:16	
Chloromethane	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 10:16	
cis-1,2-Dichloroethene	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 10:16	
cis-1,3-Dichloropropene	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 10:16	
Dibromochloromethane	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 10:16	



Certificate of Analysis

Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : Raytheon, 532.30

Report To : Steve Netto

Reported : 11/19/2012

Client Sample ID RB-11072012

Lab ID: 1203913-12

Volatile Organic Compounds by EPA 8260

Analyst: SL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Dibromomethane	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 10:16	
Dichlorodifluoromethane	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 10:16	
Ethylbenzene	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 10:16	
Hexachlorobutadiene	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 10:16	
Isopropylbenzene	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 10:16	
m,p-Xylene	ND	1.0	NA	1	B2K0198	11/09/2012	11/09/12 10:16	
Methylene chloride	ND	1.0	NA	1	B2K0198	11/09/2012	11/09/12 10:16	
n-Butylbenzene	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 10:16	
n-Propylbenzene	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 10:16	
Naphthalene	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 10:16	
o-Xylene	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 10:16	
sec-Butylbenzene	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 10:16	
Styrene	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 10:16	
tert-Butylbenzene	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 10:16	
Tetrachloroethene	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 10:16	
Toluene	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 10:16	
trans-1,2-Dichloroethene	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 10:16	
Trichloroethene	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 10:16	
Trichlorofluoromethane	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 10:16	
Vinyl chloride	ND	0.50	NA	1	B2K0198	11/09/2012	11/09/12 10:16	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>97.1 %</i>		<i>70 - 130</i>		B2K0198	11/09/2012	<i>11/09/12 10:16</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>91.9 %</i>		<i>70 - 130</i>		B2K0198	11/09/2012	<i>11/09/12 10:16</i>	
<i>Surrogate: Dibromofluoromethane</i>	<i>92.0 %</i>		<i>70 - 130</i>		B2K0198	11/09/2012	<i>11/09/12 10:16</i>	
<i>Surrogate: Toluene-d8</i>	<i>84.2 %</i>		<i>70 - 130</i>		B2K0198	11/09/2012	<i>11/09/12 10:16</i>	



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Reported : 11/19/2012

QUALITY CONTROL SECTION

Volatile Organic Compounds by EPA 8260 - Quality Control

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B2K0150 - MSVOAW_LL

Blank (B2K0150-BLK1)

Prepared: 11/8/2012 Analyzed: 11/8/2012

1,1,1,2-Tetrachloroethane	ND	0.50			NR				
1,1,1-Trichloroethane	ND	0.50			NR				
1,1,2,2-Tetrachloroethane	ND	0.50			NR				
1,1,2-Trichloroethane	ND	0.50			NR				
1,1-Dichloroethane	ND	0.50			NR				
1,1-Dichloroethene	ND	0.50			NR				
1,1-Dichloropropene	ND	0.50			NR				
1,2,3-Trichloropropane	ND	0.50			NR				
1,2,3-Trichlorobenzene	ND	0.50			NR				
1,2,4-Trichlorobenzene	ND	0.50			NR				
1,2,4-Trimethylbenzene	ND	0.50			NR				
1,2-Dibromo-3-chloropropane	ND	0.50			NR				
1,2-Dibromoethane	ND	0.50			NR				
1,2-Dichlorobenzene	ND	0.50			NR				
1,2-Dichloroethane	ND	0.50			NR				
1,2-Dichloropropane	ND	0.50			NR				
1,3,5-Trimethylbenzene	ND	0.50			NR				
1,3-Dichlorobenzene	ND	0.50			NR				
1,3-Dichloropropane	ND	0.50			NR				
1,4-Dichlorobenzene	ND	0.50			NR				
2,2-Dichloropropane	ND	0.50			NR				
2-Chlorotoluene	ND	0.50			NR				
4-Chlorotoluene	ND	0.50			NR				
4-Isopropyltoluene	ND	0.50			NR				
Benzene	ND	0.50			NR				
Bromobenzene	ND	0.50			NR				
Bromodichloromethane	ND	0.50			NR				
Bromoform	ND	0.50			NR				
Bromomethane	ND	0.50			NR				
Carbon tetrachloride	ND	0.50			NR				
Chlorobenzene	ND	0.50			NR				
Chloroethane	ND	0.50			NR				
Chloroform	ND	0.50			NR				
Chloromethane	ND	0.50			NR				
cis-1,2-Dichloroethene	ND	0.50			NR				
cis-1,3-Dichloropropene	ND	0.50			NR				
Dibromochloromethane	ND	0.50			NR				
Dibromomethane	ND	0.50			NR				
Dichlorodifluoromethane	ND	0.50			NR				



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Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : Raytheon, 532.30

Report To : Steve Netto

Reported : 11/19/2012

Volatile Organic Compounds by EPA 8260 - Quality Control (cont'd)

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B2K0150 - MSVOAW_LL (continued)

Blank (B2K0150-BLK1) - Continued

Prepared: 11/8/2012 Analyzed: 11/8/2012

Ethylbenzene	ND	0.50				NR			
Hexachlorobutadiene	ND	0.50				NR			
Isopropylbenzene	ND	0.50				NR			
m,p-Xylene	ND	1.0				NR			
Methylene chloride	ND	1.0				NR			
n-Butylbenzene	ND	0.50				NR			
n-Propylbenzene	ND	0.50				NR			
Naphthalene	ND	0.50				NR			
o-Xylene	ND	0.50				NR			
sec-Butylbenzene	ND	0.50				NR			
Styrene	ND	0.50				NR			
tert-Butylbenzene	ND	0.50				NR			
Tetrachloroethene	ND	0.50				NR			
Toluene	ND	0.50				NR			
trans-1,2-Dichloroethene	ND	0.50				NR			
Trichloroethene	ND	0.50				NR			
Trichlorofluoromethane	ND	0.50				NR			
Vinyl chloride	ND	0.50				NR			

<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>19.70</i>		<i>25.0000</i>		<i>78.8</i>	<i>70 - 130</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>19.58</i>		<i>25.0000</i>		<i>78.3</i>	<i>70 - 130</i>			
<i>Surrogate: Dibromofluoromethane</i>	<i>20.81</i>		<i>25.0000</i>		<i>83.2</i>	<i>70 - 130</i>			
<i>Surrogate: Toluene-d8</i>	<i>20.10</i>		<i>25.0000</i>		<i>80.4</i>	<i>70 - 130</i>			

LCS (B2K0150-BS1)

Prepared: 11/8/2012 Analyzed: 11/8/2012

1,1-Dichloroethene	20.5700		20.0000		103	70 - 130			
Benzene	35.6100		40.0000		89.0	70 - 130			
Chlorobenzene	18.2800		20.0000		91.4	70 - 130			
MTBE	17.5100		20.0000		87.6	70 - 130			
Toluene	36.2400		40.0000		90.6	70 - 130			
Trichloroethene	18.4800		20.0000		92.4	70 - 130			

<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>19.72</i>		<i>25.0000</i>		<i>78.9</i>	<i>70 - 130</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>20.77</i>		<i>25.0000</i>		<i>83.1</i>	<i>70 - 130</i>			
<i>Surrogate: Dibromofluoromethane</i>	<i>20.56</i>		<i>25.0000</i>		<i>82.2</i>	<i>70 - 130</i>			
<i>Surrogate: Toluene-d8</i>	<i>20.28</i>		<i>25.0000</i>		<i>81.1</i>	<i>70 - 130</i>			

LCS Dup (B2K0150-BSD1)

Prepared: 11/8/2012 Analyzed: 11/8/2012

1,1-Dichloroethene	19.4400		20.0000		97.2	70 - 130	5.65	20	
Benzene	35.1800		40.0000		88.0	70 - 130	1.21	20	
Chlorobenzene	17.8400		20.0000		89.2	70 - 130	2.44	20	
MTBE	17.1800		20.0000		85.9	70 - 130	1.90	20	
Toluene	35.5900		40.0000		89.0	70 - 130	1.81	20	



Certificate of Analysis

Hargis & Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122

Project Number : Raytheon, 532.30
 Report To : Steve Netto
 Reported : 11/19/2012

Volatile Organic Compounds by EPA 8260 - Quality Control (cont'd)

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec % Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B2K0150 - MSVOAW_LL (continued)

LCS Dup (B2K0150-BSD1) - Continued

Prepared: 11/8/2012 Analyzed: 11/8/2012

Trichloroethene	18.0800		20.0000		90.4	70 - 130	2.19	20	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>19.16</i>		<i>25.0000</i>		<i>76.6</i>	<i>70 - 130</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>20.72</i>		<i>25.0000</i>		<i>82.9</i>	<i>70 - 130</i>			
<i>Surrogate: Dibromofluoromethane</i>	<i>19.86</i>		<i>25.0000</i>		<i>79.4</i>	<i>70 - 130</i>			
<i>Surrogate: Toluene-d8</i>	<i>20.20</i>		<i>25.0000</i>		<i>80.8</i>	<i>70 - 130</i>			

Matrix Spike (B2K0150-MS1)

Source: 1203894-02

Prepared: 11/8/2012 Analyzed: 11/8/2012

1,1-Dichloroethene	22.8400		20.0000	ND	114	70 - 130			
Benzene	37.2700		40.0000	ND	93.2	70 - 130			
Chlorobenzene	18.7800		20.0000	ND	93.9	70 - 130			
MTBE	16.2800		20.0000	ND	81.4	70 - 130			
Toluene	38.1400		40.0000	ND	95.4	70 - 130			
Trichloroethene	19.4800		20.0000	ND	97.4	70 - 130			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>20.53</i>		<i>25.0000</i>		<i>82.1</i>	<i>70 - 130</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>21.56</i>		<i>25.0000</i>		<i>86.2</i>	<i>70 - 130</i>			
<i>Surrogate: Dibromofluoromethane</i>	<i>20.62</i>		<i>25.0000</i>		<i>82.5</i>	<i>70 - 130</i>			
<i>Surrogate: Toluene-d8</i>	<i>20.41</i>		<i>25.0000</i>		<i>81.6</i>	<i>70 - 130</i>			

Matrix Spike Dup (B2K0150-MSD1)

Source: 1203894-02

Prepared: 11/8/2012 Analyzed: 11/8/2012

1,1-Dichloroethene	21.4200		20.0000	ND	107	70 - 130	6.42	20	
Benzene	36.7600		40.0000	ND	91.9	70 - 130	1.38	20	
Chlorobenzene	18.6100		20.0000	ND	93.0	70 - 130	0.909	20	
MTBE	17.8600		20.0000	ND	89.3	70 - 130	9.26	20	
Toluene	37.3400		40.0000	ND	93.4	70 - 130	2.12	20	
Trichloroethene	19.2600		20.0000	ND	96.3	70 - 130	1.14	20	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>20.05</i>		<i>25.0000</i>		<i>80.2</i>	<i>70 - 130</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>21.32</i>		<i>25.0000</i>		<i>85.3</i>	<i>70 - 130</i>			
<i>Surrogate: Dibromofluoromethane</i>	<i>20.25</i>		<i>25.0000</i>		<i>81.0</i>	<i>70 - 130</i>			
<i>Surrogate: Toluene-d8</i>	<i>20.32</i>		<i>25.0000</i>		<i>81.3</i>	<i>70 - 130</i>			

Batch B2K0198 - MSVOAW_LL

Blank (B2K0198-BLK1)

Prepared: 11/9/2012 Analyzed: 11/9/2012

1,1,1,2-Tetrachloroethane	ND	0.50		NR					
1,1,1-Trichloroethane	ND	0.50		NR					
1,1,2,2-Tetrachloroethane	ND	0.50		NR					
1,1,2-Trichloroethane	ND	0.50		NR					
1,1-Dichloroethane	ND	0.50		NR					
1,1-Dichloroethene	ND	0.50		NR					
1,1-Dichloropropene	ND	0.50		NR					
1,2,3-Trichloropropane	ND	0.50		NR					



Certificate of Analysis

Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego, CA 92122

Project Number : Raytheon, 532.30

Report To : Steve Netto

Reported : 11/19/2012

Volatile Organic Compounds by EPA 8260 - Quality Control (cont'd)

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B2K0198 - MSVOAW_LL (continued)

Blank (B2K0198-BLK1) - Continued

Prepared: 11/9/2012 Analyzed: 11/9/2012

1,2,3-Trichlorobenzene	ND	0.50				NR			
1,2,4-Trichlorobenzene	ND	0.50				NR			
1,2,4-Trimethylbenzene	ND	0.50				NR			
1,2-Dibromo-3-chloropropane	ND	0.50				NR			
1,2-Dibromoethane	ND	0.50				NR			
1,2-Dichlorobenzene	ND	0.50				NR			
1,2-Dichloroethane	ND	0.50				NR			
1,2-Dichloropropane	ND	0.50				NR			
1,3,5-Trimethylbenzene	ND	0.50				NR			
1,3-Dichlorobenzene	ND	0.50				NR			
1,3-Dichloropropane	ND	0.50				NR			
1,4-Dichlorobenzene	ND	0.50				NR			
2,2-Dichloropropane	ND	0.50				NR			
2-Chlorotoluene	ND	0.50				NR			
4-Chlorotoluene	ND	0.50				NR			
4-Isopropyltoluene	ND	0.50				NR			
Benzene	ND	0.50				NR			
Bromobenzene	ND	0.50				NR			
Bromodichloromethane	ND	0.50				NR			
Bromoform	ND	0.50				NR			
Bromomethane	ND	0.50				NR			
Carbon tetrachloride	ND	0.50				NR			
Chlorobenzene	ND	0.50				NR			
Chloroethane	ND	0.50				NR			
Chloroform	ND	0.50				NR			
Chloromethane	ND	0.50				NR			
cis-1,2-Dichloroethene	ND	0.50				NR			
cis-1,3-Dichloropropene	ND	0.50				NR			
Dibromochloromethane	ND	0.50				NR			
Dibromomethane	ND	0.50				NR			
Dichlorodifluoromethane	ND	0.50				NR			
Ethylbenzene	ND	0.50				NR			
Hexachlorobutadiene	ND	0.50				NR			
Isopropylbenzene	ND	0.50				NR			
m,p-Xylene	ND	1.0				NR			
Methylene chloride	ND	1.0				NR			
n-Butylbenzene	ND	0.50				NR			
n-Propylbenzene	ND	0.50				NR			
Naphthalene	ND	0.50				NR			
o-Xylene	ND	0.50				NR			
sec-Butylbenzene	ND	0.50				NR			
Styrene	ND	0.50				NR			



Certificate of Analysis

Hargis & Associates, Inc.

Project Number : Raytheon, 532.30

9171 Towne Centre Drive, Suite 375

Report To : Steve Netto

San Diego , CA 92122

Reported : 11/19/2012

Volatile Organic Compounds by EPA 8260 - Quality Control (cont'd)

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec % Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B2K0198 - MSVOAW_LL (continued)

Blank (B2K0198-BLK1) - Continued

Prepared: 11/9/2012 Analyzed: 11/9/2012

tert-Butylbenzene	ND	0.50			NR				
Tetrachloroethene	ND	0.50			NR				
Toluene	ND	0.50			NR				
trans-1,2-Dichloroethene	ND	0.50			NR				
Trichloroethene	ND	0.50			NR				
Trichlorofluoromethane	ND	0.50			NR				
Vinyl chloride	ND	0.50			NR				

<i>Surrogate: 1,2-Dichloroethane-d4</i>	24.95		25.0000		99.8	70 - 130			
<i>Surrogate: 4-Bromofluorobenzene</i>	24.26		25.0000		97.0	70 - 130			
<i>Surrogate: Dibromofluoromethane</i>	23.58		25.0000		94.3	70 - 130			
<i>Surrogate: Toluene-d8</i>	22.24		25.0000		89.0	70 - 130			

LCS (B2K0198-BS1)

Prepared: 11/9/2012 Analyzed: 11/9/2012

1,1-Dichloroethene	18.5000		20.0000		92.5	70 - 130			
Benzene	40.5000		40.0000		101	70 - 130			
Chlorobenzene	20.6100		20.0000		103	70 - 130			
MTBE	19.6700		20.0000		98.4	70 - 130			
Toluene	40.7200		40.0000		102	70 - 130			
Trichloroethene	20.0500		20.0000		100	70 - 130			

<i>Surrogate: 1,2-Dichloroethane-d4</i>	23.40		25.0000		93.6	70 - 130			
<i>Surrogate: 4-Bromofluorobenzene</i>	23.85		25.0000		95.4	70 - 130			
<i>Surrogate: Dibromofluoromethane</i>	22.57		25.0000		90.3	70 - 130			
<i>Surrogate: Toluene-d8</i>	22.60		25.0000		90.4	70 - 130			

LCS Dup (B2K0198-BSD1)

Prepared: 11/9/2012 Analyzed: 11/9/2012

1,1-Dichloroethene	18.5300		20.0000	498.140	196	70 - 130	0.162	20	
Benzene	40.0800		40.0000	ND	105	70 - 130	1.04	20	
Chlorobenzene	20.2000		20.0000	ND	115	70 - 130	2.01	20	
MTBE	21.1300		20.0000	ND	98.6	70 - 130	7.16	20	
Toluene	41.0100		40.0000	ND	115	70 - 130	0.710	20	
Trichloroethene	19.8500		20.0000	ND	98.6	70 - 130	1.00	20	

<i>Surrogate: 1,2-Dichloroethane-d4</i>	23.87		25.0000		95.5	70 - 130			
<i>Surrogate: 4-Bromofluorobenzene</i>	22.36		25.0000		89.4	70 - 130			
<i>Surrogate: Dibromofluoromethane</i>	22.11		25.0000		88.4	70 - 130			
<i>Surrogate: Toluene-d8</i>	22.31		25.0000		89.2	70 - 130			

Matrix Spike (B2K0198-MS1)

Source: 1203913-10

Prepared: 11/9/2012 Analyzed: 11/9/2012

1,1-Dichloroethene	537.380		20.0000	498.140	196	70 - 130			M3
Benzene	42.0800		40.0000	ND	105	70 - 130			
Chlorobenzene	22.9200		20.0000	ND	115	70 - 130			
MTBE	19.7300		20.0000	ND	98.6	70 - 130			



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Project Number : Raytheon, 532.30

9171 Towne Centre Drive, Suite 375

Report To : Steve Netto

San Diego , CA 92122

Reported : 11/19/2012

Volatile Organic Compounds by EPA 8260 - Quality Control (cont'd)

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B2K0198 - MSVOAW_LL (continued)

Matrix Spike (B2K0198-MS1) - Continued

Source: 1203913-10

Prepared: 11/9/2012 Analyzed: 11/9/2012

Toluene	43.7700		40.0000	ND	109	70 - 130			
Trichloroethene	22.2800		20.0000	1.40000	104	70 - 130			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>22.90</i>		<i>25.0000</i>		<i>91.6</i>	<i>70 - 130</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>23.19</i>		<i>25.0000</i>		<i>92.8</i>	<i>70 - 130</i>			
<i>Surrogate: Dibromofluoromethane</i>	<i>21.56</i>		<i>25.0000</i>		<i>86.2</i>	<i>70 - 130</i>			
<i>Surrogate: Toluene-d8</i>	<i>21.57</i>		<i>25.0000</i>		<i>86.3</i>	<i>70 - 130</i>			

Matrix Spike Dup (B2K0198-MSD1)

Source: 1203913-10

Prepared: 11/9/2012 Analyzed: 11/9/2012

1,1-Dichloroethene	478.880		20.0000	498.140	-96.3	70 - 130	11.5	20	M3
Benzene	39.7000		40.0000	ND	99.2	70 - 130	5.82	20	
Chlorobenzene	22.3400		20.0000	ND	112	70 - 130	2.56	20	
MTBE	19.1200		20.0000	ND	95.6	70 - 130	3.14	20	
Toluene	40.9800		40.0000	ND	102	70 - 130	6.58	20	
Trichloroethene	21.6000		20.0000	1.40000	101	70 - 130	3.10	20	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>21.60</i>		<i>25.0000</i>		<i>86.4</i>	<i>70 - 130</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>22.22</i>		<i>25.0000</i>		<i>88.9</i>	<i>70 - 130</i>			
<i>Surrogate: Dibromofluoromethane</i>	<i>20.23</i>		<i>25.0000</i>		<i>80.9</i>	<i>70 - 130</i>			
<i>Surrogate: Toluene-d8</i>	<i>20.57</i>		<i>25.0000</i>		<i>82.3</i>	<i>70 - 130</i>			

Batch B2K0263 - MSVOAW_LL

Blank (B2K0263-BLK1)

Prepared: 11/12/2012 Analyzed: 11/12/2012

1,1,1,2-Tetrachloroethane	ND	0.50		NR
1,1,1-Trichloroethane	ND	0.50		NR
1,1,2,2-Tetrachloroethane	ND	0.50		NR
1,1,2-Trichloroethane	ND	0.50		NR
1,1-Dichloroethane	ND	0.50		NR
1,1-Dichloroethene	ND	0.50		NR
1,1-Dichloropropene	ND	0.50		NR
1,2,3-Trichloropropane	ND	0.50		NR
1,2,3-Trichlorobenzene	ND	0.50		NR
1,2,4-Trichlorobenzene	ND	0.50		NR
1,2,4-Trimethylbenzene	ND	0.50		NR
1,2-Dibromo-3-chloropropane	ND	0.50		NR
1,2-Dibromoethane	ND	0.50		NR
1,2-Dichlorobenzene	ND	0.50		NR
1,2-Dichloroethane	ND	0.50		NR
1,2-Dichloropropane	ND	0.50		NR
1,3,5-Trimethylbenzene	ND	0.50		NR
1,3-Dichlorobenzene	ND	0.50		NR
1,3-Dichloropropane	ND	0.50		NR



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9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : Raytheon, 532.30

Report To : Steve Netto

Reported : 11/19/2012

Volatile Organic Compounds by EPA 8260 - Quality Control (cont'd)

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec % Rec	Limits Limits	RPD RPD	Limit Limit	Notes
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Batch B2K0263 - MSVOAW_LL (continued)

Blank (B2K0263-BLK1) - Continued

Prepared: 11/12/2012 Analyzed: 11/12/2012

1,4-Dichlorobenzene	ND	0.50			NR				
2,2-Dichloropropane	ND	0.50			NR				
2-Chlorotoluene	ND	0.50			NR				
4-Chlorotoluene	ND	0.50			NR				
4-Isopropyltoluene	ND	0.50			NR				
Benzene	ND	0.50			NR				
Bromobenzene	ND	0.50			NR				
Bromodichloromethane	ND	0.50			NR				
Bromoform	ND	0.50			NR				
Bromomethane	ND	0.50			NR				
Carbon tetrachloride	ND	0.50			NR				
Chlorobenzene	ND	0.50			NR				
Chloroethane	ND	0.50			NR				
Chloroform	ND	0.50			NR				
Chloromethane	ND	0.50			NR				
cis-1,2-Dichloroethene	ND	0.50			NR				
cis-1,3-Dichloropropene	ND	0.50			NR				
Dibromochloromethane	ND	0.50			NR				
Dibromomethane	ND	0.50			NR				
Dichlorodifluoromethane	ND	0.50			NR				
Ethylbenzene	ND	0.50			NR				
Hexachlorobutadiene	ND	0.50			NR				
Isopropylbenzene	ND	0.50			NR				
m,p-Xylene	ND	1.0			NR				
Methylene chloride	ND	1.0			NR				
n-Butylbenzene	ND	0.50			NR				
n-Propylbenzene	ND	0.50			NR				
Naphthalene	ND	0.50			NR				
o-Xylene	ND	0.50			NR				
sec-Butylbenzene	ND	0.50			NR				
Styrene	ND	0.50			NR				
tert-Butylbenzene	ND	0.50			NR				
Tetrachloroethene	ND	0.50			NR				
Toluene	ND	0.50			NR				
trans-1,2-Dichloroethene	ND	0.50			NR				
Trichloroethene	ND	0.50			NR				
Trichlorofluoromethane	ND	0.50			NR				
Vinyl chloride	ND	0.50			NR				
<hr/>									
Surrogate: 1,2-Dichloroethane-d4	20.37		25.0000		81.5	70 - 130			
Surrogate: 4-Bromofluorobenzene	19.75		25.0000		79.0	70 - 130			
Surrogate: Dibromofluoromethane	21.20		25.0000		84.8	70 - 130			



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Project Number : Raytheon, 532.30
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 Reported : 11/19/2012

Volatile Organic Compounds by EPA 8260 - Quality Control (cont'd)

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B2K0263 - MSVOAW_LL (continued)									
Blank (B2K0263-BLK1) - Continued					Prepared: 11/12/2012 Analyzed: 11/12/2012				
<i>Surrogate: Toluene-d8</i>	20.13		25.0000		80.5	70 - 130			
LCS (B2K0263-BS1)					Prepared: 11/12/2012 Analyzed: 11/12/2012				
1,1-Dichloroethene	21.0300		20.0000		105	70 - 130			
Benzene	37.1100		40.0000		92.8	70 - 130			
Chlorobenzene	19.2500		20.0000		96.2	70 - 130			
MTBE	18.5000		20.0000		92.5	70 - 130			
Toluene	37.6300		40.0000		94.1	70 - 130			
Trichloroethene	19.2300		20.0000		96.2	70 - 130			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	19.45		25.0000		77.8	70 - 130			
<i>Surrogate: 4-Bromofluorobenzene</i>	21.14		25.0000		84.6	70 - 130			
<i>Surrogate: Dibromofluoromethane</i>	19.89		25.0000		79.6	70 - 130			
<i>Surrogate: Toluene-d8</i>	20.21		25.0000		80.8	70 - 130			
LCS Dup (B2K0263-BSD1)					Prepared: 11/12/2012 Analyzed: 11/12/2012				
1,1-Dichloroethene	20.1500		20.0000		101	70 - 130	4.27	20	
Benzene	36.3200		40.0000		90.8	70 - 130	2.15	20	
Chlorobenzene	18.4700		20.0000		92.4	70 - 130	4.14	20	
MTBE	18.9000		20.0000		94.5	70 - 130	2.14	20	
Toluene	36.9100		40.0000		92.3	70 - 130	1.93	20	
Trichloroethene	18.5600		20.0000		92.8	70 - 130	3.55	20	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	19.62		25.0000		78.5	70 - 130			
<i>Surrogate: 4-Bromofluorobenzene</i>	20.96		25.0000		83.8	70 - 130			
<i>Surrogate: Dibromofluoromethane</i>	20.20		25.0000		80.8	70 - 130			
<i>Surrogate: Toluene-d8</i>	20.32		25.0000		81.3	70 - 130			



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 9171 Towne Centre Drive, Suite 375
 San Diego , CA 92122

Project Number : Raytheon, 532.30
 Report To : Steve Netto
 Reported : 11/19/2012

1,4-Dioxane by EPA 8270: Isotope Dilution Technique - Quality Control

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec % Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B2K0236 - MSSEMI

Blank (B2K0236-BLK1)

Prepared: 11/9/2012 Analyzed: 11/11/2012

1,4-Dioxane	ND	2.0			NR				
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	74.88		100.000		74.9	37 - 93			
<i>Surrogate: 2-Fluorobiphenyl</i>	84.12		100.000		84.1	51 - 100			
<i>Surrogate: 4-Terphenyl-d14</i>	109.9		100.000		110	58 - 113			
<i>Surrogate: Nitrobenzene-d5</i>	78.10		100.000		78.1	39 - 95			

LCS (B2K0236-BS1)

Prepared: 11/9/2012 Analyzed: 11/11/2012

1,4-Dioxane	106.930	2.0	100.000		107	70 - 130			
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	70.75		100.000		70.8	37 - 93			
<i>Surrogate: 2-Fluorobiphenyl</i>	85.82		100.000		85.8	51 - 100			
<i>Surrogate: 4-Terphenyl-d14</i>	109.2		100.000		109	58 - 113			
<i>Surrogate: Nitrobenzene-d5</i>	81.21		100.000		81.2	39 - 95			

Matrix Spike (B2K0236-MS1)

Source: 1203913-10

Prepared: 11/9/2012 Analyzed: 11/12/2012

1,4-Dioxane	377.125	10	100.000	256.655	120	70 - 130			
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	63.80		100.000		63.8	37 - 93			
<i>Surrogate: 2-Fluorobiphenyl</i>	77.50		100.000		77.5	51 - 100			
<i>Surrogate: 4-Terphenyl-d14</i>	98.50		100.000		98.5	58 - 113			
<i>Surrogate: Nitrobenzene-d5</i>	73.80		100.000		73.8	39 - 95			

Matrix Spike Dup (B2K0236-MSD1)

Source: 1203913-10

Prepared: 11/9/2012 Analyzed: 11/12/2012

1,4-Dioxane	377.050	10	100.000	256.655	120	70 - 130	0.0199	20	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	67.90		100.000		67.9	37 - 93			
<i>Surrogate: 2-Fluorobiphenyl</i>	78.05		100.000		78.0	51 - 100			
<i>Surrogate: 4-Terphenyl-d14</i>	98.60		100.000		98.6	58 - 113			
<i>Surrogate: Nitrobenzene-d5</i>	75.90		100.000		75.9	39 - 95			



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Hargis & Associates, Inc.

Project Number : Raytheon, 532.30

9171 Towne Centre Drive, Suite 375

Report To : Steve Netto

San Diego , CA 92122

Reported : 11/19/2012

1,4-Dioxane by EPA 8270/SIM: Isotope Dilution Technique - Quality Control

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec % Rec	% Rec Limits	RPD RPD	RPD Limit	Notes
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Batch B2K0149 - MSSEMI_ISOTOPEDILN

Blank (B2K0149-BLK1)

Prepared: 11/7/2012 Analyzed: 11/8/2012

1,4-Dioxane	ND	0.20			NR				
Surrogate: 1,2-Dichlorobenzene-d4	0.6215		1.00000		62.2	36 - 107			
Surrogate: 2-Fluorobiphenyl	0.7436		1.00000		74.4	42 - 120			
Surrogate: 4-Terphenyl-d14	0.8687		1.00000		86.9	67 - 142			
Surrogate: Nitrobenzene-d5	0.8954		1.00000		89.5	36 - 130			

LCS (B2K0149-BS1)

Prepared: 11/7/2012 Analyzed: 11/8/2012

1,4-Dioxane	0.866430	0.20	1.00000		86.6	70 - 130			
Surrogate: 1,2-Dichlorobenzene-d4	0.6408		1.00000		64.1	36 - 107			
Surrogate: 2-Fluorobiphenyl	0.7498		1.00000		75.0	42 - 120			
Surrogate: 4-Terphenyl-d14	0.8092		1.00000		80.9	67 - 142			
Surrogate: Nitrobenzene-d5	0.8554		1.00000		85.5	36 - 130			

LCS Dup (B2K0149-BSD1)

Prepared: 11/7/2012 Analyzed: 11/8/2012

1,4-Dioxane	0.855490	0.20	1.00000		85.5	70 - 130	1.27	20	
Surrogate: 1,2-Dichlorobenzene-d4	0.6450		1.00000		64.5	36 - 107			
Surrogate: 2-Fluorobiphenyl	0.7331		1.00000		73.3	42 - 120			
Surrogate: 4-Terphenyl-d14	0.7949		1.00000		79.5	67 - 142			
Surrogate: Nitrobenzene-d5	0.8525		1.00000		85.3	36 - 130			

Batch B2K0208 - MSSEMI_ISOTOPEDILN

Blank (B2K0208-BLK1)

Prepared: 11/9/2012 Analyzed: 11/9/2012

1,4-Dioxane	ND	0.20			NR				
Surrogate: 1,2-Dichlorobenzene-d4	0.8566		1.00000		85.7	36 - 107			
Surrogate: 2-Fluorobiphenyl	0.9764		1.00000		97.6	42 - 120			
Surrogate: 4-Terphenyl-d14	0.9616		1.00000		96.2	67 - 142			
Surrogate: Nitrobenzene-d5	1.110		1.00000		111	36 - 130			

LCS (B2K0208-BS1)

Prepared: 11/9/2012 Analyzed: 11/9/2012

1,4-Dioxane	1.25676	0.20	1.00000		126	70 - 130			
Surrogate: 1,2-Dichlorobenzene-d4	0.8548		1.00000		85.5	36 - 107			
Surrogate: 2-Fluorobiphenyl	0.9432		1.00000		94.3	42 - 120			
Surrogate: 4-Terphenyl-d14	0.9566		1.00000		95.7	67 - 142			
Surrogate: Nitrobenzene-d5	1.134		1.00000		113	36 - 130			

LCS Dup (B2K0208-BSD1)

Prepared: 11/9/2012 Analyzed: 11/9/2012

1,4-Dioxane	1.29409	0.20	1.00000		129	70 - 130	2.93	20	
Surrogate: 1,2-Dichlorobenzene-d4	0.8684		1.00000		86.8	36 - 107			
Surrogate: 2-Fluorobiphenyl	0.9847		1.00000		98.5	42 - 120			
Surrogate: 4-Terphenyl-d14	0.9992		1.00000		99.9	67 - 142			



Certificate of Analysis

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San Diego, CA 92122

Project Number : Raytheon, 532.30

Report To : Steve Netto

Reported : 11/19/2012

1,4-Dioxane by EPA 8270/SIM: Isotope Dilution Technique - Quality Control (cont'd)

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec % Rec	% Rec Limits	RPD RPD	RPD Limit	Notes
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Batch B2K0208 - MSSEMI_ISOTOPEDILN (continued)

LCS Dup (B2K0208-bsd1) - Continued

Prepared: 11/9/2012 Analyzed: 11/9/2012

Surrogate: Nitrobenzene-d5 1.140 1.00000 114 36 - 130

Matrix Spike (B2K0208-MS1)

Source: 1203894-02

Prepared: 11/9/2012 Analyzed: 11/9/2012

1,4-Dioxane ND 0.20 1.00000 ND NR 70 - 130 M1

Surrogate: 1,2-Dichlorobenzene-d4 0.9287 1.00000 92.9 36 - 107

Surrogate: 2-Fluorobiphenyl 1.070 1.00000 107 42 - 120

Surrogate: 4-Terphenyl-d14 1.057 1.00000 106 67 - 142

Surrogate: Nitrobenzene-d5 1.139 1.00000 114 36 - 130

Matrix Spike Dup (B2K0208-MSD1)

Source: 1203894-02

Prepared: 11/9/2012 Analyzed: 11/9/2012

1,4-Dioxane ND 0.20 1.00000 ND NR 70 - 130 20 M1

Surrogate: 1,2-Dichlorobenzene-d4 0.8845 1.00000 88.5 36 - 107

Surrogate: 2-Fluorobiphenyl 1.009 1.00000 101 42 - 120

Surrogate: 4-Terphenyl-d14 1.051 1.00000 105 67 - 142

Surrogate: Nitrobenzene-d5 1.115 1.00000 111 36 - 130



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9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : Raytheon, 532.30

Report To : Steve Netto

Reported : 11/19/2012

Notes and Definitions

M3	Matrix spike recovery outside of acceptance limit due to disproportionate concentration of the analyte to spike level. The analytical batch was validated by the laboratory control sample.
M1	Matrix spike recovery outside of acceptance limit. The analytical batch was validated by the laboratory control sample.
D6	Sample required dilution due to high concentration of target analyte.
ND	Analyte not detected at or above reporting limit
PQL	Practical Quantitation Limit
MDL	Method Detection Limit
NR	Not Reported
RPD	Relative Percent Difference
CA1	CA-NELAP (CDPH)
CA2	CA-ELAP (CDPH)
OR1	OR-NELAP (OSPHL)
TX1	TX-NELAP (TCEQ)

Notes:

(1) The reported MDL and PQL are based on prep ratio variation and analytical dilution.

PROJECT NAME		PROJECT No./TASK No.		SAMPLE CONTAINERS		ANALYSIS REQUESTED		ESTIMATED CONCENTRATION RANGE (ppb) FOR VOA'S		SPECIAL HANDLING		LABORATORY INFORMATION												
Raytheon		532.30										ATL												
PROJECT MANAGER Steve Netto		Phone No. 858-455-6500										Attn: Rachelle Arada												
QA MANAGER		Fax No. 858-455-6533																						
SAMPLER (SIGNATURE)		SAMPLER (PRINTED)																						
		Anielle Fenber ERIN HUSTER																						
LAB ID	SAMPLE ID	SAMPLE COLLECTION		MATRIX		PRESERVATION		40 ml VOA 1L Amber	VOCs 8260B	1,4-Dioxane 8270 MOD	1,4-Dioxane 8270 SIM	ESTIMATED CONCENTRATION RANGE (ppb) FOR VOA'S					Standard TAT MS collected MSD collected 24 HR TAT	REMARKS						
		Date	Time	Soil	Ground water	Surface water	Lab H2O					HCl	HNO3	NaOH	H2SO4	Ice			0-10	10-100	100-1,000	1,000-10,000	>10,000	
	TB-110712	11/7/12	0753				X	X	X				X											
	MW-32B		1017	X			X		X				X											
	MW-37		1202	X			X		X				X											
	MW-3700		1300	X			X		X				X											
	MW-36		1005	X			X		X				X											
	MW-3000		1500	X			X		X				X											
	MW-2			X			X		X				X											
Total number of Containers per analysis:								17	5									Total No. of Containers: 22 of 52						

Relinquished by:	Date: 11/7/12	Received by:	Date: 11/7/12
H+A, Inc Company	Time: 1705	Advanced Tech Labs Company	Time: 1705
Relinquished by:	Date: 11/7/12	Received by:	Date: 11/7/12
Advanced Tech Labs Company	Time: 1807	ATL Company	Time: 1807

INSTRUCTIONS

- Fill out form completely except for shaded areas (lab use only); sign only after verified for completeness.
- Complete in ballpoint pen. Draw one line through errors, initial and date correction.
- Indicate number of sample containers in analysis request space; indicate choice with ✓ or x.
- Note applicable preservatives, special instructions, and deviations from typical environmental samples.
- Consult project QA documents for specific instructions.

Sample Receipt:

No. of containers correct received good condition/cold

custody seals secure conforms to COC document

Temp. @ receipt _____ °C

Shipment Method: **Courier**

Send Results to: **Steve Netto**

9171 TOWNE CENTRE DRIVE, SUITE 375
SAN DIEGO, CA 92122 (858) 455-6500

1640 SOUTH STAPLEY DRIVE, SUITE 124
MESA, AZ 85204 (480) 345-0888

1820 EAST RIVER ROAD, SUITE 220
TUCSON, AZ 85718 (520) 881-7300

Send invoice to San Diego, CA
Attn: Accounts Payable

CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST FORM

PROJECT NAME		PROJECT No./TASK No.		SAMPLE CONTAINERS		ANALYSIS REQUESTED		ESTIMATED CONCENTRATION RANGE (ppb) FOR VOA'S		SPECIAL HANDLING		LABORATORY INFORMATION										
Raytheon		532.30										ATL										
PROJECT MANAGER Steve Netto		Phone No. 858-455-6500										Attn: Rachele Arada										
QA MANAGER ERIN HUNTER		Fax No. 858-455-6533																				
SAMPLER (SIGNATURE)		SAMPLER (PRINTED)																				
		DANIEL MORAZ																				
LAB ID	SAMPLE ID	SAMPLE COLLECTION		MATRIX		PRESERVATION		40 ml VOA	1L Amber	VOCs 8260B	1,4-Dioxane 8270 MOD	1,4-Dioxane 8270 SIM	0-10	10-100	100-1,000	1,000-10,000	>10,000	Standard TAT	MS collected	MSD collected	REMARKS	
		Date	Time	Soil	Ground water	Surface water	Lab H2O															HCl	HNO3	NaOH	H2SO4	Ice
	MW-28	11/7/12	836	X		X		X					X					X				
	MW-29		937	X		X		X		X				X				X				
	MW-26C		1230	X		X		X			X		X					X				
	MW-34B		1343	X		X		X		X	X			X				X	X	X		(ZILMER AMBER) 6 VOA
	MW-08		1645	X		X		X		X				X				X				
	11072012		1540			X	X	X		X	X		X					X				
Total number of Containers per analysis:								18	5									Total No. of Containers: 239 55				
Relinquished by:		Date: 11/7/12	Received by:		Date: 11/7/12	INSTRUCTIONS		Shipment Method: Courier														
HHA, INC		Time: 1705	Advanced Tech Labs		Time: 1705	1. Fill out form completely except for shaded areas (lab use only); sign only after verified for completeness. 2. Complete in ballpoint pen. Draw one line through errors, initial and date correction. 3. Indicate number of sample containers in analysis request space; indicate choice with ✓ or x. 4. Note applicable preservatives, special instructions, and deviations from typical environmental samples. 5. Consult project QA documents for specific instructions.		Send Results to: Steve Netto CC ERIN HUNTER <input checked="" type="checkbox"/> 9171 TOWNE CENTRE DRIVE, SUITE 375 SAN DIEGO, CA 92122 (858) 455-6500 <input type="checkbox"/> 1640 SOUTH STAPLEY DRIVE, SUITE 124 MESA, AZ 85204 (480) 345-0888 <input type="checkbox"/> 1820 EAST RIVER ROAD, SUITE 220 TUCSON, AZ 85718 (520) 881-7300														
Relinquished by:		Date: 11/7/12	Received by:		Date: 11/7/12	Sample Receipt:		Send invoice to San Diego, CA Attn: Accounts Payable														
Advanced Tech Labs		Time: 1807	Company: AN		Time: 1807	<input type="checkbox"/> No. of containers correct <input type="checkbox"/> custody seals secure		<input type="checkbox"/> received good condition/cold <input type="checkbox"/> conforms to COC document														

CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST FORM

DATE 11/7/12 PAGE 2 OF 2

PROJECT NAME Raytheon		PROJECT No./TASK No. 532.30		SAMPLE CONTAINERS		ANALYSIS REQUESTED		ESTIMATED CONCENTRATION RANGE (ppb) FOR VOA'S		SPECIAL HANDLING		LABORATORY INFORMATION	
PROJECT MANAGER Steve Netto		Phone No. 858-455-6500										ATL	
QA MANAGER ERIN HUNTER		Fax No. 858-455-6533										Attn: Rachelle A	
SAMPLER (SIGNATURE) <i>[Signature]</i>		SAMPLER (PRINTED) DANIEL MERA											

LAB ID	SAMPLE ID	SAMPLE COLLECTION		MATRIX				PRESERVATION					40 ml VOA	1L Amber	VOCs 82608	1,4-Dioxane 8270 MGD	1,4-Dioxane 8270 SIN	ESTIMATED CONCENTRATION RANGE (ppb) FOR VOA'S					Standard TAT	MS collected	MSD collected	REMARKS							
		Date	Time	Soil	Ground water	Surface water	Lab H2O	HCl	HNO3	NaOH	H2SO4	Ice						0-10	10-100	100-1,000	1,000-10,000	>10,000											
	MW-28		836	X			X			X		3	1	X		X		X															
	MW-29		937	X			X			X		3	1	X	X																		
	MW-26C		1230	X			X			X		3	1	X		X																	
	MW-34B		1343	X			X			X		3	1	X	X																		
	MW-08		1645	X			X			X		3	1	X	X																		
	EB-11072012		1540			X	X					3		X	X																		

Total number of Containers per analysis: _____ Total No. of Containers: _____

Relinquished by: <i>[Signature]</i> HHA, INC Company	Date <u>11/7/12</u> Time <u>1705</u>	Received by: <i>[Signature]</i> Advanced Tech Labs Company	Date <u>11/7/12</u> Time <u>1705</u>	INSTRUCTIONS 1. Fill out form completely except for shaded areas (lab use only); sign only after verified for completeness. 2. Complete in ballpoint pen. Draw one line through errors, initial and date correction. 3. Indicate number of sample containers in analysis request space; indicate choice with ✓ or x. 4. Note applicable preservatives, special instructions, and deviations from typical environmental samples. 5. Consult project QA documents for specific instructions.	Shipment Method: <u>Courier</u> Send Results to: <u>Steve Netto</u> <input checked="" type="checkbox"/> ERIN HUNTER 9171 TOWNE CENTRE DRIVE, SUITE 375 SAN DIEGO, CA 92122 (858) 455-6500 <input type="checkbox"/> 1640 SOUTH STAPLEY DRIVE, SUITE 124 MESA, AZ 85204 (480) 345-0888 <input type="checkbox"/> 1620 EAST RIVER ROAD, SUITE 220 TUCSON, AZ 85718 (520) 881-7300
Relinquished by: _____ Company	Date _____ Time _____	Received by: _____ Company	Date _____ Time _____			Sample Receipt: ☐ No. of containers correct ☐ received good condition/cold ☐ custody seals secure ☐ conforms to COC document	Temp. @ receipt _____ °C

Rachelle Arada

From: Erin Hunter [EHunter@HARGIS.COM]
Sent: Thursday, November 08, 2012 11:21 AM
To: Rachelle Arada
Subject: 532 Sample TAT's - upgrade to 48 hr TAT?

Importance: High

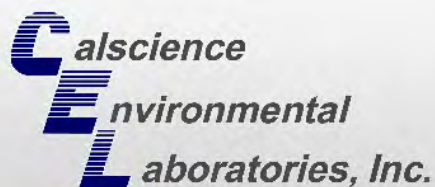
Rachelle –

Would it be possible to upgrade the sample TAT's for a few samples from Standard TAT to 48 hour TAT?

If it is possible we would like all samples collected at MW-34B, MW-32B, MW-33, and MW-36 upgraded to 48 hr TAT.

Thanks,
Erin

Erin J. Hunter
Hydrogeologist
Hargis + Associates, Inc.
858.455.6500 ext. 115
ehunter@hargis.com



CALSCIENCE

WORK ORDER NUMBER: 12-11-0469

The difference is service



AIR | SOIL | WATER | MARINE CHEMISTRY

Analytical Report For

Client: Hargis + Associates, Inc.

Client Project Name: Raytheon Main / 532.30

Attention: Steve Netto
9171 Towne Centre Drive, Suite 375
San Diego, CA 92122-6215

Approved for release on 11/16/2012 by:
Virendra Patel
Project Manager

ResultLink ▶

Email your PM ▶



Calscience Environmental Laboratories, Inc. (Calscience) certifies that the test results provided in this report meet all NELAC requirements for parameters for which accreditation is required or available. Any exceptions to NELAC requirements are noted in the case narrative. The original report of subcontracted analyses, if any, is attached to this report. The results in this report are limited to the sample(s) tested and any reproduction thereof must be made in its entirety. The client or recipient of this report is specifically prohibited from making material changes to said report and, to the extent that such changes are made, Calscience is not responsible, legally or otherwise. The client or recipient agrees to indemnify Calscience for any litigation which may arise.





Contents

Client Project Name: Raytheon Main / 532.30
Work Order Number: 12-11-0469

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Client: Hargis + Associates, Inc.
9171 Towne Centre Drive, Suite 375
San Diego, CA 92122-6215
Attn: Steve Netto

Work Order: 12-11-0469
Project name: Raytheon Main / 532.30
Received: 11/07/12 17:20

DETECTIONS SUMMARY

Client Sample ID

Analyte	Result	Qualifiers	Reporting Limit	Units	Method	Extraction
MW-34B (12-11-0469-3)						
1,4-Dioxane	320		1.0	ug/L	EPA 8270C(M) Isotope Dilution	EPA 3520C
1,1-Dichloroethane	6.4		1.0	ug/L	EPA 8260B	EPA 5030C
1,2-Dichloroethane	1.5		0.50	ug/L	EPA 8260B	EPA 5030C
1,1-Dichloroethene	180		1.0	ug/L	EPA 8260B	EPA 5030C
1,1,2-Trichloroethane	3.0		1.0	ug/L	EPA 8260B	EPA 5030C
Trichloroethene	1.4		1.0	ug/L	EPA 8260B	EPA 5030C

Subcontracted analyses, if any, are not included in this summary.

*MDL is shown.

Analytical Report



Hargis + Associates, Inc.
9171 Towne Centre Drive, Suite 375
San Diego, CA 92122-6215

Date Received: 11/07/12
Work Order No: 12-11-0469
Preparation: EPA 3520C
Method: EPA 8270C(M) Isotope Dilution

Project: Raytheon Main / 532.30

Page 1 of 1

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-37	12-11-0469-2-D	11/07/12 12:02	Aqueous	GC/MS Y	11/09/12	11/15/12 00:11	121109L02

Parameter	Result	RL	DF	Qual	Units
1,4-Dioxane	ND	1.0	1		ug/L
<u>Surrogates:</u>	<u>REC (%)</u>	<u>Control Limits</u>		<u>Qual</u>	
Nitrobenzene-d5	90	56-123			

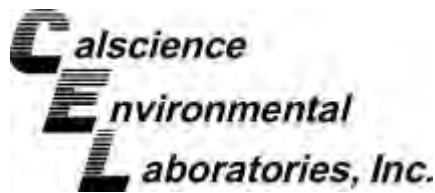
MW-34B	12-11-0469-3-D	11/07/12 13:45	Aqueous	GC/MS Y	11/09/12	11/15/12 00:42	121109L02
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Parameter	Result	RL	DF	Qual	Units
1,4-Dioxane	320	1.0	1		ug/L
<u>Surrogates:</u>	<u>REC (%)</u>	<u>Control Limits</u>		<u>Qual</u>	
Nitrobenzene-d5	90	56-123			

Method Blank	099-09-004-2,121	N/A	Aqueous	GC/MS Y	11/09/12	11/13/12 21:08	121109L02
--------------	------------------	-----	---------	---------	----------	----------------	-----------

Parameter	Result	RL	DF	Qual	Units
1,4-Dioxane	ND	1.0	1		ug/L
<u>Surrogates:</u>	<u>REC (%)</u>	<u>Control Limits</u>		<u>Qual</u>	
Nitrobenzene-d5	87	56-123			

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers



Analytical Report



Hargis + Associates, Inc.
9171 Towne Centre Drive, Suite 375
San Diego, CA 92122-6215

Date Received: 11/07/12
Work Order No: 12-11-0469
Preparation: EPA 5030C
Method: EPA 8260B
Units: ug/L

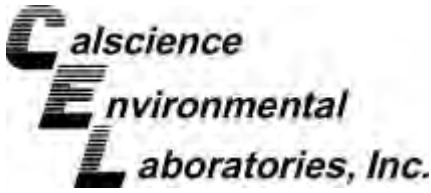
Project: Raytheon Main / 532.30

Page 1 of 4

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
TB-110712A	12-11-0469-1-A	11/07/12 08:00	Aqueous	GC/MS QQ	11/08/12	11/08/12 19:29	121108L01

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Acetone	ND	20	1		1,3-Dichloropropane	ND	1.0	1	
Benzene	ND	0.50	1		2,2-Dichloropropane	ND	1.0	1	
Bromobenzene	ND	1.0	1		1,1-Dichloropropene	ND	1.0	1	
Bromochloromethane	ND	1.0	1		c-1,3-Dichloropropene	ND	0.50	1	
Bromodichloromethane	ND	1.0	1		t-1,3-Dichloropropene	ND	0.50	1	
Bromoform	ND	1.0	1		Ethylbenzene	ND	1.0	1	
Bromomethane	ND	10	1		2-Hexanone	ND	10	1	
2-Butanone	ND	10	1		Isopropylbenzene	ND	1.0	1	
n-Butylbenzene	ND	1.0	1		p-Isopropyltoluene	ND	1.0	1	
sec-Butylbenzene	ND	1.0	1		Methylene Chloride	ND	10	1	
tert-Butylbenzene	ND	1.0	1		4-Methyl-2-Pentanone	ND	10	1	
Carbon Disulfide	ND	10	1		Naphthalene	ND	10	1	
Carbon Tetrachloride	ND	0.50	1		n-Propylbenzene	ND	1.0	1	
Chlorobenzene	ND	1.0	1		Styrene	ND	1.0	1	
Chloroethane	ND	5.0	1		1,1,1,2-Tetrachloroethane	ND	1.0	1	
Chloroform	ND	1.0	1		1,1,2,2-Tetrachloroethane	ND	1.0	1	
Chloromethane	ND	10	1		Tetrachloroethene	ND	1.0	1	
2-Chlorotoluene	ND	1.0	1		Toluene	ND	1.0	1	
4-Chlorotoluene	ND	1.0	1		1,2,3-Trichlorobenzene	ND	1.0	1	
Dibromochloromethane	ND	1.0	1		1,2,4-Trichlorobenzene	ND	1.0	1	
1,2-Dibromo-3-Chloropropane	ND	5.0	1		1,1,1-Trichloroethane	ND	1.0	1	
1,2-Dibromoethane	ND	1.0	1		1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	10	1	
Dibromomethane	ND	1.0	1		1,1,2-Trichloroethane	ND	1.0	1	
1,2-Dichlorobenzene	ND	1.0	1		Trichloroethene	ND	1.0	1	
1,3-Dichlorobenzene	ND	1.0	1		Trichlorofluoromethane	ND	10	1	
1,4-Dichlorobenzene	ND	1.0	1		1,2,3-Trichloropropane	ND	5.0	1	
Dichlorodifluoromethane	ND	1.0	1		1,2,4-Trimethylbenzene	ND	1.0	1	
1,1-Dichloroethane	ND	1.0	1		1,3,5-Trimethylbenzene	ND	1.0	1	
1,2-Dichloroethane	ND	0.50	1		Vinyl Acetate	ND	10	1	
1,1-Dichloroethene	ND	1.0	1		Vinyl Chloride	ND	0.50	1	
c-1,2-Dichloroethene	ND	1.0	1		p/m-Xylene	ND	1.0	1	
t-1,2-Dichloroethene	ND	1.0	1		o-Xylene	ND	1.0	1	
1,2-Dichloropropane	ND	1.0	1						
Surrogates:	REC (%)	Control Limits	Qual		Surrogates:	REC (%)	Control Limits	Qual	
1,4-Bromofluorobenzene	100	80-120			Dibromofluoromethane	89	80-126		
1,2-Dichloroethane-d4	108	80-134			Toluene-d8	97	80-120		

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers



Analytical Report



Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 11/07/12
 Work Order No: 12-11-0469
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Raytheon Main / 532.30

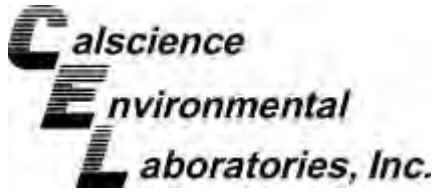
Page 2 of 4

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-37	12-11-0469-2-A	11/07/12 12:02	Aqueous	GC/MS QQ	11/08/12	11/08/12 16:30	121108L01

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Acetone	ND	20	1		1,3-Dichloropropane	ND	1.0	1	
Benzene	ND	0.50	1		2,2-Dichloropropane	ND	1.0	1	
Bromobenzene	ND	1.0	1		1,1-Dichloropropene	ND	1.0	1	
Bromochloromethane	ND	1.0	1		c-1,3-Dichloropropene	ND	0.50	1	
Bromodichloromethane	ND	1.0	1		t-1,3-Dichloropropene	ND	0.50	1	
Bromoform	ND	1.0	1		Ethylbenzene	ND	1.0	1	
Bromomethane	ND	10	1		2-Hexanone	ND	10	1	
2-Butanone	ND	10	1		Isopropylbenzene	ND	1.0	1	
n-Butylbenzene	ND	1.0	1		p-Isopropyltoluene	ND	1.0	1	
sec-Butylbenzene	ND	1.0	1		Methylene Chloride	ND	10	1	
tert-Butylbenzene	ND	1.0	1		4-Methyl-2-Pentanone	ND	10	1	
Carbon Disulfide	ND	10	1		Naphthalene	ND	10	1	
Carbon Tetrachloride	ND	0.50	1		n-Propylbenzene	ND	1.0	1	
Chlorobenzene	ND	1.0	1		Styrene	ND	1.0	1	
Chloroethane	ND	5.0	1		1,1,1,2-Tetrachloroethane	ND	1.0	1	
Chloroform	ND	1.0	1		1,1,2,2-Tetrachloroethane	ND	1.0	1	
Chloromethane	ND	10	1		Tetrachloroethene	ND	1.0	1	
2-Chlorotoluene	ND	1.0	1		Toluene	ND	1.0	1	
4-Chlorotoluene	ND	1.0	1		1,2,3-Trichlorobenzene	ND	1.0	1	
Dibromochloromethane	ND	1.0	1		1,2,4-Trichlorobenzene	ND	1.0	1	
1,2-Dibromo-3-Chloropropane	ND	5.0	1		1,1,1-Trichloroethane	ND	1.0	1	
1,2-Dibromoethane	ND	1.0	1		1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	10	1	
Dibromomethane	ND	1.0	1		1,1,2-Trichloroethane	ND	1.0	1	
1,2-Dichlorobenzene	ND	1.0	1		Trichloroethene	ND	1.0	1	
1,3-Dichlorobenzene	ND	1.0	1		Trichlorofluoromethane	ND	10	1	
1,4-Dichlorobenzene	ND	1.0	1		1,2,3-Trichloropropane	ND	5.0	1	
Dichlorodifluoromethane	ND	1.0	1		1,2,4-Trimethylbenzene	ND	1.0	1	
1,1-Dichloroethane	ND	1.0	1		1,3,5-Trimethylbenzene	ND	1.0	1	
1,2-Dichloroethane	ND	0.50	1		Vinyl Acetate	ND	10	1	
1,1-Dichloroethene	ND	1.0	1		Vinyl Chloride	ND	0.50	1	
c-1,2-Dichloroethene	ND	1.0	1		p/m-Xylene	ND	1.0	1	
t-1,2-Dichloroethene	ND	1.0	1		o-Xylene	ND	1.0	1	
1,2-Dichloropropane	ND	1.0	1						
Surrogates:	REC (%)	Control Limits	Qual		Surrogates:	REC (%)	Control Limits	Qual	
1,4-Bromofluorobenzene	101	80-120			Dibromofluoromethane	95	80-126		
1,2-Dichloroethane-d4	112	80-134			Toluene-d8	96	80-120		

Return to Contents

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers



Analytical Report



Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 11/07/12
 Work Order No: 12-11-0469
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Raytheon Main / 532.30

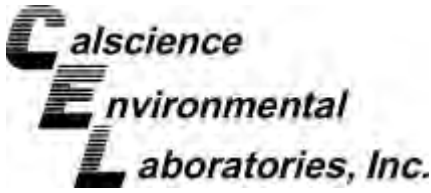
Page 3 of 4

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-34B	12-11-0469-3-A	11/07/12 13:45	Aqueous	GC/MS QQ	11/08/12	11/08/12 19:59	121108L01

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Acetone	ND	20	1		1,3-Dichloropropane	ND	1.0	1	
Benzene	ND	0.50	1		2,2-Dichloropropane	ND	1.0	1	
Bromobenzene	ND	1.0	1		1,1-Dichloropropene	ND	1.0	1	
Bromochloromethane	ND	1.0	1		c-1,3-Dichloropropene	ND	0.50	1	
Bromodichloromethane	ND	1.0	1		t-1,3-Dichloropropene	ND	0.50	1	
Bromoform	ND	1.0	1		Ethylbenzene	ND	1.0	1	
Bromomethane	ND	10	1		2-Hexanone	ND	10	1	
2-Butanone	ND	10	1		Isopropylbenzene	ND	1.0	1	
n-Butylbenzene	ND	1.0	1		p-Isopropyltoluene	ND	1.0	1	
sec-Butylbenzene	ND	1.0	1		Methylene Chloride	ND	10	1	
tert-Butylbenzene	ND	1.0	1		4-Methyl-2-Pentanone	ND	10	1	
Carbon Disulfide	ND	10	1		Naphthalene	ND	10	1	
Carbon Tetrachloride	ND	0.50	1		n-Propylbenzene	ND	1.0	1	
Chlorobenzene	ND	1.0	1		Styrene	ND	1.0	1	
Chloroethane	ND	5.0	1		1,1,1,2-Tetrachloroethane	ND	1.0	1	
Chloroform	ND	1.0	1		1,1,2,2-Tetrachloroethane	ND	1.0	1	
Chloromethane	ND	10	1		Tetrachloroethene	ND	1.0	1	
2-Chlorotoluene	ND	1.0	1		Toluene	ND	1.0	1	
4-Chlorotoluene	ND	1.0	1		1,2,3-Trichlorobenzene	ND	1.0	1	
Dibromochloromethane	ND	1.0	1		1,2,4-Trichlorobenzene	ND	1.0	1	
1,2-Dibromo-3-Chloropropane	ND	5.0	1		1,1,1-Trichloroethane	ND	1.0	1	
1,2-Dibromoethane	ND	1.0	1		1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	10	1	
Dibromomethane	ND	1.0	1		1,1,2-Trichloroethane	3.0	1.0	1	
1,2-Dichlorobenzene	ND	1.0	1		Trichloroethene	1.4	1.0	1	
1,3-Dichlorobenzene	ND	1.0	1		Trichlorofluoromethane	ND	10	1	
1,4-Dichlorobenzene	ND	1.0	1		1,2,3-Trichloropropane	ND	5.0	1	
Dichlorodifluoromethane	ND	1.0	1		1,2,4-Trimethylbenzene	ND	1.0	1	
1,1-Dichloroethane	6.4	1.0	1		1,3,5-Trimethylbenzene	ND	1.0	1	
1,2-Dichloroethane	1.5	0.50	1		Vinyl Acetate	ND	10	1	
1,1-Dichloroethene	180	1.0	1		Vinyl Chloride	ND	0.50	1	
c-1,2-Dichloroethene	ND	1.0	1		p/m-Xylene	ND	1.0	1	
t-1,2-Dichloroethene	ND	1.0	1		o-Xylene	ND	1.0	1	
1,2-Dichloropropane	ND	1.0	1						
Surrogates:	REC (%)	Control Limits	Qual		Surrogates:	REC (%)	Control Limits	Qual	
1,4-Bromofluorobenzene	100	80-120			Dibromofluoromethane	88	80-126		
1,2-Dichloroethane-d4	102	80-134			Toluene-d8	109	80-120		

Return to Contents

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers



Analytical Report



Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 11/07/12
 Work Order No: 12-11-0469
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Raytheon Main / 532.30

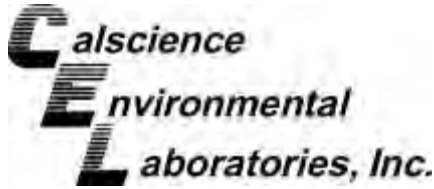
Page 4 of 4

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-14-001-9,286	N/A	Aqueous	GC/MS QQ	11/08/12	11/08/12 14:31	121108L01

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Acetone	ND	20	1		1,3-Dichloropropane	ND	1.0	1	
Benzene	ND	0.50	1		2,2-Dichloropropane	ND	1.0	1	
Bromobenzene	ND	1.0	1		1,1-Dichloropropene	ND	1.0	1	
Bromochloromethane	ND	1.0	1		c-1,3-Dichloropropene	ND	0.50	1	
Bromodichloromethane	ND	1.0	1		t-1,3-Dichloropropene	ND	0.50	1	
Bromoform	ND	1.0	1		Ethylbenzene	ND	1.0	1	
Bromomethane	ND	10	1		2-Hexanone	ND	10	1	
2-Butanone	ND	10	1		Isopropylbenzene	ND	1.0	1	
n-Butylbenzene	ND	1.0	1		p-Isopropyltoluene	ND	1.0	1	
sec-Butylbenzene	ND	1.0	1		Methylene Chloride	ND	10	1	
tert-Butylbenzene	ND	1.0	1		4-Methyl-2-Pentanone	ND	10	1	
Carbon Disulfide	ND	10	1		Naphthalene	ND	10	1	
Carbon Tetrachloride	ND	0.50	1		n-Propylbenzene	ND	1.0	1	
Chlorobenzene	ND	1.0	1		Styrene	ND	1.0	1	
Chloroethane	ND	5.0	1		1,1,1,2-Tetrachloroethane	ND	1.0	1	
Chloroform	ND	1.0	1		1,1,2,2-Tetrachloroethane	ND	1.0	1	
Chloromethane	ND	10	1		Tetrachloroethene	ND	1.0	1	
2-Chlorotoluene	ND	1.0	1		Toluene	ND	1.0	1	
4-Chlorotoluene	ND	1.0	1		1,2,3-Trichlorobenzene	ND	1.0	1	
Dibromochloromethane	ND	1.0	1		1,2,4-Trichlorobenzene	ND	1.0	1	
1,2-Dibromo-3-Chloropropane	ND	5.0	1		1,1,1-Trichloroethane	ND	1.0	1	
1,2-Dibromoethane	ND	1.0	1		1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	10	1	
Dibromomethane	ND	1.0	1		1,1,2-Trichloroethane	ND	1.0	1	
1,2-Dichlorobenzene	ND	1.0	1		Trichloroethene	ND	1.0	1	
1,3-Dichlorobenzene	ND	1.0	1		Trichlorofluoromethane	ND	10	1	
1,4-Dichlorobenzene	ND	1.0	1		1,2,3-Trichloropropane	ND	5.0	1	
Dichlorodifluoromethane	ND	1.0	1		1,2,4-Trimethylbenzene	ND	1.0	1	
1,1-Dichloroethane	ND	1.0	1		1,3,5-Trimethylbenzene	ND	1.0	1	
1,2-Dichloroethane	ND	0.50	1		Vinyl Acetate	ND	10	1	
1,1-Dichloroethene	ND	1.0	1		Vinyl Chloride	ND	0.50	1	
c-1,2-Dichloroethene	ND	1.0	1		p/m-Xylene	ND	1.0	1	
t-1,2-Dichloroethene	ND	1.0	1		o-Xylene	ND	1.0	1	
1,2-Dichloropropane	ND	1.0	1						
Surrogates:	REC (%)	Control Limits	DF	Qual	Surrogates:	REC (%)	Control Limits	DF	Qual
1,4-Bromofluorobenzene	100	80-120			Dibromofluoromethane	93	80-126		
1,2-Dichloroethane-d4	101	80-134			Toluene-d8	109	80-120		

Return to Contents

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers



Quality Control - Spike/Spike Duplicate



Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 11/07/12
 Work Order No: 12-11-0469
 Preparation: EPA 5030C
 Method: EPA 8260B

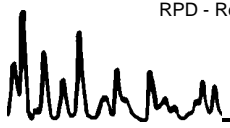
Project Raytheon Main / 532.30

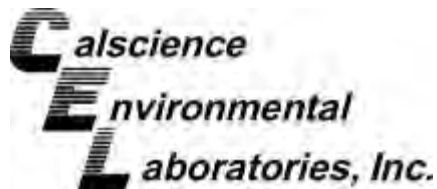
Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
MW-37	Aqueous	GC/MS QQ	11/08/12	11/08/12	121108S01

Parameter	SAMPLE CONC	SPIKE ADDED	MS CONC	MS %REC	MSD CONC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Benzene	ND	50.00	48.22	96	46.35	93	78-120	4	0-20	
Carbon Tetrachloride	ND	50.00	42.99	86	42.09	84	67-139	2	0-20	
Chlorobenzene	ND	50.00	48.86	98	47.61	95	80-120	3	0-20	
1,2-Dibromoethane	ND	50.00	46.33	93	45.10	90	80-123	3	0-20	
1,2-Dichlorobenzene	ND	50.00	50.87	102	49.84	100	76-120	2	0-20	
1,2-Dichloroethane	ND	50.00	47.67	95	46.25	93	76-130	3	0-20	
1,1-Dichloroethene	ND	50.00	41.72	83	42.27	85	70-130	1	0-27	
Ethylbenzene	ND	50.00	49.40	99	49.13	98	73-127	1	0-20	
Toluene	ND	50.00	54.39	109	53.52	107	72-126	2	0-20	
Trichloroethene	ND	50.00	45.49	91	43.38	87	74-122	5	0-20	
Vinyl Chloride	ND	50.00	47.14	94	46.34	93	65-131	2	0-24	
p/m-Xylene	ND	100.0	97.90	98	98.19	98	70-130	0	0-30	
o-Xylene	ND	50.00	48.49	97	48.73	97	70-130	1	0-30	
Methyl-t-Butyl Ether (MTBE)	ND	50.00	46.54	93	45.54	91	69-123	2	0-20	

Return to Contents

RPD - Relative Percent Difference , CL - Control Limit





Quality Control - LCS/LCS Duplicate



Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: N/A
 Work Order No: 12-11-0469
 Preparation: EPA 3520C
 Method: EPA 8270C(M) Isotope Dilution

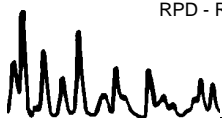
Project: Raytheon Main / 532.30

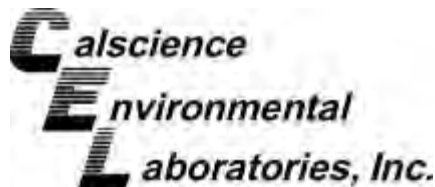
Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-09-004-2,121	Aqueous	GC/MS Y	11/09/12	11/13/12	121109L02

Parameter	<u>SPIKE ADDED</u>	<u>LCS CONC</u>	<u>LCS %REC</u>	<u>LCSD CONC</u>	<u>LCSD %REC</u>	<u>%REC CL</u>	<u>RPD</u>	<u>RPD CL</u>	<u>Qualifiers</u>
1,4-Dioxane	200.0	260.0	130	258.3	129	50-130	1	0-20	

Return to Contents

RPD - Relative Percent Difference , CL - Control Limit





Quality Control - LCS/LCS Duplicate



Hargis + Associates, Inc.
9171 Towne Centre Drive, Suite 375
San Diego, CA 92122-6215

Date Received: N/A
Work Order No: 12-11-0469
Preparation: EPA 5030C
Method: EPA 8260B

Project: Raytheon Main / 532.30

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number					
099-14-001-9,286	Aqueous	GC/MS QQ	11/08/12	11/08/12	121108L01					
Parameter	<u>SPIKE</u> <u>ADDED</u>	<u>LCS</u> <u>CONC</u>	<u>LCS</u> <u>%REC</u>	<u>LCSD</u> <u>CONC</u>	<u>LCSD</u> <u>%REC</u>	<u>%REC</u> CL	<u>ME</u> CL	RPD	RPD CL	Qualifiers
Benzene	50.00	47.55	95	48.86	98	80-120	73-127	3	0-20	
Carbon Tetrachloride	50.00	45.20	90	47.49	95	66-138	54-150	5	0-20	
Chlorobenzene	50.00	48.22	96	50.27	101	80-120	73-127	4	0-20	
1,2-Dibromoethane	50.00	46.21	92	47.42	95	80-120	73-127	3	0-20	
1,2-Dichlorobenzene	50.00	50.52	101	52.00	104	80-120	73-127	3	0-20	
1,2-Dichloroethane	50.00	46.15	92	46.70	93	80-129	72-137	1	0-20	
1,1-Dichloroethene	50.00	43.20	86	43.73	87	71-131	61-141	1	0-20	
Ethylbenzene	50.00	49.78	100	51.63	103	80-123	73-130	4	0-20	
Toluene	50.00	52.86	106	53.64	107	79-121	72-128	1	0-20	
Trichloroethene	50.00	45.98	92	47.48	95	80-120	73-127	3	0-20	
Vinyl Chloride	50.00	46.94	94	47.59	95	70-136	59-147	1	0-20	
p/m-Xylene	100.0	100.4	100	104.9	105	75-125	67-133	4	0-25	
o-Xylene	50.00	48.68	97	50.41	101	75-125	67-133	3	0-25	
Methyl-t-Butyl Ether (MTBE)	50.00	45.10	90	45.47	91	72-126	63-135	1	0-22	

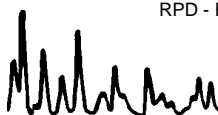
Total number of LCS compounds : 14

Total number of ME compounds : 0

Total number of ME compounds allowed : 1

LCS ME CL validation result : Pass

RPD - Relative Percent Difference , CL - Control Limit



Work Order Number: 12-11-0469

<u>Qualifier</u>	<u>Definition</u>
*	See applicable analysis comment.
<	Less than the indicated value.
>	Greater than the indicated value.
1	Surrogate compound recovery was out of control due to a required sample dilution. Therefore, the sample data was reported without further clarification.
2	Surrogate compound recovery was out of control due to matrix interference. The associated method blank surrogate spike compound was in control and, therefore, the sample data was reported without further clarification.
3	Recovery of the Matrix Spike (MS) or Matrix Spike Duplicate (MSD) compound was out of control due to matrix interference. The associated LCS and/or LCSD was in control and, therefore, the sample data was reported without further clarification.
4	The MS/MSD RPD was out of control due to matrix interference. The LCS/LCSD RPD was in control and, therefore, the sample data was reported without further clarification.
5	The PDS/PDSD or PES/PESD associated with this batch of samples was out of control due to a matrix interference effect. The associated batch LCS/LCSD was in control and, hence, the associated sample data was reported without further clarification.
6	Surrogate recovery below the acceptance limit.
7	Surrogate recovery above the acceptance limit.
B	Analyte was present in the associated method blank.
BU	Sample analyzed after holding time expired.
E	Concentration exceeds the calibration range.
ET	Sample was extracted past end of recommended max. holding time.
HD	The chromatographic pattern was inconsistent with the profile of the reference fuel standard.
HDH	The sample chromatographic pattern for TPH matches the chromatographic pattern of the specified standard but heavier hydrocarbons were also present (or detected).
HDL	The sample chromatographic pattern for TPH matches the chromatographic pattern of the specified standard but lighter hydrocarbons were also present (or detected).
J	Analyte was detected at a concentration below the reporting limit and above the laboratory method detection limit. Reported value is estimated.
ME	LCS/LCSD Recovery Percentage is within Marginal Exceedance (ME) Control Limit range.
ND	Parameter not detected at the indicated reporting limit.
Q	Spike recovery and RPD control limits do not apply resulting from the parameter concentration in the sample exceeding the spike concentration by a factor of four or greater.
SG	The sample extract was subjected to Silica Gel treatment prior to analysis.
X	% Recovery and/or RPD out-of-range.
Z	Analyte presence was not confirmed by second column or GC/MS analysis.

Solid - Unless otherwise indicated, solid sample data is reported on a wet weight basis, not corrected for % moisture. All QC results are reported on a wet weight basis.

MPN - Most Probable Number

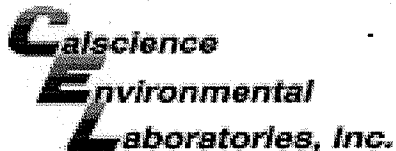


CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST FORM

PROJECT NAME Raytheon Main		PROJECT No./TASK No. 532.30		SAMPLE CONTAINERS		ANALYSIS REQUESTED		ESTIMATED CONCENTRATION RANGE (ppb) FOR VOAS		SPECIAL HANDLING		LABORATORY INFORMATION													
PROJECT MANAGER Steve Netto		Phone No. 858-455-6500						12-11-0469		Standard TAT		Calscience Attn: Virendra													
QA MANAGER		Fax No. 858-455-6533																							
SAMPLER (SIGNATURE) <i>[Signature]</i>		SAMPLER (PRINTED) Arielle Fembex Erin Hunter																							
LAB ID	SAMPLE ID	SAMPLE COLLECTION		MATRIX		PRESERVATION					40 ml VOA	1L Amber	8260B VOCs	8270C (M) 1,4-Dioxane	ESTIMATED CONCENTRATION RANGE (ppb) FOR VOAS					REMARKS					
		Date	Time	Soil	Ground water	Surface water	Lab H2O	HCl	HNO3	NaOH					H2SO4	Ice	0-10	10-100	100-1,000		1,000-10,000	>10,000			
1	TB110712A	11/7/12	0800			X	X				X	3						X							
2	MW-37	11/7/12	1202	X			X				X	3	1		X			X							
3	MW-34B		1345	X			X				X	3	1		X			X							

Total number of Containers per analysis: 9 2 Total No. of Containers: 11

Relinquished by: <u>Arielle Fembex</u> Hargis + Associates Company		Date <u>11/7/12</u> Time <u>10:37</u>	Received by: <i>[Signature]</i> <u>CALSCIENCE</u> Company	Date <u>11/07/12</u> Time <u>16:37</u>	INSTRUCTIONS 1. Fill out form completely except for shaded areas (lab use only); sign only after verified for completeness. 2. Complete in ballpoint pen. Draw one line through errors, initial and date correction. 3. Indicate number of sample containers in analysis request space; indicate choice with ✓ or x. 4. Note applicable preservatives, special instructions, and deviations from typical environmental samples. 5. Consult project QA documents for specific instructions.	Shipment Method: <u>Courier</u>	
Relinquished by: <i>[Signature]</i> <u>CALSCIENCE</u> Company		Date <u>11/07/12</u> Time <u>17:20</u>	Received by: <u>Dannyle ccc</u> <u>ccc</u> Company	Date <u>11/7/12</u> Time <u>17:20</u>		<input checked="" type="checkbox"/> 9171 TOWNE CENTRE DRIVE, SUITE 375 SAN DIEGO, CA 92122 (858) 455-6500 <input type="checkbox"/> 1640 SOUTH STAPLEY DRIVE, SUITE 124 MESA, AZ 85204 (480) 345-0888 <input type="checkbox"/> 1820 EAST RIVER ROAD, SUITE 220 TUCSON, AZ 85718 (520) 881-7300	
		Sample Receipt: <input type="checkbox"/> No. of containers correct <input type="checkbox"/> custody seals secure		Temp. @ receipt _____ °C <input type="checkbox"/> received good condition/cold <input type="checkbox"/> conforms to COC document		Send invoice to San Diego, CA Attn: Accounts Payable	



WORK ORDER #: 12-11-0469

SAMPLE RECEIPT FORM

Cooler 1 of 1

CLIENT: HARGIS & ASSOCIATES, INC.

DATE: 11/07/12

TEMPERATURE: Thermometer ID: SC4 (Criteria: 0.0 °C – 6.0 °C, not frozen)

Temperature 2.9 °C - 0.3 °C (CF) = 2.6 °C Blank Sample

- Sample(s) outside temperature criteria (PM/APM contacted by: _____).
- Sample(s) outside temperature criteria but received on ice/chilled on same day of sampling.

Received at ambient temperature, placed on ice for transport by Courier.

Ambient Temperature: Air Filter

Initial: DEE

CUSTODY SEALS INTACT:

- Cooler _____ No (Not Intact) Not Present N/A
- Sample _____ No (Not Intact) Not Present

Initial: DEE

Initial: TH?

SAMPLE CONDITION:

	Yes	No	N/A
Chain-Of-Custody (COC) document(s) received with samples.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
COC document(s) received complete.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Collection date/time, matrix, and/or # of containers logged in based on sample labels.			
<input type="checkbox"/> No analysis requested. <input type="checkbox"/> Not relinquished. <input type="checkbox"/> No date/time relinquished.			
Sampler's name indicated on COC.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sample container label(s) consistent with COC.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sample container(s) intact and good condition.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Proper containers and sufficient volume for analyses requested.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Analyses received within holding time.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
pH / Res. Chlorine / Diss. Sulfide / Diss. Oxygen received within 24 hours...	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Proper preservation noted on COC or sample container.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Unpreserved vials received for Volatiles analysis			
Volatile analysis container(s) free of headspace.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Tedlar bag(s) free of condensation.....	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

CONTAINER TYPE:

- Solid:** 4ozCGJ 8ozCGJ 16ozCGJ Sleeve (____) EnCores® TerraCores® _____
- Water:** VOA VOA³h VOAna₂ 125AGB 125AGBh 125AGBp 1AGB 1AGBna₂ 1AGBs
- 500AGB 500AGJ 500AGJs 250AGB 250CGB 250CGBs 1PB 1PBna 500PB
- 250PB 250PBn 125PB 125PBz₂na 100PJ 100PJna₂ _____ _____ _____

Air: Tedlar® Canister **Other:** _____ **Trip Blank Lot#:** 121029k **Labeled/Checked by:** TH

Container: C: Clear A: Amber P: Plastic G: Glass J: Jar B: Bottle Z: Ziploc/Resealable Bag E: Envelope **Reviewed by:** WBL

Preservative: h: HCL n: HNO₃ na₂: Na₂S₂O₃ na: NaOH p: H₃PO₄ s: H₂SO₄ u: Ultra-pure z₂na: ZnAc₂+NaOH f: Filtered **Scanned by:** WBL



APPENDIX A
LABORATORY ANALYTICAL REPORTS
(FIRST QUARTER 2013)

January 07, 2013

Steve Netto
Hargis & Associates, Inc.
9171 Towne Centre Drive, Suite 375
San Diego, CA 92122
Tel: (619) 249-3166
Fax: (858) 455-6533



Re: ATL Work Order Number : 1300018
Client Reference : Raytheon Main, 532.30

Enclosed are the results for sample(s) received on January 03, 2013 by Advanced Technology Laboratories. The sample(s) are tested for the parameters as indicated on the enclosed chain of custody in accordance with applicable laboratory certifications. The laboratory results contained in this report specifically pertains to the sample(s) submitted.

Thank you for the opportunity to serve the needs of your company. If you have any questions, please feel free to contact me or your Project Manager.

Sincerely,

Eddie Rodriguez
Laboratory Director

The cover letter and the case narrative are an integral part of this analytical report and its absence renders the report invalid. Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Conference and/or applicable state-specific certification programs. The report cannot be reproduced without written permission from the client and Advanced Technology Laboratories.



Certificate of Analysis

Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : Raytheon Main, 532.30

Report To : Steve Netto

Reported : 01/07/2013

SUMMARY OF SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
TB-010313	1300018-01	Lab H2O	1/03/13 8:00	1/03/13 17:37
MW-32C	1300018-02	Groundwater	1/03/13 12:07	1/03/13 17:37
MW-32B	1300018-03	Groundwater	1/03/13 14:30	1/03/13 17:37
MW-37	1300018-04	Groundwater	1/03/13 16:20	1/03/13 17:37
MW-30A	1300018-05	Groundwater	1/03/13 10:50	1/03/13 17:37
MW-30B	1300018-06	Groundwater	1/03/13 11:42	1/03/13 17:37
MW-3400B	1300018-07	Groundwater	1/03/13 13:51	1/03/13 17:37
MW-34C	1300018-08	Groundwater	1/03/13 14:00	1/03/13 17:37
MW-34B	1300018-09	Groundwater	1/03/13 14:51	1/03/13 17:37
RB-01032013	1300018-10	Lab H2O	1/03/13 14:25	1/03/13 17:37

CASE NARRATIVE

The samples for SM 5540C (MBAS) analysis were subcontracted to Calscience Environmental Laboratories, Inc with ELAP Cert.#1230.

Analytical Comments for EPA 8270/SIM

Result of 1,4-Dioxane for samples 1300018-07 and 1300018-09 were reported over calibration range due to high concentration of analytes. Samples were analyzed by EPA 8270 SIM, Isotope Dilution technique where the internal standard is added prior to sample extraction. Samples were not analyzed at a higher dilution to prevent 1,4-Dioxane-d8 internal standard from being diluted which in turn will cause improper calculation of 1,4-Dioxane. The analytical batch was validated by the CCV (Continuing Calibration Verification) and LCS (Laboratory Control Sample).



Certificate of Analysis

Hargis & Associates, Inc.

Project Number : Raytheon Main, 532.30

9171 Towne Centre Drive, Suite 375

Report To : Steve Netto

San Diego , CA 92122

Reported : 01/07/2013

Client Sample ID TB-010313

Lab ID: 1300018-01

Volatile Organic Compounds by EPA 8260

Analyst: SL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 10:20	
1,1,1-Trichloroethane	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 10:20	
1,1,2,2-Tetrachloroethane	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 10:20	
1,1,2-Trichloroethane	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 10:20	
1,1-Dichloroethane	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 10:20	
1,1-Dichloroethene	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 10:20	
1,1-Dichloropropene	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 10:20	
1,2,3-Trichloropropane	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 10:20	
1,2,3-Trichlorobenzene	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 10:20	
1,2,4-Trichlorobenzene	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 10:20	
1,2,4-Trimethylbenzene	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 10:20	
1,2-Dibromo-3-chloropropane	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 10:20	
1,2-Dibromoethane	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 10:20	
1,2-Dichlorobenzene	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 10:20	
1,2-Dichloroethane	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 10:20	
1,2-Dichloropropane	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 10:20	
1,3,5-Trimethylbenzene	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 10:20	
1,3-Dichlorobenzene	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 10:20	
1,3-Dichloropropane	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 10:20	
1,4-Dichlorobenzene	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 10:20	
2,2-Dichloropropane	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 10:20	
2-Chlorotoluene	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 10:20	
4-Chlorotoluene	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 10:20	
4-Isopropyltoluene	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 10:20	
Benzene	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 10:20	
Bromobenzene	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 10:20	
Bromodichloromethane	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 10:20	
Bromoform	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 10:20	
Bromomethane	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 10:20	
Carbon tetrachloride	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 10:20	
Chlorobenzene	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 10:20	
Chloroethane	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 10:20	
Chloroform	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 10:20	
Chloromethane	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 10:20	
cis-1,2-Dichloroethene	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 10:20	
cis-1,3-Dichloropropene	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 10:20	
Dibromochloromethane	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 10:20	



Certificate of Analysis

Hargis & Associates, Inc.

Project Number : Raytheon Main, 532.30

9171 Towne Centre Drive, Suite 375

Report To : Steve Netto

San Diego , CA 92122

Reported : 01/07/2013

Client Sample ID TB-010313

Lab ID: 1300018-01

Volatile Organic Compounds by EPA 8260

Analyst: SL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Dibromomethane	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 10:20	
Dichlorodifluoromethane	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 10:20	
Ethylbenzene	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 10:20	
Hexachlorobutadiene	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 10:20	
Isopropylbenzene	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 10:20	
m,p-Xylene	ND	1.0	NA	1	B3A0074	01/04/2013	01/04/13 10:20	
Methylene chloride	ND	1.0	NA	1	B3A0074	01/04/2013	01/04/13 10:20	
n-Butylbenzene	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 10:20	
n-Propylbenzene	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 10:20	
Naphthalene	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 10:20	
o-Xylene	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 10:20	
sec-Butylbenzene	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 10:20	
Styrene	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 10:20	
tert-Butylbenzene	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 10:20	
Tetrachloroethene	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 10:20	
Toluene	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 10:20	
trans-1,2-Dichloroethene	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 10:20	
Trichloroethene	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 10:20	
Trichlorofluoromethane	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 10:20	
Vinyl chloride	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 10:20	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>109 %</i>		<i>70 - 130</i>		B3A0074	01/04/2013	<i>01/04/13 10:20</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>105 %</i>		<i>70 - 130</i>		B3A0074	01/04/2013	<i>01/04/13 10:20</i>	
<i>Surrogate: Dibromofluoromethane</i>	<i>110 %</i>		<i>70 - 130</i>		B3A0074	01/04/2013	<i>01/04/13 10:20</i>	
<i>Surrogate: Toluene-d8</i>	<i>111 %</i>		<i>70 - 130</i>		B3A0074	01/04/2013	<i>01/04/13 10:20</i>	



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Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego, CA 92122

Project Number : Raytheon Main, 532.30

Report To : Steve Netto

Reported : 01/07/2013

Client Sample ID MW-32C

Lab ID: 1300018-02

Specific Conductance by EPA 120.1

Analyst: RD

Analyte	Result (umhos/cm)	PQL (umhos/cm)	MDL (umhos/cm)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Specific Conductance	530	0.10	NA	1	B3A0104	01/03/2013	01/03/13 00:00	

Anions Scan by Ion Chromatography EPA 300.0

Analyst: AG

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Bromide	0.08	0.05	NA	1	B3A0134	01/04/2013	01/04/13 16:28	
Chloride	24	2.5	NA	5	B3A0134	01/04/2013	01/04/13 16:51	
Nitrate as N	ND	0.10	NA	1	B3A0134	01/04/2013	01/04/13 16:28	
Sulfate	61	5.0	NA	5	B3A0134	01/04/2013	01/04/13 16:51	

Alkalinity, Speciated by SM 2320B

Analyst: AG

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Alkalinity, Bicarbonate (as CaCO ₃)	180	5.0	NA	1	B3A0131	01/07/2013	01/07/13 13:32	

Hardness by Calculation by SM 2340B

Analyst: PT

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Hardness Total (As CaCO ₃)	94	2.0	NA	1	B3A0089	01/04/2013	01/07/13 07:53	

Total Dissolved Solids (Residue, Filterable) by SM 2540C

Analyst: AG

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Residue, Dissolved	330	10	NA	1	B3A0133	01/04/2013	01/04/13 15:04	

pH by SM 4500H+B

Analyst: RD

Analyte	Result (pH Units)	PQL (pH Units)	MDL (pH Units)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
pH	8.1	0.10	NA	1	B3A0102	01/03/2013	01/03/13 00:00	H1



Certificate of Analysis

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Report To : Steve Netto

Reported : 01/07/2013

Client Sample ID MW-32C

Lab ID: 1300018-02

Ammonia, as Nitrogen N by SM 4500NH3C

Analyst: LA

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Nitrogen, Ammonia (As N)	0.16	0.15	NA	1	B3A0132	01/07/2013	01/07/13 01:01	

Total Metals by ICP-AES EPA 6010B

Analyst: SB

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Copper	0.0097	0.0050	NA	1	B3A0090	01/04/2013	01/04/13 15:23	
Iron	ND	0.50	NA	1	B3A0090	01/04/2013	01/04/13 15:23	
Manganese	ND	0.50	NA	1	B3A0090	01/04/2013	01/04/13 15:23	
Zinc	0.075	0.010	NA	1	B3A0090	01/04/2013	01/04/13 15:23	

Dissolved Metals by ICP-AES EPA 6010B

Analyst: PT

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Calcium	29	0.50	NA	1	B3A0089	01/04/2013	01/07/13 07:53	
Magnesium	5.3	0.10	NA	1	B3A0089	01/04/2013	01/07/13 07:53	

Dissolved Potassium by AA (Direct Aspiration) EPA 7610

Analyst: VV

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Potassium	2.4	0.50	NA	1	B3A0130	01/07/2013	01/07/13 14:16	

Dissolved Sodium by AA (Direct Aspiration) by EPA 7770

Analyst: VV

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Sodium	77	50	NA	1	B3A0091	01/04/2013	01/07/13 13:57	

Volatile Organic Compounds by EPA 8260

Analyst: SL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 11:00	
1,1,1-Trichloroethane	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 11:00	
1,1,2,2-Tetrachloroethane	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 11:00	



Certificate of Analysis

Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : Raytheon Main, 532.30

Report To : Steve Netto

Reported : 01/07/2013

Client Sample ID MW-32C

Lab ID: 1300018-02

Volatile Organic Compounds by EPA 8260

Analyst: SL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,2-Trichloroethane	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 11:00	
1,1-Dichloroethane	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 11:00	
1,1-Dichloroethene	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 11:00	
1,1-Dichloropropene	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 11:00	
1,2,3-Trichloropropane	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 11:00	
1,2,3-Trichlorobenzene	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 11:00	
1,2,4-Trichlorobenzene	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 11:00	
1,2,4-Trimethylbenzene	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 11:00	
1,2-Dibromo-3-chloropropane	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 11:00	
1,2-Dibromoethane	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 11:00	
1,2-Dichlorobenzene	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 11:00	
1,2-Dichloroethane	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 11:00	
1,2-Dichloropropane	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 11:00	
1,3,5-Trimethylbenzene	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 11:00	
1,3-Dichlorobenzene	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 11:00	
1,3-Dichloropropane	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 11:00	
1,4-Dichlorobenzene	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 11:00	
2,2-Dichloropropane	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 11:00	
2-Chlorotoluene	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 11:00	
4-Chlorotoluene	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 11:00	
4-Isopropyltoluene	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 11:00	
Benzene	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 11:00	
Bromobenzene	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 11:00	
Bromodichloromethane	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 11:00	
Bromoform	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 11:00	
Bromomethane	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 11:00	
Carbon tetrachloride	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 11:00	
Chlorobenzene	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 11:00	
Chloroethane	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 11:00	
Chloroform	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 11:00	
Chloromethane	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 11:00	
cis-1,2-Dichloroethene	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 11:00	
cis-1,3-Dichloropropene	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 11:00	
Dibromochloromethane	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 11:00	
Dibromomethane	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 11:00	
Dichlorodifluoromethane	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 11:00	
Ethylbenzene	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 11:00	



Certificate of Analysis

Hargis & Associates, Inc.

Project Number : Raytheon Main, 532.30

9171 Towne Centre Drive, Suite 375

Report To : Steve Netto

San Diego , CA 92122

Reported : 01/07/2013

Client Sample ID MW-32C

Lab ID: 1300018-02

Volatile Organic Compounds by EPA 8260

Analyst: SL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Hexachlorobutadiene	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 11:00	
Isopropylbenzene	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 11:00	
m,p-Xylene	ND	1.0	NA	1	B3A0074	01/04/2013	01/04/13 11:00	
Methylene chloride	ND	1.0	NA	1	B3A0074	01/04/2013	01/04/13 11:00	
n-Butylbenzene	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 11:00	
n-Propylbenzene	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 11:00	
Naphthalene	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 11:00	
o-Xylene	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 11:00	
sec-Butylbenzene	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 11:00	
Styrene	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 11:00	
tert-Butylbenzene	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 11:00	
Tetrachloroethene	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 11:00	
Toluene	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 11:00	
trans-1,2-Dichloroethene	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 11:00	
Trichloroethene	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 11:00	
Trichlorofluoromethane	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 11:00	
Vinyl chloride	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 11:00	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>116 %</i>	<i>70 - 130</i>			B3A0074	01/04/2013	<i>01/04/13 11:00</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>107 %</i>	<i>70 - 130</i>			B3A0074	01/04/2013	<i>01/04/13 11:00</i>	
<i>Surrogate: Dibromofluoromethane</i>	<i>114 %</i>	<i>70 - 130</i>			B3A0074	01/04/2013	<i>01/04/13 11:00</i>	
<i>Surrogate: Toluene-d8</i>	<i>117 %</i>	<i>70 - 130</i>			B3A0074	01/04/2013	<i>01/04/13 11:00</i>	

1,4-Dioxane by EPA 8270/SIM: Isotope Dilution Technique

Analyst: BB

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,4-Dioxane	ND	0.20	0.13	1	B3A0092	01/04/2013	01/04/13 17:41	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	<i>109 %</i>	<i>36 - 107</i>			B3A0092	01/04/2013	<i>01/04/13 17:41</i>	S1
<i>Surrogate: 2-Fluorobiphenyl</i>	<i>112 %</i>	<i>42 - 120</i>			B3A0092	01/04/2013	<i>01/04/13 17:41</i>	
<i>Surrogate: 4-Terphenyl-d14</i>	<i>108 %</i>	<i>67 - 142</i>			B3A0092	01/04/2013	<i>01/04/13 17:41</i>	
<i>Surrogate: Nitrobenzene-d5</i>	<i>138 %</i>	<i>36 - 130</i>			B3A0092	01/04/2013	<i>01/04/13 17:41</i>	S1



Certificate of Analysis

Hargis & Associates, Inc.

Project Number : Raytheon Main, 532.30

9171 Towne Centre Drive, Suite 375

Report To : Steve Netto

San Diego , CA 92122

Reported : 01/07/2013

Client Sample ID MW-32B

Lab ID: 1300018-03

Specific Conductance by EPA 120.1

Analyst: RD

Analyte	Result (umhos/cm)	PQL (umhos/cm)	MDL (umhos/cm)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Specific Conductance	940	0.10	NA	1	B3A0104	01/03/2013	01/03/13 00:00	

Anions Scan by Ion Chromatography EPA 300.0

Analyst: AG

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Bromide	0.29	0.05	NA	1	B3A0134	01/04/2013	01/04/13 11:21	
Chloride	140	10	NA	20	B3A0134	01/04/2013	01/04/13 18:33	
Nitrate as N	ND	0.10	NA	1	B3A0134	01/04/2013	01/04/13 11:21	
Sulfate	86	5.0	NA	5	B3A0134	01/04/2013	01/04/13 18:10	

Alkalinity, Speciated by SM 2320B

Analyst: AG

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Alkalinity, Bicarbonate (as CaCO3)	190	5.0	NA	1	B3A0131	01/07/2013	01/07/13 13:32	

Hardness by Calculation by SM 2340B

Analyst: PT

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Hardness Total (As CaCO3)	230	2.0	NA	1	B3A0089	01/04/2013	01/07/13 07:59	

Total Dissolved Solids (Residue, Filterable) by SM 2540C

Analyst: AG

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Residue, Dissolved	550	10	NA	1	B3A0133	01/04/2013	01/04/13 15:06	

pH by SM 4500H+B

Analyst: RD

Analyte	Result (pH Units)	PQL (pH Units)	MDL (pH Units)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
pH	7.8	0.10	NA	1	B3A0102	01/03/2013	01/03/13 00:00	H1



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Project Number : Raytheon Main, 532.30

Report To : Steve Netto

Reported : 01/07/2013

Client Sample ID MW-32B

Lab ID: 1300018-03

Ammonia, as Nitrogen N by SM 4500NH3C

Analyst: LA

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Nitrogen, Ammonia (As N)	0.16	0.15	NA	1	B3A0132	01/07/2013	01/07/13 01:01	

Total Metals by ICP-AES EPA 6010B

Analyst: SB

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Copper	0.0097	0.0050	NA	1	B3A0090	01/04/2013	01/04/13 15:29	
Iron	ND	0.50	NA	1	B3A0090	01/04/2013	01/04/13 15:29	
Manganese	ND	0.50	NA	1	B3A0090	01/04/2013	01/04/13 15:29	
Zinc	0.034	0.010	NA	1	B3A0090	01/04/2013	01/04/13 15:29	

Dissolved Metals by ICP-AES EPA 6010B

Analyst: PT

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Calcium	64	0.50	NA	1	B3A0089	01/04/2013	01/07/13 07:59	
Magnesium	17	0.10	NA	1	B3A0089	01/04/2013	01/07/13 07:59	

Dissolved Potassium by AA (Direct Aspiration) EPA 7610

Analyst: VV

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Potassium	3.8	0.50	NA	1	B3A0130	01/07/2013	01/07/13 14:17	

Dissolved Sodium by AA (Direct Aspiration) by EPA 7770

Analyst: VV

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Sodium	83	50	NA	1	B3A0091	01/04/2013	01/07/13 13:58	

Volatile Organic Compounds by EPA 8260

Analyst: SL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 12:40	
1,1,1-Trichloroethane	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 12:40	
1,1,2,2-Tetrachloroethane	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 12:40	



Certificate of Analysis

Hargis & Associates, Inc.

Project Number : Raytheon Main, 532.30

9171 Towne Centre Drive, Suite 375

Report To : Steve Netto

San Diego , CA 92122

Reported : 01/07/2013

Client Sample ID MW-32B

Lab ID: 1300018-03

Volatile Organic Compounds by EPA 8260

Analyst: SL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,2-Trichloroethane	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 12:40	
1,1-Dichloroethane	0.74	0.50	NA	1	B3A0074	01/04/2013	01/04/13 12:40	
1,1-Dichloroethene	120	5.0	NA	10	B3A0074	01/04/2013	01/04/13 14:25	
1,1-Dichloropropene	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 12:40	
1,2,3-Trichloropropane	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 12:40	
1,2,3-Trichlorobenzene	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 12:40	
1,2,4-Trichlorobenzene	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 12:40	
1,2,4-Trimethylbenzene	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 12:40	
1,2-Dibromo-3-chloropropane	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 12:40	
1,2-Dibromoethane	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 12:40	
1,2-Dichlorobenzene	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 12:40	
1,2-Dichloroethane	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 12:40	
1,2-Dichloropropane	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 12:40	
1,3,5-Trimethylbenzene	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 12:40	
1,3-Dichlorobenzene	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 12:40	
1,3-Dichloropropane	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 12:40	
1,4-Dichlorobenzene	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 12:40	
2,2-Dichloropropane	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 12:40	
2-Chlorotoluene	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 12:40	
4-Chlorotoluene	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 12:40	
4-Isopropyltoluene	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 12:40	
Benzene	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 12:40	
Bromobenzene	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 12:40	
Bromodichloromethane	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 12:40	
Bromoform	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 12:40	
Bromomethane	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 12:40	
Carbon tetrachloride	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 12:40	
Chlorobenzene	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 12:40	
Chloroethane	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 12:40	
Chloroform	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 12:40	
Chloromethane	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 12:40	
cis-1,2-Dichloroethene	4.0	0.50	NA	1	B3A0074	01/04/2013	01/04/13 12:40	
cis-1,3-Dichloropropene	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 12:40	
Dibromochloromethane	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 12:40	
Dibromomethane	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 12:40	
Dichlorodifluoromethane	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 12:40	
Ethylbenzene	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 12:40	



Certificate of Analysis

Hargis & Associates, Inc.

Project Number : Raytheon Main, 532.30

9171 Towne Centre Drive, Suite 375

Report To : Steve Netto

San Diego , CA 92122

Reported : 01/07/2013

Client Sample ID MW-32B

Lab ID: 1300018-03

Volatile Organic Compounds by EPA 8260

Analyst: SL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Hexachlorobutadiene	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 12:40	
Isopropylbenzene	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 12:40	
m,p-Xylene	ND	1.0	NA	1	B3A0074	01/04/2013	01/04/13 12:40	
Methylene chloride	ND	1.0	NA	1	B3A0074	01/04/2013	01/04/13 12:40	
n-Butylbenzene	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 12:40	
n-Propylbenzene	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 12:40	
Naphthalene	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 12:40	
o-Xylene	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 12:40	
sec-Butylbenzene	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 12:40	
Styrene	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 12:40	
tert-Butylbenzene	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 12:40	
Tetrachloroethene	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 12:40	
Toluene	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 12:40	
trans-1,2-Dichloroethene	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 12:40	
Trichloroethene	49	0.50	NA	1	B3A0074	01/04/2013	01/04/13 12:40	
Trichlorofluoromethane	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 12:40	
Vinyl chloride	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 12:40	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>116 %</i>	<i>70 - 130</i>			B3A0074	01/04/2013	<i>01/04/13 14:25</i>	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>107 %</i>	<i>70 - 130</i>			B3A0074	01/04/2013	<i>01/04/13 12:40</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>107 %</i>	<i>70 - 130</i>			B3A0074	01/04/2013	<i>01/04/13 14:25</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>101 %</i>	<i>70 - 130</i>			B3A0074	01/04/2013	<i>01/04/13 12:40</i>	
<i>Surrogate: Dibromofluoromethane</i>	<i>114 %</i>	<i>70 - 130</i>			B3A0074	01/04/2013	<i>01/04/13 14:25</i>	
<i>Surrogate: Dibromofluoromethane</i>	<i>107 %</i>	<i>70 - 130</i>			B3A0074	01/04/2013	<i>01/04/13 12:40</i>	
<i>Surrogate: Toluene-d8</i>	<i>107 %</i>	<i>70 - 130</i>			B3A0074	01/04/2013	<i>01/04/13 12:40</i>	
<i>Surrogate: Toluene-d8</i>	<i>116 %</i>	<i>70 - 130</i>			B3A0074	01/04/2013	<i>01/04/13 14:25</i>	



Certificate of Analysis

Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego, CA 92122

Project Number : Raytheon Main, 532.30

Report To : Steve Netto

Reported : 01/07/2013

Client Sample ID MW-32B

Lab ID: 1300018-03

1,4-Dioxane by EPA 8270/SIM: Isotope Dilution Technique

Analyst: BB

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,4-Dioxane	0.60	0.20	0.13	1	B3A0092	01/04/2013	01/04/13 18:06	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	<i>75.8 %</i>		<i>36 - 107</i>		B3A0092	01/04/2013	<i>01/04/13 18:06</i>	
<i>Surrogate: 2-Fluorobiphenyl</i>	<i>103 %</i>		<i>42 - 120</i>		B3A0092	01/04/2013	<i>01/04/13 18:06</i>	
<i>Surrogate: 4-Terphenyl-d14</i>	<i>96.4 %</i>		<i>67 - 142</i>		B3A0092	01/04/2013	<i>01/04/13 18:06</i>	
<i>Surrogate: Nitrobenzene-d5</i>	<i>112 %</i>		<i>36 - 130</i>		B3A0092	01/04/2013	<i>01/04/13 18:06</i>	



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9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : Raytheon Main, 532.30

Report To : Steve Netto

Reported : 01/07/2013

Client Sample ID MW-37

Lab ID: 1300018-04

Specific Conductance by EPA 120.1

Analyst: RD

Analyte	Result (umhos/cm)	PQL (umhos/cm)	MDL (umhos/cm)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Specific Conductance	810	0.10	NA	1	B3A0104	01/03/2013	01/03/13 00:00	

Anions Scan by Ion Chromatography EPA 300.0

Analyst: AG

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Bromide	0.28	0.05	NA	1	B3A0134	01/04/2013	01/04/13 11:44	
Chloride	130	10	NA	20	B3A0134	01/04/2013	01/04/13 19:07	
Nitrate as N	3.2	0.10	NA	1	B3A0134	01/04/2013	01/04/13 11:44	
Sulfate	54	5.0	NA	5	B3A0134	01/04/2013	01/04/13 18:56	

Alkalinity, Speciated by SM 2320B

Analyst: AG

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Alkalinity, Bicarbonate (as CaCO3)	140	5.0	NA	1	B3A0131	01/07/2013	01/07/13 13:32	

Hardness by Calculation by SM 2340B

Analyst: PT

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Hardness Total (As CaCO3)	210	2.0	NA	1	B3A0089	01/04/2013	01/07/13 08:01	

Total Dissolved Solids (Residue, Filterable) by SM 2540C

Analyst: AG

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Residue, Dissolved	450	10	NA	1	B3A0133	01/04/2013	01/04/13 15:08	

pH by SM 4500H+B

Analyst: RD

Analyte	Result (pH Units)	PQL (pH Units)	MDL (pH Units)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
pH	7.8	0.10	NA	1	B3A0102	01/03/2013	01/03/13 00:00	H1



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Report To : Steve Netto

Reported : 01/07/2013

Client Sample ID MW-37

Lab ID: 1300018-04

Ammonia, as Nitrogen N by SM 4500NH3C

Analyst: LA

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Nitrogen, Ammonia (As N)	ND	0.15	NA	1	B3A0132	01/07/2013	01/07/13 01:01	

Total Metals by ICP-AES EPA 6010B

Analyst: SB

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Copper	0.0095	0.0050	NA	1	B3A0090	01/04/2013	01/04/13 15:31	
Iron	0.78	0.50	NA	1	B3A0090	01/04/2013	01/04/13 15:31	
Manganese	ND	0.50	NA	1	B3A0090	01/04/2013	01/04/13 15:31	
Zinc	0.033	0.010	NA	1	B3A0090	01/04/2013	01/04/13 15:31	

Dissolved Metals by ICP-AES EPA 6010B

Analyst: PT

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Calcium	62	0.50	NA	1	B3A0089	01/04/2013	01/07/13 08:01	
Magnesium	14	0.10	NA	1	B3A0089	01/04/2013	01/07/13 08:01	

Dissolved Potassium by AA (Direct Aspiration) EPA 7610

Analyst: VV

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Potassium	5.0	1.0	NA	2	B3A0130	01/07/2013	01/07/13 14:17	

Dissolved Sodium by AA (Direct Aspiration) by EPA 7770

Analyst: VV

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Sodium	69	50	NA	1	B3A0091	01/04/2013	01/07/13 13:58	

Volatile Organic Compounds by EPA 8260

Analyst: SL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 12:20	
1,1,1-Trichloroethane	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 12:20	
1,1,2,2-Tetrachloroethane	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 12:20	



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9171 Towne Centre Drive, Suite 375

Report To : Steve Netto

San Diego , CA 92122

Reported : 01/07/2013

Client Sample ID MW-37

Lab ID: 1300018-04

Volatile Organic Compounds by EPA 8260

Analyst: SL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,2-Trichloroethane	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 12:20	
1,1-Dichloroethane	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 12:20	
1,1-Dichloroethene	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 12:20	
1,1-Dichloropropene	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 12:20	
1,2,3-Trichloropropane	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 12:20	
1,2,3-Trichlorobenzene	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 12:20	
1,2,4-Trichlorobenzene	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 12:20	
1,2,4-Trimethylbenzene	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 12:20	
1,2-Dibromo-3-chloropropane	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 12:20	
1,2-Dibromoethane	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 12:20	
1,2-Dichlorobenzene	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 12:20	
1,2-Dichloroethane	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 12:20	
1,2-Dichloropropane	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 12:20	
1,3,5-Trimethylbenzene	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 12:20	
1,3-Dichlorobenzene	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 12:20	
1,3-Dichloropropane	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 12:20	
1,4-Dichlorobenzene	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 12:20	
2,2-Dichloropropane	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 12:20	
2-Chlorotoluene	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 12:20	
4-Chlorotoluene	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 12:20	
4-Isopropyltoluene	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 12:20	
Benzene	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 12:20	
Bromobenzene	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 12:20	
Bromodichloromethane	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 12:20	
Bromoform	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 12:20	
Bromomethane	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 12:20	
Carbon tetrachloride	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 12:20	
Chlorobenzene	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 12:20	
Chloroethane	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 12:20	
Chloroform	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 12:20	
Chloromethane	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 12:20	
cis-1,2-Dichloroethene	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 12:20	
cis-1,3-Dichloropropene	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 12:20	
Dibromochloromethane	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 12:20	
Dibromomethane	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 12:20	
Dichlorodifluoromethane	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 12:20	
Ethylbenzene	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 12:20	



Certificate of Analysis

Hargis & Associates, Inc.

Project Number : Raytheon Main, 532.30

9171 Towne Centre Drive, Suite 375

Report To : Steve Netto

San Diego , CA 92122

Reported : 01/07/2013

Client Sample ID MW-37

Lab ID: 1300018-04

Volatile Organic Compounds by EPA 8260

Analyst: SL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Hexachlorobutadiene	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 12:20	
Isopropylbenzene	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 12:20	
m,p-Xylene	ND	1.0	NA	1	B3A0074	01/04/2013	01/04/13 12:20	
Methylene chloride	ND	1.0	NA	1	B3A0074	01/04/2013	01/04/13 12:20	
n-Butylbenzene	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 12:20	
n-Propylbenzene	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 12:20	
Naphthalene	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 12:20	
o-Xylene	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 12:20	
sec-Butylbenzene	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 12:20	
Styrene	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 12:20	
tert-Butylbenzene	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 12:20	
Tetrachloroethene	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 12:20	
Toluene	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 12:20	
trans-1,2-Dichloroethene	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 12:20	
Trichloroethene	0.66	0.50	NA	1	B3A0074	01/04/2013	01/04/13 12:20	
Trichlorofluoromethane	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 12:20	
Vinyl chloride	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 12:20	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>114 %</i>	<i>70 - 130</i>			B3A0074	01/04/2013	<i>01/04/13 12:20</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>108 %</i>	<i>70 - 130</i>			B3A0074	01/04/2013	<i>01/04/13 12:20</i>	
<i>Surrogate: Dibromofluoromethane</i>	<i>115 %</i>	<i>70 - 130</i>			B3A0074	01/04/2013	<i>01/04/13 12:20</i>	
<i>Surrogate: Toluene-d8</i>	<i>116 %</i>	<i>70 - 130</i>			B3A0074	01/04/2013	<i>01/04/13 12:20</i>	

1,4-Dioxane by EPA 8270/SIM: Isotope Dilution Technique

Analyst: BB

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,4-Dioxane	ND	0.20	0.13	1	B3A0092	01/04/2013	01/04/13 18:31	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	<i>67.7 %</i>	<i>36 - 107</i>			B3A0092	01/04/2013	<i>01/04/13 18:31</i>	
<i>Surrogate: 2-Fluorobiphenyl</i>	<i>93.3 %</i>	<i>42 - 120</i>			B3A0092	01/04/2013	<i>01/04/13 18:31</i>	
<i>Surrogate: 4-Terphenyl-d14</i>	<i>95.1 %</i>	<i>67 - 142</i>			B3A0092	01/04/2013	<i>01/04/13 18:31</i>	
<i>Surrogate: Nitrobenzene-d5</i>	<i>111 %</i>	<i>36 - 130</i>			B3A0092	01/04/2013	<i>01/04/13 18:31</i>	



Certificate of Analysis

Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego, CA 92122

Project Number : Raytheon Main, 532.30

Report To : Steve Netto

Reported : 01/07/2013

Client Sample ID MW-30A

Lab ID: 1300018-05

Specific Conductance by EPA 120.1

Analyst: RD

Analyte	Result (umhos/cm)	PQL (umhos/cm)	MDL (umhos/cm)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Specific Conductance	740	0.10	NA	1	B3A0104	01/03/2013	01/03/13 00:00	

Anions Scan by Ion Chromatography EPA 300.0

Analyst: AG

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Bromide	0.11	0.05	NA	1	B3A0134	01/04/2013	01/04/13 11:55	
Chloride	44	5.0	NA	10	B3A0134	01/04/2013	01/04/13 19:19	
Nitrate as N	1.1	0.10	NA	1	B3A0134	01/04/2013	01/04/13 11:55	
Sulfate	140	10	NA	10	B3A0134	01/04/2013	01/04/13 19:19	

Alkalinity, Speciated by SM 2320B

Analyst: AG

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Alkalinity, Bicarbonate (as CaCO3)	180	5.0	NA	1	B3A0131	01/07/2013	01/07/13 13:32	

Hardness by Calculation by SM 2340B

Analyst: PT

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Hardness Total (As CaCO3)	250	2.0	NA	1	B3A0089	01/04/2013	01/07/13 08:03	

Total Dissolved Solids (Residue, Filterable) by SM 2540C

Analyst: AG

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Residue, Dissolved	470	10	NA	1	B3A0133	01/04/2013	01/04/13 15:10	

pH by SM 4500H+B

Analyst: RD

Analyte	Result (pH Units)	PQL (pH Units)	MDL (pH Units)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
pH	7.6	0.10	NA	1	B3A0102	01/03/2013	01/03/13 00:00	H1



Certificate of Analysis

Hargis & Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego , CA 92122

Project Number : Raytheon Main, 532.30
 Report To : Steve Netto
 Reported : 01/07/2013

Client Sample ID MW-30A

Lab ID: 1300018-05

Ammonia, as Nitrogen N by SM 4500NH3C

Analyst: LA

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Nitrogen, Ammonia (As N)	0.32	0.15	NA	1	B3A0132	01/07/2013	01/07/13 01:01	

Total Metals by ICP-AES EPA 6010B

Analyst: SB

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Copper	0.010	0.0050	NA	1	B3A0090	01/04/2013	01/04/13 15:34	
Iron	ND	0.50	NA	1	B3A0090	01/04/2013	01/04/13 15:34	
Manganese	ND	0.50	NA	1	B3A0090	01/04/2013	01/04/13 15:34	
Zinc	ND	0.010	NA	1	B3A0090	01/04/2013	01/04/13 15:34	

Dissolved Metals by ICP-AES EPA 6010B

Analyst: PT

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Calcium	65	0.50	NA	1	B3A0089	01/04/2013	01/07/13 08:03	
Magnesium	21	0.10	NA	1	B3A0089	01/04/2013	01/07/13 08:03	

Dissolved Potassium by AA (Direct Aspiration) EPA 7610

Analyst: VV

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Potassium	3.8	0.50	NA	1	B3A0130	01/07/2013	01/07/13 14:18	

Dissolved Sodium by AA (Direct Aspiration) by EPA 7770

Analyst: VV

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Sodium	57	50	NA	1	B3A0091	01/04/2013	01/07/13 13:58	

Volatile Organic Compounds by EPA 8260

Analyst: SL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 11:20	
1,1,1-Trichloroethane	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 11:20	
1,1,2,2-Tetrachloroethane	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 11:20	



Certificate of Analysis

Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : Raytheon Main, 532.30

Report To : Steve Netto

Reported : 01/07/2013

Client Sample ID MW-30A

Lab ID: 1300018-05

Volatile Organic Compounds by EPA 8260

Analyst: SL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,2-Trichloroethane	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 11:20	
1,1-Dichloroethane	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 11:20	
1,1-Dichloroethene	0.51	0.50	NA	1	B3A0074	01/04/2013	01/04/13 11:20	
1,1-Dichloropropene	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 11:20	
1,2,3-Trichloropropane	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 11:20	
1,2,3-Trichlorobenzene	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 11:20	
1,2,4-Trichlorobenzene	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 11:20	
1,2,4-Trimethylbenzene	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 11:20	
1,2-Dibromo-3-chloropropane	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 11:20	
1,2-Dibromoethane	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 11:20	
1,2-Dichlorobenzene	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 11:20	
1,2-Dichloroethane	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 11:20	
1,2-Dichloropropane	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 11:20	
1,3,5-Trimethylbenzene	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 11:20	
1,3-Dichlorobenzene	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 11:20	
1,3-Dichloropropane	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 11:20	
1,4-Dichlorobenzene	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 11:20	
2,2-Dichloropropane	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 11:20	
2-Chlorotoluene	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 11:20	
4-Chlorotoluene	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 11:20	
4-Isopropyltoluene	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 11:20	
Benzene	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 11:20	
Bromobenzene	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 11:20	
Bromodichloromethane	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 11:20	
Bromoform	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 11:20	
Bromomethane	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 11:20	
Carbon tetrachloride	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 11:20	
Chlorobenzene	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 11:20	
Chloroethane	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 11:20	
Chloroform	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 11:20	
Chloromethane	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 11:20	
cis-1,2-Dichloroethene	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 11:20	
cis-1,3-Dichloropropene	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 11:20	
Dibromochloromethane	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 11:20	
Dibromomethane	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 11:20	
Dichlorodifluoromethane	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 11:20	
Ethylbenzene	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 11:20	



Certificate of Analysis

Hargis & Associates, Inc.

Project Number : Raytheon Main, 532.30

9171 Towne Centre Drive, Suite 375

Report To : Steve Netto

San Diego , CA 92122

Reported : 01/07/2013

Client Sample ID MW-30A

Lab ID: 1300018-05

Volatile Organic Compounds by EPA 8260

Analyst: SL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Hexachlorobutadiene	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 11:20	
Isopropylbenzene	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 11:20	
m,p-Xylene	ND	1.0	NA	1	B3A0074	01/04/2013	01/04/13 11:20	
Methylene chloride	ND	1.0	NA	1	B3A0074	01/04/2013	01/04/13 11:20	
n-Butylbenzene	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 11:20	
n-Propylbenzene	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 11:20	
Naphthalene	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 11:20	
o-Xylene	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 11:20	
sec-Butylbenzene	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 11:20	
Styrene	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 11:20	
tert-Butylbenzene	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 11:20	
Tetrachloroethene	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 11:20	
Toluene	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 11:20	
trans-1,2-Dichloroethene	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 11:20	
Trichloroethene	0.62	0.50	NA	1	B3A0074	01/04/2013	01/04/13 11:20	
Trichlorofluoromethane	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 11:20	
Vinyl chloride	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 11:20	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>113 %</i>	<i>70 - 130</i>			B3A0074	01/04/2013	<i>01/04/13 11:20</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>109 %</i>	<i>70 - 130</i>			B3A0074	01/04/2013	<i>01/04/13 11:20</i>	
<i>Surrogate: Dibromofluoromethane</i>	<i>114 %</i>	<i>70 - 130</i>			B3A0074	01/04/2013	<i>01/04/13 11:20</i>	
<i>Surrogate: Toluene-d8</i>	<i>116 %</i>	<i>70 - 130</i>			B3A0074	01/04/2013	<i>01/04/13 11:20</i>	

1,4-Dioxane by EPA 8270/SIM: Isotope Dilution Technique

Analyst: BB

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,4-Dioxane	ND	0.20	0.13	1	B3A0092	01/04/2013	01/04/13 18:57	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	<i>62.7 %</i>	<i>36 - 107</i>			B3A0092	01/04/2013	<i>01/04/13 18:57</i>	
<i>Surrogate: 2-Fluorobiphenyl</i>	<i>81.0 %</i>	<i>42 - 120</i>			B3A0092	01/04/2013	<i>01/04/13 18:57</i>	
<i>Surrogate: 4-Terphenyl-d14</i>	<i>96.0 %</i>	<i>67 - 142</i>			B3A0092	01/04/2013	<i>01/04/13 18:57</i>	
<i>Surrogate: Nitrobenzene-d5</i>	<i>93.8 %</i>	<i>36 - 130</i>			B3A0092	01/04/2013	<i>01/04/13 18:57</i>	



Certificate of Analysis

Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : Raytheon Main, 532.30

Report To : Steve Netto

Reported : 01/07/2013

Client Sample ID MW-30B

Lab ID: 1300018-06

Specific Conductance by EPA 120.1

Analyst: RD

Analyte	Result (umhos/cm)	PQL (umhos/cm)	MDL (umhos/cm)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Specific Conductance	1200	0.10	NA	1	B3A0104	01/03/2013	01/03/13 00:00	

Anions Scan by Ion Chromatography EPA 300.0

Analyst: AG

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Bromide	0.48	0.05	NA	1	B3A0134	01/04/2013	01/04/13 13:14	
Chloride	180	10	NA	20	B3A0134	01/04/2013	01/04/13 19:42	
Nitrate as N	6.5	0.10	NA	1	B3A0134	01/04/2013	01/04/13 13:14	
Sulfate	100	10	NA	10	B3A0134	01/04/2013	01/04/13 19:30	

Alkalinity, Speciated by SM 2320B

Analyst: AG

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Alkalinity, Bicarbonate (as CaCO3)	240	5.0	NA	1	B3A0131	01/07/2013	01/07/13 13:32	

Hardness by Calculation by SM 2340B

Analyst: PT

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Hardness Total (As CaCO3)	340	2.0	NA	1	B3A0089	01/04/2013	01/07/13 08:05	

Total Dissolved Solids (Residue, Filterable) by SM 2540C

Analyst: AG

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Residue, Dissolved	700	10	NA	1	B3A0133	01/04/2013	01/04/13 15:12	

pH by SM 4500H+B

Analyst: RD

Analyte	Result (pH Units)	PQL (pH Units)	MDL (pH Units)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
pH	7.5	0.10	NA	1	B3A0102	01/03/2013	01/03/13 00:00	H1



Certificate of Analysis

Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego, CA 92122

Project Number : Raytheon Main, 532.30

Report To : Steve Netto

Reported : 01/07/2013

Client Sample ID MW-30B

Lab ID: 1300018-06

Ammonia, as Nitrogen N by SM 4500NH3C

Analyst: LA

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Nitrogen, Ammonia (As N)	0.18	0.15	NA	1	B3A0132	01/07/2013	01/07/13 01:01	

Total Metals by ICP-AES EPA 6010B

Analyst: SB

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Copper	0.012	0.0050	NA	1	B3A0090	01/04/2013	01/04/13 15:36	
Iron	ND	0.50	NA	1	B3A0090	01/04/2013	01/04/13 15:36	
Manganese	ND	0.50	NA	1	B3A0090	01/04/2013	01/04/13 15:36	
Zinc	0.024	0.010	NA	1	B3A0090	01/04/2013	01/04/13 15:36	

Dissolved Metals by ICP-AES EPA 6010B

Analyst: PT

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Calcium	92	0.50	NA	1	B3A0089	01/04/2013	01/07/13 08:05	
Magnesium	27	0.10	NA	1	B3A0089	01/04/2013	01/07/13 08:05	

Dissolved Potassium by AA (Direct Aspiration) EPA 7610

Analyst: VV

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Potassium	6.0	1.0	NA	2	B3A0130	01/07/2013	01/07/13 14:19	

Dissolved Sodium by AA (Direct Aspiration) by EPA 7770

Analyst: VV

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Sodium	110	50	NA	1	B3A0091	01/04/2013	01/07/13 13:58	

Volatile Organic Compounds by EPA 8260

Analyst: SL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 12:00	
1,1,1-Trichloroethane	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 12:00	
1,1,2,2-Tetrachloroethane	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 12:00	



Certificate of Analysis

Hargis & Associates, Inc.

Project Number : Raytheon Main, 532.30

9171 Towne Centre Drive, Suite 375

Report To : Steve Netto

San Diego , CA 92122

Reported : 01/07/2013

Client Sample ID MW-30B

Lab ID: 1300018-06

Volatile Organic Compounds by EPA 8260

Analyst: SL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,2-Trichloroethane	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 12:00	
1,1-Dichloroethane	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 12:00	
1,1-Dichloroethene	18	0.50	NA	1	B3A0074	01/04/2013	01/04/13 12:00	
1,1-Dichloropropene	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 12:00	
1,2,3-Trichloropropane	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 12:00	
1,2,3-Trichlorobenzene	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 12:00	
1,2,4-Trichlorobenzene	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 12:00	
1,2,4-Trimethylbenzene	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 12:00	
1,2-Dibromo-3-chloropropane	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 12:00	
1,2-Dibromoethane	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 12:00	
1,2-Dichlorobenzene	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 12:00	
1,2-Dichloroethane	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 12:00	
1,2-Dichloropropane	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 12:00	
1,3,5-Trimethylbenzene	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 12:00	
1,3-Dichlorobenzene	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 12:00	
1,3-Dichloropropane	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 12:00	
1,4-Dichlorobenzene	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 12:00	
2,2-Dichloropropane	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 12:00	
2-Chlorotoluene	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 12:00	
4-Chlorotoluene	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 12:00	
4-Isopropyltoluene	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 12:00	
Benzene	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 12:00	
Bromobenzene	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 12:00	
Bromodichloromethane	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 12:00	
Bromoform	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 12:00	
Bromomethane	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 12:00	
Carbon tetrachloride	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 12:00	
Chlorobenzene	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 12:00	
Chloroethane	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 12:00	
Chloroform	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 12:00	
Chloromethane	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 12:00	
cis-1,2-Dichloroethene	4.5	0.50	NA	1	B3A0074	01/04/2013	01/04/13 12:00	
cis-1,3-Dichloropropene	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 12:00	
Dibromochloromethane	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 12:00	
Dibromomethane	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 12:00	
Dichlorodifluoromethane	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 12:00	
Ethylbenzene	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 12:00	



Certificate of Analysis

Hargis & Associates, Inc.

Project Number : Raytheon Main, 532.30

9171 Towne Centre Drive, Suite 375

Report To : Steve Netto

San Diego , CA 92122

Reported : 01/07/2013

Client Sample ID MW-30B

Lab ID: 1300018-06

Volatile Organic Compounds by EPA 8260

Analyst: SL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Hexachlorobutadiene	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 12:00	
Isopropylbenzene	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 12:00	
m,p-Xylene	ND	1.0	NA	1	B3A0074	01/04/2013	01/04/13 12:00	
Methylene chloride	ND	1.0	NA	1	B3A0074	01/04/2013	01/04/13 12:00	
n-Butylbenzene	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 12:00	
n-Propylbenzene	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 12:00	
Naphthalene	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 12:00	
o-Xylene	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 12:00	
sec-Butylbenzene	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 12:00	
Styrene	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 12:00	
tert-Butylbenzene	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 12:00	
Tetrachloroethene	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 12:00	
Toluene	2.5	0.50	NA	1	B3A0074	01/04/2013	01/04/13 12:00	
trans-1,2-Dichloroethene	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 12:00	
Trichloroethene	93	0.50	NA	1	B3A0074	01/04/2013	01/04/13 12:00	
Trichlorofluoromethane	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 12:00	
Vinyl chloride	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 12:00	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>111 %</i>	<i>70 - 130</i>			B3A0074	01/04/2013	<i>01/04/13 12:00</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>105 %</i>	<i>70 - 130</i>			B3A0074	01/04/2013	<i>01/04/13 12:00</i>	
<i>Surrogate: Dibromofluoromethane</i>	<i>111 %</i>	<i>70 - 130</i>			B3A0074	01/04/2013	<i>01/04/13 12:00</i>	
<i>Surrogate: Toluene-d8</i>	<i>110 %</i>	<i>70 - 130</i>			B3A0074	01/04/2013	<i>01/04/13 12:00</i>	

1,4-Dioxane by EPA 8270/SIM: Isotope Dilution Technique

Analyst: BB

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,4-Dioxane	ND	0.20	0.13	1	B3A0092	01/04/2013	01/04/13 19:21	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	<i>62.6 %</i>	<i>36 - 107</i>			B3A0092	01/04/2013	<i>01/04/13 19:21</i>	
<i>Surrogate: 2-Fluorobiphenyl</i>	<i>89.7 %</i>	<i>42 - 120</i>			B3A0092	01/04/2013	<i>01/04/13 19:21</i>	
<i>Surrogate: 4-Terphenyl-d14</i>	<i>88.9 %</i>	<i>67 - 142</i>			B3A0092	01/04/2013	<i>01/04/13 19:21</i>	
<i>Surrogate: Nitrobenzene-d5</i>	<i>83.2 %</i>	<i>36 - 130</i>			B3A0092	01/04/2013	<i>01/04/13 19:21</i>	



Certificate of Analysis

Hargis & Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122

Project Number : Raytheon Main, 532.30
 Report To : Steve Netto
 Reported : 01/07/2013

Client Sample ID MW-3400B

Lab ID: 1300018-07

Specific Conductance by EPA 120.1

Analyst: RD

Analyte	Result (umhos/cm)	PQL (umhos/cm)	MDL (umhos/cm)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Specific Conductance	1100	0.10	NA	1	B3A0104	01/03/2013	01/03/13 00:00	

Anions Scan by Ion Chromatography EPA 300.0

Analyst: AG

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Bromide	0.31	0.05	NA	1	B3A0134	01/04/2013	01/04/13 13:25	
Chloride	140	10	NA	20	B3A0134	01/04/2013	01/04/13 19:53	
Nitrate as N	6.3	0.10	NA	1	B3A0134	01/04/2013	01/04/13 13:25	
Sulfate	130	20	NA	20	B3A0134	01/04/2013	01/04/13 19:53	

Alkalinity, Speciated by SM 2320B

Analyst: AG

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Alkalinity, Bicarbonate (as CaCO3)	220	5.0	NA	1	B3A0131	01/07/2013	01/07/13 13:32	

Hardness by Calculation by SM 2340B

Analyst: PT

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Hardness Total (As CaCO3)	370	2.0	NA	1	B3A0089	01/04/2013	01/07/13 08:08	

Total Dissolved Solids (Residue, Filterable) by SM 2540C

Analyst: AG

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Residue, Dissolved	670	10	NA	1	B3A0133	01/04/2013	01/04/13 15:14	

pH by SM 4500H+B

Analyst: RD

Analyte	Result (pH Units)	PQL (pH Units)	MDL (pH Units)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
pH	7.5	0.10	NA	1	B3A0102	01/03/2013	01/03/13 00:00	H1



Certificate of Analysis

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San Diego , CA 92122

Project Number : Raytheon Main, 532.30

Report To : Steve Netto

Reported : 01/07/2013

Client Sample ID MW-3400B

Lab ID: 1300018-07

Ammonia, as Nitrogen N by SM 4500NH3C

Analyst: LA

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Nitrogen, Ammonia (As N)	ND	0.15	NA	1	B3A0132	01/07/2013	01/07/13 01:01	

Total Metals by ICP-AES EPA 6010B

Analyst: SB

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Copper	0.016	0.0050	NA	1	B3A0090	01/04/2013	01/04/13 15:38	
Iron	0.82	0.50	NA	1	B3A0090	01/04/2013	01/04/13 15:38	
Manganese	ND	0.50	NA	1	B3A0090	01/04/2013	01/04/13 15:38	
Zinc	0.058	0.010	NA	1	B3A0090	01/04/2013	01/04/13 15:38	

Dissolved Metals by ICP-AES EPA 6010B

Analyst: PT

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Calcium	94	0.50	NA	1	B3A0089	01/04/2013	01/07/13 08:08	
Magnesium	32	0.10	NA	1	B3A0089	01/04/2013	01/07/13 08:08	

Dissolved Potassium by AA (Direct Aspiration) EPA 7610

Analyst: VV

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Potassium	4.6	0.50	NA	1	B3A0130	01/07/2013	01/07/13 14:19	

Dissolved Sodium by AA (Direct Aspiration) by EPA 7770

Analyst: VV

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Sodium	78	50	NA	1	B3A0091	01/04/2013	01/07/13 13:59	

Volatile Organic Compounds by EPA 8260

Analyst: SL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	1.0	NA	2	B3A0074	01/04/2013	01/04/13 13:43	D6
1,1,1-Trichloroethane	ND	1.0	NA	2	B3A0074	01/04/2013	01/04/13 13:43	D6
1,1,2,2-Tetrachloroethane	ND	1.0	NA	2	B3A0074	01/04/2013	01/04/13 13:43	D6



Certificate of Analysis

Hargis & Associates, Inc.

Project Number : Raytheon Main, 532.30

9171 Towne Centre Drive, Suite 375

Report To : Steve Netto

San Diego , CA 92122

Reported : 01/07/2013

Client Sample ID MW-3400B

Lab ID: 1300018-07

Volatile Organic Compounds by EPA 8260

Analyst: SL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,2-Trichloroethane	1.7	1.0	NA	2	B3A0074	01/04/2013	01/04/13 13:43	D6
1,1-Dichloroethane	5.4	1.0	NA	2	B3A0074	01/04/2013	01/04/13 13:43	D6
1,1-Dichloroethene	590	25	NA	50	B3A0074	01/04/2013	01/04/13 13:00	
1,1-Dichloropropene	ND	1.0	NA	2	B3A0074	01/04/2013	01/04/13 13:43	D6
1,2,3-Trichloropropane	ND	1.0	NA	2	B3A0074	01/04/2013	01/04/13 13:43	D6
1,2,3-Trichlorobenzene	ND	1.0	NA	2	B3A0074	01/04/2013	01/04/13 13:43	D6
1,2,4-Trichlorobenzene	ND	1.0	NA	2	B3A0074	01/04/2013	01/04/13 13:43	D6
1,2,4-Trimethylbenzene	ND	1.0	NA	2	B3A0074	01/04/2013	01/04/13 13:43	D6
1,2-Dibromo-3-chloropropane	ND	1.0	NA	2	B3A0074	01/04/2013	01/04/13 13:43	D6
1,2-Dibromoethane	ND	1.0	NA	2	B3A0074	01/04/2013	01/04/13 13:43	D6
1,2-Dichlorobenzene	ND	1.0	NA	2	B3A0074	01/04/2013	01/04/13 13:43	D6
1,2-Dichloroethane	1.1	1.0	NA	2	B3A0074	01/04/2013	01/04/13 13:43	D6
1,2-Dichloropropane	ND	1.0	NA	2	B3A0074	01/04/2013	01/04/13 13:43	D6
1,3,5-Trimethylbenzene	ND	1.0	NA	2	B3A0074	01/04/2013	01/04/13 13:43	D6
1,3-Dichlorobenzene	ND	1.0	NA	2	B3A0074	01/04/2013	01/04/13 13:43	D6
1,3-Dichloropropane	ND	1.0	NA	2	B3A0074	01/04/2013	01/04/13 13:43	D6
1,4-Dichlorobenzene	ND	1.0	NA	2	B3A0074	01/04/2013	01/04/13 13:43	D6
2,2-Dichloropropane	ND	1.0	NA	2	B3A0074	01/04/2013	01/04/13 13:43	D6
2-Chlorotoluene	ND	1.0	NA	2	B3A0074	01/04/2013	01/04/13 13:43	D6
4-Chlorotoluene	ND	1.0	NA	2	B3A0074	01/04/2013	01/04/13 13:43	D6
4-Isopropyltoluene	ND	1.0	NA	2	B3A0074	01/04/2013	01/04/13 13:43	D6
Benzene	ND	1.0	NA	2	B3A0074	01/04/2013	01/04/13 13:43	D6
Bromobenzene	ND	1.0	NA	2	B3A0074	01/04/2013	01/04/13 13:43	D6
Bromodichloromethane	ND	1.0	NA	2	B3A0074	01/04/2013	01/04/13 13:43	D6
Bromoform	ND	1.0	NA	2	B3A0074	01/04/2013	01/04/13 13:43	D6
Bromomethane	ND	1.0	NA	2	B3A0074	01/04/2013	01/04/13 13:43	D6
Carbon tetrachloride	ND	1.0	NA	2	B3A0074	01/04/2013	01/04/13 13:43	D6
Chlorobenzene	ND	1.0	NA	2	B3A0074	01/04/2013	01/04/13 13:43	D6
Chloroethane	ND	1.0	NA	2	B3A0074	01/04/2013	01/04/13 13:43	D6
Chloroform	ND	1.0	NA	2	B3A0074	01/04/2013	01/04/13 13:43	D6
Chloromethane	ND	1.0	NA	2	B3A0074	01/04/2013	01/04/13 13:43	D6
cis-1,2-Dichloroethene	ND	1.0	NA	2	B3A0074	01/04/2013	01/04/13 13:43	D6
cis-1,3-Dichloropropene	ND	1.0	NA	2	B3A0074	01/04/2013	01/04/13 13:43	D6
Dibromochloromethane	ND	1.0	NA	2	B3A0074	01/04/2013	01/04/13 13:43	D6
Dibromomethane	ND	1.0	NA	2	B3A0074	01/04/2013	01/04/13 13:43	D6
Dichlorodifluoromethane	ND	1.0	NA	2	B3A0074	01/04/2013	01/04/13 13:43	D6
Ethylbenzene	ND	1.0	NA	2	B3A0074	01/04/2013	01/04/13 13:43	D6



Certificate of Analysis

Hargis & Associates, Inc.

Project Number : Raytheon Main, 532.30

9171 Towne Centre Drive, Suite 375

Report To : Steve Netto

San Diego , CA 92122

Reported : 01/07/2013

Client Sample ID MW-3400B

Lab ID: 1300018-07

Volatile Organic Compounds by EPA 8260

Analyst: SL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Hexachlorobutadiene	ND	1.0	NA	2	B3A0074	01/04/2013	01/04/13 13:43	D6
Isopropylbenzene	ND	1.0	NA	2	B3A0074	01/04/2013	01/04/13 13:43	D6
m,p-Xylene	ND	2.0	NA	2	B3A0074	01/04/2013	01/04/13 13:43	D6
Methylene chloride	ND	2.0	NA	2	B3A0074	01/04/2013	01/04/13 13:43	D6
n-Butylbenzene	ND	1.0	NA	2	B3A0074	01/04/2013	01/04/13 13:43	D6
n-Propylbenzene	ND	1.0	NA	2	B3A0074	01/04/2013	01/04/13 13:43	D6
Naphthalene	ND	1.0	NA	2	B3A0074	01/04/2013	01/04/13 13:43	D6
o-Xylene	ND	1.0	NA	2	B3A0074	01/04/2013	01/04/13 13:43	D6
sec-Butylbenzene	ND	1.0	NA	2	B3A0074	01/04/2013	01/04/13 13:43	D6
Styrene	ND	1.0	NA	2	B3A0074	01/04/2013	01/04/13 13:43	D6
tert-Butylbenzene	ND	1.0	NA	2	B3A0074	01/04/2013	01/04/13 13:43	D6
Tetrachloroethene	ND	1.0	NA	2	B3A0074	01/04/2013	01/04/13 13:43	D6
Toluene	ND	1.0	NA	2	B3A0074	01/04/2013	01/04/13 13:43	D6
trans-1,2-Dichloroethene	ND	1.0	NA	2	B3A0074	01/04/2013	01/04/13 13:43	D6
Trichloroethene	ND	1.0	NA	2	B3A0074	01/04/2013	01/04/13 13:43	D6
Trichlorofluoromethane	ND	1.0	NA	2	B3A0074	01/04/2013	01/04/13 13:43	D6
Vinyl chloride	ND	1.0	NA	2	B3A0074	01/04/2013	01/04/13 13:43	D6
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>108 %</i>		<i>70 - 130</i>		B3A0074	01/04/2013	<i>01/04/13 13:00</i>	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>117 %</i>		<i>70 - 130</i>		B3A0074	01/04/2013	<i>01/04/13 13:43</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>99.5 %</i>		<i>70 - 130</i>		B3A0074	01/04/2013	<i>01/04/13 13:00</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>108 %</i>		<i>70 - 130</i>		B3A0074	01/04/2013	<i>01/04/13 13:43</i>	
<i>Surrogate: Dibromofluoromethane</i>	<i>114 %</i>		<i>70 - 130</i>		B3A0074	01/04/2013	<i>01/04/13 13:43</i>	
<i>Surrogate: Dibromofluoromethane</i>	<i>106 %</i>		<i>70 - 130</i>		B3A0074	01/04/2013	<i>01/04/13 13:00</i>	
<i>Surrogate: Toluene-d8</i>	<i>108 %</i>		<i>70 - 130</i>		B3A0074	01/04/2013	<i>01/04/13 13:00</i>	
<i>Surrogate: Toluene-d8</i>	<i>115 %</i>		<i>70 - 130</i>		B3A0074	01/04/2013	<i>01/04/13 13:43</i>	



Certificate of Analysis

Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego, CA 92122

Project Number : Raytheon Main, 532.30

Report To : Steve Netto

Reported : 01/07/2013

Client Sample ID MW-3400B

Lab ID: 1300018-07

1,4-Dioxane by EPA 8270/SIM: Isotope Dilution Technique

Analyst: BB

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,4-Dioxane	74	1.0	0.63	5	B3A0092	01/04/2013	01/05/13 07:45	E4
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	<i>146 %</i>		<i>36 - 107</i>		B3A0092	01/04/2013	<i>01/05/13 07:45</i>	S10
<i>Surrogate: 2-Fluorobiphenyl</i>	<i>94.7 %</i>		<i>42 - 120</i>		B3A0092	01/04/2013	<i>01/05/13 07:45</i>	
<i>Surrogate: 4-Terphenyl-d14</i>	<i>113 %</i>		<i>67 - 142</i>		B3A0092	01/04/2013	<i>01/05/13 07:45</i>	
<i>Surrogate: Nitrobenzene-d5</i>	<i>132 %</i>		<i>36 - 130</i>		B3A0092	01/04/2013	<i>01/05/13 07:45</i>	S10



Certificate of Analysis

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9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : Raytheon Main, 532.30

Report To : Steve Netto

Reported : 01/07/2013

Client Sample ID MW-34C

Lab ID: 1300018-08

Specific Conductance by EPA 120.1

Analyst: RD

Analyte	Result (umhos/cm)	PQL (umhos/cm)	MDL (umhos/cm)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Specific Conductance	670	0.10	NA	1	B3A0104	01/03/2013	01/03/13 00:00	

Anions Scan by Ion Chromatography EPA 300.0

Analyst: AG

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Bromide	ND	0.05	NA	1	B3A0134	01/04/2013	01/04/13 13:37	
Chloride	68	5.0	NA	10	B3A0138	01/07/2013	01/07/13 08:25	
Nitrate as N	ND	0.10	NA	1	B3A0134	01/04/2013	01/04/13 13:37	
Sulfate	72	10	NA	10	B3A0138	01/07/2013	01/07/13 08:25	

Alkalinity, Speciated by SM 2320B

Analyst: AG

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Alkalinity, Bicarbonate (as CaCO3)	150	5.0	NA	1	B3A0131	01/07/2013	01/07/13 13:32	

Hardness by Calculation by SM 2340B

Analyst: PT

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Hardness Total (As CaCO3)	150	2.0	NA	1	B3A0089	01/04/2013	01/07/13 08:14	

Total Dissolved Solids (Residue, Filterable) by SM 2540C

Analyst: AG

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Residue, Dissolved	350	10	NA	1	B3A0133	01/04/2013	01/04/13 15:16	

pH by SM 4500H+B

Analyst: RD

Analyte	Result (pH Units)	PQL (pH Units)	MDL (pH Units)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
pH	8.0	0.10	NA	1	B3A0102	01/03/2013	01/03/13 00:00	H1



Certificate of Analysis

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9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : Raytheon Main, 532.30

Report To : Steve Netto

Reported : 01/07/2013

Client Sample ID MW-34C

Lab ID: 1300018-08

Ammonia, as Nitrogen N by SM 4500NH3C

Analyst: LA

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Nitrogen, Ammonia (As N)	0.19	0.15	NA	1	B3A0132	01/07/2013	01/07/13 01:01	

Total Metals by ICP-AES EPA 6010B

Analyst: SB

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Copper	0.0059	0.0050	NA	1	B3A0090	01/04/2013	01/04/13 15:44	
Iron	ND	0.50	NA	1	B3A0090	01/04/2013	01/04/13 15:44	
Manganese	ND	0.50	NA	1	B3A0090	01/04/2013	01/04/13 15:44	
Zinc	0.013	0.010	NA	1	B3A0090	01/04/2013	01/04/13 15:44	

Dissolved Metals by ICP-AES EPA 6010B

Analyst: PT

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Calcium	43	0.50	NA	1	B3A0089	01/04/2013	01/07/13 08:14	
Magnesium	9.6	0.10	NA	1	B3A0089	01/04/2013	01/07/13 08:14	

Dissolved Potassium by AA (Direct Aspiration) EPA 7610

Analyst: VV

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Potassium	4.0	0.50	NA	1	B3A0130	01/07/2013	01/07/13 14:20	

Dissolved Sodium by AA (Direct Aspiration) by EPA 7770

Analyst: VV

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Sodium	68	50	NA	1	B3A0091	01/04/2013	01/07/13 13:59	

Volatile Organic Compounds by EPA 8260

Analyst: SL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 11:40	
1,1,1-Trichloroethane	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 11:40	
1,1,2,2-Tetrachloroethane	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 11:40	



Certificate of Analysis

Hargis & Associates, Inc.

Project Number : Raytheon Main, 532.30

9171 Towne Centre Drive, Suite 375

Report To : Steve Netto

San Diego , CA 92122

Reported : 01/07/2013

Client Sample ID MW-34C

Lab ID: 1300018-08

Volatile Organic Compounds by EPA 8260

Analyst: SL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,2-Trichloroethane	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 11:40	
1,1-Dichloroethane	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 11:40	
1,1-Dichloroethene	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 11:40	
1,1-Dichloropropene	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 11:40	
1,2,3-Trichloropropane	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 11:40	
1,2,3-Trichlorobenzene	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 11:40	
1,2,4-Trichlorobenzene	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 11:40	
1,2,4-Trimethylbenzene	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 11:40	
1,2-Dibromo-3-chloropropane	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 11:40	
1,2-Dibromoethane	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 11:40	
1,2-Dichlorobenzene	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 11:40	
1,2-Dichloroethane	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 11:40	
1,2-Dichloropropane	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 11:40	
1,3,5-Trimethylbenzene	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 11:40	
1,3-Dichlorobenzene	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 11:40	
1,3-Dichloropropane	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 11:40	
1,4-Dichlorobenzene	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 11:40	
2,2-Dichloropropane	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 11:40	
2-Chlorotoluene	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 11:40	
4-Chlorotoluene	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 11:40	
4-Isopropyltoluene	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 11:40	
Benzene	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 11:40	
Bromobenzene	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 11:40	
Bromodichloromethane	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 11:40	
Bromoform	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 11:40	
Bromomethane	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 11:40	
Carbon tetrachloride	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 11:40	
Chlorobenzene	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 11:40	
Chloroethane	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 11:40	
Chloroform	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 11:40	
Chloromethane	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 11:40	
cis-1,2-Dichloroethene	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 11:40	
cis-1,3-Dichloropropene	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 11:40	
Dibromochloromethane	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 11:40	
Dibromomethane	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 11:40	
Dichlorodifluoromethane	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 11:40	
Ethylbenzene	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 11:40	



Certificate of Analysis

Hargis & Associates, Inc.

Project Number : Raytheon Main, 532.30

9171 Towne Centre Drive, Suite 375

Report To : Steve Netto

San Diego , CA 92122

Reported : 01/07/2013

Client Sample ID MW-34C

Lab ID: 1300018-08

Volatile Organic Compounds by EPA 8260

Analyst: SL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Hexachlorobutadiene	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 11:40	
Isopropylbenzene	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 11:40	
m,p-Xylene	ND	1.0	NA	1	B3A0074	01/04/2013	01/04/13 11:40	
Methylene chloride	ND	1.0	NA	1	B3A0074	01/04/2013	01/04/13 11:40	
n-Butylbenzene	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 11:40	
n-Propylbenzene	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 11:40	
Naphthalene	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 11:40	
o-Xylene	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 11:40	
sec-Butylbenzene	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 11:40	
Styrene	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 11:40	
tert-Butylbenzene	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 11:40	
Tetrachloroethene	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 11:40	
Toluene	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 11:40	
trans-1,2-Dichloroethene	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 11:40	
Trichloroethene	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 11:40	
Trichlorofluoromethane	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 11:40	
Vinyl chloride	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 11:40	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>111 %</i>	<i>70 - 130</i>			B3A0074	01/04/2013	<i>01/04/13 11:40</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>105 %</i>	<i>70 - 130</i>			B3A0074	01/04/2013	<i>01/04/13 11:40</i>	
<i>Surrogate: Dibromofluoromethane</i>	<i>111 %</i>	<i>70 - 130</i>			B3A0074	01/04/2013	<i>01/04/13 11:40</i>	
<i>Surrogate: Toluene-d8</i>	<i>113 %</i>	<i>70 - 130</i>			B3A0074	01/04/2013	<i>01/04/13 11:40</i>	

1,4-Dioxane by EPA 8270/SIM: Isotope Dilution Technique

Analyst: BB

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,4-Dioxane	ND	0.20	0.13	1	B3A0092	01/04/2013	01/04/13 20:11	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	<i>77.5 %</i>	<i>36 - 107</i>			B3A0092	01/04/2013	<i>01/04/13 20:11</i>	
<i>Surrogate: 2-Fluorobiphenyl</i>	<i>98.3 %</i>	<i>42 - 120</i>			B3A0092	01/04/2013	<i>01/04/13 20:11</i>	
<i>Surrogate: 4-Terphenyl-d14</i>	<i>108 %</i>	<i>67 - 142</i>			B3A0092	01/04/2013	<i>01/04/13 20:11</i>	
<i>Surrogate: Nitrobenzene-d5</i>	<i>123 %</i>	<i>36 - 130</i>			B3A0092	01/04/2013	<i>01/04/13 20:11</i>	



Certificate of Analysis

Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : Raytheon Main, 532.30

Report To : Steve Netto

Reported : 01/07/2013

Client Sample ID MW-34B

Lab ID: 1300018-09

Specific Conductance by EPA 120.1

Analyst: RD

Analyte	Result (umhos/cm)	PQL (umhos/cm)	MDL (umhos/cm)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Specific Conductance	1100	0.10	NA	1	B3A0104	01/03/2013	01/03/13 00:00	

Anions Scan by Ion Chromatography EPA 300.0

Analyst: AG

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Bromide	0.30	0.05	NA	1	B3A0134	01/04/2013	01/04/13 13:48	
Chloride	130	10	NA	20	B3A0138	01/07/2013	01/07/13 09:10	
Nitrate as N	6.1	0.10	NA	1	B3A0134	01/04/2013	01/04/13 13:48	
Sulfate	130	20	NA	20	B3A0138	01/07/2013	01/07/13 09:10	

Alkalinity, Speciated by SM 2320B

Analyst: AG

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Alkalinity, Bicarbonate (as CaCO3)	220	5.0	NA	1	B3A0131	01/07/2013	01/07/13 13:32	

Hardness by Calculation by SM 2340B

Analyst: PT

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Hardness Total (As CaCO3)	380	2.0	NA	1	B3A0089	01/04/2013	01/07/13 08:16	

Total Dissolved Solids (Residue, Filterable) by SM 2540C

Analyst: AG

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Residue, Dissolved	680	10	NA	1	B3A0133	01/04/2013	01/04/13 15:18	

pH by SM 4500H+B

Analyst: RD

Analyte	Result (pH Units)	PQL (pH Units)	MDL (pH Units)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
pH	7.5	0.10	NA	1	B3A0102	01/03/2013	01/03/13 00:00	H1



Certificate of Analysis

Hargis & Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego , CA 92122

Project Number : Raytheon Main, 532.30
 Report To : Steve Netto
 Reported : 01/07/2013

Client Sample ID MW-34B

Lab ID: 1300018-09

Ammonia, as Nitrogen N by SM 4500NH3C

Analyst: LA

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Nitrogen, Ammonia (As N)	ND	0.15	NA	1	B3A0132	01/07/2013	01/07/13 01:01	

Total Metals by ICP-AES EPA 6010B

Analyst: SB

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Copper	0.016	0.0050	NA	1	B3A0090	01/04/2013	01/04/13 15:46	
Iron	0.97	0.50	NA	1	B3A0090	01/04/2013	01/04/13 15:46	
Manganese	ND	0.50	NA	1	B3A0090	01/04/2013	01/04/13 15:46	
Zinc	0.016	0.010	NA	1	B3A0090	01/04/2013	01/04/13 15:46	

Dissolved Metals by ICP-AES EPA 6010B

Analyst: PT

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Calcium	98	0.50	NA	1	B3A0089	01/04/2013	01/07/13 08:16	
Magnesium	32	0.10	NA	1	B3A0089	01/04/2013	01/07/13 08:16	

Dissolved Potassium by AA (Direct Aspiration) EPA 7610

Analyst: VV

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Potassium	4.6	0.50	NA	1	B3A0130	01/07/2013	01/07/13 14:20	

Dissolved Sodium by AA (Direct Aspiration) by EPA 7770

Analyst: VV

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Sodium	76	50	NA	1	B3A0091	01/04/2013	01/07/13 14:00	

Volatile Organic Compounds by EPA 8260

Analyst: SL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	1.0	NA	2	B3A0074	01/04/2013	01/04/13 14:05	D6
1,1,1-Trichloroethane	ND	1.0	NA	2	B3A0074	01/04/2013	01/04/13 14:05	D6
1,1,2,2-Tetrachloroethane	ND	1.0	NA	2	B3A0074	01/04/2013	01/04/13 14:05	D6



Certificate of Analysis

Hargis & Associates, Inc.

Project Number : Raytheon Main, 532.30

9171 Towne Centre Drive, Suite 375

Report To : Steve Netto

San Diego , CA 92122

Reported : 01/07/2013

Client Sample ID MW-34B

Lab ID: 1300018-09

Volatile Organic Compounds by EPA 8260

Analyst: SL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,2-Trichloroethane	1.8	1.0	NA	2	B3A0074	01/04/2013	01/04/13 14:05	D6
1,1-Dichloroethane	5.3	1.0	NA	2	B3A0074	01/04/2013	01/04/13 14:05	D6
1,1-Dichloroethene	580	25	NA	50	B3A0074	01/04/2013	01/04/13 13:20	
1,1-Dichloropropene	ND	1.0	NA	2	B3A0074	01/04/2013	01/04/13 14:05	D6
1,2,3-Trichloropropane	ND	1.0	NA	2	B3A0074	01/04/2013	01/04/13 14:05	D6
1,2,3-Trichlorobenzene	ND	1.0	NA	2	B3A0074	01/04/2013	01/04/13 14:05	D6
1,2,4-Trichlorobenzene	ND	1.0	NA	2	B3A0074	01/04/2013	01/04/13 14:05	D6
1,2,4-Trimethylbenzene	ND	1.0	NA	2	B3A0074	01/04/2013	01/04/13 14:05	D6
1,2-Dibromo-3-chloropropane	ND	1.0	NA	2	B3A0074	01/04/2013	01/04/13 14:05	D6
1,2-Dibromoethane	ND	1.0	NA	2	B3A0074	01/04/2013	01/04/13 14:05	D6
1,2-Dichlorobenzene	ND	1.0	NA	2	B3A0074	01/04/2013	01/04/13 14:05	D6
1,2-Dichloroethane	1.1	1.0	NA	2	B3A0074	01/04/2013	01/04/13 14:05	D6
1,2-Dichloropropane	ND	1.0	NA	2	B3A0074	01/04/2013	01/04/13 14:05	D6
1,3,5-Trimethylbenzene	ND	1.0	NA	2	B3A0074	01/04/2013	01/04/13 14:05	D6
1,3-Dichlorobenzene	ND	1.0	NA	2	B3A0074	01/04/2013	01/04/13 14:05	D6
1,3-Dichloropropane	ND	1.0	NA	2	B3A0074	01/04/2013	01/04/13 14:05	D6
1,4-Dichlorobenzene	ND	1.0	NA	2	B3A0074	01/04/2013	01/04/13 14:05	D6
2,2-Dichloropropane	ND	1.0	NA	2	B3A0074	01/04/2013	01/04/13 14:05	D6
2-Chlorotoluene	ND	1.0	NA	2	B3A0074	01/04/2013	01/04/13 14:05	D6
4-Chlorotoluene	ND	1.0	NA	2	B3A0074	01/04/2013	01/04/13 14:05	D6
4-Isopropyltoluene	ND	1.0	NA	2	B3A0074	01/04/2013	01/04/13 14:05	D6
Benzene	ND	1.0	NA	2	B3A0074	01/04/2013	01/04/13 14:05	D6
Bromobenzene	ND	1.0	NA	2	B3A0074	01/04/2013	01/04/13 14:05	D6
Bromodichloromethane	ND	1.0	NA	2	B3A0074	01/04/2013	01/04/13 14:05	D6
Bromoform	ND	1.0	NA	2	B3A0074	01/04/2013	01/04/13 14:05	D6
Bromomethane	ND	1.0	NA	2	B3A0074	01/04/2013	01/04/13 14:05	D6
Carbon tetrachloride	ND	1.0	NA	2	B3A0074	01/04/2013	01/04/13 14:05	D6
Chlorobenzene	ND	1.0	NA	2	B3A0074	01/04/2013	01/04/13 14:05	D6
Chloroethane	ND	1.0	NA	2	B3A0074	01/04/2013	01/04/13 14:05	D6
Chloroform	ND	1.0	NA	2	B3A0074	01/04/2013	01/04/13 14:05	D6
Chloromethane	ND	1.0	NA	2	B3A0074	01/04/2013	01/04/13 14:05	D6
cis-1,2-Dichloroethene	ND	1.0	NA	2	B3A0074	01/04/2013	01/04/13 14:05	D6
cis-1,3-Dichloropropene	ND	1.0	NA	2	B3A0074	01/04/2013	01/04/13 14:05	D6
Dibromochloromethane	ND	1.0	NA	2	B3A0074	01/04/2013	01/04/13 14:05	D6
Dibromomethane	ND	1.0	NA	2	B3A0074	01/04/2013	01/04/13 14:05	D6
Dichlorodifluoromethane	ND	1.0	NA	2	B3A0074	01/04/2013	01/04/13 14:05	D6
Ethylbenzene	ND	1.0	NA	2	B3A0074	01/04/2013	01/04/13 14:05	D6



Certificate of Analysis

Hargis & Associates, Inc.

Project Number : Raytheon Main, 532.30

9171 Towne Centre Drive, Suite 375

Report To : Steve Netto

San Diego , CA 92122

Reported : 01/07/2013

Client Sample ID MW-34B

Lab ID: 1300018-09

Volatile Organic Compounds by EPA 8260

Analyst: SL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Hexachlorobutadiene	ND	1.0	NA	2	B3A0074	01/04/2013	01/04/13 14:05	D6
Isopropylbenzene	ND	1.0	NA	2	B3A0074	01/04/2013	01/04/13 14:05	D6
m,p-Xylene	ND	2.0	NA	2	B3A0074	01/04/2013	01/04/13 14:05	D6
Methylene chloride	ND	2.0	NA	2	B3A0074	01/04/2013	01/04/13 14:05	D6
n-Butylbenzene	ND	1.0	NA	2	B3A0074	01/04/2013	01/04/13 14:05	D6
n-Propylbenzene	ND	1.0	NA	2	B3A0074	01/04/2013	01/04/13 14:05	D6
Naphthalene	ND	1.0	NA	2	B3A0074	01/04/2013	01/04/13 14:05	D6
o-Xylene	ND	1.0	NA	2	B3A0074	01/04/2013	01/04/13 14:05	D6
sec-Butylbenzene	ND	1.0	NA	2	B3A0074	01/04/2013	01/04/13 14:05	D6
Styrene	ND	1.0	NA	2	B3A0074	01/04/2013	01/04/13 14:05	D6
tert-Butylbenzene	ND	1.0	NA	2	B3A0074	01/04/2013	01/04/13 14:05	D6
Tetrachloroethene	ND	1.0	NA	2	B3A0074	01/04/2013	01/04/13 14:05	D6
Toluene	ND	1.0	NA	2	B3A0074	01/04/2013	01/04/13 14:05	D6
trans-1,2-Dichloroethene	ND	1.0	NA	2	B3A0074	01/04/2013	01/04/13 14:05	D6
Trichloroethene	ND	1.0	NA	2	B3A0074	01/04/2013	01/04/13 14:05	D6
Trichlorofluoromethane	ND	1.0	NA	2	B3A0074	01/04/2013	01/04/13 14:05	D6
Vinyl chloride	ND	1.0	NA	2	B3A0074	01/04/2013	01/04/13 14:05	D6
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>121 %</i>		<i>70 - 130</i>		B3A0074	01/04/2013	<i>01/04/13 13:20</i>	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>113 %</i>		<i>70 - 130</i>		B3A0074	01/04/2013	<i>01/04/13 14:05</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>112 %</i>		<i>70 - 130</i>		B3A0074	01/04/2013	<i>01/04/13 13:20</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>104 %</i>		<i>70 - 130</i>		B3A0074	01/04/2013	<i>01/04/13 14:05</i>	
<i>Surrogate: Dibromofluoromethane</i>	<i>111 %</i>		<i>70 - 130</i>		B3A0074	01/04/2013	<i>01/04/13 14:05</i>	
<i>Surrogate: Dibromofluoromethane</i>	<i>120 %</i>		<i>70 - 130</i>		B3A0074	01/04/2013	<i>01/04/13 13:20</i>	
<i>Surrogate: Toluene-d8</i>	<i>122 %</i>		<i>70 - 130</i>		B3A0074	01/04/2013	<i>01/04/13 13:20</i>	
<i>Surrogate: Toluene-d8</i>	<i>113 %</i>		<i>70 - 130</i>		B3A0074	01/04/2013	<i>01/04/13 14:05</i>	



Certificate of Analysis

Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego, CA 92122

Project Number : Raytheon Main, 532.30

Report To : Steve Netto

Reported : 01/07/2013

Client Sample ID MW-34B

Lab ID: 1300018-09

1,4-Dioxane by EPA 8270/SIM: Isotope Dilution Technique

Analyst: BB

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,4-Dioxane	68	1.0	0.63	5	B3A0092	01/04/2013	01/05/13 08:10	E4
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	<i>188 %</i>		<i>36 - 107</i>		B3A0092	01/04/2013	<i>01/05/13 08:10</i>	S10
<i>Surrogate: 2-Fluorobiphenyl</i>	<i>86.3 %</i>		<i>42 - 120</i>		B3A0092	01/04/2013	<i>01/05/13 08:10</i>	
<i>Surrogate: 4-Terphenyl-d14</i>	<i>99.9 %</i>		<i>67 - 142</i>		B3A0092	01/04/2013	<i>01/05/13 08:10</i>	
<i>Surrogate: Nitrobenzene-d5</i>	<i>129 %</i>		<i>36 - 130</i>		B3A0092	01/04/2013	<i>01/05/13 08:10</i>	



Certificate of Analysis

Hargis & Associates, Inc.

Project Number : Raytheon Main, 532.30

9171 Towne Centre Drive, Suite 375

Report To : Steve Netto

San Diego , CA 92122

Reported : 01/07/2013

Client Sample ID RB-01032013

Lab ID: 1300018-10

Volatile Organic Compounds by EPA 8260

Analyst: SL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 10:40	
1,1,1-Trichloroethane	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 10:40	
1,1,2,2-Tetrachloroethane	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 10:40	
1,1,2-Trichloroethane	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 10:40	
1,1-Dichloroethane	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 10:40	
1,1-Dichloroethene	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 10:40	
1,1-Dichloropropene	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 10:40	
1,2,3-Trichloropropane	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 10:40	
1,2,3-Trichlorobenzene	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 10:40	
1,2,4-Trichlorobenzene	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 10:40	
1,2,4-Trimethylbenzene	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 10:40	
1,2-Dibromo-3-chloropropane	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 10:40	
1,2-Dibromoethane	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 10:40	
1,2-Dichlorobenzene	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 10:40	
1,2-Dichloroethane	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 10:40	
1,2-Dichloropropane	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 10:40	
1,3,5-Trimethylbenzene	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 10:40	
1,3-Dichlorobenzene	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 10:40	
1,3-Dichloropropane	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 10:40	
1,4-Dichlorobenzene	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 10:40	
2,2-Dichloropropane	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 10:40	
2-Chlorotoluene	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 10:40	
4-Chlorotoluene	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 10:40	
4-Isopropyltoluene	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 10:40	
Benzene	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 10:40	
Bromobenzene	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 10:40	
Bromodichloromethane	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 10:40	
Bromoform	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 10:40	
Bromomethane	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 10:40	
Carbon tetrachloride	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 10:40	
Chlorobenzene	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 10:40	
Chloroethane	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 10:40	
Chloroform	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 10:40	
Chloromethane	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 10:40	
cis-1,2-Dichloroethene	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 10:40	
cis-1,3-Dichloropropene	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 10:40	
Dibromochloromethane	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 10:40	



Certificate of Analysis

Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego, CA 92122

Project Number : Raytheon Main, 532.30

Report To : Steve Netto

Reported : 01/07/2013

Client Sample ID RB-01032013

Lab ID: 1300018-10

Volatile Organic Compounds by EPA 8260

Analyst: SL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Dibromomethane	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 10:40	
Dichlorodifluoromethane	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 10:40	
Ethylbenzene	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 10:40	
Hexachlorobutadiene	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 10:40	
Isopropylbenzene	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 10:40	
m,p-Xylene	ND	1.0	NA	1	B3A0074	01/04/2013	01/04/13 10:40	
Methylene chloride	ND	1.0	NA	1	B3A0074	01/04/2013	01/04/13 10:40	
n-Butylbenzene	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 10:40	
n-Propylbenzene	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 10:40	
Naphthalene	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 10:40	
o-Xylene	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 10:40	
sec-Butylbenzene	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 10:40	
Styrene	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 10:40	
tert-Butylbenzene	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 10:40	
Tetrachloroethene	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 10:40	
Toluene	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 10:40	
trans-1,2-Dichloroethene	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 10:40	
Trichloroethene	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 10:40	
Trichlorofluoromethane	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 10:40	
Vinyl chloride	ND	0.50	NA	1	B3A0074	01/04/2013	01/04/13 10:40	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>106 %</i>		<i>70 - 130</i>		B3A0074	01/04/2013	<i>01/04/13 10:40</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>104 %</i>		<i>70 - 130</i>		B3A0074	01/04/2013	<i>01/04/13 10:40</i>	
<i>Surrogate: Dibromofluoromethane</i>	<i>106 %</i>		<i>70 - 130</i>		B3A0074	01/04/2013	<i>01/04/13 10:40</i>	
<i>Surrogate: Toluene-d8</i>	<i>111 %</i>		<i>70 - 130</i>		B3A0074	01/04/2013	<i>01/04/13 10:40</i>	



Certificate of Analysis

Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : Raytheon Main, 532.30

Report To : Steve Netto

Reported : 01/07/2013

QUALITY CONTROL SECTION

Specific Conductance by EPA 120.1 - Quality Control

Analyte	Result (umhos/cm)	PQL (umhos/cm)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B3A0104 - No Prep-Sample Control

Duplicate (B3A0104-DUP1)

Source: 1300018-02

Prepared: 1/3/2013 Analyzed: 1/3/2013

Specific Conductance

534.000

0.10

533.000

NR

0.187

30



Certificate of Analysis

Hargis & Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego , CA 92122

Project Number : Raytheon Main, 532.30
 Report To : Steve Netto
 Reported : 01/07/2013

Anions Scan by Ion Chromatography EPA 300.0 - Quality Control

Analyte	Result (mg/L)	PQL (mg/L)	Spike Level	Source Result	% Rec % Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B3A0134 - No_Prep_IC_1

Blank (B3A0134-BLK1)

Prepared: 1/4/2013 Analyzed: 1/4/2013

Bromide	ND	0.05			NR				
Chloride	ND	0.50			NR				
Nitrate as N	ND	0.10			NR				
Sulfate	ND	1.0			NR				

LCS (B3A0134-BS1)

Prepared: 1/4/2013 Analyzed: 1/4/2013

Bromide	1.00430	0.05	1.00000		100	90 - 110			
Chloride	1.01310	0.50	1.00000		101	90 - 110			
Nitrate as N	0.969100	0.10	1.00000		96.9	90 - 110			
Sulfate	2.02990	1.0	2.00000		101	90 - 110			

Duplicate (B3A0134-DUP1)

Source: 1300018-02

Prepared: 1/4/2013 Analyzed: 1/4/2013

Bromide	0.0872	0.05		0.0839	NR		3.86	20	
Chloride	23.3640	2.5		23.5240	NR		0.682	20	
Nitrate as N	ND	0.10		ND	NR			20	
Sulfate	61.6100	5.0		61.2190	NR		0.637	20	

Matrix Spike (B3A0134-MS1)

Source: 1300018-02

Prepared: 1/4/2013 Analyzed: 1/4/2013

Bromide	2.69310	0.05	2.50000	0.0839	104	80 - 120			
Chloride	26.3380	2.5	2.50000	23.5240	113	80 - 120			
Nitrate as N	2.54930	0.10	2.50000	ND	102	80 - 120			
Sulfate	66.1815	5.0	5.00000	61.2190	99.3	80 - 120			

Matrix Spike (B3A0134-MS2)

Source: 1300018-03

Prepared: 1/4/2013 Analyzed: 1/4/2013

Bromide	4.06750	0.05	2.50000	0.294200	151	80 - 120			M1
Chloride	129.652	10	2.50000	135.602	-238	80 - 120			M6
Nitrate as N	2.70300	0.10	2.50000	ND	108	80 - 120			
Sulfate	87.5905	5.0	5.00000	85.9670	32.5	80 - 120			M5

Matrix Spike Dup (B3A0134-MSD1)

Source: 1300018-02

Prepared: 1/4/2013 Analyzed: 1/4/2013

Bromide	2.68010	0.05	2.50000	0.0839	104	80 - 120	0.484	20	
Chloride	26.4230	2.5	2.50000	23.5240	116	80 - 120	0.322	20	
Nitrate as N	2.56390	0.10	2.50000	ND	103	80 - 120	0.571	20	
Sulfate	65.3970	5.0	5.00000	61.2190	83.6	80 - 120	1.19	20	

Batch B3A0138 - No_Prep_IC_1

Blank (B3A0138-BLK1)

Prepared: 1/7/2013 Analyzed: 1/7/2013

Bromide	ND	0.05			NR				
Chloride	ND	0.50			NR				
Nitrate as N	ND	0.10			NR				
Sulfate	ND	1.0			NR				



Certificate of Analysis

Hargis & Associates, Inc.

Project Number : Raytheon Main, 532.30

9171 Towne Centre Drive, Suite 375

Report To : Steve Netto

San Diego , CA 92122

Reported : 01/07/2013

Anions Scan by Ion Chromatography EPA 300.0 - Quality Control (cont'd)

Analyte	Result (mg/L)	PQL (mg/L)	Spike Level	Source Result	% Rec % Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B3A0138 - No_Prep_IC_1 (continued)

LCS (B3A0138-BS1)

Prepared: 1/7/2013 Analyzed: 1/7/2013

Bromide	1.00640	0.05	1.00000		101	90 - 110			
Chloride	1.03960	0.50	1.00000		104	90 - 110			
Nitrate as N	0.979900	0.10	1.00000		98.0	90 - 110			
Sulfate	2.03890	1.0	2.00000		102	90 - 110			

Duplicate (B3A0138-DUP1)

Source: 1300018-08RE1

Prepared: 1/7/2013 Analyzed: 1/7/2013

Bromide	ND	0.50		ND	NR			20	
Chloride	68.3600	5.0		68.3290	NR		0.0454	20	
Nitrate as N	7.89300	1.0		ND	NR			20	
Sulfate	72.0440	10		71.9260	NR		0.164	20	

Matrix Spike (B3A0138-MS1)

Source: 1300018-08RE1

Prepared: 1/7/2013 Analyzed: 1/7/2013

Bromide	5.93300	0.50	2.50000	ND	237	80 - 120			M3
Chloride	69.7150	5.0	2.50000	68.3290	55.4	80 - 120			M5
Nitrate as N	9.51300	1.0	2.50000	ND	381	80 - 120			M5
Sulfate	76.2250	10	5.00000	71.9260	86.0	80 - 120			

Matrix Spike (B3A0138-MS2)

Source: 1300018-09RE1

Prepared: 1/7/2013 Analyzed: 1/7/2013

Bromide	10.4340	1.0	2.50000	ND	417	80 - 120			M5
Chloride	134.770	10	2.50000	134.854	-3.36	80 - 120			M6
Nitrate as N	21.8620	2.0	2.50000	20.0580	72.2	80 - 120			M5
Sulfate	131.554	20	5.00000	128.858	53.9	80 - 120			M3

Matrix Spike Dup (B3A0138-MSD1)

Source: 1300018-08RE1

Prepared: 1/7/2013 Analyzed: 1/7/2013

Bromide	6.52300	0.50	2.50000	ND	261	80 - 120	9.47	20	M5
Chloride	69.7750	5.0	2.50000	68.3290	57.8	80 - 120	0.0860	20	M3
Nitrate as N	9.66100	1.0	2.50000	ND	386	80 - 120	1.54	20	M5
Sulfate	76.4820	10	5.00000	71.9260	91.1	80 - 120	0.337	20	



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Project Number : Raytheon Main, 532.30
 Report To : Steve Netto
 Reported : 01/07/2013

Alkalinity, Speciated by SM 2320B - Quality Control

Analyte	Result (mg/L)	PQL (mg/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B3A0131 - No_Prep_WC_1

Blank (B3A0131-BLK1)

Prepared: 1/7/2013 Analyzed: 1/7/2013

Alkalinity, Bicarbonate (as CaCO3)

ND 5.0

NR

LCS (B3A0131-BS1)

Prepared: 1/7/2013 Analyzed: 1/7/2013

Alkalinity, Bicarbonate (as CaCO3)

1.88000 5.0 0.00000

NR 80 - 120

Matrix Spike (B3A0131-MS1)

Source: 1300018-02

Prepared: 1/7/2013 Analyzed: 1/7/2013

Alkalinity, Bicarbonate (as CaCO3)

182.380 5.0 0.00000

179.750 NR 80 - 120

Matrix Spike Dup (B3A0131-MSD1)

Source: 1300018-02

Prepared: 1/7/2013 Analyzed: 1/7/2013

Alkalinity, Bicarbonate (as CaCO3)

183.510 5.0 0.00000

179.750 NR 80 - 120 0.618 20



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Project Number : Raytheon Main, 532.30
 Report To : Steve Netto
 Reported : 01/07/2013

Hardness by Calculation by SM 2340B - Quality Control

Analyte	Result (mg/L)	PQL (mg/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B3A0089 - EPA 3010A

Blank (B3A0089-BLK1)				Prepared: 1/4/2013 Analyzed: 1/7/2013					
Hardness Total (As CaCO3)	ND	2.0				NR			
LCS (B3A0089-BS1)				Prepared: 1/4/2013 Analyzed: 1/7/2013					
Hardness Total (As CaCO3)	125.738	2.0	132.271		95.1	80 - 120			
Matrix Spike (B3A0089-MS1)				Source: 1300018-02		Prepared: 1/4/2013 Analyzed: 1/7/2013			
Hardness Total (As CaCO3)	213.898	2.0	132.200	93.7812	90.9	80 - 120			
Matrix Spike Dup (B3A0089-MSD1)				Source: 1300018-02		Prepared: 1/4/2013 Analyzed: 1/7/2013			
Hardness Total (As CaCO3)	215.852	2.0	132.200	93.7812	92.3	80 - 120	0.909	20	



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Project Number : Raytheon Main, 532.30

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Total Dissolved Solids (Residue, Filterable) by SM 2540C - Quality Control

Analyte	Result (mg/L)	PQL (mg/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B3A0133 - No_Prep_WC_1

Blank (B3A0133-BLK1)

Prepared: 1/4/2013 Analyzed: 1/4/2013

Residue, Dissolved

ND

10

NR

LCS (B3A0133-BS1)

Prepared: 1/4/2013 Analyzed: 1/4/2013

Residue, Dissolved

983.000

10

970.000

101

80 - 120

Duplicate (B3A0133-DUP1)

Source: 1300018-02

Prepared: 1/4/2013 Analyzed: 1/4/2013

Residue, Dissolved

330.000

10

332.000

NR

0.604

10



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pH by SM 4500H+B - Quality Control

Analyte	Result (pH Units)	PQL (pH Units)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B3A0102 - No Prep-Sample Control

Duplicate (B3A0102-DUP1)

Source: 1300018-02

Prepared: 1/3/2013 Analyzed: 1/3/2013

pH	8.16000	0.10		8.12000	NR		0.491	10	H1
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Report To : Steve Netto

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Ammonia, as Nitrogen N by SM 4500NH3C - Quality Control

Analyte	Result (mg/L)	PQL (mg/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B3A0132 - Prep_WC_3_W

Blank (B3A0132-BLK1)

Prepared: 1/7/2013 Analyzed: 1/7/2013

Nitrogen, Ammonia (As N)

ND

0.03

NR



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Ammonia, as Nitrogen N by SM 4500NH3C - Quality Control (cont'd)

Analyte	Result (mg/L)	PQL (mg/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B3A0132 - Prep_WC_3_W (continued)

LCS (B3A0132-BS1)

Prepared: 1/7/2013 Analyzed: 1/7/2013

Nitrogen, Ammonia (As N)	1.00200	0.03	1.00000		100	80 - 120			
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Ammonia, as Nitrogen N by SM 4500NH3C - Quality Control (cont'd)

Analyte	Result (mg/L)	PQL (mg/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B3A0132 - Prep_WC_3_W (continued)

Matrix Spike (B3A0132-MS1)

Source: 1300018-02

Prepared: 1/7/2013 Analyzed: 1/7/2013

Nitrogen, Ammonia (As N)	4.92000	0.15	5.00000	0.155000	95.3	80 - 120			
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Ammonia, as Nitrogen N by SM 4500NH3C - Quality Control (cont'd)

Analyte	Result (mg/L)	PQL (mg/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B3A0132 - Prep_WC_3_W (continued)

Matrix Spike Dup (B3A0132-MSD1)

Source: 1300018-02

Prepared: 1/7/2013 Analyzed: 1/7/2013

Nitrogen, Ammonia (As N)	4.95000	0.15	5.00000	0.155000	95.9	80 - 120	0.608	20	
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Total Metals by ICP-AES EPA 6010B - Quality Control

Analyte	Result (mg/L)	PQL (mg/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B3A0090 - EPA 3010A

Blank (B3A0090-BLK1)

Prepared: 1/4/2013 Analyzed: 1/4/2013

Copper	ND	0.0050							NR
Iron	ND	0.50							NR
Manganese	ND	0.50							NR
Zinc	ND	0.010							NR



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Total Metals by ICP-AES EPA 6010B - Quality Control (cont'd)

Analyte	Result (mg/L)	PQL (mg/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B3A0090 - EPA 3010A (continued)

LCS (B3A0090-BS1)

Prepared: 1/4/2013 Analyzed: 1/4/2013

Copper	1.01091	0.0050	1.00000		101	80 - 120	
Iron	20.0918	0.50	20.0000		100	80 - 120	
Manganese	18.9573	0.50	20.0000		94.8	80 - 120	E
Zinc	1.02974	0.010	1.00000		103	80 - 120	



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Total Metals by ICP-AES EPA 6010B - Quality Control (cont'd)

Analyte	Result (mg/L)	PQL (mg/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B3A0090 - EPA 3010A (continued)

LCS (B3A0090-BS2)

Prepared: 1/4/2013 Analyzed: 1/4/2013

Copper	1.07315	0.010	1.00000		107	80 - 120		
Iron	20.3460	1.0	20.0000		102	80 - 120		
Manganese	19.8923	1.0	20.0000		99.5	80 - 120		
Zinc	1.05976	0.020	1.00000		106	80 - 120		



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Total Metals by ICP-AES EPA 6010B - Quality Control (cont'd)

Analyte	Result (mg/L)	PQL (mg/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B3A0090 - EPA 3010A (continued)

Matrix Spike (B3A0090-MS1)

Source: 1300018-02

Prepared: 1/4/2013 Analyzed: 1/4/2013

Copper	4.83992	0.0050	5.00000	0.009738	96.6	71 - 128			
Iron	19.8663	0.50	20.0000	ND	99.3	69 - 121			
Manganese	18.4332	0.50	20.0000	0.044782	91.9	68 - 115			E
Zinc	4.61858	0.010	5.00000	0.074629	90.9	63 - 123			



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Total Metals by ICP-AES EPA 6010B - Quality Control (cont'd)

Analyte	Result (mg/L)	PQL (mg/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B3A0090 - EPA 3010A (continued)

Matrix Spike (B3A0090-MS2)

Source: 1300018-02

Prepared: 1/4/2013 Analyzed: 1/4/2013

Copper	4.91245	0.010	5.00000	0.009738	98.1	71 - 128			
Iron	20.1355	1.0	20.0000	ND	101	69 - 121			
Manganese	19.3727	1.0	20.0000	0.044782	96.6	68 - 115			
Zinc	4.85402	0.020	5.00000	0.074629	95.6	63 - 123			



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Total Metals by ICP-AES EPA 6010B - Quality Control (cont'd)

Analyte	Result (mg/L)	PQL (mg/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B3A0090 - EPA 3010A (continued)

Matrix Spike Dup (B3A0090-MSD1)

Source: 1300018-02

Prepared: 1/4/2013 Analyzed: 1/4/2013

Copper	4.99327	0.0050	5.00000	0.009738	99.7	71 - 128	3.12	20	
Iron	20.5857	0.50	20.0000	ND	103	69 - 121	3.56	20	
Manganese	18.9646	0.50	20.0000	0.044782	94.6	68 - 115	2.84	20	E
Zinc	4.85037	0.010	5.00000	0.074629	95.5	63 - 123	4.90	20	



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Total Metals by ICP-AES EPA 6010B - Quality Control (cont'd)

Analyte	Result (mg/L)	PQL (mg/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B3A0090 - EPA 3010A (continued)

Matrix Spike Dup (B3A0090-MSD2)

Source: 1300018-02

Prepared: 1/4/2013 Analyzed: 1/4/2013

Copper	4.91584	0.010	5.00000	0.009738	98.1	71 - 128	0.0690	20	
Iron	20.4944	1.0	20.0000	ND	102	69 - 121	1.77	20	
Manganese	19.8946	1.0	20.0000	0.044782	99.2	68 - 115	2.66	20	
Zinc	5.01673	0.020	5.00000	0.074629	98.8	63 - 123	3.30	20	



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Dissolved Metals by ICP-AES EPA 6010B - Quality Control

Analyte	Result (mg/L)	PQL (mg/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B3A0089 - EPA 3010A

Blank (B3A0089-BLK1)

Prepared: 1/4/2013 Analyzed: 1/7/2013

Calcium	ND	0.50							NR
Magnesium	ND	0.10							NR



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Dissolved Metals by ICP-AES EPA 6010B - Quality Control (cont'd)

Analyte	Result (mg/L)	PQL (mg/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B3A0089 - EPA 3010A (continued)

LCS (B3A0089-BS1)

Prepared: 1/4/2013 Analyzed: 1/7/2013

Calcium	19.0965	0.50	20.0000		95.5	80 - 120		
Magnesium	18.9609	0.10	20.0000		94.8	80 - 120		



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Dissolved Metals by ICP-AES EPA 6010B - Quality Control (cont'd)

Analyte	Result (mg/L)	PQL (mg/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B3A0089 - EPA 3010A (continued)

Matrix Spike (B3A0089-MS1)

Source: 1300018-02

Prepared: 1/4/2013 Analyzed: 1/7/2013

Calcium	46.8198	0.50	20.0000	28.8585	89.8	28 - 159			
Magnesium	23.5440	0.10	20.0000	5.25945	91.4	39 - 145			



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Dissolved Metals by ICP-AES EPA 6010B - Quality Control (cont'd)

Analyte	Result (mg/L)	PQL (mg/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B3A0089 - EPA 3010A (continued)

Matrix Spike Dup (B3A0089-MSD1)

Source: 1300018-02

Prepared: 1/4/2013 Analyzed: 1/7/2013

Calcium	47.1466	0.50	20.0000	28.8585	91.4	28 - 159	0.696	20	
Magnesium	23.8202	0.10	20.0000	5.25945	92.8	39 - 145	1.17	20	



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Dissolved Potassium by AA (Direct Aspiration) EPA 7610 - Quality Control

Analyte	Result (mg/L)	PQL (mg/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B3A0130 - EPA 3010A

Blank (B3A0130-BLK1)

Prepared: 1/7/2013 Analyzed: 1/7/2013

Potassium

ND

0.50

NR



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Dissolved Potassium by AA (Direct Aspiration) EPA 7610 - Quality Control (cont'd)

Analyte	Result (mg/L)	PQL (mg/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B3A0130 - EPA 3010A (continued)

LCS (B3A0130-BS1)

Prepared: 1/7/2013 Analyzed: 1/7/2013

Potassium	2.47977	0.50	2.50000		99.2	80 - 120			
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Reported : 01/07/2013

Dissolved Potassium by AA (Direct Aspiration) EPA 7610 - Quality Control (cont'd)

Analyte	Result (mg/L)	PQL (mg/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B3A0130 - EPA 3010A (continued)

Matrix Spike (B3A0130-MS1)

Source: 1300018-02

Prepared: 1/7/2013 Analyzed: 1/7/2013

Potassium	4.96096	1.0	2.50000	2.42363	101	70 - 130			
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Project Number : Raytheon Main, 532.30

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Reported : 01/07/2013

Dissolved Potassium by AA (Direct Aspiration) EPA 7610 - Quality Control (cont'd)

Analyte	Result (mg/L)	PQL (mg/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B3A0130 - EPA 3010A (continued)

Matrix Spike Dup (B3A0130-MSD1)

Source: 1300018-02

Prepared: 1/7/2013 Analyzed: 1/7/2013

Potassium	4.95666	1.0	2.50000	2.42363	101	70 - 130	0.0867	20	
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Reported : 01/07/2013

Dissolved Sodium by AA (Direct Aspiration) by EPA 7770 - Quality Control

Analyte	Result (mg/L)	PQL (mg/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B3A0091 - EPA 3010A

Blank (B3A0091-BLK1)

Prepared: 1/4/2013 Analyzed: 1/7/2013

Sodium	ND	50			NR				
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Dissolved Sodium by AA (Direct Aspiration) by EPA 7770 - Quality Control (cont'd)

Analyte	Result (mg/L)	PQL (mg/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B3A0091 - EPA 3010A (continued)

LCS (B3A0091-BS1)

Prepared: 1/4/2013 Analyzed: 1/7/2013

Sodium	91.4542	50	100.000		91.5	80 - 120			
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Project Number : Raytheon Main, 532.30

Report To : Steve Netto

Reported : 01/07/2013

Dissolved Sodium by AA (Direct Aspiration) by EPA 7770 - Quality Control (cont'd)

Analyte	Result (mg/L)	PQL (mg/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B3A0091 - EPA 3010A (continued)

Matrix Spike (B3A0091-MS1)

Source: 1300018-02

Prepared: 1/4/2013 Analyzed: 1/7/2013

Sodium	172.714	50	100.000	77.0208	95.7	70 - 130
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Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : Raytheon Main, 532.30

Report To : Steve Netto

Reported : 01/07/2013

Dissolved Sodium by AA (Direct Aspiration) by EPA 7770 - Quality Control (cont'd)

Analyte	Result (mg/L)	PQL (mg/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B3A0091 - EPA 3010A (continued)

Matrix Spike Dup (B3A0091-MSD1)

Source: 1300018-02

Prepared: 1/4/2013 Analyzed: 1/7/2013

Sodium	171.037	50	100.000	77.0208	94.0	70 - 130	0.976	20	
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Project Number : Raytheon Main, 532.30

9171 Towne Centre Drive, Suite 375

Report To : Steve Netto

San Diego , CA 92122

Reported : 01/07/2013

Volatile Organic Compounds by EPA 8260 - Quality Control

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec % Rec	% Rec Limits	RPD RPD	RPD Limit	Notes
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Batch B3A0074 - MSVOAW_LL

Blank (B3A0074-BLK1)

Prepared: 1/4/2013 Analyzed: 1/4/2013

1,1,1,2-Tetrachloroethane	ND	0.50			NR
1,1,1-Trichloroethane	ND	0.50			NR
1,1,2,2-Tetrachloroethane	ND	0.50			NR
1,1,2-Trichloroethane	ND	0.50			NR
1,1-Dichloroethane	ND	0.50			NR
1,1-Dichloroethene	ND	0.50			NR
1,1-Dichloropropene	ND	0.50			NR
1,2,3-Trichloropropane	ND	0.50			NR
1,2,3-Trichlorobenzene	ND	0.50			NR
1,2,4-Trichlorobenzene	ND	0.50			NR
1,2,4-Trimethylbenzene	ND	0.50			NR
1,2-Dibromo-3-chloropropane	ND	0.50			NR
1,2-Dibromoethane	ND	0.50			NR
1,2-Dichlorobenzene	ND	0.50			NR
1,2-Dichloroethane	ND	0.50			NR
1,2-Dichloropropane	ND	0.50			NR
1,3,5-Trimethylbenzene	ND	0.50			NR
1,3-Dichlorobenzene	ND	0.50			NR
1,3-Dichloropropane	ND	0.50			NR
1,4-Dichlorobenzene	ND	0.50			NR
2,2-Dichloropropane	ND	0.50			NR
2-Chlorotoluene	ND	0.50			NR
4-Chlorotoluene	ND	0.50			NR
4-Isopropyltoluene	ND	0.50			NR
Benzene	ND	0.50			NR
Bromobenzene	ND	0.50			NR
Bromodichloromethane	ND	0.50			NR
Bromoform	ND	0.50			NR
Bromomethane	ND	0.50			NR
Carbon tetrachloride	ND	0.50			NR
Chlorobenzene	ND	0.50			NR
Chloroethane	ND	0.50			NR
Chloroform	ND	0.50			NR
Chloromethane	ND	0.50			NR
cis-1,2-Dichloroethene	ND	0.50			NR
cis-1,3-Dichloropropene	ND	0.50			NR
Dibromochloromethane	ND	0.50			NR
Dibromomethane	ND	0.50			NR
Dichlorodifluoromethane	ND	0.50			NR
Ethylbenzene	ND	0.50			NR
Hexachlorobutadiene	ND	0.50			NR



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Hargis & Associates, Inc.

Project Number : Raytheon Main, 532.30

9171 Towne Centre Drive, Suite 375

Report To : Steve Netto

San Diego , CA 92122

Reported : 01/07/2013

Volatile Organic Compounds by EPA 8260 - Quality Control (cont'd)

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B3A0074 - MSVOAW_LL (continued)

Blank (B3A0074-BLK1) - Continued

Prepared: 1/4/2013 Analyzed: 1/4/2013

Isopropylbenzene	ND	0.50				NR			
m,p-Xylene	ND	1.0				NR			
Methylene chloride	ND	1.0				NR			
n-Butylbenzene	ND	0.50				NR			
n-Propylbenzene	ND	0.50				NR			
Naphthalene	ND	0.50				NR			
o-Xylene	ND	0.50				NR			
sec-Butylbenzene	ND	0.50				NR			
Styrene	ND	0.50				NR			
tert-Butylbenzene	ND	0.50				NR			
Tetrachloroethene	ND	0.50				NR			
Toluene	ND	0.50				NR			
trans-1,2-Dichloroethene	ND	0.50				NR			
Trichloroethene	ND	0.50				NR			
Trichlorofluoromethane	ND	0.50				NR			
Vinyl chloride	ND	0.50				NR			
<hr/>									
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>28.02</i>		<i>25.0000</i>			<i>112</i>		<i>70 - 130</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>26.60</i>		<i>25.0000</i>			<i>106</i>		<i>70 - 130</i>	
<i>Surrogate: Dibromofluoromethane</i>	<i>28.46</i>		<i>25.0000</i>			<i>114</i>		<i>70 - 130</i>	
<i>Surrogate: Toluene-d8</i>	<i>28.60</i>		<i>25.0000</i>			<i>114</i>		<i>70 - 130</i>	



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Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : Raytheon Main, 532.30

Report To : Steve Netto

Reported : 01/07/2013

Volatile Organic Compounds by EPA 8260 - Quality Control (cont'd)

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B3A0074 - MSVOAW_LL (continued)

LCS (B3A0074-BS1)

Prepared: 1/4/2013 Analyzed: 1/4/2013

1,1-Dichloroethene	20.5200		20.0000		103	70 - 130			
Benzene	38.1900		40.0000		95.5	70 - 130			
Chlorobenzene	20.8300		20.0000		104	70 - 130			
MTBE	18.4800		20.0000		92.4	70 - 130			
Toluene	40.3300		40.0000		101	70 - 130			
Trichloroethene	19.3300		20.0000		96.6	70 - 130			
<hr/>									
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>27.98</i>		<i>25.0000</i>		<i>112</i>	<i>70 - 130</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>26.35</i>		<i>25.0000</i>		<i>105</i>	<i>70 - 130</i>			
<i>Surrogate: Dibromofluoromethane</i>	<i>26.98</i>		<i>25.0000</i>		<i>108</i>	<i>70 - 130</i>			
<i>Surrogate: Toluene-d8</i>	<i>27.12</i>		<i>25.0000</i>		<i>108</i>	<i>70 - 130</i>			



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9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : Raytheon Main, 532.30

Report To : Steve Netto

Reported : 01/07/2013

Volatile Organic Compounds by EPA 8260 - Quality Control (cont'd)

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B3A0074 - MSVOAW_LL (continued)

LCS Dup (B3A0074-BSD1)

Prepared: 1/4/2013 Analyzed: 1/4/2013

1,1-Dichloroethene	20.3600		20.0000		102	70 - 130	0.783	20	
Benzene	39.6200		40.0000		99.0	70 - 130	3.68	20	
Chlorobenzene	21.4600		20.0000		107	70 - 130	2.98	20	
MTBE	19.8400		20.0000		99.2	70 - 130	7.10	20	
Toluene	41.7800		40.0000		104	70 - 130	3.53	20	
Trichloroethene	20.2100		20.0000		101	70 - 130	4.45	20	
<hr/>									
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>30.67</i>		<i>25.0000</i>		<i>123</i>	<i>70 - 130</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>28.97</i>		<i>25.0000</i>		<i>116</i>	<i>70 - 130</i>			
<i>Surrogate: Dibromofluoromethane</i>	<i>30.29</i>		<i>25.0000</i>		<i>121</i>	<i>70 - 130</i>			
<i>Surrogate: Toluene-d8</i>	<i>29.39</i>		<i>25.0000</i>		<i>118</i>	<i>70 - 130</i>			



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San Diego , CA 92122

Project Number : Raytheon Main, 532.30

Report To : Steve Netto

Reported : 01/07/2013

Volatile Organic Compounds by EPA 8260 - Quality Control (cont'd)

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B3A0074 - MSVOAW_LL (continued)

Matrix Spike (B3A0074-MS1)

Source: 1300018-02

Prepared: 1/4/2013 Analyzed: 1/4/2013

1,1-Dichloroethene	22.3100		20.0000	ND	112	70 - 130			
Benzene	38.9400		40.0000	ND	97.4	70 - 130			
Chlorobenzene	20.7100		20.0000	ND	104	70 - 130			
MTBE	17.7000		20.0000	ND	88.5	70 - 130			
Toluene	41.2200		40.0000	ND	103	70 - 130			
Trichloroethene	19.4900		20.0000	ND	97.4	70 - 130			
<hr/>									
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>29.17</i>		<i>25.0000</i>		<i>117</i>	<i>70 - 130</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>26.89</i>		<i>25.0000</i>		<i>108</i>	<i>70 - 130</i>			
<i>Surrogate: Dibromofluoromethane</i>	<i>27.28</i>		<i>25.0000</i>		<i>109</i>	<i>70 - 130</i>			
<i>Surrogate: Toluene-d8</i>	<i>27.56</i>		<i>25.0000</i>		<i>110</i>	<i>70 - 130</i>			



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San Diego , CA 92122

Project Number : Raytheon Main, 532.30

Report To : Steve Netto

Reported : 01/07/2013

Volatile Organic Compounds by EPA 8260 - Quality Control (cont'd)

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B3A0074 - MSVOAW_LL (continued)

Matrix Spike Dup (B3A0074-MSD1)

Source: 1300018-02

Prepared: 1/4/2013 Analyzed: 1/4/2013

1,1-Dichloroethene	24.4200		20.0000	ND	122	70 - 130	9.03	20	
Benzene	41.5400		40.0000	ND	104	70 - 130	6.46	20	
Chlorobenzene	21.8100		20.0000	ND	109	70 - 130	5.17	20	
MTBE	18.3900		20.0000	ND	92.0	70 - 130	3.82	20	
Toluene	43.6200		40.0000	ND	109	70 - 130	5.66	20	
Trichloroethene	21.0700		20.0000	ND	105	70 - 130	7.79	20	
<hr/>									
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>29.34</i>		<i>25.0000</i>		<i>117</i>	<i>70 - 130</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>27.41</i>		<i>25.0000</i>		<i>110</i>	<i>70 - 130</i>			
<i>Surrogate: Dibromofluoromethane</i>	<i>28.14</i>		<i>25.0000</i>		<i>113</i>	<i>70 - 130</i>			
<i>Surrogate: Toluene-d8</i>	<i>28.45</i>		<i>25.0000</i>		<i>114</i>	<i>70 - 130</i>			



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San Diego, CA 92122

Project Number : Raytheon Main, 532.30

Report To : Steve Netto

Reported : 01/07/2013

1,4-Dioxane by EPA 8270/SIM: Isotope Dilution Technique - Quality Control

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B3A0092 - MSSEMI

Blank (B3A0092-BLK1)

Prepared: 1/4/2013 Analyzed: 1/4/2013

1,4-Dioxane	ND	0.20		NR					
Surrogate: 1,2-Dichlorobenzene-d4	0.7080		1.00000	70.8		36 - 107			
Surrogate: 2-Fluorobiphenyl	0.9568		1.00000	95.7		42 - 120			
Surrogate: 4-Terphenyl-d14	0.9663		1.00000	96.6		67 - 142			
Surrogate: Nitrobenzene-d5	0.9839		1.00000	98.4		36 - 130			



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9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : Raytheon Main, 532.30

Report To : Steve Netto

Reported : 01/07/2013

1,4-Dioxane by EPA 8270/SIM: Isotope Dilution Technique - Quality Control (cont'd)

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B3A0092 - MSSEMI (continued)

LCS (B3A0092-BS1)

Prepared: 1/4/2013 Analyzed: 1/4/2013

1,4-Dioxane	0.704690	0.20	1.00000		70.5	70 - 130			
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	<i>0.9135</i>		<i>1.00000</i>		<i>91.4</i>	<i>36 - 107</i>			
<i>Surrogate: 2-Fluorobiphenyl</i>	<i>0.9484</i>		<i>1.00000</i>		<i>94.8</i>	<i>42 - 120</i>			
<i>Surrogate: 4-Terphenyl-d14</i>	<i>0.9832</i>		<i>1.00000</i>		<i>98.3</i>	<i>67 - 142</i>			
<i>Surrogate: Nitrobenzene-d5</i>	<i>1.061</i>		<i>1.00000</i>		<i>106</i>	<i>36 - 130</i>			



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San Diego , CA 92122

Project Number : Raytheon Main, 532.30

Report To : Steve Netto

Reported : 01/07/2013

1,4-Dioxane by EPA 8270/SIM: Isotope Dilution Technique - Quality Control (cont'd)

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B3A0092 - MSSEMI (continued)

Matrix Spike (B3A0092-MS1)

Source: 1300018-02

Prepared: 1/4/2013 Analyzed: 1/4/2013

1,4-Dioxane	0.925100	0.20	1.00000	ND	92.5	70 - 130			
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	<i>0.9103</i>		<i>1.00000</i>		<i>91.0</i>	<i>36 - 107</i>			
<i>Surrogate: 2-Fluorobiphenyl</i>	<i>0.8194</i>		<i>1.00000</i>		<i>81.9</i>	<i>42 - 120</i>			
<i>Surrogate: 4-Terphenyl-d14</i>	<i>0.8884</i>		<i>1.00000</i>		<i>88.8</i>	<i>67 - 142</i>			
<i>Surrogate: Nitrobenzene-d5</i>	<i>0.9373</i>		<i>1.00000</i>		<i>93.7</i>	<i>36 - 130</i>			



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San Diego , CA 92122

Project Number : Raytheon Main, 532.30

Report To : Steve Netto

Reported : 01/07/2013

1,4-Dioxane by EPA 8270/SIM: Isotope Dilution Technique - Quality Control (cont'd)

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B3A0092 - MSSEMI (continued)

Matrix Spike Dup (B3A0092-MSD1)

Source: 1300018-02

Prepared: 1/4/2013 Analyzed: 1/4/2013

1,4-Dioxane	0.977660	0.20	1.00000	ND	97.8	70 - 130	5.52	20	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	<i>0.8162</i>		<i>1.00000</i>		<i>81.6</i>	<i>36 - 107</i>			
<i>Surrogate: 2-Fluorobiphenyl</i>	<i>0.7530</i>		<i>1.00000</i>		<i>75.3</i>	<i>42 - 120</i>			
<i>Surrogate: 4-Terphenyl-d14</i>	<i>0.8309</i>		<i>1.00000</i>		<i>83.1</i>	<i>67 - 142</i>			
<i>Surrogate: Nitrobenzene-d5</i>	<i>0.8651</i>		<i>1.00000</i>		<i>86.5</i>	<i>36 - 130</i>			



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Project Number : Raytheon Main, 532.30

Report To : Steve Netto

Reported : 01/07/2013

Notes and Definitions

S10	Surrogate recovery outside of laboratory acceptance limit possibly due to matrix interference.
S1	Surrogate recovery was above laboratory acceptance limit. No target analyte was detected in the sample.
M6	Matrix spike analyte was diluted out.
M5	Matrix spike recovery outside of acceptance limit for non-target analyte.
M3	Matrix spike recovery outside of acceptance limit due to disproportionate concentration of the analyte to spike level. The analytical batch was validated by the laboratory control sample.
M1	Matrix spike recovery outside of acceptance limit. The analytical batch was validated by the laboratory control sample.
H1	Sample was received past holding time.
E4	Result value is estimated.
E	Result value above quantitation range.
D6	Sample required dilution due to high concentration of target analyte.
ND	Analyte not detected at or above reporting limit
PQL	Practical Quantitation Limit
MDL	Method Detection Limit
NR	Not Reported
RPD	Relative Percent Difference
CA1	CA-NELAP (CDPH)
CA2	CA-ELAP (CDPH)
OR1	OR-NELAP (OSPHL)
TX1	TX-NELAP (TCEQ)

- Notes:
- (1) The reported MDL and PQL are based on prep ratio variation and analytical dilution.
 - (2) The suffix [2C] of specific analytes signifies that the reported result is taken from the instrument's second column.



CALSCIENCE

WORK ORDER NUMBER: 13-01-0160

The difference is service



AIR · SOIL · WATER · MARINE CHEMISTRY

Analytical Report For

Client: Advanced Technology Laboratories

Client Project Name: 1300018

Attention: Rachelle Arada
3275 Walnut Street
Signal Hill, CA 90755-5225

Approved for release on 01/7/2013 by:
Amanda Porter
Project Manager

ResultLink ▶

Email your PM ▶



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Client Project Name: 1300018
Work Order Number: 13-01-0160

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Analytical Report



Advanced Technology Laboratories
3275 Walnut Street
Signal Hill, CA 90755-5225

Date Received: 01/04/13
Work Order No: 13-01-0160
Preparation: N/A
Method: SM 5540C

Project: 1300018

Page 1 of 2

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
1300018-02 / MW-32C	13-01-0160-1-A	01/03/13 12:07	Aqueous	UV 2	01/04/13	01/04/13 15:16	D0104SURL1

Parameter	Result	RL	DF	Qual	Units
MBAS	ND	0.10	1		mg/L

1300018-03 / MW-32B	13-01-0160-2-A	01/03/13 14:30	Aqueous	UV 2	01/04/13	01/04/13 15:16	D0104SURL1
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Parameter	Result	RL	DF	Qual	Units
MBAS	ND	0.10	1		mg/L

1300018-04 / MW-37	13-01-0160-3-A	01/03/13 16:20	Aqueous	UV 2	01/04/13	01/04/13 15:16	D0104SURL1
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Parameter	Result	RL	DF	Qual	Units
MBAS	ND	0.10	1		mg/L

1300018-05 / MW-30A	13-01-0160-4-A	01/03/13 10:50	Aqueous	UV 2	01/04/13	01/04/13 15:16	D0104SURL1
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Parameter	Result	RL	DF	Qual	Units
MBAS	ND	0.10	1		mg/L

1300018-06 / MW-30B	13-01-0160-5-A	01/03/13 11:42	Aqueous	UV 2	01/04/13	01/04/13 15:16	D0104SURL1
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Parameter	Result	RL	DF	Qual	Units
MBAS	ND	0.10	1		mg/L

1300018-07 / MW-3400B	13-01-0160-6-A	01/03/13 13:51	Aqueous	UV 2	01/04/13	01/04/13 15:16	D0104SURL1
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Parameter	Result	RL	DF	Qual	Units
MBAS	ND	0.10	1		mg/L

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Return to Contents

Analytical Report



Advanced Technology Laboratories
3275 Walnut Street
Signal Hill, CA 90755-5225

Date Received: 01/04/13
Work Order No: 13-01-0160
Preparation: N/A
Method: SM 5540C

Project: 1300018

Page 2 of 2

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
1300018-08 / MW-34C	13-01-0160-7-A	01/03/13 14:00	Aqueous	UV 2	01/04/13	01/04/13 15:16	D0104SURL1

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qual</u>	<u>Units</u>
MBAS	ND	0.10	1		mg/L

1300018-09 / MW-34B	13-01-0160-8-A	01/03/13 14:51	Aqueous	UV 2	01/04/13	01/04/13 15:16	D0104SURL1
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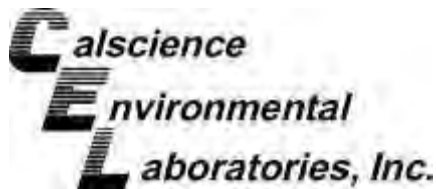
<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qual</u>	<u>Units</u>
MBAS	ND	0.10	1		mg/L

Method Blank	099-05-093-2,449	N/A	Aqueous	UV 2	01/04/13	01/04/13 15:16	D0104SURL1
--------------	------------------	-----	---------	------	----------	----------------	------------

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qual</u>	<u>Units</u>
MBAS	ND	0.10	1		mg/L

Return to Contents

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers



Quality Control - Spike/Spike Duplicate



Advanced Technology Laboratories
 3275 Walnut Street
 Signal Hill, CA 90755-5225

Date Received: 01/04/13
 Work Order No: 13-01-0160
 Preparation: N/A
 Method: SM 5540C

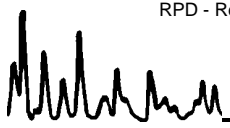
Project 1300018

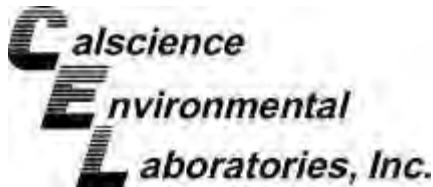
Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
1300018-02 / MW-32C	Aqueous	UV 2	01/04/13	01/04/13	D0104SURS1

Parameter	SAMPLE CONC	SPIKE ADDED	MS CONC	MS %REC	MSD CONC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
MBAS	ND	1.0	0.93	93	0.97	97	70-130	4	0-25	

Return to Contents

RPD - Relative Percent Difference , CL - Control Limit





Quality Control - LCS/LCS Duplicate



Advanced Technology Laboratories
 3275 Walnut Street
 Signal Hill, CA 90755-5225

Date Received: N/A
 Work Order No: 13-01-0160
 Preparation: N/A
 Method: SM 5540C

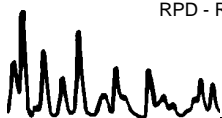
Project: 1300018

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-05-093-2,449	Aqueous	UV 2	01/04/13	01/04/13	D0104SURL1

Parameter	<u>SPIKE ADDED</u>	<u>LCS CONC</u>	<u>LCS %REC</u>	<u>LCSD CONC</u>	<u>LCSD %REC</u>	<u>%REC CL</u>	<u>RPD</u>	<u>RPD CL</u>	<u>Qualifiers</u>
MBAS	1.0	0.95	95	0.93	93	80-120	2	0-20	

Return to Contents

RPD - Relative Percent Difference , CL - Control Limit



Work Order Number: 13-01-0160

<u>Qualifier</u>	<u>Definition</u>
*	See applicable analysis comment.
<	Less than the indicated value.
>	Greater than the indicated value.
1	Surrogate compound recovery was out of control due to a required sample dilution. Therefore, the sample data was reported without further clarification.
2	Surrogate compound recovery was out of control due to matrix interference. The associated method blank surrogate spike compound was in control and, therefore, the sample data was reported without further clarification.
3	Recovery of the Matrix Spike (MS) or Matrix Spike Duplicate (MSD) compound was out of control due to matrix interference. The associated LCS and/or LCSD was in control and, therefore, the sample data was reported without further clarification.
4	The MS/MSD RPD was out of control due to matrix interference. The LCS/LCSD RPD was in control and, therefore, the sample data was reported without further clarification.
5	The PDS/PDSD or PES/PESD associated with this batch of samples was out of control due to a matrix interference effect. The associated batch LCS/LCSD was in control and, hence, the associated sample data was reported without further clarification.
6	Surrogate recovery below the acceptance limit.
7	Surrogate recovery above the acceptance limit.
B	Analyte was present in the associated method blank.
BU	Sample analyzed after holding time expired.
E	Concentration exceeds the calibration range.
ET	Sample was extracted past end of recommended max. holding time.
HD	The chromatographic pattern was inconsistent with the profile of the reference fuel standard.
HDH	The sample chromatographic pattern for TPH matches the chromatographic pattern of the specified standard but heavier hydrocarbons were also present (or detected).
HDL	The sample chromatographic pattern for TPH matches the chromatographic pattern of the specified standard but lighter hydrocarbons were also present (or detected).
J	Analyte was detected at a concentration below the reporting limit and above the laboratory method detection limit. Reported value is estimated.
ME	LCS/LCSD Recovery Percentage is within Marginal Exceedance (ME) Control Limit range.
ND	Parameter not detected at the indicated reporting limit.
Q	Spike recovery and RPD control limits do not apply resulting from the parameter concentration in the sample exceeding the spike concentration by a factor of four or greater.
SG	The sample extract was subjected to Silica Gel treatment prior to analysis.
X	% Recovery and/or RPD out-of-range.
Z	Analyte presence was not confirmed by second column or GC/MS analysis.

Solid - Unless otherwise indicated, solid sample data is reported on a wet weight basis, not corrected for % moisture. All QC results are reported on a wet weight basis.

MPN - Most Probable Number




ADVANCED TECHNOLOGY
 LABORATORIES

SUBCONTRACT ORDER

Work Order: 1300018

13-01-0160

SENDING LABORATORY:

Advanced Technology Laboratories
 3275 Walnut Avenue
 Signal Hill, CA 90755
 Phone: 562.989.4045
 Fax: 562.989.6348
 Project Manager: Rachele Arada

RECEIVING LABORATORY:

Calscience Environmental Laboratories, Inc.
 7440 Lincoln Way
 Garden Grove, CA 92841-1427
 Phone : (714) 895-5494
 Fax: (714) 894-7501
 PO#: SC07787 - RUSH TAT RA

IMPORTANT : Please include Work Order # and PO # in your invoice.

Analysis	Due	Expires	Sampled	Comments
1 ATL Lab#: 1300018-02 425.1_5540C_SUB 3-Poly Unpres - 500mL	/ MW-32C 01/07/13 15:00	Groundwater 01/05/13 12:07	01/03/13 12:07	MS/MSD
2 ATL Lab#: 1300018-03 425.1_5540C_SUB 1-Poly Unpres - 500mL	/ MW-32B 01/07/13 15:00	Groundwater 01/05/13 14:30	01/03/13 14:30	
3 ATL Lab#: 1300018-04 425.1_5540C_SUB 1-Poly Unpres - 500mL	/ MW-37 01/07/13 15:00	Groundwater 01/05/13 16:20	01/03/13 16:20	
4 ATL Lab#: 1300018-05 425.1_5540C_SUB 1-Poly Unpres - 500mL	/ MW-30A 01/07/13 15:00	Groundwater 01/05/13 10:50	01/03/13 10:50	
5 ATL Lab#: 1300018-06 425.1_5540C_SUB 1-Poly Unpres - 500mL	/ MW-30B 01/07/13 15:00	Groundwater 01/05/13 11:42	01/03/13 11:42	
6 ATL Lab#: 1300018-07 425.1_5540C_SUB 1-Poly Unpres - 500mL	/ MW-3400B 01/07/13 15:00	Groundwater 01/05/13 12:14	01/03/13 13:51	

Released By <i>EM</i>	Date <i>1/4/13</i>	Received By <i>EM</i>	Date <i>1/4/13 11:45</i>
Released By <i>EM</i>	Date <i>1/4/13 12:14</i>	Received By <i>Dannyle</i>	Date <i>1/4/13 12:14</i>

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SUBCONTRACT ORDER

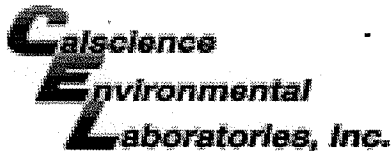
Work Order: 1300018

Analysis	Due	Expires	Sampled	Comments
425.1_5540C_SUB 1-Poly Unpres - 500mL	01/07/13 15:00	01/05/13 13:51		
7 ATL Lab#: 1300018-08 / MW-34C 425.1_5540C_SUB 1-Poly Unpres - 500mL			Groundwater	01/03/13 14:00
	01/07/13 15:00	01/05/13 14:00		
8 ATL Lab#: 1300018-09 / MW-34B 425.1_5540C_SUB 1-Poly Unpres - 500mL			Groundwater	01/03/13 14:51
	01/07/13 15:00	01/05/13 14:51		Use Sample ID 1300018-02 / MW-32C for MS MSD

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Released By <i>CR</i>	Date <i>1/4/13</i>	Received By <i>Edl Rhy</i>	Date <i>1/4/13 11:45</i>
<i>Edl Rhy</i>	<i>1/4/13 12:14</i>	<i>Dannyl CR</i>	<i>1/4/13 12:14</i>

CR 1/4/13



WORK ORDER #: 13-01-0160

SAMPLE RECEIPT FORM

Cooler 1 of 1

CLIENT: ATL

DATE: 01/04/13

TEMPERATURE: Thermometer ID: SC2 (Criteria: 0.0°C - 6.0°C, not frozen except sediment/tissue)
Temperature 2.7°C - 0.2°C (CF) = 2.5°C
Ambient Temperature: Air Filter Initial: PL

CUSTODY SEALS INTACT:
Cooler No (Not Intact) Not Present N/A Initial: PL
Sample No (Not Intact) Not Present Initial: PL

SAMPLE CONDITION:
Chain-Of-Custody (COC) document(s) received with samples... [X]
COC document(s) received complete... [X]
Sampler's name indicated on COC... []
Sample container label(s) consistent with COC... [X]
Sample container(s) intact and good condition... [X]
Proper containers and sufficient volume for analyses requested... [X]
Analyses received within holding time... [X]
pH / Res. Chlorine / Diss. Sulfide / Diss. Oxygen received within 24 hours... []
Proper preservation noted on COC or sample container... [X]
Volatile analysis container(s) free of headspace... []
Tedlar bag(s) free of condensation... []

CONTAINER TYPE:
Solid: 4ozCGJ 8ozCGJ 16ozCGJ Sleeve EnCores TerraCores
Water: VOA VOAh VOAna2 125AGB 125AGBh 125AGBp 1AGB 1AGBna2 1AGBs
500AGB 500AGJ 500AGJs 250AGB 250CGB 250CGBs 1PB 1PBna 500PB
250PB 250PBn 125PB 125PBzna 100PJ 100PJna2
Air: Tedlar Canister Other: Trip Blank Lot#: Labeled/Checked by: PL
Container: C: Clear A: Amber P: Plastic G: Glass J: Jar B: Bottle Z: Ziploc/Resealable Bag E: Envelope Reviewed by: PS
Preservative: h: HCL n: HNO3 na2: Na2S2O3 na: NaOH p: H3PO4 s: H2SO4 u: Ultra-pure zna: ZnAc2+NaOH f: Filtered Scanned by: PS



CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST FORM

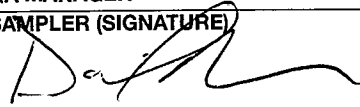
PROJECT NAME Raytheon Main		PROJECT No./TASK No. 532.30		SAMPLE CONTAINERS		ANALYSIS REQUESTED		ESTIMATED CONCENTRATION RANGE (ppb) FOR VOAS		SPECIAL HANDLING		LABORATORY INFORMATION	
PROJECT MANAGER Steve Netto		Phone No. 858-455-6500		1 L Amber		8260B VOC's						ATL	
QA MANAGER		Fax No. 858-455-6533		500 ml Poly		8270 (M) 1,4-Dioxane						Attn: Rachelle Arada	
SAMPLER (SIGNATURE) <i>[Signature]</i>		SAMPLER (PRINTED) Anelle Fenber				8270 (SIM) 1,4-Dioxane							
SAMPLER (SIGNATURE) <i>[Signature]</i>		SAMPLER (PRINTED) ERIN HURT				Surfactants by SM5540C; Bicarbonate only by SM23200							
SAMPLER (SIGNATURE) <i>[Signature]</i>		SAMPLER (PRINTED) ERIN HURT				Diss. Metals by EPA 6010; Diss. Na by EPA 7770; Diss. K by EPA 7610							
LAB ID	SAMPLE ID	SAMPLE COLLECTION		MATRIX		PRESERVATION		40 ml VOA		10-100		REMARKS	
		Date	Time	Soil	Ground-water	HCl	HNO ₃	Ice	1 L Amber	0-10	48 Hr IAT	Lab Filtered	
	TB-010313	01/03/13	0800										
	MIN-32C		1207	X	X	X	X	X	X	X	X	X	6 VOAS (EPA)
				X	X	X	X	X	X	X	X	X	2 + 1 L Amber 6 VOAS
				X	X	X	X	X	X	X	X	X	3 rd 2 L Amber
	MW-32B		4:30	X	X	X	X	X	X	X	X	X	2 500 ml Poly
				X	X	X	X	X	X	X	X	X	2 500 ml Poly
				X	X	X	X	X	X	X	X	X	
	MW-37		16:20	X	X	X	X	X	X	X	X	X	
				X	X	X	X	X	X	X	X	X	
				X	X	X	X	X	X	X	X	X	
Total number of Containers per analysis:								1230		Total No. of Containers: <u>21/18</u>			
Relinquished by: Anelle Fenber		Date	Received by: [Signature]		Date	INSTRUCTIONS						Shipment Method: Courier	
Company: H+A		Time: 17:18	Company: ATL		Time: 17:20							<ol style="list-style-type: none"> Fill out form completely except for shaded areas (lab use only); sign only after verified for completeness. Complete in ballpoint pen. Draw one line through errors, initial and date correction. Indicate number of sample containers in analysis request space; indicate choice with ✓ or x. Note applicable preservatives, special instructions, and deviations from typical environmental samples. Consult project QA documents for specific instructions.						Send Results to: Steve Netto
Relinquished by: [Signature]		Date	Received by: [Signature]		Date	Sample Receipt: <input type="checkbox"/> No. of containers correct <input type="checkbox"/> received good condition/cold <input type="checkbox"/> custody seals secure <input type="checkbox"/> conforms to COC document							
Company: ATL		Time: 17:17	Company: ATL		Time: 18:17							Temp. @ receipt _____ °C	

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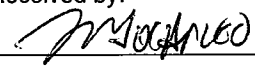
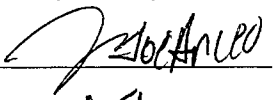
CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST FORM

PROJECT NAME		PROJECT No./TASK No.		SAMPLE CONTAINERS		ANALYSIS REQUESTED		ESTIMATED CONCENTRATION RANGE (ppb) FOR VOA'S		SPECIAL HANDLING		LABORATORY INFORMATION							
Raytheon Main		532.30										ATL							
PROJECT MANAGER Steve Netto		Phone No. 858-455-6500										Attn: Rachele ARada							
QA MANAGER		Fax No. 858-455-6533																	
SAMPLER (SIGNATURE)		SAMPLER (PRINTED)																	
		Anelle Ferber																	
		Steve Netto																	
LAB ID	SAMPLE ID	SAMPLE COLLECTION		MATRIX		PRESERVATION		1 L Poly	500 ml Poly	250 ml Poly	Ions by EPA 300.0; Specific Conductance by EPA 120.1	TDS by SM2540C, pH by SM4500 H + B	Total Hardness by SM2340B; Total Metals Cu/Fe/Mn/Zn By EPA 6010B	Ammonia by SM4500-NH3	ESTIMATED CONCENTRATION RANGE (ppb) FOR VOA'S	48 Hr TAT	MS	MSD	REMARKS
		Date	Time	Soil	Ground-water	Surface water	HCl													HNO3	NaOH	H2SO4	Ice
	MW-32C	01/03/13	12:07	X				X								X			2 1 L Poly
	↓		↓	X												X			2 500 ml Poly
	MW-32B		14:30	X				X								X			2 250 ml Poly
	↓		↓	X												X			
	MW-37		11:20	X				X								X			
	↓		↓	X												X			
	↓		↓	X												X			
Total number of Containers per analysis:								333								Total No. of Containers: 9/30 (ASF)			
Relinquished by:		Date	Received by:		Date	INSTRUCTIONS										Shipment Method: <u>Courier</u>			
		1/3/13			1/3/13	<ol style="list-style-type: none"> Fill out form completely except for shaded areas (lab use only); sign only after verified for completeness. Complete in ballpoint pen. Draw one line through errors, initial and date correction. Indicate number of sample containers in analysis request space; indicate choice with ✓ or x. Note applicable preservatives, special instructions, and deviations from typical environmental samples. Consult project QA documents for specific instructions. 										Send Results to: <u>Steve Netto</u>			
H+A Company		Time 17:18			Time 17:18											<input checked="" type="checkbox"/> 9171 TOWNE CENTRE DRIVE, SUITE 375 SAN DIEGO, CA 92122 (858) 455-6500 <input type="checkbox"/> 1640 SOUTH STAPLEY DRIVE, SUITE 124 MESA, AZ 85204 (480) 345-0888 <input type="checkbox"/> 1820 EAST RIVER ROAD, SUITE 220 TUCSON, AZ 85718 (520) 881-7300			
Relinquished by:		Date	Received by:		Date	Sample Receipt:										Send invoice to San Diego, CA			
		1/3/13	FRODIA		1/3/13	<input type="checkbox"/> No. of containers correct <input type="checkbox"/> custody seals secure <input type="checkbox"/> Temp. @ receipt _____ °C <input type="checkbox"/> received good condition/cold <input type="checkbox"/> conforms to COC document										Attn: Accounts Payable			
ATC Company		Time 18:17	ATC		Time 18:17														

CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST FORM

PROJECT NAME Raytheon Main		PROJECT No./TASK No. 532.30		SAMPLE CONTAINERS		ANALYSIS REQUESTED		ESTIMATED CONCENTRATION RANGE (ppb) FOR VOA'S		SPECIAL HANDLING		LABORATORY INFORMATION	
PROJECT MANAGER Steve Netto		Phone No. 858-455-6500										ATL Attn: Rachelle Arada	
QA MANAGER		Fax No. 858-455-6533											
SAMPLER (SIGNATURE) 		SAMPLER (PRINTED) DANIEL MORA											

LAB ID	SAMPLE ID	SAMPLE COLLECTION		MATRIX			PRESERVATION					40 ml VOA		1 L Amber		500 ml Poly		8260B VOC's		8270 (M) 1,4-Dioxane		8270 (SIM) 1,4-Dioxane		Surfactants by SM5540C;		Biocarbonate only by SM2320		Diss. Metals by EPA 6010; Diss. Na by EPA 7770; Diss. K by EPA 7610		0-10		10-100		100-1,000		1,000-10,000		>10,000		48 Hr. IAT		Lab Filtered		REMARKS								
		Date	Time	Soil	Ground Water	Surface Water	HCl	HNO3	NaOH	H2SO4	Ice																																									
	MW-30A	1/3/13	1050	X			X			X				X					X																																	
	↓		↓	X						X											X																															
	↓		↓	X						X											X																															
	MW-30B		1142	X			X			X				3					X																																	
	↓		↓	X						X											X																															
	↓		↓	X						X											X																															
	MW-3400B		1351	X			X			X				3					X																																	
	↓		↓	X						X											X																															
	↓		↓	X						X											X																															
	↓		↓	X						X											X																															
Total number of Containers per analysis:												936												Total No. of Containers: 18/18																												

Relinquished by: Anielle Fender		Date: 1/3/13		Received by: 		Date: 1/3/13		INSTRUCTIONS		Shipment Method: Courier	
H+A Company		Time: 7:18		Company: ATL		Time: 17:15		<ol style="list-style-type: none"> Fill out form completely except for shaded areas (lab use only); sign only after verified for completeness. Complete in ballpoint pen. Draw one line through errors, initial and date correction. Indicate number of sample containers in analysis request space; indicate choice with ✓ or x. Note applicable preservatives, special instructions, and deviations from typical environmental samples. Consult project QA documents for specific instructions. 		Send Results to: Steve Netto	
Relinquished by: 		Date: 1/3/13		Received by: ATL		Date: 1/3/13				<input checked="" type="checkbox"/> 9171 TOWNE CENTRE DRIVE, SUITE 375 SAN DIEGO, CA 92122 (858) 455-6500 <input type="checkbox"/> 1640 SOUTH STAPLEY DRIVE, SUITE 124 MESA, AZ 85204 (480) 345-0888 <input type="checkbox"/> 1820 EAST RIVER ROAD, SUITE 220 TUCSON, AZ 85718 (520) 881-7300		Send invoice to San Diego, CA Attn: Accounts Payable
Company: ATL		Time: 18:17		Company: ATL		Time: 18:17		Sample Receipt: <input type="checkbox"/> No. of containers correct <input type="checkbox"/> custody seals secure		Temp. @ receipt _____ °C <input type="checkbox"/> received good condition/cold <input type="checkbox"/> conforms to COC document	

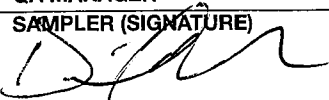
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CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST FORM

PROJECT NAME		PROJECT No./TASK No.		SAMPLE CONTAINERS			ANALYSIS REQUESTED			ESTIMATED CONCENTRATION RANGE (ppb) FOR VOA'S		SPECIAL HANDLING		LABORATORY INFORMATION					
Raytheon Main		532.30												ATL					
PROJECT MANAGER Steve Netto		Phone No. 858-455-6500												Attn: Rachele Arada					
QA MANAGER		Fax No. 858-455-6533																	
SAMPLER (SIGNATURE)		SAMPLER (PRINTED)																	
		DANIEL MORA																	
LAB ID	SAMPLE ID	SAMPLE COLLECTION		MATRIX			PRESERVATION					48 Hr TAT	REMARKS						
		Date	Time	Soil	Ground-water	Surface water	HCl	HNO ₃	NaOH	H ₂ SO ₄	Ice			1 L Poly	500 ml Poly	250 ml Poly			
	MW-30A	1/3/13	1050	X						X									
	↓		↓	X															
	MW-30B		1142	X															
	↓		↓	X															
	MW-3400B		1351	X															
	↓		↓	X															
	MW-34C		1400	X															
	↓		↓	X															
	RB-011			X															
Total number of Containers per analysis:												444		Total No. of Containers: 12/18					
Relinquished by:		Date	Received by:		Date	INSTRUCTIONS					Shipment Method: <u>Courier</u>								
		1/3/13			1/3/13	1. Fill out form completely except for shaded areas (lab use only); sign only after verified for completeness.					Send Results to: <u>Steve Netto</u>								
H+A Company		Time 17:18	ATL Company		Time 17:18	2. Complete in ballpoint pen. Draw one line through errors, initial and date correction.					<input checked="" type="checkbox"/> 9171 TOWNE CENTRE DRIVE, SUITE 375 SAN DIEGO, CA 92122 (858) 455-6500								
Relinquished by:		Date	Received by:		Date	3. Indicate number of sample containers in analysis request space; indicate choice with ✓ or x.					<input type="checkbox"/> 1640 SOUTH STAPLEY DRIVE, SUITE 124 MESA, AZ 85204 (480) 345-0888								
		1/3/13			1/3/13	4. Note applicable preservatives, special instructions, and deviations from typical environmental samples.					<input type="checkbox"/> 1820 EAST RIVER ROAD, SUITE 220 TUCSON, AZ 85718 (520) 881-7300								
ATL Company		Time 1817	ATL Company		Time 1817	5. Consult project QA documents for specific instructions.					Send invoice to San Diego, CA Attn: Accounts Payable								
						Sample Receipt:					Temp. @ receipt _____ °C								
						<input type="checkbox"/> No. of containers correct					<input type="checkbox"/> received good condition/cold								
						<input type="checkbox"/> custody seals secure					<input type="checkbox"/> conforms to COC document								

CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST FORM

DATE 01/03/13 PAGE 5 OF 6

PROJECT NAME Raytheon Main		PROJECT No./TASK No. 532.30		SAMPLE CONTAINERS		ANALYSIS REQUESTED		ESTIMATED CONCENTRATION RANGE (ppb) FOR VOC'S		SPECIAL HANDLING		LABORATORY INFORMATION	
PROJECT MANAGER Steve Netto		Phone No. 858-455-6500										ATL	
QA MANAGER		Fax No. 858-455-6533										Attn: Rachele Arada	
SAMPLER (SIGNATURE) 		SAMPLER (PRINTED) DANIEL MORA											

LAB ID	SAMPLE ID	SAMPLE COLLECTION		MATRIX			PRESERVATION				40 ml VOA			500 ml Poly			8260B VOC's					ESTIMATED CONCENTRATION RANGE (ppb) FOR VOC'S					SPECIAL HANDLING	LABORATORY INFORMATION						
		Date	Time	Soil	Ground water	Surface water	LAB N/D	HCl	HNO3	NaOH	H2SO4	Ice	40 ml VOA	1 L Amber	500 ml Poly	8260B VOC's	8270 (M) 1,4-Dioxane	8270 (SIM) 1,4-Dioxane	Surfactants by SM5540C; Bicarbonate only by SM2320B	Diss. Metals by EPA 6010; Diss. K by Na by EPA 7770; Diss. K by EPA 7610	01-10	10-100	100-1,000	1,000-10,000	>10,000	48 Hr TAT			Lab Filtered					
	MW-34C	1/3/13	1400	X			X				X				X						X					X								
	↓	↓	↓	X						X							X	X								X								
	↓	↓	↓	X						X									X	X						X	X							
	MW-34B		1451	X			X			X		3			X										X		X							
	↓	↓	↓	X						X							X	X								X								
	↓	↓	↓	X						X									X	X						X	X							
	RB-01032013		1425				X	X		X		3			X										X		X							

Total number of Containers per analysis: 924 Total No. of Containers: 15/78

Relinquished by: <u>Anelle Fender</u>		Date: <u>1/3/13</u>	Received by: <u>[Signature]</u>		Date: <u>1/3/12</u>	INSTRUCTIONS 1. Fill out form completely except for shaded areas (lab use only); sign only after verified for completeness. 2. Complete in ballpoint pen. Draw one line through errors, initial and date correction. 3. Indicate number of sample containers in analysis request space; indicate choice with ✓ or x. 4. Note applicable preservatives, special instructions, and deviations from typical environmental samples. 5. Consult project QA documents for specific instructions.					Shipment Method: <u>Courier</u>									
Company: <u>H+A</u>		Time: <u>17:18</u>	Company: <u>ATL</u>		Time: <u>17:18</u>						Send Results to: <u>Steve Netto</u>					<input checked="" type="checkbox"/> 9171 TOWNE CENTRE DRIVE, SUITE 375 SAN DIEGO, CA 92122 (858) 455-6500 <input type="checkbox"/> 1640 SOUTH STAPLEY DRIVE, SUITE 124 MESA, AZ 85204 (480) 345-0888 <input type="checkbox"/> 1820 EAST RIVER ROAD, SUITE 220 TUCSON, AZ 85718 (520) 881-7300				
Relinquished by: <u>[Signature]</u>		Date: <u>1/3/13</u>	Received by: <u>[Signature]</u>		Date: <u>1/3/12</u>	Sample Receipt: <input type="checkbox"/> No. of containers correct <input type="checkbox"/> custody seals secure					Temp. @ receipt _____ °C <input type="checkbox"/> received good condition/cold <input type="checkbox"/> conforms to COC document					Send invoice to San Diego, CA Attn: Accounts Payable				
Company: <u>ATL</u>		Time: <u>1817</u>	Company: <u>ATL</u>		Time: <u>1817</u>															

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CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST FORM

PROJECT NAME		PROJECT No./TASK No.		SAMPLE CONTAINERS			ANALYSIS REQUESTED				ESTIMATED CONCENTRATION RANGE (ppb) FOR VOAS	SPECIAL HANDLING	LABORATORY INFORMATION	
Raytheon Main		532.30					Ions by EPA 300.0; Specific Conductance by EPA 120.1 TDS by SM2540C; pH by SM4500 H+B Total Hardness by SM2340B; Total Metals Cu/Fe/Mn/Zn By EPA 60102 Ammonia by SM4500-NH3						ATL	
PROJECT MANAGER Steve Netto		Phone No. 858-455-6500											Attn: Rachele Arada	
QA MANAGER		Fax No. 858-455-6533												
SAMPLER (SIGNATURE)		SAMPLER (PRINTED)												
		DANIEL MORA												
LAB ID	SAMPLE ID	SAMPLE COLLECTION		MATRIX			PRESERVATION			1 L Poly	500 ml Poly	250 ml Poly	48 Hr TAT	REMARKS
		Date	Time	Soil	Ground-water	Surface water	HCl	HNO3	NaOH						H2SO4	Ice
	MIN-34B	1/3/13	1451	X						X				
	↓	↓	↓	X				X						
				X			X							
Total number of Containers per analysis:										1	1	1	Total No. of Containers: <u>3/18</u>	
Relinquished by:		Date	Received by:		Date	INSTRUCTIONS				Shipment Method: <u>Courier</u> Send Results to: <u>Steve Netto</u> <input checked="" type="checkbox"/> 9171 TOWNE CENTRE DRIVE, SUITE 375 SAN DIEGO, CA 92122 (858) 455-6500 <input type="checkbox"/> 1640 SOUTH STAPLEY DRIVE, SUITE 124 MESA, AZ 85204 (480) 345-0888 <input type="checkbox"/> 1820 EAST RIVER ROAD, SUITE 220 TUCSON, AZ 85718 (520) 881-7300				
<u>Anelle Fowler</u>		<u>1/3/13</u>			<u>1/3/13</u>									
Company		Time	Company		Time	1. Fill out form completely except for shaded areas (lab use only); sign only after verified for completeness. 2. Complete in ballpoint pen. Draw one line through errors, initial and date correction. 3. Indicate number of sample containers in analysis request space; indicate choice with ✓ or x. 4. Note applicable preservatives, special instructions, and deviations from typical environmental samples. 5. Consult project QA documents for specific instructions.				Send invoice to San Diego, CA Attn: Accounts Payable				
<u>H+A</u>		<u>17:18</u>	<u>ATL</u>		<u>17:18</u>									
Relinquished by:		Date	Received by:		Date	Sample Receipt: Temp. @ receipt _____ °C <input type="checkbox"/> No. of containers correct <input type="checkbox"/> received good condition/cold <input type="checkbox"/> custody seals secure <input type="checkbox"/> conforms to COC document								
		<u>1/3/13</u>			<u>1/3/13</u>									
Company		Time	Company		Time									
<u>ATL</u>		<u>1817</u>	<u>AT</u>		<u>1817</u>									

Page 98 of 98

January 08, 2013

Steve Netto
Hargis & Associates, Inc.
9171 Towne Centre Drive, Suite 375
San Diego, CA 92122
Tel: (619) 249-3166
Fax: (858) 455-6533



Re: ATL Work Order Number : 1300025
Client Reference : Raytheon Main, 532.30

Enclosed are the results for sample(s) received on January 04, 2013 by Advanced Technology Laboratories. The sample(s) are tested for the parameters as indicated on the enclosed chain of custody in accordance with applicable laboratory certifications. The laboratory results contained in this report specifically pertains to the sample(s) submitted.

Thank you for the opportunity to serve the needs of your company. If you have any questions, please feel free to contact me or your Project Manager.

Sincerely,

Eddie Rodriguez
Laboratory Director

The cover letter and the case narrative are an integral part of this analytical report and its absence renders the report invalid. Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Conference and/or applicable state-specific certification programs. The report cannot be reproduced without written permission from the client and Advanced Technology Laboratories.



Certificate of Analysis

Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : Raytheon Main, 532.30

Report To : Steve Netto

Reported : 01/08/2013

SUMMARY OF SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
TB-010413	1300025-01	Lab H2O	1/04/13 9:00	1/04/13 14:00
MW-33	1300025-02	Groundwater	1/04/13 10:10	1/04/13 14:00
MW-36	1300025-03	Groundwater	1/04/13 13:05	1/04/13 14:00

CASE NARRATIVE

The samples for SM 5540C (MBAS) analysis were subcontracted to Calscience Environmental Laboratories, Inc with ELAP Cert.#1230.



Certificate of Analysis

Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego, CA 92122

Project Number : Raytheon Main, 532.30

Report To : Steve Netto

Reported : 01/08/2013

Client Sample ID TB-010413

Lab ID: 1300025-01

Volatile Organic Compounds by EPA 8260

Analyst: SL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 12:02	
1,1,1-Trichloroethane	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 12:02	
1,1,2,2-Tetrachloroethane	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 12:02	
1,1,2-Trichloroethane	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 12:02	
1,1-Dichloroethane	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 12:02	
1,1-Dichloroethene	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 12:02	
1,1-Dichloropropene	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 12:02	
1,2,3-Trichloropropane	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 12:02	
1,2,3-Trichlorobenzene	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 12:02	
1,2,4-Trichlorobenzene	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 12:02	
1,2,4-Trimethylbenzene	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 12:02	
1,2-Dibromo-3-chloropropane	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 12:02	
1,2-Dibromoethane	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 12:02	
1,2-Dichlorobenzene	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 12:02	
1,2-Dichloroethane	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 12:02	
1,2-Dichloropropane	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 12:02	
1,3,5-Trimethylbenzene	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 12:02	
1,3-Dichlorobenzene	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 12:02	
1,3-Dichloropropane	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 12:02	
1,4-Dichlorobenzene	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 12:02	
2,2-Dichloropropane	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 12:02	
2-Chlorotoluene	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 12:02	
4-Chlorotoluene	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 12:02	
4-Isopropyltoluene	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 12:02	
Benzene	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 12:02	
Bromobenzene	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 12:02	
Bromodichloromethane	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 12:02	
Bromoform	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 12:02	
Bromomethane	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 12:02	
Carbon tetrachloride	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 12:02	
Chlorobenzene	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 12:02	
Chloroethane	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 12:02	
Chloroform	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 12:02	
Chloromethane	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 12:02	
cis-1,2-Dichloroethene	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 12:02	
cis-1,3-Dichloropropene	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 12:02	
Dibromochloromethane	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 12:02	



Certificate of Analysis

Hargis & Associates, Inc.

Project Number : Raytheon Main, 532.30

9171 Towne Centre Drive, Suite 375

Report To : Steve Netto

San Diego , CA 92122

Reported : 01/08/2013

Client Sample ID TB-010413

Lab ID: 1300025-01

Volatile Organic Compounds by EPA 8260

Analyst: SL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Dibromomethane	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 12:02	
Dichlorodifluoromethane	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 12:02	
Ethylbenzene	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 12:02	
Hexachlorobutadiene	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 12:02	
Isopropylbenzene	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 12:02	
m,p-Xylene	ND	1.0	NA	1	B3A0110	01/07/2013	01/07/13 12:02	
Methylene chloride	ND	1.0	NA	1	B3A0110	01/07/2013	01/07/13 12:02	
n-Butylbenzene	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 12:02	
n-Propylbenzene	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 12:02	
Naphthalene	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 12:02	
o-Xylene	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 12:02	
sec-Butylbenzene	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 12:02	
Styrene	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 12:02	
tert-Butylbenzene	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 12:02	
Tetrachloroethene	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 12:02	
Toluene	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 12:02	
trans-1,2-Dichloroethene	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 12:02	
Trichloroethene	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 12:02	
Trichlorofluoromethane	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 12:02	
Vinyl chloride	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 12:02	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>96.1 %</i>		<i>70 - 130</i>		B3A0110	01/07/2013	<i>01/07/13 12:02</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>95.9 %</i>		<i>70 - 130</i>		B3A0110	01/07/2013	<i>01/07/13 12:02</i>	
<i>Surrogate: Dibromofluoromethane</i>	<i>99.0 %</i>		<i>70 - 130</i>		B3A0110	01/07/2013	<i>01/07/13 12:02</i>	
<i>Surrogate: Toluene-d8</i>	<i>103 %</i>		<i>70 - 130</i>		B3A0110	01/07/2013	<i>01/07/13 12:02</i>	



Certificate of Analysis

Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : Raytheon Main, 532.30

Report To : Steve Netto

Reported : 01/08/2013

Client Sample ID MW-33

Lab ID: 1300025-02

Specific Conductance by EPA 120.1

Analyst: RD

Analyte	Result (umhos/cm)	PQL (umhos/cm)	MDL (umhos/cm)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Specific Conductance	730	0.10	NA	1	B3A0105	01/04/2013	01/04/13 00:00	

Anions Scan by Ion Chromatography EPA 300.0

Analyst: AG

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Bromide	0.13	0.05	NA	1	B3A0134	01/04/2013	01/04/13 16:05	
Chloride	53	5.0	NA	10	B3A0138	01/07/2013	01/07/13 11:27	
Nitrate as N	1.2	0.10	NA	1	B3A0134	01/04/2013	01/04/13 16:05	
Sulfate	110	10	NA	10	B3A0138	01/07/2013	01/07/13 11:27	

Alkalinity, Speciated by SM 2320B

Analyst: AG

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Alkalinity, Bicarbonate (as CaCO ₃)	190	5.0	NA	1	B3A0131	01/07/2013	01/07/13 13:32	

Hardness by Calculation by SM 2340B

Analyst: PT

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Hardness Total (As CaCO ₃)	220	2.0	NA	1	B3A0149	01/08/2013	01/08/13 13:22	

Total Dissolved Solids (Residue, Filterable) by SM 2540C

Analyst: AG

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Residue, Dissolved	420	10	NA	1	B3A0143	01/07/2013	01/07/13 17:46	

pH by SM 4500H+B

Analyst: RD

Analyte	Result (pH Units)	PQL (pH Units)	MDL (pH Units)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
pH	7.5	0.10	NA	1	B3A0103	01/04/2013	01/04/13 00:00	H1



Certificate of Analysis

Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : Raytheon Main, 532.30

Report To : Steve Netto

Reported : 01/08/2013

Client Sample ID MW-33

Lab ID: 1300025-02

Ammonia, as Nitrogen N by SM 4500NH3C

Analyst: LA

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Nitrogen, Ammonia (As N)	ND	0.15	NA	1	B3A0178	01/08/2013	01/08/13 12:30	D7

Total Metals by ICP-AES EPA 6010B

Analyst: PT

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Copper	0.0095	0.0050	NA	1	B3A0150	01/08/2013	01/08/13 13:29	
Iron	ND	0.50	NA	1	B3A0150	01/08/2013	01/08/13 13:29	
Manganese	ND	0.50	NA	1	B3A0150	01/08/2013	01/08/13 13:29	
Zinc	0.011	0.010	NA	1	B3A0150	01/08/2013	01/08/13 13:29	

Dissolved Metals by ICP-AES EPA 6010B

Analyst: PT

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Calcium	58	0.50	NA	1	B3A0149	01/08/2013	01/08/13 13:22	
Magnesium	18	0.10	NA	1	B3A0149	01/08/2013	01/08/13 13:22	

Dissolved Potassium by AA (Direct Aspiration) EPA 7610

Analyst: VV

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Potassium	3.9	0.50	NA	1	B3A0164	01/08/2013	01/08/13 12:52	

Dissolved Sodium by AA (Direct Aspiration) by EPA 7770

Analyst: VV

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Sodium	61	50	NA	1	B3A0165	01/08/2013	01/08/13 13:00	

Volatile Organic Compounds by EPA 8260

Analyst: SL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 12:22	
1,1,1-Trichloroethane	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 12:22	
1,1,2,2-Tetrachloroethane	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 12:22	



Certificate of Analysis

Hargis & Associates, Inc.

Project Number : Raytheon Main, 532.30

9171 Towne Centre Drive, Suite 375

Report To : Steve Netto

San Diego , CA 92122

Reported : 01/08/2013

Client Sample ID MW-33

Lab ID: 1300025-02

Volatile Organic Compounds by EPA 8260

Analyst: SL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,2-Trichloroethane	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 12:22	
1,1-Dichloroethane	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 12:22	
1,1-Dichloroethene	6.5	0.50	NA	1	B3A0110	01/07/2013	01/07/13 12:22	
1,1-Dichloropropene	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 12:22	
1,2,3-Trichloropropane	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 12:22	
1,2,3-Trichlorobenzene	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 12:22	
1,2,4-Trichlorobenzene	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 12:22	
1,2,4-Trimethylbenzene	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 12:22	
1,2-Dibromo-3-chloropropane	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 12:22	
1,2-Dibromoethane	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 12:22	
1,2-Dichlorobenzene	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 12:22	
1,2-Dichloroethane	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 12:22	
1,2-Dichloropropane	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 12:22	
1,3,5-Trimethylbenzene	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 12:22	
1,3-Dichlorobenzene	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 12:22	
1,3-Dichloropropane	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 12:22	
1,4-Dichlorobenzene	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 12:22	
2,2-Dichloropropane	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 12:22	
2-Chlorotoluene	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 12:22	
4-Chlorotoluene	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 12:22	
4-Isopropyltoluene	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 12:22	
Benzene	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 12:22	
Bromobenzene	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 12:22	
Bromodichloromethane	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 12:22	
Bromoform	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 12:22	
Bromomethane	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 12:22	
Carbon tetrachloride	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 12:22	
Chlorobenzene	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 12:22	
Chloroethane	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 12:22	
Chloroform	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 12:22	
Chloromethane	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 12:22	
cis-1,2-Dichloroethene	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 12:22	
cis-1,3-Dichloropropene	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 12:22	
Dibromochloromethane	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 12:22	
Dibromomethane	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 12:22	
Dichlorodifluoromethane	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 12:22	
Ethylbenzene	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 12:22	



Certificate of Analysis

Hargis & Associates, Inc.

Project Number : Raytheon Main, 532.30

9171 Towne Centre Drive, Suite 375

Report To : Steve Netto

San Diego , CA 92122

Reported : 01/08/2013

Client Sample ID MW-33

Lab ID: 1300025-02

Volatile Organic Compounds by EPA 8260

Analyst: SL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Hexachlorobutadiene	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 12:22	
Isopropylbenzene	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 12:22	
m,p-Xylene	ND	1.0	NA	1	B3A0110	01/07/2013	01/07/13 12:22	
Methylene chloride	ND	1.0	NA	1	B3A0110	01/07/2013	01/07/13 12:22	
n-Butylbenzene	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 12:22	
n-Propylbenzene	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 12:22	
Naphthalene	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 12:22	
o-Xylene	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 12:22	
sec-Butylbenzene	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 12:22	
Styrene	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 12:22	
tert-Butylbenzene	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 12:22	
Tetrachloroethene	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 12:22	
Toluene	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 12:22	
trans-1,2-Dichloroethene	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 12:22	
Trichloroethene	1.3	0.50	NA	1	B3A0110	01/07/2013	01/07/13 12:22	
Trichlorofluoromethane	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 12:22	
Vinyl chloride	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 12:22	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>108 %</i>	<i>70 - 130</i>			B3A0110	01/07/2013	<i>01/07/13 12:22</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>108 %</i>	<i>70 - 130</i>			B3A0110	01/07/2013	<i>01/07/13 12:22</i>	
<i>Surrogate: Dibromofluoromethane</i>	<i>111 %</i>	<i>70 - 130</i>			B3A0110	01/07/2013	<i>01/07/13 12:22</i>	
<i>Surrogate: Toluene-d8</i>	<i>115 %</i>	<i>70 - 130</i>			B3A0110	01/07/2013	<i>01/07/13 12:22</i>	

1,4-Dioxane by EPA 8270/SIM: Isotope Dilution Technique

Analyst: BB

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,4-Dioxane	ND	0.20	0.13	1	B3A0092	01/04/2013	01/04/13 21:01	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	<i>98.0 %</i>	<i>36 - 107</i>			B3A0092	01/04/2013	<i>01/04/13 21:01</i>	
<i>Surrogate: 2-Fluorobiphenyl</i>	<i>80.9 %</i>	<i>42 - 120</i>			B3A0092	01/04/2013	<i>01/04/13 21:01</i>	
<i>Surrogate: 4-Terphenyl-d14</i>	<i>97.8 %</i>	<i>67 - 142</i>			B3A0092	01/04/2013	<i>01/04/13 21:01</i>	
<i>Surrogate: Nitrobenzene-d5</i>	<i>108 %</i>	<i>36 - 130</i>			B3A0092	01/04/2013	<i>01/04/13 21:01</i>	



Certificate of Analysis

Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego, CA 92122

Project Number : Raytheon Main, 532.30

Report To : Steve Netto

Reported : 01/08/2013

Client Sample ID MW-36

Lab ID: 1300025-03

Specific Conductance by EPA 120.1

Analyst: RD

Analyte	Result (umhos/cm)	PQL (umhos/cm)	MDL (umhos/cm)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Specific Conductance	710	0.10	NA	1	B3A0105	01/04/2013	01/04/13 00:00	

Anions Scan by Ion Chromatography EPA 300.0

Analyst: AG

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Bromide	0.17	0.05	NA	1	B3A0134	01/04/2013	01/04/13 16:16	
Chloride	71	5.0	NA	10	B3A0138	01/07/2013	01/07/13 11:38	
Nitrate as N	ND	0.10	NA	1	B3A0134	01/04/2013	01/04/13 16:16	
Sulfate	89	10	NA	10	B3A0138	01/07/2013	01/07/13 11:38	

Alkalinity, Speciated by SM 2320B

Analyst: AG

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Alkalinity, Bicarbonate (as CaCO ₃)	170	5.0	NA	1	B3A0131	01/07/2013	01/07/13 13:32	

Hardness by Calculation by SM 2340B

Analyst: PT

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Hardness Total (As CaCO ₃)	180	2.0	NA	1	B3A0149	01/08/2013	01/08/13 13:27	

Total Dissolved Solids (Residue, Filterable) by SM 2540C

Analyst: AG

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Residue, Dissolved	380	10	NA	1	B3A0143	01/07/2013	01/07/13 17:48	

pH by SM 4500H+B

Analyst: RD

Analyte	Result (pH Units)	PQL (pH Units)	MDL (pH Units)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
pH	7.8	0.10	NA	1	B3A0103	01/04/2013	01/04/13 00:00	H1



Certificate of Analysis

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9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : Raytheon Main, 532.30

Report To : Steve Netto

Reported : 01/08/2013

Client Sample ID MW-36

Lab ID: 1300025-03

Ammonia, as Nitrogen N by SM 4500NH3C

Analyst: LA

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Nitrogen, Ammonia (As N)	ND	0.15	NA	1	B3A0178	01/08/2013	01/08/13 12:30	D7

Total Metals by ICP-AES EPA 6010B

Analyst: PT

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Copper	0.0072	0.0050	NA	1	B3A0150	01/08/2013	01/08/13 13:35	
Iron	ND	0.50	NA	1	B3A0150	01/08/2013	01/08/13 13:35	
Manganese	ND	0.50	NA	1	B3A0150	01/08/2013	01/08/13 13:35	
Zinc	0.013	0.010	NA	1	B3A0150	01/08/2013	01/08/13 13:35	

Dissolved Metals by ICP-AES EPA 6010B

Analyst: PT

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Calcium	47	0.50	NA	1	B3A0149	01/08/2013	01/08/13 13:27	
Magnesium	15	0.10	NA	1	B3A0149	01/08/2013	01/08/13 13:27	

Dissolved Potassium by AA (Direct Aspiration) EPA 7610

Analyst: VV

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Potassium	4.4	0.50	NA	1	B3A0164	01/08/2013	01/08/13 12:54	

Dissolved Sodium by AA (Direct Aspiration) by EPA 7770

Analyst: VV

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Sodium	80	50	NA	1	B3A0165	01/08/2013	01/08/13 13:01	

Volatile Organic Compounds by EPA 8260

Analyst: SL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 12:42	
1,1,1-Trichloroethane	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 12:42	
1,1,2,2-Tetrachloroethane	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 12:42	



Certificate of Analysis

Hargis & Associates, Inc.

Project Number : Raytheon Main, 532.30

9171 Towne Centre Drive, Suite 375

Report To : Steve Netto

San Diego , CA 92122

Reported : 01/08/2013

Client Sample ID MW-36

Lab ID: 1300025-03

Volatile Organic Compounds by EPA 8260

Analyst: SL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,2-Trichloroethane	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 12:42	
1,1-Dichloroethane	1.5	0.50	NA	1	B3A0110	01/07/2013	01/07/13 12:42	
1,1-Dichloroethene	140	5.0	NA	10	B3A0110	01/07/2013	01/07/13 14:42	
1,1-Dichloropropene	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 12:42	
1,2,3-Trichloropropane	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 12:42	
1,2,3-Trichlorobenzene	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 12:42	
1,2,4-Trichlorobenzene	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 12:42	
1,2,4-Trimethylbenzene	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 12:42	
1,2-Dibromo-3-chloropropane	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 12:42	
1,2-Dibromoethane	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 12:42	
1,2-Dichlorobenzene	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 12:42	
1,2-Dichloroethane	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 12:42	
1,2-Dichloropropane	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 12:42	
1,3,5-Trimethylbenzene	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 12:42	
1,3-Dichlorobenzene	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 12:42	
1,3-Dichloropropane	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 12:42	
1,4-Dichlorobenzene	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 12:42	
2,2-Dichloropropane	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 12:42	
2-Chlorotoluene	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 12:42	
4-Chlorotoluene	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 12:42	
4-Isopropyltoluene	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 12:42	
Benzene	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 12:42	
Bromobenzene	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 12:42	
Bromodichloromethane	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 12:42	
Bromoform	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 12:42	
Bromomethane	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 12:42	
Carbon tetrachloride	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 12:42	
Chlorobenzene	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 12:42	
Chloroethane	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 12:42	
Chloroform	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 12:42	
Chloromethane	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 12:42	
cis-1,2-Dichloroethene	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 12:42	
cis-1,3-Dichloropropene	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 12:42	
Dibromochloromethane	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 12:42	
Dibromomethane	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 12:42	
Dichlorodifluoromethane	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 12:42	
Ethylbenzene	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 12:42	



Certificate of Analysis

Hargis & Associates, Inc.

Project Number : Raytheon Main, 532.30

9171 Towne Centre Drive, Suite 375

Report To : Steve Netto

San Diego , CA 92122

Reported : 01/08/2013

Client Sample ID MW-36

Lab ID: 1300025-03

Volatile Organic Compounds by EPA 8260

Analyst: SL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Hexachlorobutadiene	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 12:42	
Isopropylbenzene	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 12:42	
m,p-Xylene	ND	1.0	NA	1	B3A0110	01/07/2013	01/07/13 12:42	
Methylene chloride	ND	1.0	NA	1	B3A0110	01/07/2013	01/07/13 12:42	
n-Butylbenzene	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 12:42	
n-Propylbenzene	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 12:42	
Naphthalene	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 12:42	
o-Xylene	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 12:42	
sec-Butylbenzene	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 12:42	
Styrene	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 12:42	
tert-Butylbenzene	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 12:42	
Tetrachloroethene	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 12:42	
Toluene	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 12:42	
trans-1,2-Dichloroethene	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 12:42	
Trichloroethene	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 12:42	
Trichlorofluoromethane	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 12:42	
Vinyl chloride	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 12:42	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>108 %</i>		<i>70 - 130</i>		B3A0110	01/07/2013	<i>01/07/13 14:42</i>	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>102 %</i>		<i>70 - 130</i>		B3A0110	01/07/2013	<i>01/07/13 12:42</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>103 %</i>		<i>70 - 130</i>		B3A0110	01/07/2013	<i>01/07/13 14:42</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>100 %</i>		<i>70 - 130</i>		B3A0110	01/07/2013	<i>01/07/13 12:42</i>	
<i>Surrogate: Dibromofluoromethane</i>	<i>105 %</i>		<i>70 - 130</i>		B3A0110	01/07/2013	<i>01/07/13 12:42</i>	
<i>Surrogate: Dibromofluoromethane</i>	<i>110 %</i>		<i>70 - 130</i>		B3A0110	01/07/2013	<i>01/07/13 14:42</i>	
<i>Surrogate: Toluene-d8</i>	<i>111 %</i>		<i>70 - 130</i>		B3A0110	01/07/2013	<i>01/07/13 14:42</i>	
<i>Surrogate: Toluene-d8</i>	<i>106 %</i>		<i>70 - 130</i>		B3A0110	01/07/2013	<i>01/07/13 12:42</i>	



Certificate of Analysis

Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego, CA 92122

Project Number : Raytheon Main, 532.30

Report To : Steve Netto

Reported : 01/08/2013

Client Sample ID MW-36

Lab ID: 1300025-03

1,4-Dioxane by EPA 8270/SIM: Isotope Dilution Technique

Analyst: BB

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,4-Dioxane	1.7	0.20	0.13	1	B3A0092	01/04/2013	01/04/13 21:25	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	<i>106 %</i>		<i>36 - 107</i>		B3A0092	01/04/2013	<i>01/04/13 21:25</i>	
<i>Surrogate: 2-Fluorobiphenyl</i>	<i>86.1 %</i>		<i>42 - 120</i>		B3A0092	01/04/2013	<i>01/04/13 21:25</i>	
<i>Surrogate: 4-Terphenyl-d14</i>	<i>96.3 %</i>		<i>67 - 142</i>		B3A0092	01/04/2013	<i>01/04/13 21:25</i>	
<i>Surrogate: Nitrobenzene-d5</i>	<i>118 %</i>		<i>36 - 130</i>		B3A0092	01/04/2013	<i>01/04/13 21:25</i>	



Certificate of Analysis

Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : Raytheon Main, 532.30

Report To : Steve Netto

Reported : 01/08/2013

QUALITY CONTROL SECTION

Specific Conductance by EPA 120.1 - Quality Control

Analyte	Result (umhos/cm)	PQL (umhos/cm)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B3A0105 - No Prep-Sample Control

Duplicate (B3A0105-DUP1)

Source: 1300025-03

Prepared: 1/4/2013 Analyzed: 1/4/2013

Specific Conductance

712.000

0.10

711.000

NR

0.141

30



Certificate of Analysis

Hargis & Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego , CA 92122

Project Number : Raytheon Main, 532.30
 Report To : Steve Netto
 Reported : 01/08/2013

Anions Scan by Ion Chromatography EPA 300.0 - Quality Control

Analyte	Result (mg/L)	PQL (mg/L)	Spike Level	Source Result	% Rec % Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B3A0134 - No_Prep_IC_1

Blank (B3A0134-BLK1)

Prepared: 1/4/2013 Analyzed: 1/4/2013

Bromide	ND	0.05			NR				
Chloride	ND	0.50			NR				
Nitrate as N	ND	0.10			NR				
Sulfate	ND	1.0			NR				

LCS (B3A0134-BS1)

Prepared: 1/4/2013 Analyzed: 1/4/2013

Bromide	1.00430	0.05	1.00000		100	90 - 110			
Chloride	1.01310	0.50	1.00000		101	90 - 110			
Nitrate as N	0.969100	0.10	1.00000		96.9	90 - 110			
Sulfate	2.02990	1.0	2.00000		101	90 - 110			

Duplicate (B3A0134-DUP1)

Source: 1300018-02

Prepared: 1/4/2013 Analyzed: 1/4/2013

Bromide	0.0872	0.05		0.0839	NR		3.86		20
Chloride	23.3640	2.5		23.5240	NR		0.682		20
Nitrate as N	ND	0.10		ND	NR				20
Sulfate	61.6100	5.0		61.2190	NR		0.637		20

Matrix Spike (B3A0134-MS1)

Source: 1300018-02

Prepared: 1/4/2013 Analyzed: 1/4/2013

Bromide	2.69310	0.05	2.50000	0.0839	104	80 - 120			
Chloride	26.3380	2.5	2.50000	23.5240	113	80 - 120			
Nitrate as N	2.54930	0.10	2.50000	ND	102	80 - 120			
Sulfate	66.1815	5.0	5.00000	61.2190	99.3	80 - 120			

Matrix Spike (B3A0134-MS2)

Source: 1300018-03

Prepared: 1/4/2013 Analyzed: 1/4/2013

Bromide	4.06750	0.05	2.50000	0.294200	151	80 - 120			M1
Chloride	129.652	10	2.50000	135.602	-238	80 - 120			M6
Nitrate as N	2.70300	0.10	2.50000	ND	108	80 - 120			
Sulfate	87.5905	5.0	5.00000	85.9670	32.5	80 - 120			M5

Matrix Spike Dup (B3A0134-MSD1)

Source: 1300018-02

Prepared: 1/4/2013 Analyzed: 1/4/2013

Bromide	2.68010	0.05	2.50000	0.0839	104	80 - 120	0.484		20
Chloride	26.4230	2.5	2.50000	23.5240	116	80 - 120	0.322		20
Nitrate as N	2.56390	0.10	2.50000	ND	103	80 - 120	0.571		20
Sulfate	65.3970	5.0	5.00000	61.2190	83.6	80 - 120	1.19		20

Batch B3A0138 - No_Prep_IC_1

Blank (B3A0138-BLK1)

Prepared: 1/7/2013 Analyzed: 1/7/2013

Bromide	ND	0.05			NR				
Chloride	ND	0.50			NR				
Nitrate as N	ND	0.10			NR				
Sulfate	ND	1.0			NR				



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Anions Scan by Ion Chromatography EPA 300.0 - Quality Control (cont'd)

Analyte	Result (mg/L)	PQL (mg/L)	Spike Level	Source Result	% Rec % Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B3A0138 - No_Prep_IC_1 (continued)

LCS (B3A0138-BS1)

Prepared: 1/7/2013 Analyzed: 1/7/2013

Bromide	1.00640	0.05	1.00000	101	90 - 110				
Chloride	1.03960	0.50	1.00000	104	90 - 110				
Nitrate as N	0.979900	0.10	1.00000	98.0	90 - 110				
Sulfate	2.03890	1.0	2.00000	102	90 - 110				

Duplicate (B3A0138-DUP1)

Source: 1300018-08RE1

Prepared: 1/7/2013 Analyzed: 1/7/2013

Bromide	ND	0.50	ND	NR				20	
Chloride	68.3600	5.0	68.3290	NR			0.0454	20	
Nitrate as N	7.89300	1.0	ND	NR				20	
Sulfate	72.0440	10	71.9260	NR			0.164	20	

Matrix Spike (B3A0138-MS1)

Source: 1300018-08RE1

Prepared: 1/7/2013 Analyzed: 1/7/2013

Bromide	5.93300	0.50	2.50000	ND	237	80 - 120			M3
Chloride	69.7150	5.0	2.50000	68.3290	55.4	80 - 120			M5
Nitrate as N	9.51300	1.0	2.50000	ND	381	80 - 120			M5
Sulfate	76.2250	10	5.00000	71.9260	86.0	80 - 120			

Matrix Spike (B3A0138-MS2)

Source: 1300018-09RE1

Prepared: 1/7/2013 Analyzed: 1/7/2013

Bromide	10.4340	1.0	2.50000	ND	417	80 - 120			M5
Chloride	134.770	10	2.50000	134.854	-3.36	80 - 120			M6
Nitrate as N	21.8620	2.0	2.50000	20.0580	72.2	80 - 120			M5
Sulfate	131.554	20	5.00000	128.858	53.9	80 - 120			M3

Matrix Spike Dup (B3A0138-MSD1)

Source: 1300018-08RE1

Prepared: 1/7/2013 Analyzed: 1/7/2013

Bromide	6.52300	0.50	2.50000	ND	261	80 - 120	9.47	20	M5
Chloride	69.7750	5.0	2.50000	68.3290	57.8	80 - 120	0.0860	20	M3
Nitrate as N	9.66100	1.0	2.50000	ND	386	80 - 120	1.54	20	M5
Sulfate	76.4820	10	5.00000	71.9260	91.1	80 - 120	0.337	20	



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Alkalinity, Speciated by SM 2320B - Quality Control

Analyte	Result (mg/L)	PQL (mg/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B3A0131 - No_Prep_WC_1

Blank (B3A0131-BLK1)

Alkalinity, Bicarbonate (as CaCO3)

ND 5.0

Prepared: 1/7/2013 Analyzed: 1/7/2013

NR

LCS (B3A0131-BS1)

Alkalinity, Bicarbonate (as CaCO3)

1.88000 5.0 0.00000

Prepared: 1/7/2013 Analyzed: 1/7/2013

NR 80 - 120

Matrix Spike (B3A0131-MS1)

Alkalinity, Bicarbonate (as CaCO3)

182.380 5.0 0.00000

Source: 1300018-02

Prepared: 1/7/2013 Analyzed: 1/7/2013

179.750 NR 80 - 120

Matrix Spike Dup (B3A0131-MSD1)

Alkalinity, Bicarbonate (as CaCO3)

183.510 5.0 0.00000

Source: 1300018-02

Prepared: 1/7/2013 Analyzed: 1/7/2013

179.750 NR 80 - 120 0.618 20



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Hardness by Calculation by SM 2340B - Quality Control

Analyte	Result (mg/L)	PQL (mg/L)	Spike Level	Source Result	% Rec % Rec	% Rec Limits	RPD RPD	RPD Limit	Notes
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Batch B3A0149 - EPA 3010A

Blank (B3A0149-BLK1)

Prepared: 1/8/2013 Analyzed: 1/8/2013

Hardness Total (As CaCO3)

ND 2.0

NR

LCS (B3A0149-BS1)

Prepared: 1/8/2013 Analyzed: 1/8/2013

Hardness Total (As CaCO3)

126.501 2.0 132.271

95.6 80 - 120

Matrix Spike (B3A0149-MS1)

Source: 1300025-02

Prepared: 1/8/2013 Analyzed: 1/8/2013

Hardness Total (As CaCO3)

374.428 2.0 132.200

221.784 115 80 - 120

Matrix Spike Dup (B3A0149-MSD1)

Source: 1300025-02

Prepared: 1/8/2013 Analyzed: 1/8/2013

Hardness Total (As CaCO3)

375.265 2.0 132.200

221.784 116 80 - 120 0.223 20



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Total Dissolved Solids (Residue, Filterable) by SM 2540C - Quality Control

Analyte	Result (mg/L)	PQL (mg/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B3A0143 - No_Prep_WC_1

Blank (B3A0143-BLK1)

Prepared: 1/7/2013 Analyzed: 1/7/2013

Residue, Dissolved

ND

10

NR

LCS (B3A0143-BS1)

Prepared: 1/7/2013 Analyzed: 1/7/2013

Residue, Dissolved

973.000

10

970.000

100

80 - 120

Duplicate (B3A0143-DUP1)

Source: 1300025-03

Prepared: 1/7/2013 Analyzed: 1/7/2013

Residue, Dissolved

388.000

10

380.000

NR

2.08

10



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pH by SM 4500H+B - Quality Control

Analyte	Result (pH Units)	PQL (pH Units)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B3A0103 - No Prep-Sample Control

Duplicate (B3A0103-DUP1)

Source: 1300020-01

Prepared: 1/4/2013 Analyzed: 1/4/2013

pH	8.02000	0.10		8.01000	NR		0.125	10	H1
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Ammonia, as Nitrogen N by SM 4500NH3C - Quality Control

Analyte	Result (mg/L)	PQL (mg/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B3A0178 - Prep_WC_3_W

Blank (B3A0178-BLK1)

Prepared: 1/8/2013 Analyzed: 1/8/2013

Nitrogen, Ammonia (As N)

ND

0.03

NR



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Ammonia, as Nitrogen N by SM 4500NH3C - Quality Control (cont'd)

Analyte	Result (mg/L)	PQL (mg/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B3A0178 - Prep_WC_3_W (continued)

LCS (B3A0178-BS1)

Prepared: 1/8/2013 Analyzed: 1/8/2013

Nitrogen, Ammonia (As N)	0.925000	0.03	1.00000		92.5	80 - 120			
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Ammonia, as Nitrogen N by SM 4500NH3C - Quality Control (cont'd)

Analyte	Result (mg/L)	PQL (mg/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B3A0178 - Prep_WC_3_W (continued)

Matrix Spike (B3A0178-MS1)

Source: 1300025-03

Prepared: 1/8/2013 Analyzed: 1/8/2013

Nitrogen, Ammonia (As N)

5.07000

0.15

5.00000

ND

101

80 - 120



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Ammonia, as Nitrogen N by SM 4500NH3C - Quality Control (cont'd)

Analyte	Result (mg/L)	PQL (mg/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B3A0178 - Prep_WC_3_W (continued)

Matrix Spike Dup (B3A0178-MSD1)

Source: 1300025-03

Prepared: 1/8/2013 Analyzed: 1/8/2013

Nitrogen, Ammonia (As N)	5.02000	0.15	5.00000	ND	100	80 - 120	0.991	20	
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Total Metals by ICP-AES EPA 6010B - Quality Control

Analyte	Result (mg/L)	PQL (mg/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B3A0150 - EPA 3010A

Blank (B3A0150-BLK1)

Prepared: 1/8/2013 Analyzed: 1/8/2013

Copper	ND	0.0050				NR			
Iron	ND	0.50				NR			
Manganese	ND	0.50				NR			
Zinc	ND	0.010				NR			



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Total Metals by ICP-AES EPA 6010B - Quality Control (cont'd)

Analyte	Result (mg/L)	PQL (mg/L)	Spike Level	Source Result	% Rec	Limits	RPD	RPD Limit	Notes
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Batch B3A0150 - EPA 3010A (continued)

LCS (B3A0150-BS1)

Prepared: 1/8/2013 Analyzed: 1/8/2013

Copper	1.00964	0.0050	1.00000		101	80 - 120			
Iron	19.7483	0.50	20.0000		98.7	80 - 120			
Manganese	18.7884	0.50	20.0000		93.9	80 - 120			E
Zinc	0.984518	0.010	1.00000		98.5	80 - 120			



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Total Metals by ICP-AES EPA 6010B - Quality Control (cont'd)

Analyte	Result (mg/L)	PQL (mg/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B3A0150 - EPA 3010A (continued)

LCS (B3A0150-BS2)

Prepared: 1/8/2013 Analyzed: 1/8/2013

Copper	1.04879	0.010	1.00000		105	80 - 120		
Iron	20.0930	1.0	20.0000		100	80 - 120		
Manganese	19.6557	1.0	20.0000		98.3	80 - 120		
Zinc	1.03526	0.020	1.00000		104	80 - 120		



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Total Metals by ICP-AES EPA 6010B - Quality Control (cont'd)

Analyte	Result (mg/L)	PQL (mg/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B3A0150 - EPA 3010A (continued)

Matrix Spike (B3A0150-MS1)

Source: 1300025-02

Prepared: 1/8/2013 Analyzed: 1/8/2013

Copper	2.40596	0.0050	2.50000	0.009489	95.9	71 - 128			
Iron	19.7853	0.50	20.0000	ND	98.9	69 - 121			
Manganese	18.6238	0.50	20.0000	ND	93.1	68 - 115			E
Zinc	2.23489	0.010	2.50000	0.011117	89.0	63 - 123			



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Total Metals by ICP-AES EPA 6010B - Quality Control (cont'd)

Analyte	Result (mg/L)	PQL (mg/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B3A0150 - EPA 3010A (continued)

Matrix Spike (B3A0150-MS2)

Source: 1300025-02

Prepared: 1/8/2013 Analyzed: 1/8/2013

Copper	2.38960	0.010	2.50000	0.009489	95.2	71 - 128			
Iron	19.7746	1.0	20.0000	ND	98.9	69 - 121			
Manganese	19.0997	1.0	20.0000	ND	95.5	68 - 115			
Zinc	2.29897	0.020	2.50000	0.011117	91.5	63 - 123			



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Total Metals by ICP-AES EPA 6010B - Quality Control (cont'd)

Analyte	Result (mg/L)	PQL (mg/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B3A0150 - EPA 3010A (continued)

Matrix Spike Dup (B3A0150-MSD1)

Source: 1300025-02

Prepared: 1/8/2013 Analyzed: 1/8/2013

Copper	2.37172	0.0050	2.50000	0.009489	94.5	71 - 128	1.43	20	
Iron	19.4911	0.50	20.0000	ND	97.5	69 - 121	1.50	20	
Manganese	18.4306	0.50	20.0000	ND	92.2	68 - 115	1.04	20	E
Zinc	2.20697	0.010	2.50000	0.011117	87.8	63 - 123	1.26	20	



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Total Metals by ICP-AES EPA 6010B - Quality Control (cont'd)

Analyte	Result (mg/L)	PQL (mg/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B3A0150 - EPA 3010A (continued)

Matrix Spike Dup (B3A0150-MSD2)

Source: 1300025-02

Prepared: 1/8/2013 Analyzed: 1/8/2013

Copper	2.34113	0.010	2.50000	0.009489	93.3	71 - 128	2.05	20
Iron	19.4252	1.0	20.0000	ND	97.1	69 - 121	1.78	20
Manganese	19.2884	1.0	20.0000	ND	96.4	68 - 115	0.983	20
Zinc	2.26038	0.020	2.50000	0.011117	90.0	63 - 123	1.69	20



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Dissolved Metals by ICP-AES EPA 6010B - Quality Control

Analyte	Result (mg/L)	PQL (mg/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B3A0149 - EPA 3010A

Blank (B3A0149-BLK1)

Prepared: 1/8/2013 Analyzed: 1/8/2013

Calcium	ND	0.50				NR			
Magnesium	ND	0.10				NR			



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Dissolved Metals by ICP-AES EPA 6010B - Quality Control (cont'd)

Analyte	Result (mg/L)	PQL (mg/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B3A0149 - EPA 3010A (continued)

LCS (B3A0149-BS1)

Prepared: 1/8/2013 Analyzed: 1/8/2013

Calcium	19.2051	0.50	20.0000		96.0	80 - 120			
Magnesium	19.0806	0.10	20.0000		95.4	80 - 120			



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Dissolved Metals by ICP-AES EPA 6010B - Quality Control (cont'd)

Analyte	Result (mg/L)	PQL (mg/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B3A0149 - EPA 3010A (continued)

Matrix Spike (B3A0149-MS1)

Source: 1300025-02

Prepared: 1/8/2013 Analyzed: 1/8/2013

Calcium	84.6840	0.50	20.0000	58.4690	131	28 - 159			
Magnesium	39.5569	0.10	20.0000	18.3812	106	39 - 145			



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Dissolved Metals by ICP-AES EPA 6010B - Quality Control (cont'd)

Analyte	Result (mg/L)	PQL (mg/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B3A0149 - EPA 3010A (continued)

Matrix Spike Dup (B3A0149-MSD1)

Source: 1300025-02

Prepared: 1/8/2013 Analyzed: 1/8/2013

Calcium	84.9256	0.50	20.0000	58.4690	132	28 - 159	0.285	20	
Magnesium	39.6134	0.10	20.0000	18.3812	106	39 - 145	0.143	20	



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Dissolved Potassium by AA (Direct Aspiration) EPA 7610 - Quality Control

Analyte	Result (mg/L)	PQL (mg/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B3A0164 - EPA 3010A

Blank (B3A0164-BLK1)

Prepared: 1/8/2013 Analyzed: 1/8/2013

Potassium

ND

0.50

NR



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Dissolved Potassium by AA (Direct Aspiration) EPA 7610 - Quality Control (cont'd)

Analyte	Result (mg/L)	PQL (mg/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B3A0164 - EPA 3010A (continued)

LCS (B3A0164-BS1)

Prepared: 1/8/2013 Analyzed: 1/8/2013

Potassium	2.46369	0.50	2.50000		98.5	80 - 120			
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Project Number : Raytheon Main, 532.30

Report To : Steve Netto

Reported : 01/08/2013

Dissolved Potassium by AA (Direct Aspiration) EPA 7610 - Quality Control (cont'd)

Analyte	Result (mg/L)	PQL (mg/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B3A0164 - EPA 3010A (continued)

Matrix Spike (B3A0164-MS1)

Source: 1300025-02

Prepared: 1/8/2013 Analyzed: 1/8/2013

Potassium	7.51146	1.0	2.50000	3.88357	145	70 - 130			M1
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Certificate of Analysis

Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : Raytheon Main, 532.30

Report To : Steve Netto

Reported : 01/08/2013

Dissolved Potassium by AA (Direct Aspiration) EPA 7610 - Quality Control (cont'd)

Analyte	Result (mg/L)	PQL (mg/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B3A0164 - EPA 3010A (continued)

Matrix Spike Dup (B3A0164-MSD1)

Source: 1300025-02

Prepared: 1/8/2013 Analyzed: 1/8/2013

Potassium	7.67052	1.0	2.50000	3.88357	151	70 - 130	2.10	20	M1
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San Diego, CA 92122

Project Number : Raytheon Main, 532.30

Report To : Steve Netto

Reported : 01/08/2013

Dissolved Sodium by AA (Direct Aspiration) by EPA 7770 - Quality Control

Analyte	Result (mg/L)	PQL (mg/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B3A0165 - EPA 3010A

Blank (B3A0165-BLK1)

Prepared: 1/8/2013 Analyzed: 1/8/2013

Sodium	ND	50			NR				
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San Diego , CA 92122

Project Number : Raytheon Main, 532.30

Report To : Steve Netto

Reported : 01/08/2013

Dissolved Sodium by AA (Direct Aspiration) by EPA 7770 - Quality Control (cont'd)

Analyte	Result (mg/L)	PQL (mg/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B3A0165 - EPA 3010A (continued)

LCS (B3A0165-BS1)

Prepared: 1/8/2013 Analyzed: 1/8/2013

Sodium	100.168	50	100.000		100	80 - 120			
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San Diego , CA 92122

Project Number : Raytheon Main, 532.30

Report To : Steve Netto

Reported : 01/08/2013

Dissolved Sodium by AA (Direct Aspiration) by EPA 7770 - Quality Control (cont'd)

Analyte	Result (mg/L)	PQL (mg/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B3A0165 - EPA 3010A (continued)

Matrix Spike (B3A0165-MS1)

Source: 1300025-02

Prepared: 1/8/2013 Analyzed: 1/8/2013

Sodium	163.366	50	100.000	61.1022	102	70 - 130
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San Diego , CA 92122

Project Number : Raytheon Main, 532.30

Report To : Steve Netto

Reported : 01/08/2013

Dissolved Sodium by AA (Direct Aspiration) by EPA 7770 - Quality Control (cont'd)

Analyte	Result (mg/L)	PQL (mg/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B3A0165 - EPA 3010A (continued)

Matrix Spike Dup (B3A0165-MSD1)

Source: 1300025-02

Prepared: 1/8/2013 Analyzed: 1/8/2013

Sodium	165.818	50	100.000	61.1022	105	70 - 130	1.49	20	
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Hargis & Associates, Inc.

Project Number : Raytheon Main, 532.30

9171 Towne Centre Drive, Suite 375

Report To : Steve Netto

San Diego , CA 92122

Reported : 01/08/2013

Volatile Organic Compounds by EPA 8260 - Quality Control

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec % Rec	% Rec Limits	RPD RPD	RPD Limit	Notes
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Batch B3A0110 - MSVOAW_LL

Blank (B3A0110-BLK1)

Prepared: 1/7/2013 Analyzed: 1/7/2013

1,1,1,2-Tetrachloroethane	ND	0.50			NR
1,1,1-Trichloroethane	ND	0.50			NR
1,1,2,2-Tetrachloroethane	ND	0.50			NR
1,1,2-Trichloroethane	ND	0.50			NR
1,1-Dichloroethane	ND	0.50			NR
1,1-Dichloroethene	ND	0.50			NR
1,1-Dichloropropene	ND	0.50			NR
1,2,3-Trichloropropane	ND	0.50			NR
1,2,3-Trichlorobenzene	ND	0.50			NR
1,2,4-Trichlorobenzene	ND	0.50			NR
1,2,4-Trimethylbenzene	ND	0.50			NR
1,2-Dibromo-3-chloropropane	ND	0.50			NR
1,2-Dibromoethane	ND	0.50			NR
1,2-Dichlorobenzene	ND	0.50			NR
1,2-Dichloroethane	ND	0.50			NR
1,2-Dichloropropane	ND	0.50			NR
1,3,5-Trimethylbenzene	ND	0.50			NR
1,3-Dichlorobenzene	ND	0.50			NR
1,3-Dichloropropane	ND	0.50			NR
1,4-Dichlorobenzene	ND	0.50			NR
2,2-Dichloropropane	ND	0.50			NR
2-Chlorotoluene	ND	0.50			NR
4-Chlorotoluene	ND	0.50			NR
4-Isopropyltoluene	ND	0.50			NR
Benzene	ND	0.50			NR
Bromobenzene	ND	0.50			NR
Bromodichloromethane	ND	0.50			NR
Bromoform	ND	0.50			NR
Bromomethane	ND	0.50			NR
Carbon tetrachloride	ND	0.50			NR
Chlorobenzene	ND	0.50			NR
Chloroethane	ND	0.50			NR
Chloroform	ND	0.50			NR
Chloromethane	ND	0.50			NR
cis-1,2-Dichloroethene	ND	0.50			NR
cis-1,3-Dichloropropene	ND	0.50			NR
Dibromochloromethane	ND	0.50			NR
Dibromomethane	ND	0.50			NR
Dichlorodifluoromethane	ND	0.50			NR
Ethylbenzene	ND	0.50			NR
Hexachlorobutadiene	ND	0.50			NR



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Project Number : Raytheon Main, 532.30

9171 Towne Centre Drive, Suite 375

Report To : Steve Netto

San Diego , CA 92122

Reported : 01/08/2013

Volatile Organic Compounds by EPA 8260 - Quality Control (cont'd)

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B3A0110 - MSVOAW_LL (continued)

Blank (B3A0110-BLK1) - Continued

Prepared: 1/7/2013 Analyzed: 1/7/2013

Isopropylbenzene	ND	0.50						NR	
m,p-Xylene	ND	1.0						NR	
Methylene chloride	ND	1.0						NR	
n-Butylbenzene	ND	0.50						NR	
n-Propylbenzene	ND	0.50						NR	
Naphthalene	ND	0.50						NR	
o-Xylene	ND	0.50						NR	
sec-Butylbenzene	ND	0.50						NR	
Styrene	ND	0.50						NR	
tert-Butylbenzene	ND	0.50						NR	
Tetrachloroethene	ND	0.50						NR	
Toluene	ND	0.50						NR	
trans-1,2-Dichloroethene	ND	0.50						NR	
Trichloroethene	ND	0.50						NR	
Trichlorofluoromethane	ND	0.50						NR	
Vinyl chloride	ND	0.50						NR	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>24.65</i>		<i>25.0000</i>					<i>98.6</i>	<i>70 - 130</i>
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>25.76</i>		<i>25.0000</i>					<i>103</i>	<i>70 - 130</i>
<i>Surrogate: Dibromofluoromethane</i>	<i>26.27</i>		<i>25.0000</i>					<i>105</i>	<i>70 - 130</i>
<i>Surrogate: Toluene-d8</i>	<i>27.14</i>		<i>25.0000</i>					<i>109</i>	<i>70 - 130</i>



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San Diego , CA 92122

Project Number : Raytheon Main, 532.30

Report To : Steve Netto

Reported : 01/08/2013

Volatile Organic Compounds by EPA 8260 - Quality Control (cont'd)

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B3A0110 - MSVOAW_LL (continued)

LCS (B3A0110-BS1)

Prepared: 1/7/2013 Analyzed: 1/7/2013

1,1-Dichloroethene	18.1500		20.0000		90.8	70 - 130			
Benzene	36.8400		40.0000		92.1	70 - 130			
Chlorobenzene	20.5400		20.0000		103	70 - 130			
MTBE	17.5200		20.0000		87.6	70 - 130			
Toluene	38.7500		40.0000		96.9	70 - 130			
Trichloroethene	18.8900		20.0000		94.4	70 - 130			
<hr/>									
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>26.42</i>		<i>25.0000</i>		<i>106</i>	<i>70 - 130</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>26.43</i>		<i>25.0000</i>		<i>106</i>	<i>70 - 130</i>			
<i>Surrogate: Dibromofluoromethane</i>	<i>26.64</i>		<i>25.0000</i>		<i>107</i>	<i>70 - 130</i>			
<i>Surrogate: Toluene-d8</i>	<i>27.25</i>		<i>25.0000</i>		<i>109</i>	<i>70 - 130</i>			



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San Diego , CA 92122

Project Number : Raytheon Main, 532.30

Report To : Steve Netto

Reported : 01/08/2013

Volatile Organic Compounds by EPA 8260 - Quality Control (cont'd)

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B3A0110 - MSVOAW_LL (continued)

LCS Dup (B3A0110-BSD1)

Prepared: 1/7/2013 Analyzed: 1/7/2013

1,1-Dichloroethene	17.5500		20.0000		87.8	70 - 130	3.36	20	
Benzene	36.6900		40.0000		91.7	70 - 130	0.408	20	
Chlorobenzene	20.0400		20.0000		100	70 - 130	2.46	20	
MTBE	17.6500		20.0000		88.2	70 - 130	0.739	20	
Toluene	38.5000		40.0000		96.2	70 - 130	0.647	20	
Trichloroethene	18.7900		20.0000		94.0	70 - 130	0.531	20	
<hr/>									
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>26.83</i>		<i>25.0000</i>		<i>107</i>	<i>70 - 130</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>26.37</i>		<i>25.0000</i>		<i>105</i>	<i>70 - 130</i>			
<i>Surrogate: Dibromofluoromethane</i>	<i>27.00</i>		<i>25.0000</i>		<i>108</i>	<i>70 - 130</i>			
<i>Surrogate: Toluene-d8</i>	<i>27.65</i>		<i>25.0000</i>		<i>111</i>	<i>70 - 130</i>			



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9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : Raytheon Main, 532.30

Report To : Steve Netto

Reported : 01/08/2013

1,4-Dioxane by EPA 8270/SIM: Isotope Dilution Technique - Quality Control

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B3A0092 - MSSEMI

Blank (B3A0092-BLK1)

Prepared: 1/4/2013 Analyzed: 1/4/2013

1,4-Dioxane	ND	0.20				NR			
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	<i>0.7080</i>		<i>1.00000</i>		<i>70.8</i>	<i>36 - 107</i>			
<i>Surrogate: 2-Fluorobiphenyl</i>	<i>0.9568</i>		<i>1.00000</i>		<i>95.7</i>	<i>42 - 120</i>			
<i>Surrogate: 4-Terphenyl-d14</i>	<i>0.9663</i>		<i>1.00000</i>		<i>96.6</i>	<i>67 - 142</i>			
<i>Surrogate: Nitrobenzene-d5</i>	<i>0.9839</i>		<i>1.00000</i>		<i>98.4</i>	<i>36 - 130</i>			



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San Diego , CA 92122

Project Number : Raytheon Main, 532.30

Report To : Steve Netto

Reported : 01/08/2013

1,4-Dioxane by EPA 8270/SIM: Isotope Dilution Technique - Quality Control (cont'd)

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
---------	------------------	---------------	----------------	------------------	-------	-----------------	-----	--------------	-------

Batch B3A0092 - MSSEMI (continued)

LCS (B3A0092-BS1)

Prepared: 1/4/2013 Analyzed: 1/4/2013

1,4-Dioxane	0.704690	0.20	1.00000		70.5	70 - 130		
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	<i>0.9135</i>		<i>1.00000</i>		<i>91.4</i>	<i>36 - 107</i>		
<i>Surrogate: 2-Fluorobiphenyl</i>	<i>0.9484</i>		<i>1.00000</i>		<i>94.8</i>	<i>42 - 120</i>		
<i>Surrogate: 4-Terphenyl-d14</i>	<i>0.9832</i>		<i>1.00000</i>		<i>98.3</i>	<i>67 - 142</i>		
<i>Surrogate: Nitrobenzene-d5</i>	<i>1.061</i>		<i>1.00000</i>		<i>106</i>	<i>36 - 130</i>		



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San Diego , CA 92122

Project Number : Raytheon Main, 532.30

Report To : Steve Netto

Reported : 01/08/2013

1,4-Dioxane by EPA 8270/SIM: Isotope Dilution Technique - Quality Control (cont'd)

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B3A0092 - MSSEMI (continued)

Matrix Spike (B3A0092-MS1)

Source: 1300018-02

Prepared: 1/4/2013 Analyzed: 1/4/2013

1,4-Dioxane	0.925100	0.20	1.00000	ND	92.5	70 - 130			
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	<i>0.9103</i>		<i>1.00000</i>		<i>91.0</i>	<i>36 - 107</i>			
<i>Surrogate: 2-Fluorobiphenyl</i>	<i>0.8194</i>		<i>1.00000</i>		<i>81.9</i>	<i>42 - 120</i>			
<i>Surrogate: 4-Terphenyl-d14</i>	<i>0.8884</i>		<i>1.00000</i>		<i>88.8</i>	<i>67 - 142</i>			
<i>Surrogate: Nitrobenzene-d5</i>	<i>0.9373</i>		<i>1.00000</i>		<i>93.7</i>	<i>36 - 130</i>			



Certificate of Analysis

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9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : Raytheon Main, 532.30

Report To : Steve Netto

Reported : 01/08/2013

1,4-Dioxane by EPA 8270/SIM: Isotope Dilution Technique - Quality Control (cont'd)

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B3A0092 - MSSEMI (continued)

Matrix Spike Dup (B3A0092-MSD1)

Source: 1300018-02

Prepared: 1/4/2013 Analyzed: 1/4/2013

1,4-Dioxane	0.977660	0.20	1.00000	ND	97.8	70 - 130	5.52	20	
Surrogate: 1,2-Dichlorobenzene-d4	0.8162		1.00000		81.6	36 - 107			
Surrogate: 2-Fluorobiphenyl	0.7530		1.00000		75.3	42 - 120			
Surrogate: 4-Terphenyl-d14	0.8309		1.00000		83.1	67 - 142			
Surrogate: Nitrobenzene-d5	0.8651		1.00000		86.5	36 - 130			



Certificate of Analysis

Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego, CA 92122

Project Number : Raytheon Main, 532.30

Report To : Steve Netto

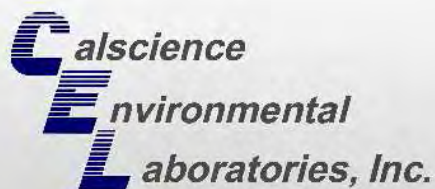
Reported : 01/08/2013

Notes and Definitions

M6	Matrix spike analyte was diluted out.
M5	Matrix spike recovery outside of acceptance limit for non-target analyte.
M3	Matrix spike recovery outside of acceptance limit due to disproportionate concentration of the analyte to spike level. The analytical batch was validated by the laboratory control sample.
M1	Matrix spike recovery outside of acceptance limit. The analytical batch was validated by the laboratory control sample.
H1	Sample was received past holding time.
E	Result value above quantitation range.
D7	A lesser amount of sample was analyzed due to matrix.
ND	Analyte not detected at or above reporting limit
PQL	Practical Quantitation Limit
MDL	Method Detection Limit
NR	Not Reported
RPD	Relative Percent Difference
CA1	CA-NELAP (CDPH)
CA2	CA-ELAP (CDPH)
OR1	OR-NELAP (OSPHL)
TX1	TX-NELAP (TCEQ)

Notes:

- (1) The reported MDL and PQL are based on prep ratio variation and analytical dilution.
- (2) The suffix [2C] of specific analytes signifies that the reported result is taken from the instrument's second column.



CALSCIENCE

WORK ORDER NUMBER: 13-01-0190

The difference is service



AIR · SOIL · WATER · MARINE CHEMISTRY

Analytical Report For

Client: Advanced Technology Laboratories

Client Project Name: 1300025

Attention: Rachelle Arada
3275 Walnut Street
Signal Hill, CA 90755-5225

Approved for release on 01/8/2013 by:
Amanda Porter
Project Manager

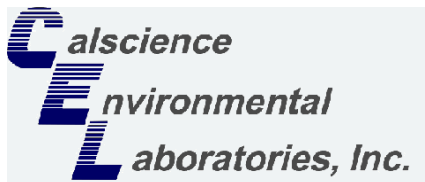
ResultLink ▶

Email your PM ▶



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Contents

Client Project Name: 1300025
Work Order Number: 13-01-0190

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2.2	LCS/LCSD	5
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4	Chain of Custody/Sample Receipt Form	7

Analytical Report



Advanced Technology Laboratories
3275 Walnut Street
Signal Hill, CA 90755-5225

Date Received: 01/04/13
Work Order No: 13-01-0190
Preparation: N/A
Method: SM 5540C

Project: 1300025

Page 1 of 1

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
1300025-02 / MW-33	13-01-0190-1-A	01/04/13 10:10	Aqueous	UV 2	01/04/13	01/04/13 19:20	C0104SURL2

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qual</u>	<u>Units</u>
MBAS	ND	0.10	1		mg/L

1300025-03 / MW-36	13-01-0190-2-A	01/04/13 13:05	Aqueous	UV 2	01/04/13	01/04/13 19:20	C0104SURL2
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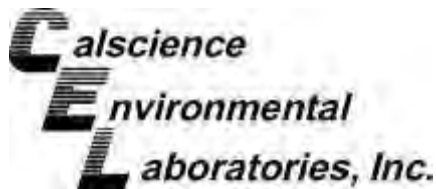
<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qual</u>	<u>Units</u>
MBAS	ND	0.10	1		mg/L

Method Blank	099-05-093-2,450	N/A	Aqueous	UV 2	01/04/13	01/04/13 19:20	C0104SURL2
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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qual</u>	<u>Units</u>
MBAS	ND	0.10	1		mg/L

Return to Contents

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers



Quality Control - Spike/Spike Duplicate



Advanced Technology Laboratories
 3275 Walnut Street
 Signal Hill, CA 90755-5225

Date Received: 01/04/13
 Work Order No: 13-01-0190
 Preparation: N/A
 Method: SM 5540C

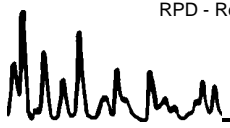
Project 1300025

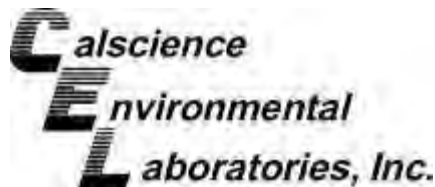
Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
13-01-0208-1	Aqueous	UV 2	01/04/13	01/04/13	C0104SURS2

Parameter	SAMPLE CONC	SPIKE ADDED	MS CONC	MS %REC	MSD CONC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
MBAS	ND	1.0	0.97	97	0.94	94	70-130	3	0-25	

Return to Contents

RPD - Relative Percent Difference , CL - Control Limit





Quality Control - LCS/LCS Duplicate



Advanced Technology Laboratories
 3275 Walnut Street
 Signal Hill, CA 90755-5225

Date Received: N/A
 Work Order No: 13-01-0190
 Preparation: N/A
 Method: SM 5540C

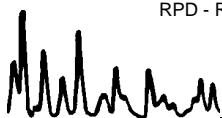
Project: 1300025

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-05-093-2,450	Aqueous	UV 2	01/04/13	01/04/13	C0104SURL2

Parameter	<u>SPIKE ADDED</u>	<u>LCS CONC</u>	<u>LCS %REC</u>	<u>LCSD CONC</u>	<u>LCSD %REC</u>	<u>%REC CL</u>	<u>RPD</u>	<u>RPD CL</u>	<u>Qualifiers</u>
MBAS	1.0	0.93	93	0.92	92	80-120	1	0-20	

Return to Contents

RPD - Relative Percent Difference , CL - Control Limit



Work Order Number: 13-01-0190

<u>Qualifier</u>	<u>Definition</u>
*	See applicable analysis comment.
<	Less than the indicated value.
>	Greater than the indicated value.
1	Surrogate compound recovery was out of control due to a required sample dilution. Therefore, the sample data was reported without further clarification.
2	Surrogate compound recovery was out of control due to matrix interference. The associated method blank surrogate spike compound was in control and, therefore, the sample data was reported without further clarification.
3	Recovery of the Matrix Spike (MS) or Matrix Spike Duplicate (MSD) compound was out of control due to matrix interference. The associated LCS and/or LCSD was in control and, therefore, the sample data was reported without further clarification.
4	The MS/MSD RPD was out of control due to matrix interference. The LCS/LCSD RPD was in control and, therefore, the sample data was reported without further clarification.
5	The PDS/PDSD or PES/PESD associated with this batch of samples was out of control due to a matrix interference effect. The associated batch LCS/LCSD was in control and, hence, the associated sample data was reported without further clarification.
6	Surrogate recovery below the acceptance limit.
7	Surrogate recovery above the acceptance limit.
B	Analyte was present in the associated method blank.
BU	Sample analyzed after holding time expired.
E	Concentration exceeds the calibration range.
ET	Sample was extracted past end of recommended max. holding time.
HD	The chromatographic pattern was inconsistent with the profile of the reference fuel standard.
HDH	The sample chromatographic pattern for TPH matches the chromatographic pattern of the specified standard but heavier hydrocarbons were also present (or detected).
HDL	The sample chromatographic pattern for TPH matches the chromatographic pattern of the specified standard but lighter hydrocarbons were also present (or detected).
J	Analyte was detected at a concentration below the reporting limit and above the laboratory method detection limit. Reported value is estimated.
ME	LCS/LCSD Recovery Percentage is within Marginal Exceedance (ME) Control Limit range.
ND	Parameter not detected at the indicated reporting limit.
Q	Spike recovery and RPD control limits do not apply resulting from the parameter concentration in the sample exceeding the spike concentration by a factor of four or greater.
SG	The sample extract was subjected to Silica Gel treatment prior to analysis.
X	% Recovery and/or RPD out-of-range.
Z	Analyte presence was not confirmed by second column or GC/MS analysis.

Solid - Unless otherwise indicated, solid sample data is reported on a wet weight basis, not corrected for % moisture. All QC results are reported on a wet weight basis.

MPN - Most Probable Number




ADVANCED TECHNOLOGY
 LABORATORIES

SUBCONTRACT ORDER

Work Order: 1300025

13-01-0190

SENDING LABORATORY:

Advanced Technology Laboratories
 3275 Walnut Avenue
 Signal Hill, CA 90755
 Phone: 562.989.4045
 Fax: 562.989.6348
 Project Manager: Rachele Arada

RECEIVING LABORATORY:

Calscience Environmental Laboratories, Inc.
 7440 Lincoln Way
 Garden Grove, CA 92841-1427
 Phone : (714) 895-5494
 Fax: (714) 894-7501
 PO#: SC07789- RUSH TAT RA

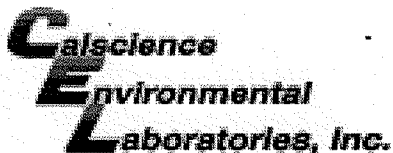
IMPORTANT : Please include Work Order # and PO # in your invoice.

Analysis	Due	Expires	Sampled	Comments
① ATL Lab#: 1300025-02 / MW-33 425.1_5540C_SUB 1-Poly Unpres - 500mL	01/08/13 15:00	01/06/13 10:10	Groundwater 01/04/13 10:10	
② ATL Lab#: 1300025-03 / MW-36 425.1_5540C_SUB 1-Poly Unpres - 500mL	01/08/13 15:00	01/06/13 13:05	Groundwater 01/04/13 13:05	

Return to Contents

Released By <i>CR</i>	Date <i>1/4/13</i>	Received By <i>ABMER MANGATHAN</i>	Date <i>1/4/13 1509</i>
Released By <i>ABMER MANGATHAN</i>	Date <i>1/4/13 1540</i>	Received By <i>Diana L. Co</i>	Date <i>1/4/13 1540</i>

CR 1/4/13



WORK ORDER #: 13-01-0190

SAMPLE RECEIPT FORM

Cooler 1 of 1

CLIENT: ATL

DATE: 01/04/13

TEMPERATURE: Thermometer ID: SC2 (Criteria: 0.0 °C - 6.0 °C, not frozen except sediment/tissue)

Temperature 2.9 °C - 0.2 °C (CF) = 2.7 °C [] Blank [X] Sample

[] Sample(s) outside temperature criteria (PM/APM contacted by: _____).

[] Sample(s) outside temperature criteria but received on ice/chilled on same day of sampling.

[] Received at ambient temperature, placed on ice for transport by Courier.

Ambient Temperature: [] Air [] Filter

Initial: PS

CUSTODY SEALS INTACT:

[] Cooler [] _____ [] No (Not Intact) [X] Not Present [] N/A

Initial: PS

[] Sample [] _____ [] No (Not Intact) [X] Not Present

Initial: WK

SAMPLE CONDITION:

Table with 4 columns: Condition, Yes, No, N/A. Rows include Chain-Of-Custody (COC) document(s) received with samples, COC document(s) received complete, Collection date/time, matrix, and/or # of containers logged in based on sample labels, No analysis requested, Not relinquished, No date/time relinquished, Sampler's name indicated on COC, Sample container label(s) consistent with COC, Sample container(s) intact and good condition, Proper containers and sufficient volume for analyses requested, Analyses received within holding time, pH / Res. Chlorine / Diss. Sulfide / Diss. Oxygen received within 24 hours, Proper preservation noted on COC or sample container, Unpreserved vials received for Volatiles analysis, Volatile analysis container(s) free of headspace, Tedlar bag(s) free of condensation.

CONTAINER TYPE:

Solid: [] 4ozCGJ [] 8ozCGJ [] 16ozCGJ [] Sleeve (____) [] EnCores® [] TerraCores® [] _____
Water: [] VOA [] VOA h [] VOAna2 [] 125AGB [] 125AGBh [] 125AGBp [] 1AGB [] 1AGBna2 [] 1AGBs
[] 500AGB [] 500AGJ [] 500AGJs [] 250AGB [] 250CGB [] 250CGBs [] 1PB [] 1PBna [X] 500PB
[] 250PB [] 250PBn [] 125PB [] 125PBzanna [] 100PJ [] 100PJna2 [] _____ [] _____ [] _____

Air: [] Tedlar® [] Canister Other: [] _____ Trip Blank Lot#: _____ Labeled/Checked by: MS

Container: C: Clear A: Amber P: Plastic G: Glass J: Jar B: Bottle Z: Ziploc/Resealable Bag E: Envelope Reviewed by: [Signature]

Preservative: h: HCL n: HNO3 na2: Na2S2O3 na: NaOH p: H3PO4 s: H2SO4 u: Ultra-pure z: ZnAc2+NaOH f: Filtered Scanned by: [Signature]



CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST FORM

PROJECT NAME		PROJECT No./TASK No.		SAMPLE CONTAINERS		ANALYSIS REQUESTED		ESTIMATED CONCENTRATION RANGE (ppb) FOR VOAs		SPECIAL HANDLING		LABORATORY INFORMATION													
Raytheon Main		532.30										ATL													
PROJECT MANAGER Steve Netto		Phone No. 858-455-6500										Attn: Rachelle Arada													
QA MANAGER		Fax No. 858-455-6533																							
SAMPLER (SIGNATURE) <i>[Signature]</i>		SAMPLER (PRINTED) Anelle Fenber																							
LAB ID	SAMPLE ID	SAMPLE COLLECTION		MATRIX		PRESERVATION		40 ml VOA	1 L Amber	500 ml Poly	8260B VOC's	8270 (M) 1,4-Dioxane	8270 (SIM) 1,4-Dioxane	Surfactants by SM5540C; Biocarbonate only by SM2320	Diss. Metals by EPA 6010; Diss. Na by EPA 7770; Diss. K by EPA 7610	EPA 7610	0-10	10-100	100-1,000	1,000-10,000	>10,000	48 Hr TAT	Lab Filtered	REMARKS	
		Date	Time	Soil	Ground-water	Surface water	Lab H ₂ O																		HCl	HNO_{3}	NaOH	H_{2}SO_{4}	Ice
	TB-010413	01/04/13	0900																						
	MW-33		1010	X	X						X						X					X			Dissolved Metals by 6010 for Ca and Mg
				X	X							X					X					X			
				X	X							X					X					X			
	MW-36		1305	X	X	X					X						X					X			
				X	X												X					X			
				X	X												X					X			
Total number of Containers per analysis:								924								Total No. of Containers: 15 / 21									
Relinquished by: Anelle Fenber		Date 1/4/13		Received by: FPD		Date 1/4/13		INSTRUCTIONS 1. Fill out form completely except for shaded areas (lab use only); sign only after verified for completeness. 2. Complete in ballpoint pen. Draw one line through errors, initial and date correction. 3. Indicate number of sample containers in analysis request space; indicate choice with ✓ or x. 4. Note applicable preservatives, special instructions, and deviations from typical environmental samples. 5. Consult project QA documents for specific instructions.								Shipment Method: <u>Courier</u>									
Company H+A		Time 14:00		Company ATL		Time 14:00										Send Results to: <u>Steve Netto</u>									
Relinquished by: FPD		Date 1/4/13		Received by: C. Aguilera		Date 1/4/13		Sample Receipt: <input type="checkbox"/> No. of containers correct <input type="checkbox"/> received good condition/cold <input type="checkbox"/> custody seals secure <input type="checkbox"/> conforms to COC document				<input checked="" type="checkbox"/> 9171 TOWNE CENTRE DRIVE, SUITE 375 SAN DIEGO, CA 92122 (858) 455-6500 <input type="checkbox"/> 1640 SOUTH STAPLEY DRIVE, SUITE 124 MESA, AZ 85204 (480) 345-0888 <input type="checkbox"/> 1820 EAST RIVER ROAD, SUITE 220 TUCSON, AZ 85718 (520) 881-7300													
Company ATL		Time 1440		Company BV		Time 1440						Send invoice to San Diego, CA Attn: Accounts Payable													

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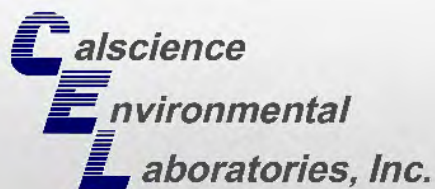
CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST FORM

DATE 01/04/13 PAGE 2 OF 2

PROJECT NAME		PROJECT No./TASK No.			SAMPLE CONTAINERS			ANALYSIS REQUESTED			ESTIMATED CONCENTRATION RANGE (ppb) FOR VOAs	SPECIAL HANDLING	LABORATORY INFORMATION
Raytheon Main		532.30			1 L Poly 500 ml Poly 250 ml Poly			Ions by EPA 300.0; Specific Conductance by EPA 120.1 TDS by SM 2540C; pH by SM4500 H + B Total Hardness by SM2340B; Total Metals Cu/Fe/Mn/Zn By EPA 6010 D Ammonia by SM4500-NH3					ATL Attn: Rachele Arada
PROJECT MANAGER Steve Netto		Phone No. 858-455-6500											
QA MANAGER		Fax No. 858-455-6533											
SAMPLER (SIGNATURE)		SAMPLER (PRINTED)											
		Erin Hunter Anelle Fender											
LAB ID	SAMPLE ID	SAMPLE COLLECTION		MATRIX		PRESERVATION					48 Hr. TAT	REMARKS	
		Date	Time	Soil	Ground water	Surface water	HCl	HNO3	NaOH	H2SO4			Ice
	MW-33	01/04/13	1010	X	X						X		
	↓	S	↓	X	X		X				X		
	MW-36		1305	X	X		X				X		
	↓	↓	↓	X	X		X				X		
	↓	↓	↓	X	X		X				X		
Total number of Containers per analysis:				222				Total No. of Containers				(6/2)	

Relinquished by: <u>Anelle Fender</u> H+A Company	Date <u>1/4/13</u> Time <u>1:00</u>	Received by: <u>FPD</u> Company	Date <u>1/4/13</u> Time <u>1:40</u>	INSTRUCTIONS 1. Fill out form completely except for shaded areas (lab use only); sign only after verified for completeness. 2. Complete in ballpoint pen. Draw one line through errors, initial and date correction. 3. Indicate number of sample containers in analysis request space; indicate choice with ✓ or x. 4. Note applicable preservatives, special instructions, and deviations from typical environmental samples. 5. Consult project QA documents for specific instructions.	Shipment Method: <u>Courier</u>
Relinquished by: <u>FPD</u> Company	Date <u>1/4/13</u> Time <u>1:40</u>	Received by: <u>C. Aguilera</u> Company	Date <u>1/4/13</u> Time <u>1:40</u>		<input checked="" type="checkbox"/> 9171 TOWNE CENTRE DRIVE, SUITE 375 SAN DIEGO, CA 92122 (858) 455-6500 <input type="checkbox"/> 1640 SOUTH STAPLEY DRIVE, SUITE 124 MESA, AZ 85204 (480) 345-0888 <input type="checkbox"/> 1820 EAST RIVER ROAD, SUITE 220 TUCSON, AZ 85718 (520) 881-7300
Sample Receipt: <input type="checkbox"/> No. of containers correct <input type="checkbox"/> custody seals secure				Temp. @ receipt _____ °C <input type="checkbox"/> received good condition/cold <input type="checkbox"/> conforms to COC document	Send invoice to San Diego, CA Attn: Accounts Payable

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Supplemental Report 1

The original report has been revised/corrected.

**CALSCIENCE****WORK ORDER NUMBER: 13-01-0112***The difference is service*

AIR | SOIL | WATER | MARINE CHEMISTRY

Analytical Report For**Client:** Hargis + Associates, Inc.**Client Project Name:** Raytheon Main / 532.30**Attention:** Steve Netto9171 Towne Centre Drive, Suite 375
San Diego, CA 92122-6215

 Approved for release on 01/9/2013 by:
 Virendra Patel
 Project Manager

ResultLink ▶

Email your PM ▶



Calscience Environmental Laboratories, Inc. (Calscience) certifies that the test results provided in this report meet all NELAC requirements for parameters for which accreditation is required or available. Any exceptions to NELAC requirements are noted in the case narrative. The original report of subcontracted analyses, if any, is attached to this report. The results in this report are limited to the sample(s) tested and any reproduction thereof must be made in its entirety. The client or recipient of this report is specifically prohibited from making material changes to said report and, to the extent that such changes are made, Calscience is not responsible, legally or otherwise. The client or recipient agrees to indemnify Calscience for any litigation which may arise.



Contents

Client Project Name: Raytheon Main / 532.30

Work Order Number: 13-01-0112

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Client: Hargis + Associates, Inc.
9171 Towne Centre Drive, Suite 375
San Diego, CA 92122-6215
Attn: Steve Netto

Work Order: 13-01-0112
Project name: Raytheon Main / 532.30
Received: 01/03/13 17:40

DETECTIONS SUMMARY

Client Sample ID

Analyte	Result	Qualifiers	Reporting Limit	Units	Method	Extraction
MW-37 (13-01-0112-2)						
Iron	2.05		0.100	mg/L	EPA 6010B	EPA 3010A Total
Manganese	0.0447		0.00500	mg/L	EPA 6010B	EPA 3010A Total
Zinc	0.0269		0.0100	mg/L	EPA 6010B	EPA 3010A Total
Calcium	66.0		0.100	mg/L	EPA 6010B	EPA 3005A Filt.
Magnesium	15.4		0.100	mg/L	EPA 6010B	EPA 3005A Filt.
Potassium	4.49		0.500	mg/L	EPA 6010B	EPA 3005A Filt.
Sodium	78.9		0.500	mg/L	EPA 6010B	EPA 3005A Filt.
Fluoride	0.27		0.10	mg/L	EPA 300.0	N/A
Chloride	140		2.0	mg/L	EPA 300.0	N/A
Bromide	0.34		0.10	mg/L	EPA 300.0	N/A
Nitrate (as N)	2.9		0.10	mg/L	EPA 300.0	N/A
Sulfate	52		1.0	mg/L	EPA 300.0	N/A
Bicarbonate (as CaCO3)	154		5.00	mg/L	SM 2320B	N/A
Hardness, Total (as CaCO3)	220		2.0	mg/L	SM 2340C	N/A
Specific Conductance	790		1.0	umhos/cm	SM 2510 B	N/A
pH	7.47		0.01	pH units	SM 4500 H+ B	N/A
Solids, Total Dissolved	510		1.00	mg/L	SM 2540 C	N/A

Subcontracted analyses, if any, are not included in this summary.

*MDL is shown.

Analytical Report



Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 01/03/13
 Work Order No: 13-01-0112
 Preparation: EPA 3520C
 Method: EPA 8270C(M) Isotope Dilution

Project: Raytheon Main / 532.30

Page 1 of 1

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-37	13-01-0112-2-H	01/03/13 16:20	Aqueous	GC/MS DDD	01/03/13	01/04/13 17:25	130103L04

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qual</u>	<u>Units</u>
1,4-Dioxane	ND	1.0	1		ug/L

<u>Surrogates:</u>	<u>REC (%)</u>	<u>Control Limits</u>	<u>Qual</u>
Nitrobenzene-d5	85	56-123	

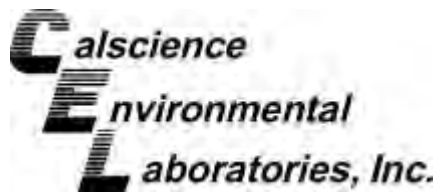
Method Blank	099-09-004-2,160	N/A	Aqueous	GC/MS DDD	01/03/13	01/04/13 16:09	130103L04
---------------------	-------------------------	------------	----------------	------------------	-----------------	-----------------------	------------------

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qual</u>	<u>Units</u>
1,4-Dioxane	ND	1.0	1		ug/L

<u>Surrogates:</u>	<u>REC (%)</u>	<u>Control Limits</u>	<u>Qual</u>
Nitrobenzene-d5	75	56-123	

Return to Contents

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers



Analytical Report



Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 01/03/13
 Work Order No: 13-01-0112
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Raytheon Main / 532.30

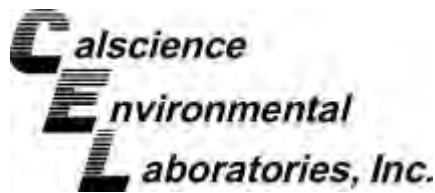
Page 1 of 3

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
TB-010313A	13-01-0112-1-A	01/03/13 09:00	Aqueous	GC/MS CC	01/03/13	01/03/13 20:01	130103L01

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Acetone	ND	20	1		1,3-Dichloropropane	ND	1.0	1	
Benzene	ND	0.50	1		2,2-Dichloropropane	ND	1.0	1	
Bromobenzene	ND	1.0	1		1,1-Dichloropropene	ND	1.0	1	
Bromochloromethane	ND	1.0	1		c-1,3-Dichloropropene	ND	0.50	1	
Bromodichloromethane	ND	1.0	1		t-1,3-Dichloropropene	ND	0.50	1	
Bromoform	ND	1.0	1		Ethylbenzene	ND	1.0	1	
Bromomethane	ND	10	1		2-Hexanone	ND	10	1	
2-Butanone	ND	10	1		Isopropylbenzene	ND	1.0	1	
n-Butylbenzene	ND	1.0	1		p-Isopropyltoluene	ND	1.0	1	
sec-Butylbenzene	ND	1.0	1		Methylene Chloride	ND	10	1	
tert-Butylbenzene	ND	1.0	1		4-Methyl-2-Pentanone	ND	10	1	
Carbon Disulfide	ND	10	1		Naphthalene	ND	10	1	
Carbon Tetrachloride	ND	0.50	1		n-Propylbenzene	ND	1.0	1	
Chlorobenzene	ND	1.0	1		Styrene	ND	1.0	1	
Chloroethane	ND	5.0	1		1,1,1,2-Tetrachloroethane	ND	1.0	1	
Chloroform	ND	1.0	1		1,1,2,2-Tetrachloroethane	ND	1.0	1	
Chloromethane	ND	10	1		Tetrachloroethene	ND	1.0	1	
2-Chlorotoluene	ND	1.0	1		Toluene	ND	1.0	1	
4-Chlorotoluene	ND	1.0	1		1,2,3-Trichlorobenzene	ND	1.0	1	
Dibromochloromethane	ND	1.0	1		1,2,4-Trichlorobenzene	ND	1.0	1	
1,2-Dibromo-3-Chloropropane	ND	5.0	1		1,1,1-Trichloroethane	ND	1.0	1	
1,2-Dibromoethane	ND	1.0	1		1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	10	1	
Dibromomethane	ND	1.0	1		1,1,2-Trichloroethane	ND	1.0	1	
1,2-Dichlorobenzene	ND	1.0	1		Trichloroethene	ND	1.0	1	
1,3-Dichlorobenzene	ND	1.0	1		Trichlorofluoromethane	ND	10	1	
1,4-Dichlorobenzene	ND	1.0	1		1,2,3-Trichloropropane	ND	5.0	1	
Dichlorodifluoromethane	ND	1.0	1		1,2,4-Trimethylbenzene	ND	1.0	1	
1,1-Dichloroethane	ND	1.0	1		1,3,5-Trimethylbenzene	ND	1.0	1	
1,2-Dichloroethane	ND	0.50	1		Vinyl Acetate	ND	10	1	
1,1-Dichloroethene	ND	1.0	1		Vinyl Chloride	ND	0.50	1	
c-1,2-Dichloroethene	ND	1.0	1		p/m-Xylene	ND	1.0	1	
t-1,2-Dichloroethene	ND	1.0	1		o-Xylene	ND	1.0	1	
1,2-Dichloropropane	ND	1.0	1						
Surrogates:	REC (%)	Control Limits	Qual		Surrogates:	REC (%)	Control Limits	Qual	
1,4-Bromofluorobenzene	99	80-120			Dibromofluoromethane	100	80-126		
1,2-Dichloroethane-d4	98	80-134			Toluene-d8	100	80-120		

Return to Contents

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers



Analytical Report



Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 01/03/13
 Work Order No: 13-01-0112
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Raytheon Main / 532.30

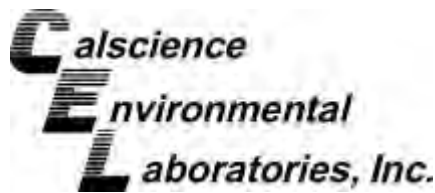
Page 2 of 3

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-37	13-01-0112-2-A	01/03/13 16:20	Aqueous	GC/MS CC	01/03/13	01/03/13 20:29	130103L01

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Acetone	ND	20	1		1,3-Dichloropropane	ND	1.0	1	
Benzene	ND	0.50	1		2,2-Dichloropropane	ND	1.0	1	
Bromobenzene	ND	1.0	1		1,1-Dichloropropene	ND	1.0	1	
Bromochloromethane	ND	1.0	1		c-1,3-Dichloropropene	ND	0.50	1	
Bromodichloromethane	ND	1.0	1		t-1,3-Dichloropropene	ND	0.50	1	
Bromoform	ND	1.0	1		Ethylbenzene	ND	1.0	1	
Bromomethane	ND	10	1		2-Hexanone	ND	10	1	
2-Butanone	ND	10	1		Isopropylbenzene	ND	1.0	1	
n-Butylbenzene	ND	1.0	1		p-Isopropyltoluene	ND	1.0	1	
sec-Butylbenzene	ND	1.0	1		Methylene Chloride	ND	10	1	
tert-Butylbenzene	ND	1.0	1		4-Methyl-2-Pentanone	ND	10	1	
Carbon Disulfide	ND	10	1		Naphthalene	ND	10	1	
Carbon Tetrachloride	ND	0.50	1		n-Propylbenzene	ND	1.0	1	
Chlorobenzene	ND	1.0	1		Styrene	ND	1.0	1	
Chloroethane	ND	5.0	1		1,1,1,2-Tetrachloroethane	ND	1.0	1	
Chloroform	ND	1.0	1		1,1,2,2-Tetrachloroethane	ND	1.0	1	
Chloromethane	ND	10	1		Tetrachloroethene	ND	1.0	1	
2-Chlorotoluene	ND	1.0	1		Toluene	ND	1.0	1	
4-Chlorotoluene	ND	1.0	1		1,2,3-Trichlorobenzene	ND	1.0	1	
Dibromochloromethane	ND	1.0	1		1,2,4-Trichlorobenzene	ND	1.0	1	
1,2-Dibromo-3-Chloropropane	ND	5.0	1		1,1,1-Trichloroethane	ND	1.0	1	
1,2-Dibromoethane	ND	1.0	1		1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	10	1	
Dibromomethane	ND	1.0	1		1,1,2-Trichloroethane	ND	1.0	1	
1,2-Dichlorobenzene	ND	1.0	1		Trichloroethene	ND	1.0	1	
1,3-Dichlorobenzene	ND	1.0	1		Trichlorofluoromethane	ND	10	1	
1,4-Dichlorobenzene	ND	1.0	1		1,2,3-Trichloropropane	ND	5.0	1	
Dichlorodifluoromethane	ND	1.0	1		1,2,4-Trimethylbenzene	ND	1.0	1	
1,1-Dichloroethane	ND	1.0	1		1,3,5-Trimethylbenzene	ND	1.0	1	
1,2-Dichloroethane	ND	0.50	1		Vinyl Acetate	ND	10	1	
1,1-Dichloroethene	ND	1.0	1		Vinyl Chloride	ND	0.50	1	
c-1,2-Dichloroethene	ND	1.0	1		p/m-Xylene	ND	1.0	1	
t-1,2-Dichloroethene	ND	1.0	1		o-Xylene	ND	1.0	1	
1,2-Dichloropropane	ND	1.0	1						
Surrogates:	REC (%)	Control Limits	Qual		Surrogates:	REC (%)	Control Limits	Qual	
1,4-Bromofluorobenzene	99	80-120			Dibromofluoromethane	100	80-126		
1,2-Dichloroethane-d4	101	80-134			Toluene-d8	98	80-120		

Return to Contents

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers



Analytical Report



Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 01/03/13
 Work Order No: 13-01-0112
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Raytheon Main / 532.30

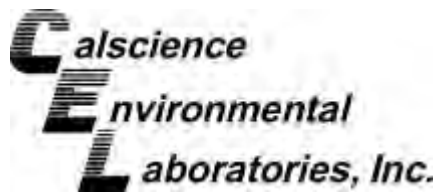
Page 3 of 3

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-14-001-9,765	N/A	Aqueous	GC/MS CC	01/03/13	01/03/13 15:53	130103L01

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Acetone	ND	20	1		1,3-Dichloropropane	ND	1.0	1	
Benzene	ND	0.50	1		2,2-Dichloropropane	ND	1.0	1	
Bromobenzene	ND	1.0	1		1,1-Dichloropropene	ND	1.0	1	
Bromochloromethane	ND	1.0	1		c-1,3-Dichloropropene	ND	0.50	1	
Bromodichloromethane	ND	1.0	1		t-1,3-Dichloropropene	ND	0.50	1	
Bromoform	ND	1.0	1		Ethylbenzene	ND	1.0	1	
Bromomethane	ND	10	1		2-Hexanone	ND	10	1	
2-Butanone	ND	10	1		Isopropylbenzene	ND	1.0	1	
n-Butylbenzene	ND	1.0	1		p-Isopropyltoluene	ND	1.0	1	
sec-Butylbenzene	ND	1.0	1		Methylene Chloride	ND	10	1	
tert-Butylbenzene	ND	1.0	1		4-Methyl-2-Pentanone	ND	10	1	
Carbon Disulfide	ND	10	1		Naphthalene	ND	10	1	
Carbon Tetrachloride	ND	0.50	1		n-Propylbenzene	ND	1.0	1	
Chlorobenzene	ND	1.0	1		Styrene	ND	1.0	1	
Chloroethane	ND	5.0	1		1,1,1,2-Tetrachloroethane	ND	1.0	1	
Chloroform	ND	1.0	1		1,1,2,2-Tetrachloroethane	ND	1.0	1	
Chloromethane	ND	10	1		Tetrachloroethene	ND	1.0	1	
2-Chlorotoluene	ND	1.0	1		Toluene	ND	1.0	1	
4-Chlorotoluene	ND	1.0	1		1,2,3-Trichlorobenzene	ND	1.0	1	
Dibromochloromethane	ND	1.0	1		1,2,4-Trichlorobenzene	ND	1.0	1	
1,2-Dibromo-3-Chloropropane	ND	5.0	1		1,1,1-Trichloroethane	ND	1.0	1	
1,2-Dibromoethane	ND	1.0	1		1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	10	1	
Dibromomethane	ND	1.0	1		1,1,2-Trichloroethane	ND	1.0	1	
1,2-Dichlorobenzene	ND	1.0	1		Trichloroethene	ND	1.0	1	
1,3-Dichlorobenzene	ND	1.0	1		Trichlorofluoromethane	ND	10	1	
1,4-Dichlorobenzene	ND	1.0	1		1,2,3-Trichloropropane	ND	5.0	1	
Dichlorodifluoromethane	ND	1.0	1		1,2,4-Trimethylbenzene	ND	1.0	1	
1,1-Dichloroethane	ND	1.0	1		1,3,5-Trimethylbenzene	ND	1.0	1	
1,2-Dichloroethane	ND	0.50	1		Vinyl Acetate	ND	10	1	
1,1-Dichloroethene	ND	1.0	1		Vinyl Chloride	ND	0.50	1	
c-1,2-Dichloroethene	ND	1.0	1		p/m-Xylene	ND	1.0	1	
t-1,2-Dichloroethene	ND	1.0	1		o-Xylene	ND	1.0	1	
1,2-Dichloropropane	ND	1.0	1						
Surrogates:	REC (%)	Control Limits	DF	Qual	Surrogates:	REC (%)	Control Limits	DF	Qual
1,4-Bromofluorobenzene	98	80-120			Dibromofluoromethane	100	80-126		
1,2-Dichloroethane-d4	100	80-134			Toluene-d8	101	80-120		

Return to Contents

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers



Analytical Report



Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 01/03/13
 Work Order No: 13-01-0112
 Preparation: EPA 3010A Total
 Method: EPA 6010B
 Units: mg/L

Project: Raytheon Main / 532.30

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Client Sample Number	Lab Sample Number	Date /Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-37	13-01-0112-2-F	01/03/13 16:20	Aqueous	ICP 7300	01/03/13	01/04/13 12:10	130103LA1

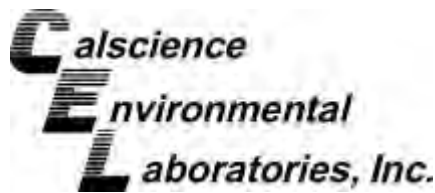
Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Copper	ND	0.0100	1		Manganese	0.0447	0.00500	1	
Iron	2.05	0.100	1		Zinc	0.0269	0.0100	1	

Method Blank	097-01-003-13,130	N/A	Aqueous	ICP 7300	01/03/13	01/03/13 16:49	130103LA1
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Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Copper	ND	0.0100	1		Manganese	ND	0.00500	1	
Iron	ND	0.100	1		Zinc	ND	0.0100	1	

Return to Contents

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers



Analytical Report



Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 01/03/13
 Work Order No: 13-01-0112
 Preparation: EPA 3005A Filt.
 Method: EPA 6010B
 Units: mg/L

Project: Raytheon Main / 532.30

Page 1 of 1

Client Sample Number	Lab Sample Number	Date /Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-37	13-01-0112-2-G	01/03/13 16:20	Aqueous	ICP 7300	01/03/13	01/04/13 11:54	130103L1F

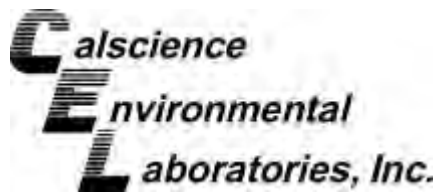
Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Calcium	66.0	0.100	1		Potassium	4.49	0.500	1	
Magnesium	15.4	0.100	1		Sodium	78.9	0.500	1	

Method Blank	099-15-683-193	N/A	Aqueous	ICP 7300	01/03/13	01/03/13 16:51	130103L1F
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Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Calcium	ND	0.100	1		Potassium	ND	0.500	1	
Magnesium	ND	0.100	1		Sodium	ND	0.500	1	

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RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers



Analytical Report



Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 01/03/13
 Work Order No: 13-01-0112

Project: Raytheon Main / 532.30

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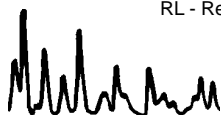
Client Sample Number	Lab Sample Number	Date Collected	Matrix
MW-37	13-01-0112-2	01/03/13	Aqueous

Parameter	Results	RL	DF	Qual	Units	Date Prepared	Date Analyzed	Method
Fluoride	0.27	0.10	1		mg/L	N/A	01/04/13	EPA 300.0
Chloride	140	2.0	2		mg/L	N/A	01/04/13	EPA 300.0
Nitrite (as N)	ND	0.10	1		mg/L	N/A	01/04/13	EPA 300.0
Bromide	0.34	0.10	1		mg/L	N/A	01/04/13	EPA 300.0
Nitrate (as N)	2.9	0.10	1		mg/L	N/A	01/04/13	EPA 300.0
o-Phosphate (as P)	ND	0.10	1		mg/L	N/A	01/04/13	EPA 300.0
Sulfate	52	1.0	1		mg/L	N/A	01/04/13	EPA 300.0
Bicarbonate (as CaCO3)	154	5.00	1		mg/L	N/A	01/08/13	SM 2320B
Hardness, Total (as CaCO3)	220	2.0	1		mg/L	N/A	01/04/13	SM 2340C
Specific Conductance	790	1.0	1		umhos/cm	N/A	01/03/13	SM 2510 B
Solids, Total Dissolved	510	1.00	1		mg/L	01/04/13	01/04/13	SM 2540 C
pH	7.47	0.01	1		pH units	N/A	01/03/13	SM 4500 H+ B
Ammonia (as N)	ND	0.10	1		mg/L	01/04/13	01/04/13	SM 4500-NH3 B/C
MBAS	ND	0.10	1		mg/L	01/04/13	01/04/13	SM 5540C

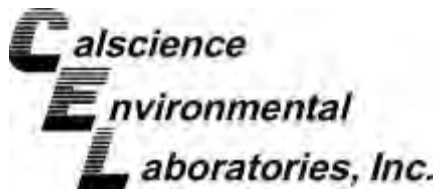
Method Blank					N/A			Aqueous
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Parameter	Results	RL	DF	Qual	Units	Date Prepared	Date Analyzed	Method
Fluoride	ND	0.10	1		mg/L	N/A	01/04/13	EPA 300.0
Chloride	ND	1.0	1		mg/L	N/A	01/04/13	EPA 300.0
Nitrite (as N)	ND	0.10	1		mg/L	N/A	01/04/13	EPA 300.0
Bromide	ND	0.10	1		mg/L	N/A	01/04/13	EPA 300.0
Nitrate (as N)	ND	0.10	1		mg/L	N/A	01/04/13	EPA 300.0
o-Phosphate (as P)	ND	0.10	1		mg/L	N/A	01/04/13	EPA 300.0
Sulfate	ND	1.0	1		mg/L	N/A	01/04/13	EPA 300.0
Fluoride	ND	0.10	1		mg/L	N/A	01/04/13	EPA 300.0
Chloride	ND	1.0	1		mg/L	N/A	01/04/13	EPA 300.0
Nitrite (as N)	ND	0.10	1		mg/L	N/A	01/04/13	EPA 300.0
Bromide	ND	0.10	1		mg/L	N/A	01/04/13	EPA 300.0
Nitrate (as N)	ND	0.10	1		mg/L	N/A	01/04/13	EPA 300.0
o-Phosphate (as P)	ND	0.10	1		mg/L	N/A	01/04/13	EPA 300.0
Sulfate	ND	1.0	1		mg/L	N/A	01/04/13	EPA 300.0
Bicarbonate (as CaCO3)	ND	1.0	1		mg/L	N/A	01/08/13	SM 2320B
Hardness, Total (as CaCO3)	ND	2.0	1		mg/L	N/A	01/04/13	SM 2340C
Solids, Total Dissolved	ND	1.0	1		mg/L	01/04/13	01/04/13	SM 2540 C
Ammonia (as N)	ND	0.10	1		mg/L	01/04/13	01/04/13	SM 4500-NH3 B/C
MBAS	ND	0.10	1		mg/L	01/04/13	01/04/13	SM 5540C

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers



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Quality Control - Spike/Spike Duplicate



Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 01/03/13
 Work Order No: 13-01-0112
 Preparation: EPA 3010A Total
 Method: EPA 6010B

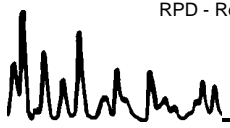
Project Raytheon Main / 532.30

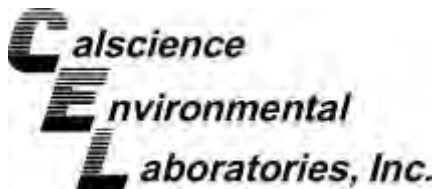
Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
13-01-0044-1	Aqueous	ICP 7300	01/03/13	01/03/13	130103SA1

Parameter	SAMPLE CONC	SPIKE ADDED	MS CONC	MS %REC	MSD CONC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Copper	ND	0.5000	0.4735	95	0.4714	94	78-126	0	0-7	
Calcium	37.29	0.5000	37.53	4X	37.10	4X	77-113	4X	0-11	Q
Iron	0.9872	0.5000	1.498	102	1.493	101	65-149	0	0-21	
Magnesium	48.26	0.5000	49.41	4X	48.98	4X	56-140	4X	0-11	Q
Manganese	3.950	0.5000	4.499	4X	4.458	4X	86-116	4X	0-7	Q
Potassium	0.6657	5.000	6.181	110	6.272	112	83-131	1	0-7	
Sodium	29.65	5.000	34.83	4X	34.74	4X	73-127	4X	0-9	Q
Zinc	ND	0.5000	0.5474	109	0.5435	109	89-131	1	0-8	

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RPD - Relative Percent Difference , CL - Control Limit





Quality Control - PDS / PSDS



Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 01/03/13
 Work Order No: 13-01-0112
 Preparation: EPA 3010A Total
 Method: EPA 6010B

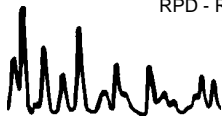
Project: Raytheon Main / 532.30

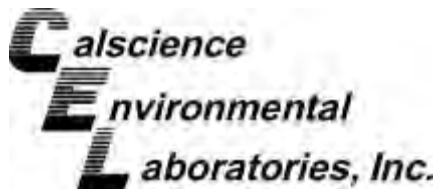
Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	PDS / PSDS Batch Number
13-01-0044-1	Aqueous	ICP 7300	01/03/13	01/03/13	130103SA1

Parameter	SAMPLE CONC	SPIKE ADDED	PDS CONC	PDS %REC	PSDS CONC	PSDS %REC	%REC CL	RPD	RPD CL	Qualifiers
Copper	ND	0.5000	0.4486	90	0.4614	92	75-125	3	0-7	
Calcium	37.29	0.5000	37.13	4X	37.61	4X	75-125	4X	0-11	Q
Iron	0.9872	0.5000	1.473	97	1.481	99	75-125	1	0-21	
Magnesium	48.26	0.5000	49.42	4X	48.97	4X	75-125	4X	0-11	Q
Manganese	3.950	0.5000	4.473	4X	4.469	4X	75-125	4X	0-7	Q
Potassium	0.6657	5.000	5.566	98	6.151	110	75-125	10	0-7	
Sodium	29.65	5.000	33.95	4X	34.92	4X	75-125	4X	0-9	Q
Zinc	ND	0.5000	0.5188	104	0.5371	107	75-125	3	0-8	

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RPD - Relative Percent Difference , CL - Control Limit





Quality Control - Spike/Spike Duplicate



Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 01/03/13
 Work Order No: 13-01-0112
 Preparation: EPA 3010A Total
 Method: EPA 6010B

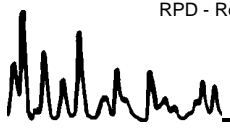
Project Raytheon Main / 532.30

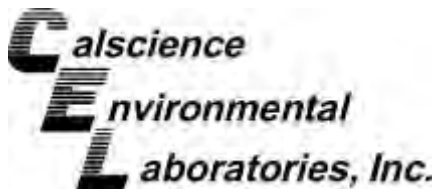
Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
13-01-0044-1	Aqueous	ICP 7300	01/03/13	01/03/13	130103SA1

Parameter	SAMPLE CONC	SPIKE ADDED	MS CONC	MS %REC	MSD CONC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Copper	ND	0.5000	0.4735	95	0.4714	94	78-126	0	0-7	
Calcium	37.29	0.5000	37.53	4X	37.10	4X	77-113	4X	0-11	Q
Iron	0.9872	0.5000	1.498	102	1.493	101	65-149	0	0-21	
Magnesium	48.26	0.5000	49.41	4X	48.98	4X	56-140	4X	0-11	Q
Manganese	3.950	0.5000	4.499	4X	4.458	4X	86-116	4X	0-7	Q
Potassium	0.6657	5.000	6.181	110	6.272	112	83-131	1	0-7	
Sodium	29.65	5.000	34.83	4X	34.74	4X	73-127	4X	0-9	Q
Zinc	ND	0.5000	0.5474	109	0.5435	109	89-131	1	0-8	

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RPD - Relative Percent Difference , CL - Control Limit





Quality Control - PDS / PSDS



Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received 01/03/13
 Work Order No: 13-01-0112
 Preparation: EPA 3010A Total
 Method: EPA 6010B

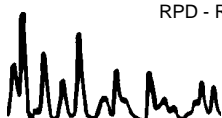
Project: Raytheon Main / 532.30

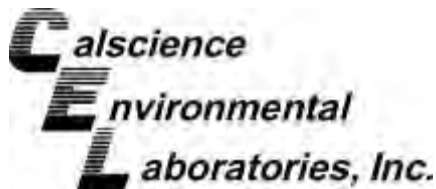
Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	PDS / PSDS Batch Number
13-01-0044-1	Aqueous	ICP 7300	01/03/13	01/03/13	130103SA1

Parameter	SAMPLE CONC	SPIKE ADDED	PDS CONC	PDS %REC	PSDS CONC	PSDS %REC	%REC CL	RPD	RPD CL	Qualifiers
Copper	ND	0.5000	0.4486	90	0.4614	92	75-125	3	0-7	
Calcium	37.29	0.5000	37.13	4X	37.61	4X	75-125	4X	0-11	Q
Iron	0.9872	0.5000	1.473	97	1.481	99	75-125	1	0-21	
Magnesium	48.26	0.5000	49.42	4X	48.97	4X	75-125	4X	0-11	Q
Manganese	3.950	0.5000	4.473	4X	4.469	4X	75-125	4X	0-7	Q
Potassium	0.6657	5.000	5.566	98	6.151	110	75-125	10	0-7	
Sodium	29.65	5.000	33.95	4X	34.92	4X	75-125	4X	0-9	Q
Zinc	ND	0.5000	0.5188	104	0.5371	107	75-125	3	0-8	

Return to Contents

RPD - Relative Percent Difference , CL - Control Limit





Quality Control - Spike/Spike Duplicate



Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 01/03/13
 Work Order No: 13-01-0112
 Preparation: N/A
 Method: EPA 300.0

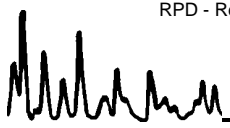
Project Raytheon Main / 532.30

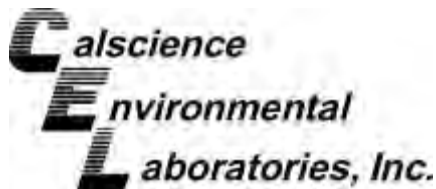
Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
13-01-0098-1	Aqueous	IC 7	N/A	01/04/13	130103S03

Parameter	SAMPLE CONC	SPIKE ADDED	MS CONC	MS %REC	MSD CONC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Fluoride	0.11	250	250	100	250	101	80-120	1	0-20	
Chloride	40	5000	5100	101	5100	102	80-120	0	0-20	
Nitrite (as N)	1.2	250	260	103	260	103	80-120	0	0-20	
Bromide	0.20	500	500	100	510	103	80-120	2	0-20	
Nitrate (as N)	16	500	510	99	510	100	80-120	1	0-20	
o-Phosphate (as P)	0.25	250	260	104	250	100	80-120	4	0-20	
Sulfate	270	5000	5200	99	5200	99	80-120	0	0-20	

Return to Contents

RPD - Relative Percent Difference , CL - Control Limit





Quality Control - Spike/Spike Duplicate



Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 01/03/13
 Work Order No: 13-01-0112
 Preparation: N/A
 Method: SM 5540C

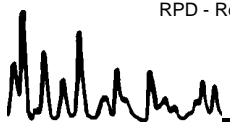
Project Raytheon Main / 532.30

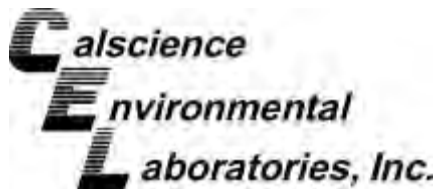
Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
13-01-0160-1	Aqueous	UV 2	01/04/13	01/04/13	D0104SURS1

Parameter	SAMPLE CONC	SPIKE ADDED	MS CONC	MS %REC	MSD CONC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
MBAS	ND	1.0	0.93	93	0.97	97	70-130	4	0-25	

Return to Contents

RPD - Relative Percent Difference , CL - Control Limit





Quality Control - Spike/Spike Duplicate



Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 01/03/13
 Work Order No: 13-01-0112
 Preparation: EPA 5030C
 Method: EPA 8260B

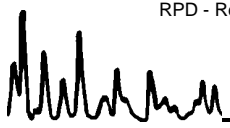
Project Raytheon Main / 532.30

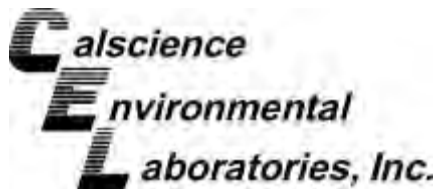
Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
MW-37	Aqueous	GC/MS CC	01/03/13	01/03/13	130103S01

Parameter	SAMPLE CONC	SPIKE ADDED	MS CONC	MS %REC	MSD CONC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Benzene	ND	50.00	43.88	88	46.52	93	78-120	6	0-20	
Carbon Tetrachloride	ND	50.00	39.67	79	43.46	87	67-139	9	0-20	
Chlorobenzene	ND	50.00	43.91	88	46.82	94	80-120	6	0-20	
1,2-Dibromoethane	ND	50.00	42.42	85	44.84	90	80-123	6	0-20	
1,2-Dichlorobenzene	ND	50.00	45.06	90	47.96	96	76-120	6	0-20	
1,2-Dichloroethane	ND	50.00	46.01	92	48.78	98	76-130	6	0-20	
1,1-Dichloroethene	ND	50.00	33.85	68	36.12	72	70-130	7	0-27	3
Ethylbenzene	ND	50.00	44.88	90	47.41	95	73-127	5	0-20	
Toluene	ND	50.00	44.94	90	47.53	95	72-126	6	0-20	
Trichloroethene	ND	50.00	45.41	91	48.03	96	74-122	6	0-20	
Vinyl Chloride	ND	50.00	36.82	74	39.53	79	65-131	7	0-24	
p/m-Xylene	ND	100.0	88.81	89	93.92	94	70-130	6	0-30	
o-Xylene	ND	50.00	45.70	91	48.64	97	70-130	6	0-30	
Methyl-t-Butyl Ether (MTBE)	ND	50.00	41.36	83	44.46	89	69-123	7	0-20	

Return to Contents

RPD - Relative Percent Difference , CL - Control Limit





Quality Control - Duplicate



Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: N/A
 Work Order No: 13-01-0112

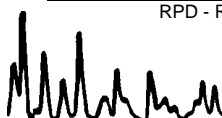
Project: Raytheon Main / 532.30

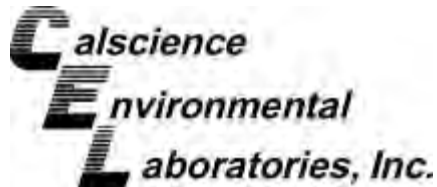
Matrix: Aqueous or Solid

Parameter	Method	QC Sample ID	Date Analyzed	Sample Conc	DUP Conc	RPD	RPD CL	Qualifiers
Specific Conductance	SM 2510 B	MW-37	01/03/13	790	790	1	0-25	
Alkalinity, Total (as CaCO3)	SM 2320B	13-01-0042-1	01/08/13	268	274	2	0-25	
Bicarbonate (as CaCO3)	SM 2320B	13-01-0042-1	01/08/13	268	274	2	0-25	
Carbonate (as CaCO3)	SM 2320B	13-01-0042-1	01/08/13	ND	ND	NA	0-25	
Hydroxide (as CaCO3)	SM 2320B	13-01-0042-1	01/08/13	ND	ND	NA	0-25	
pH	SM 4500 H+ B	13-01-0044-1	01/03/13	6.64	6.66	0	0-25	
Hardness, Total (as CaCO3)	SM 2340C	13-01-0036-1	01/04/13	570	570	0	0-25	
Solids, Total Dissolved	SM 2540 C	13-01-0042-2	01/04/13	470	460	2	0-20	

Return to Contents

RPD - Relative Percent Difference , CL - Control Limit





Quality Control - LCS/LCS Duplicate



Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: N/A
 Work Order No: 13-01-0112
 Preparation: EPA 3010A Total
 Method: EPA 6010B

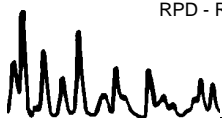
Project: Raytheon Main / 532.30

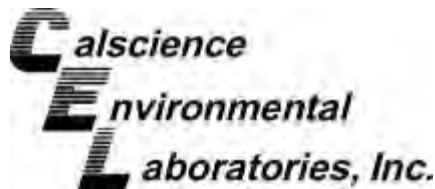
Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
097-01-003-13,130	Aqueous	ICP 7300	01/03/13	01/03/13	130103LA1

Parameter	SPIKE ADDED	LCS CONC	LCS %REC	LCSD CONC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Copper	0.5000	0.4973	99	0.4995	100	80-120	0	0-20	
Iron	0.5000	0.5272	105	0.5265	105	80-120	0	0-20	
Manganese	0.5000	0.5091	102	0.5076	102	80-120	0	0-20	
Zinc	0.5000	0.5698	114	0.5692	114	80-120	0	0-20	

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RPD - Relative Percent Difference , CL - Control Limit





Quality Control - LCS/LCS Duplicate



Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: N/A
 Work Order No: 13-01-0112
 Preparation: EPA 3005A Filt.
 Method: EPA 6010B

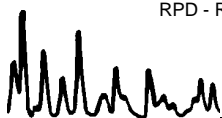
Project: Raytheon Main / 532.30

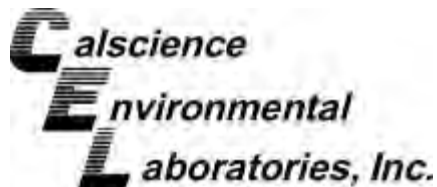
Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-15-683-193	Aqueous	ICP 7300	01/03/13	01/07/13	130103L1F

Parameter	SPIKE ADDED	LCS CONC	LCS %REC	LCSD CONC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Calcium	0.5000	0.5700	114	0.5636	113	80-120	1	0-20	
Magnesium	0.5000	0.5318	106	0.5284	106	80-120	1	0-20	
Potassium	5.000	5.171	103	5.168	103	80-120	0	0-20	
Sodium	5.000	5.329	107	5.352	107	80-120	0	0-20	

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RPD - Relative Percent Difference , CL - Control Limit





Quality Control - LCS/LCS Duplicate



Hargis + Associates, Inc.
9171 Towne Centre Drive, Suite 375
San Diego, CA 92122-6215

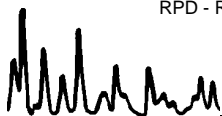
Date Received: N/A
Work Order No: 13-01-0112
Preparation: N/A
Method: EPA 300.0

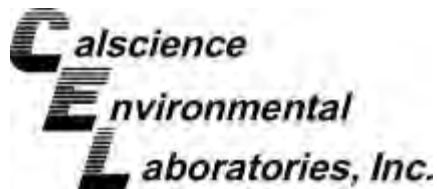
Project: Raytheon Main / 532.30

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-12-906-3,285	Aqueous	IC 7	N/A	01/04/13	130104L01

Parameter	SPIKE ADDED	LCS CONC	LCS %REC	LCSD CONC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Fluoride	2.5	2.4	95	2.3	92	90-110	2	0-15	
Chloride	50	51	102	51	103	90-110	0	0-15	
Nitrite (as N)	2.5	2.7	106	2.7	107	90-110	0	0-15	
Bromide	5.0	5.1	102	5.0	101	90-110	1	0-15	
Nitrate (as N)	5.0	5.0	100	5.1	101	90-110	2	0-15	
o-Phosphate (as P)	2.5	2.5	100	2.7	107	90-110	6	0-15	
Sulfate	50	50	100	50	100	90-110	1	0-15	

RPD - Relative Percent Difference , CL - Control Limit





Quality Control - LCS/LCS Duplicate



Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: N/A
 Work Order No: 13-01-0112
 Preparation: N/A
 Method: EPA 300.0

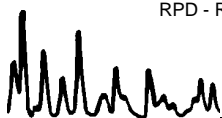
Project: Raytheon Main / 532.30

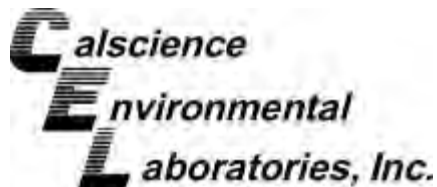
Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-12-906-3,284	Aqueous	IC 7	N/A	01/04/13	130103L03

Parameter	SPIKE ADDED	LCS CONC	LCS %REC	LCSD CONC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Fluoride	2.5	2.5	99	2.6	105	90-110	6	0-15	
Chloride	50	51	102	51	102	90-110	1	0-15	
Nitrite (as N)	2.5	2.6	104	2.6	102	90-110	1	0-15	
Bromide	5.0	5.1	101	5.1	102	90-110	1	0-15	
Nitrate (as N)	5.0	5.0	101	5.0	100	90-110	1	0-15	
o-Phosphate (as P)	2.5	2.7	109	2.7	110	90-110	0	0-15	
Sulfate	50	50	100	50	100	90-110	0	0-15	

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RPD - Relative Percent Difference , CL - Control Limit





Quality Control - LCS/LCS Duplicate



Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: N/A
 Work Order No: 13-01-0112
 Preparation: N/A
 Method: SM 5540C

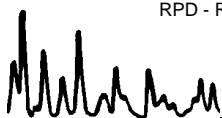
Project: Raytheon Main / 532.30

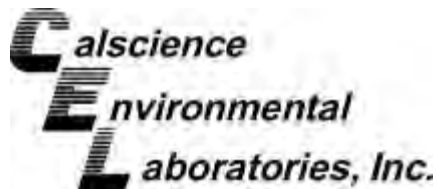
Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-05-093-2,449	Aqueous	UV 2	01/04/13	01/04/13	D0104SURL1

Parameter	<u>SPIKE ADDED</u>	<u>LCS CONC</u>	<u>LCS %REC</u>	<u>LCSD CONC</u>	<u>LCSD %REC</u>	<u>%REC CL</u>	<u>RPD</u>	<u>RPD CL</u>	<u>Qualifiers</u>
MBAS	1.0	0.95	95	0.93	93	80-120	2	0-20	

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RPD - Relative Percent Difference , CL - Control Limit





Quality Control - LCS/LCS Duplicate



Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: N/A
 Work Order No: 13-01-0112
 Preparation: N/A
 Method: SM 4500-NH3 B/C

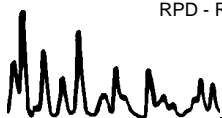
Project: Raytheon Main / 532.30

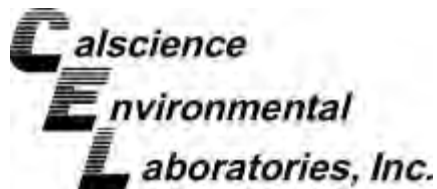
Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-12-814-1,551	Aqueous	BUR05	01/04/13	01/04/13	D0104NHEL2

Parameter	<u>SPIKE ADDED</u>	<u>LCS CONC</u>	<u>LCS %REC</u>	<u>LCSD CONC</u>	<u>LCSD %REC</u>	<u>%REC CL</u>	<u>RPD</u>	<u>RPD CL</u>	<u>Qualifiers</u>
Ammonia (as N)	5.0	4.7	94	4.8	95	80-120	1	0-20	

Return to Contents

RPD - Relative Percent Difference , CL - Control Limit





Quality Control - LCS/LCS Duplicate



Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: N/A
 Work Order No: 13-01-0112
 Preparation: N/A
 Method: SM 2540 C

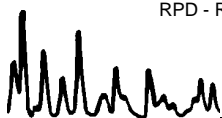
Project: Raytheon Main / 532.30

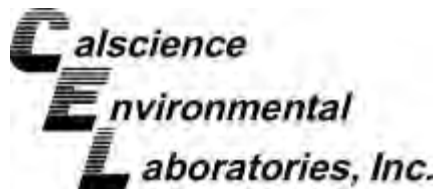
Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-12-180-3,507	Aqueous	N/A	01/04/13	01/04/13	D0104TDSL1

Parameter	<u>SPIKE ADDED</u>	<u>LCS CONC</u>	<u>LCS %REC</u>	<u>LCSD CONC</u>	<u>LCSD %REC</u>	<u>%REC CL</u>	<u>RPD</u>	<u>RPD CL</u>	<u>Qualifiers</u>
Solids, Total Dissolved	100	105	105	110	110	80-120	5	0-20	

Return to Contents

RPD - Relative Percent Difference , CL - Control Limit





Quality Control - LCS/LCS Duplicate



Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: N/A
 Work Order No: 13-01-0112
 Preparation: EPA 3520C
 Method: EPA 8270C(M) Isotope Dilution

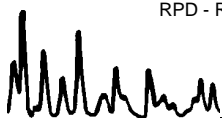
Project: Raytheon Main / 532.30

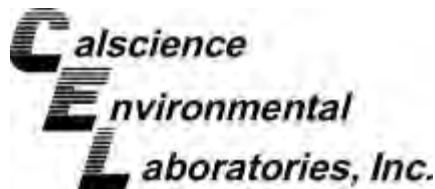
Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-09-004-2,160	Aqueous	GC/MS DDD	01/03/13	01/04/13	130103L04

Parameter	<u>SPIKE ADDED</u>	<u>LCS CONC</u>	<u>LCS %REC</u>	<u>LCSD CONC</u>	<u>LCSD %REC</u>	<u>%REC CL</u>	<u>RPD</u>	<u>RPD CL</u>	<u>Qualifiers</u>
1,4-Dioxane	200.0	227.7	114	223.9	112	50-130	2	0-20	

Return to Contents

RPD - Relative Percent Difference , CL - Control Limit





Quality Control - LCS/LCS Duplicate



Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: N/A
 Work Order No: 13-01-0112
 Preparation: EPA 5030C
 Method: EPA 8260B

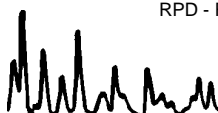
Project: Raytheon Main / 532.30

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number					
099-14-001-9,765	Aqueous	GC/MS CC	01/03/13	01/03/13	130103L01					
Parameter	<u>SPIKE ADDED</u>	<u>LCS CONC</u>	<u>LCS %REC</u>	<u>LCSD CONC</u>	<u>LCSD %REC</u>	<u>%REC CL</u>	<u>ME CL</u>	<u>RPD</u>	<u>RPD CL</u>	<u>Qualifiers</u>
Benzene	50.00	50.23	100	47.06	94	80-120	73-127	7	0-20	
Carbon Tetrachloride	50.00	47.80	96	44.67	89	66-138	54-150	7	0-20	
Chlorobenzene	50.00	49.80	100	46.67	93	80-120	73-127	6	0-20	
1,2-Dibromoethane	50.00	49.43	99	45.31	91	80-120	73-127	9	0-20	
1,2-Dichlorobenzene	50.00	51.22	102	47.87	96	80-120	73-127	7	0-20	
1,2-Dichloroethane	50.00	53.23	106	48.91	98	80-129	72-137	8	0-20	
1,1-Dichloroethene	50.00	41.32	83	38.60	77	71-131	61-141	7	0-20	
Ethylbenzene	50.00	50.83	102	47.22	94	80-123	73-130	7	0-20	
Toluene	50.00	50.52	101	47.70	95	79-121	72-128	6	0-20	
Trichloroethene	50.00	51.50	103	48.12	96	80-120	73-127	7	0-20	
Vinyl Chloride	50.00	44.56	89	41.05	82	70-136	59-147	8	0-20	
p/m-Xylene	100.0	101.9	102	94.60	95	75-125	67-133	7	0-25	
o-Xylene	50.00	52.14	104	48.77	98	75-125	67-133	7	0-25	
Methyl-t-Butyl Ether (MTBE)	50.00	38.88	78	34.41	69	72-126	63-135	12	0-22	ME

Total number of LCS compounds : 14
 Total number of ME compounds : 1
 Total number of ME compounds allowed : 1
 LCS ME CL validation result : Pass

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RPD - Relative Percent Difference , CL - Control Limit



Work Order Number: 13-01-0112

<u>Qualifier</u>	<u>Definition</u>
*	See applicable analysis comment.
<	Less than the indicated value.
>	Greater than the indicated value.
1	Surrogate compound recovery was out of control due to a required sample dilution. Therefore, the sample data was reported without further clarification.
2	Surrogate compound recovery was out of control due to matrix interference. The associated method blank surrogate spike compound was in control and, therefore, the sample data was reported without further clarification.
3	Recovery of the Matrix Spike (MS) or Matrix Spike Duplicate (MSD) compound was out of control due to matrix interference. The associated LCS and/or LCSD was in control and, therefore, the sample data was reported without further clarification.
4	The MS/MSD RPD was out of control due to matrix interference. The LCS/LCSD RPD was in control and, therefore, the sample data was reported without further clarification.
5	The PDS/PDSD or PES/PESD associated with this batch of samples was out of control due to a matrix interference effect. The associated batch LCS/LCSD was in control and, hence, the associated sample data was reported without further clarification.
6	Surrogate recovery below the acceptance limit.
7	Surrogate recovery above the acceptance limit.
B	Analyte was present in the associated method blank.
BU	Sample analyzed after holding time expired.
E	Concentration exceeds the calibration range.
ET	Sample was extracted past end of recommended max. holding time.
HD	The chromatographic pattern was inconsistent with the profile of the reference fuel standard.
HDH	The sample chromatographic pattern for TPH matches the chromatographic pattern of the specified standard but heavier hydrocarbons were also present (or detected).
HDL	The sample chromatographic pattern for TPH matches the chromatographic pattern of the specified standard but lighter hydrocarbons were also present (or detected).
J	Analyte was detected at a concentration below the reporting limit and above the laboratory method detection limit. Reported value is estimated.
ME	LCS/LCSD Recovery Percentage is within Marginal Exceedance (ME) Control Limit range.
ND	Parameter not detected at the indicated reporting limit.
Q	Spike recovery and RPD control limits do not apply resulting from the parameter concentration in the sample exceeding the spike concentration by a factor of four or greater.
SG	The sample extract was subjected to Silica Gel treatment prior to analysis.
X	% Recovery and/or RPD out-of-range.
Z	Analyte presence was not confirmed by second column or GC/MS analysis.

Solid - Unless otherwise indicated, solid sample data is reported on a wet weight basis, not corrected for % moisture. All QC results are reported on a wet weight basis.

MPN - Most Probable Number



CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST FORM

PROJECT NAME				PROJECT No./TASK No.				SAMPLE CONTAINERS				ANALYSIS REQUESTED				ESTIMATED CONCENTRATION RANGE (ppb) FOR VOA'S				SPECIAL HANDLING				LABORATORY INFORMATION																			
RAYTHEON MAIN				532.30																																							
PROJECT MANAGER Steve Netto				Phone No. 858-455-6500																CalScience																							
QA MANAGER				Fax No. 858-455-6533																Attn: Virendra																							
SAMPLER (SIGNATURE)				SAMPLER (PRINTED)																<div style="font-size: 2em; font-weight: bold; text-align: center;">13-01-0112</div>																							
<i>[Signature]</i>				ERIN HUNTER Arielle Fender																																							
LAB ID	SAMPLE ID	SAMPLE COLLECTION		MATRIX		PRESERVATION		40 ml VOA		1 L Amber		250 ml HDPE		1 L HDPE		8260 VOC'S		8270C (M) 1,4-Dioxane						Diss. Ca/Mg/Na/K by		EPA 6010B		Total Metals (Cu,Fe,Mn,Zn) by EPA 6010B		Total Hardness by SM2340B		TDS by SM2540C		0-10		10-100		100-1,000		1,000-10,000		>10,000	
1	TB-010313A	01/03/13	0900																																								
2	MW-37		1620	X																																							
					X																																						

Total number of Containers per analysis: 5131 Total No. of Containers: 10 of 14

Relinquished by: <u>Arielle Fender</u>	Date <u>1/3/13</u> Time <u>17:03</u>	Received by: <u>[Signature]</u>	Date <u>01/03/13</u> Time <u>17:03</u>	INSTRUCTIONS 1. Fill out form completely except for shaded areas (lab use only); sign only after verified for completeness. 2. Complete in ballpoint pen. Draw one line through errors, initial and date correction. 3. Indicate number of sample containers in analysis request space; indicate choice with ✓ or x. 4. Note applicable preservatives, special instructions, and deviations from typical environmental samples. 5. Consult project QA documents for specific instructions.	Shipment Method: <u>Courier</u>
<u>H+A</u> Company		<u>CEL</u> Company			<input checked="" type="checkbox"/> 9171 TOWNE CENTRE DRIVE, SUITE 375 SAN DIEGO, CA 92122 (858) 455-6500 <input type="checkbox"/> 1640 SOUTH STAPLEY DRIVE, SUITE 124 MESA, AZ 85204 (480) 345-0888 <input type="checkbox"/> 1820 EAST RIVER ROAD, SUITE 220 TUCSON, AZ 85718 (520) 881-7300
Relinquished by: <u>[Signature]</u>	Date <u>01/03/13</u> Time <u>17:40</u>	Received by: <u>DANNY</u>	Date <u>1/3/13</u> Time <u>17:40</u>	Sample Receipt: <input type="checkbox"/> No. of containers correct <input type="checkbox"/> custody seals secure	Temp. @ receipt _____ °C <input type="checkbox"/> received good condition/cold <input type="checkbox"/> conforms to COC document
<u>CEL</u> Company		<u>CEL</u> Company		Send invoice to San Diego, CA Attn: Accounts Payable	

CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST FORM

PROJECT NAME		PROJECT No./TASK No.					SAMPLE CONTAINERS			ANALYSIS REQUESTED					ESTIMATED CONCENTRATION RANGE (ppb) FOR VOAS		SPECIAL HANDLING		LABORATORY INFORMATION				
RAYTHEON MAIN		532.30																	Calscience				
PROJECT MANAGER Steve Netto		Phone No. 858-455-6500																	Attn: Virendra				
QA MANAGER		Fax No. 858-455-6533																					
SAMPLER (SIGNATURE)		SAMPLER (PRINTED)																					
		ERIN HUNTER																					
		ANNIELE FENDER																					
LAB ID	SAMPLE ID	SAMPLE COLLECTION		MATRIX		PRESERVATION					1 L Amber	500 ml HDPE	125 ml HDPE	Ammonia by SM4500-NH3	B/C (M)	Surfactants by SM5540C	PH by SM4500 H + B;	Bicarbonate only by SM2320B and Specific Conductance by SM 2510B	Anions by EPA 300.0 - Full List	48 Hr TAT		REMARKS	
		Date	Time	Soil	Ground water	Surface water	HCl	HNO3	NaOH	H2SO4													Ice
	MW-37	01/03/13	1620	X									X		X						X		
2	↓	↓	↓												X						X		
																					X		

0112

Total number of Containers per analysis: 121 Total No. of Containers: 4 of 14

Relinquished by: Anielle Fender Date: 1/3/13 Received by: [Signature] Date: 01/03/13
 Company: H+A Time: 17:03 Company: CEL Time: 17:03

Relinquished by: [Signature] Date: 01/03/13 Received by: [Signature] Date: 1/3/13
 Company: CEL Time: 17:40 Company: CEL Time: 17:40

INSTRUCTIONS

- Fill out form completely except for shaded areas (lab use only); sign only after verified for completeness.
- Complete in ballpoint pen. Draw one line through errors, initial and date correction.
- Indicate number of sample containers in analysis request space; indicate choice with ✓ or x.
- Note applicable preservatives, special instructions, and deviations from typical environmental samples.
- Consult project QA documents for specific instructions.

Sample Receipt: No. of containers correct received good condition/cold
 custody seals secure conforms to COC document

Temp. @ receipt _____ °C

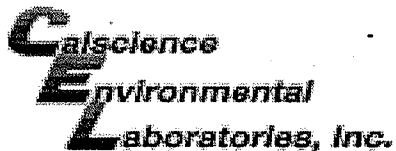
Shipment Method: Courier
 Send Results to: Steve Netto

9171 TOWNE CENTRE DRIVE, SUITE 375
 SAN DIEGO, CA 92122 (858) 455-6500

1640 SOUTH STAPLEY DRIVE, SUITE 124
 MESA, AZ 85204 (480) 345-0888

1820 EAST RIVER ROAD, SUITE 220
 TUCSON, AZ 85718 (520) 881-7300

Send invoice to San Diego, CA
 Attn: Accounts Payable



WORK ORDER #: 13-01-0772

SAMPLE RECEIPT FORM

Cooler 1 of 1

CLIENT: HARGIS + ASSOCIATES, INC.

DATE: 01/03/13

TEMPERATURE: Thermometer ID: SC2 (Criteria: 0.0°C – 6.0°C, not frozen except sediment/tissue)

Temperature 2.9 °C - 0.2°C (CF) = 2.7 °C Blank Sample

Sample(s) outside temperature criteria (PM/APM contacted by: _____).

Sample(s) outside temperature criteria but received on ice/chilled on same day of sampling.

Received at ambient temperature, placed on ice for transport by Courier.

Ambient Temperature: Air Filter

Initial: PEC

CUSTODY SEALS INTACT:

Cooler _____ No (Not Intact), Not Present N/A

Initial: PEC

Sample _____ No (Not Intact) Not Present

Initial: MS

SAMPLE CONDITION:

	Yes	No	N/A
Chain-Of-Custody (COC) document(s) received with samples.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
COC document(s) received complete.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Collection date/time, matrix, and/or # of containers logged in based on sample labels.			
<input type="checkbox"/> No analysis requested. <input type="checkbox"/> Not relinquished. <input type="checkbox"/> No date/time relinquished.			
Sampler's name indicated on COC.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sample container label(s) consistent with COC.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sample container(s) intact and good condition.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Proper containers and sufficient volume for analyses requested.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Analyses received within holding time.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
pH/ Res. Chlorine / Diss. Sulfide / Diss. Oxygen received within 24 hours... <input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Proper preservation noted on COC or sample container..... <input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Unpreserved vials received for Volatiles analysis			
Volatile analysis container(s) free of headspace..... <input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Tedlar bag(s) free of condensation..... <input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

CONTAINER TYPE:

Solid: 4ozCGJ 8ozCGJ 16ozCGJ Sleeve (____) EnCores® TerraCores® _____

Water: VOA VOA³h VOAna₂ 125AGB 125AGBh 125AGBp 1AGB 1AGBna₂ 1AGBs

500AGB 500AGJ 500AGJs 250AGB 250CGB 250CGBs 1PB 1PBna 500PB

250PB 250PBn 125PB 125PBz_{na} 100PJ 100PJna₂ _____ _____ _____

Air: Tedlar® Canister Other: _____ Trip Blank Lot#: 121217B Labeled/Checked by: MS

Container: C: Clear A: Amber P: Plastic G: Glass J: Jar B: Bottle Z: Ziploc/Resealable Bag E: Envelope Reviewed by: YU

Preservative: h: HCL n: HNO₃ na₂: Na₂S₂O₃ na: NaOH p: H₃PO₄ s: H₂SO₄ u: Ultra-pure z_{na}: ZnAc₂+NaOH f: Filtered Scanned by: YU

Return to Contents

February 15, 2013

Steve Netto
Hargis & Associates, Inc.
9171 Towne Centre Drive, Suite 375
San Diego, CA 92122
Tel: (619) 249-3166
Fax: (858) 455-6533



Re: ATL Work Order Number : 1300389
Client Reference : RAYTHEON MAIN, 532.30

Enclosed are the results for sample(s) received on February 05, 2013 by Advanced Technology Laboratories. The sample(s) are tested for the parameters as indicated on the enclosed chain of custody in accordance with applicable laboratory certifications. The laboratory results contained in this report specifically pertains to the sample(s) submitted.

Thank you for the opportunity to serve the needs of your company. If you have any questions, please feel free to contact me or your Project Manager.

Sincerely,

Eddie Rodriguez
Laboratory Director

The cover letter and the case narrative are an integral part of this analytical report and its absence renders the report invalid. Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Conference and/or applicable state-specific certification programs. The report cannot be reproduced without written permission from the client and Advanced Technology Laboratories.



Certificate of Analysis

Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : RAYTHEON MAIN, 532.30

Report To : Steve Netto

Reported : 02/15/2013

SUMMARY OF SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
TB-020413	1300389-01	Lab H2O	2/04/13 13:30	2/05/13 17:30
EW-01	1300389-02	Groundwater	2/04/13 14:00	2/05/13 17:30
MW-21	1300389-03	Groundwater	2/04/13 14:15	2/05/13 17:30
MW-32A	1300389-04	Groundwater	2/05/13 9:40	2/05/13 17:30
MW-32C	1300389-05	Groundwater	2/05/13 12:25	2/05/13 17:30
MW-3200B	1300389-06	Groundwater	2/05/13 13:00	2/05/13 17:30
MW-32B	1300389-07	Groundwater	2/05/13 14:00	2/05/13 17:30
RB-020513	1300389-08	Lab H2O	2/05/13 9:00	2/05/13 17:30
MW-18	1300389-09	Groundwater	2/05/13 10:18	2/05/13 17:30
MW-6	1300389-10	Groundwater	2/05/13 14:10	2/05/13 17:30
MW-34A	1300389-11	Groundwater	2/05/13 16:42	2/05/13 17:30
MW-35B	1300389-12	Groundwater	2/05/13 16:07	2/05/13 17:30



Certificate of Analysis

Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego, CA 92122

Project Number : RAYTHEON MAIN, 532.30

Report To : Steve Netto

Reported : 02/15/2013

Client Sample ID TB-020413

Lab ID: 1300389-01

Volatile Organic Compounds by EPA 8260

Analyst: SL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	0.50	NA	1	B3B0085	02/06/2013	02/06/13 13:05	
1,1,1-Trichloroethane	ND	0.50	NA	1	B3B0085	02/06/2013	02/06/13 13:05	
1,1,2,2-Tetrachloroethane	ND	0.50	NA	1	B3B0085	02/06/2013	02/06/13 13:05	
1,1,2-Trichloroethane	ND	0.50	NA	1	B3B0085	02/06/2013	02/06/13 13:05	
1,1-Dichloroethane	ND	0.50	NA	1	B3B0085	02/06/2013	02/06/13 13:05	
1,1-Dichloroethene	ND	0.50	NA	1	B3B0085	02/06/2013	02/06/13 13:05	
1,1-Dichloropropene	ND	0.50	NA	1	B3B0085	02/06/2013	02/06/13 13:05	
1,2,3-Trichloropropane	ND	0.50	NA	1	B3B0085	02/06/2013	02/06/13 13:05	
1,2,3-Trichlorobenzene	ND	0.50	NA	1	B3B0085	02/06/2013	02/06/13 13:05	
1,2,4-Trichlorobenzene	ND	0.50	NA	1	B3B0085	02/06/2013	02/06/13 13:05	
1,2,4-Trimethylbenzene	ND	0.50	NA	1	B3B0085	02/06/2013	02/06/13 13:05	
1,2-Dibromo-3-chloropropane	ND	0.50	NA	1	B3B0085	02/06/2013	02/06/13 13:05	
1,2-Dibromoethane	ND	0.50	NA	1	B3B0085	02/06/2013	02/06/13 13:05	
1,2-Dichlorobenzene	ND	0.50	NA	1	B3B0085	02/06/2013	02/06/13 13:05	
1,2-Dichloroethane	ND	0.50	NA	1	B3B0085	02/06/2013	02/06/13 13:05	
1,2-Dichloropropane	ND	0.50	NA	1	B3B0085	02/06/2013	02/06/13 13:05	
1,3,5-Trimethylbenzene	ND	0.50	NA	1	B3B0085	02/06/2013	02/06/13 13:05	
1,3-Dichlorobenzene	ND	0.50	NA	1	B3B0085	02/06/2013	02/06/13 13:05	
1,3-Dichloropropane	ND	0.50	NA	1	B3B0085	02/06/2013	02/06/13 13:05	
1,4-Dichlorobenzene	ND	0.50	NA	1	B3B0085	02/06/2013	02/06/13 13:05	
2,2-Dichloropropane	ND	0.50	NA	1	B3B0085	02/06/2013	02/06/13 13:05	
2-Chlorotoluene	ND	0.50	NA	1	B3B0085	02/06/2013	02/06/13 13:05	
4-Chlorotoluene	ND	0.50	NA	1	B3B0085	02/06/2013	02/06/13 13:05	
4-Isopropyltoluene	ND	0.50	NA	1	B3B0085	02/06/2013	02/06/13 13:05	
Benzene	ND	0.50	NA	1	B3B0085	02/06/2013	02/06/13 13:05	
Bromobenzene	ND	0.50	NA	1	B3B0085	02/06/2013	02/06/13 13:05	
Bromodichloromethane	ND	0.50	NA	1	B3B0085	02/06/2013	02/06/13 13:05	
Bromoform	ND	0.50	NA	1	B3B0085	02/06/2013	02/06/13 13:05	
Bromomethane	ND	0.50	NA	1	B3B0085	02/06/2013	02/06/13 13:05	
Carbon tetrachloride	ND	0.50	NA	1	B3B0085	02/06/2013	02/06/13 13:05	
Chlorobenzene	ND	0.50	NA	1	B3B0085	02/06/2013	02/06/13 13:05	
Chloroethane	ND	0.50	NA	1	B3B0085	02/06/2013	02/06/13 13:05	
Chloroform	ND	0.50	NA	1	B3B0085	02/06/2013	02/06/13 13:05	
Chloromethane	ND	0.50	NA	1	B3B0085	02/06/2013	02/06/13 13:05	
cis-1,2-Dichloroethene	ND	0.50	NA	1	B3B0085	02/06/2013	02/06/13 13:05	
cis-1,3-Dichloropropene	ND	0.50	NA	1	B3B0085	02/06/2013	02/06/13 13:05	
Dibromochloromethane	ND	0.50	NA	1	B3B0085	02/06/2013	02/06/13 13:05	



Certificate of Analysis

Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego, CA 92122

Project Number : RAYTHEON MAIN, 532.30

Report To : Steve Netto

Reported : 02/15/2013

Client Sample ID TB-020413

Lab ID: 1300389-01

Volatile Organic Compounds by EPA 8260

Analyst: SL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Dibromomethane	ND	0.50	NA	1	B3B0085	02/06/2013	02/06/13 13:05	
Dichlorodifluoromethane	ND	0.50	NA	1	B3B0085	02/06/2013	02/06/13 13:05	
Ethylbenzene	ND	0.50	NA	1	B3B0085	02/06/2013	02/06/13 13:05	
Hexachlorobutadiene	ND	0.50	NA	1	B3B0085	02/06/2013	02/06/13 13:05	
Isopropylbenzene	ND	0.50	NA	1	B3B0085	02/06/2013	02/06/13 13:05	
m,p-Xylene	ND	1.0	NA	1	B3B0085	02/06/2013	02/06/13 13:05	
Methylene chloride	ND	1.0	NA	1	B3B0085	02/06/2013	02/06/13 13:05	
n-Butylbenzene	ND	0.50	NA	1	B3B0085	02/06/2013	02/06/13 13:05	
n-Propylbenzene	ND	0.50	NA	1	B3B0085	02/06/2013	02/06/13 13:05	
Naphthalene	ND	0.50	NA	1	B3B0085	02/06/2013	02/06/13 13:05	
o-Xylene	ND	0.50	NA	1	B3B0085	02/06/2013	02/06/13 13:05	
sec-Butylbenzene	ND	0.50	NA	1	B3B0085	02/06/2013	02/06/13 13:05	
Styrene	ND	0.50	NA	1	B3B0085	02/06/2013	02/06/13 13:05	
tert-Butylbenzene	ND	0.50	NA	1	B3B0085	02/06/2013	02/06/13 13:05	
Tetrachloroethene	ND	0.50	NA	1	B3B0085	02/06/2013	02/06/13 13:05	
Toluene	ND	0.50	NA	1	B3B0085	02/06/2013	02/06/13 13:05	
trans-1,2-Dichloroethene	ND	0.50	NA	1	B3B0085	02/06/2013	02/06/13 13:05	
Trichloroethene	ND	0.50	NA	1	B3B0085	02/06/2013	02/06/13 13:05	
Trichlorofluoromethane	ND	0.50	NA	1	B3B0085	02/06/2013	02/06/13 13:05	
Vinyl chloride	ND	0.50	NA	1	B3B0085	02/06/2013	02/06/13 13:05	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>108 %</i>		<i>70 - 130</i>		B3B0085	02/06/2013	<i>02/06/13 13:05</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>91.1 %</i>		<i>70 - 130</i>		B3B0085	02/06/2013	<i>02/06/13 13:05</i>	
<i>Surrogate: Dibromofluoromethane</i>	<i>110 %</i>		<i>70 - 130</i>		B3B0085	02/06/2013	<i>02/06/13 13:05</i>	
<i>Surrogate: Toluene-d8</i>	<i>102 %</i>		<i>70 - 130</i>		B3B0085	02/06/2013	<i>02/06/13 13:05</i>	



Certificate of Analysis

Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego, CA 92122

Project Number : RAYTHEON MAIN, 532.30

Report To : Steve Netto

Reported : 02/15/2013

Client Sample ID EW-01

Lab ID: 1300389-02

Volatile Organic Compounds by EPA 8260

Analyst: SL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	0.50	NA	1	B3B0085	02/06/2013	02/06/13 13:52	
1,1,1-Trichloroethane	ND	0.50	NA	1	B3B0085	02/06/2013	02/06/13 13:52	
1,1,2,2-Tetrachloroethane	ND	0.50	NA	1	B3B0085	02/06/2013	02/06/13 13:52	
1,1,2-Trichloroethane	0.67	0.50	NA	1	B3B0085	02/06/2013	02/06/13 13:52	
1,1-Dichloroethane	1.9	0.50	NA	1	B3B0085	02/06/2013	02/06/13 13:52	
1,1-Dichloroethene	130	5.0	NA	10	B3B0085	02/06/2013	02/06/13 15:04	
1,1-Dichloropropene	ND	0.50	NA	1	B3B0085	02/06/2013	02/06/13 13:52	
1,2,3-Trichloropropane	ND	0.50	NA	1	B3B0085	02/06/2013	02/06/13 13:52	
1,2,3-Trichlorobenzene	ND	0.50	NA	1	B3B0085	02/06/2013	02/06/13 13:52	
1,2,4-Trichlorobenzene	ND	0.50	NA	1	B3B0085	02/06/2013	02/06/13 13:52	
1,2,4-Trimethylbenzene	ND	0.50	NA	1	B3B0085	02/06/2013	02/06/13 13:52	
1,2-Dibromo-3-chloropropane	ND	0.50	NA	1	B3B0085	02/06/2013	02/06/13 13:52	
1,2-Dibromoethane	ND	0.50	NA	1	B3B0085	02/06/2013	02/06/13 13:52	
1,2-Dichlorobenzene	ND	0.50	NA	1	B3B0085	02/06/2013	02/06/13 13:52	
1,2-Dichloroethane	ND	0.50	NA	1	B3B0085	02/06/2013	02/06/13 13:52	
1,2-Dichloropropane	ND	0.50	NA	1	B3B0085	02/06/2013	02/06/13 13:52	
1,3,5-Trimethylbenzene	ND	0.50	NA	1	B3B0085	02/06/2013	02/06/13 13:52	
1,3-Dichlorobenzene	ND	0.50	NA	1	B3B0085	02/06/2013	02/06/13 13:52	
1,3-Dichloropropane	ND	0.50	NA	1	B3B0085	02/06/2013	02/06/13 13:52	
1,4-Dichlorobenzene	ND	0.50	NA	1	B3B0085	02/06/2013	02/06/13 13:52	
2,2-Dichloropropane	ND	0.50	NA	1	B3B0085	02/06/2013	02/06/13 13:52	
2-Chlorotoluene	ND	0.50	NA	1	B3B0085	02/06/2013	02/06/13 13:52	
4-Chlorotoluene	ND	0.50	NA	1	B3B0085	02/06/2013	02/06/13 13:52	
4-Isopropyltoluene	ND	0.50	NA	1	B3B0085	02/06/2013	02/06/13 13:52	
Benzene	ND	0.50	NA	1	B3B0085	02/06/2013	02/06/13 13:52	
Bromobenzene	ND	0.50	NA	1	B3B0085	02/06/2013	02/06/13 13:52	
Bromodichloromethane	ND	0.50	NA	1	B3B0085	02/06/2013	02/06/13 13:52	
Bromoform	ND	0.50	NA	1	B3B0085	02/06/2013	02/06/13 13:52	
Bromomethane	ND	0.50	NA	1	B3B0085	02/06/2013	02/06/13 13:52	
Carbon tetrachloride	ND	0.50	NA	1	B3B0085	02/06/2013	02/06/13 13:52	
Chlorobenzene	ND	0.50	NA	1	B3B0085	02/06/2013	02/06/13 13:52	
Chloroethane	ND	0.50	NA	1	B3B0085	02/06/2013	02/06/13 13:52	
Chloroform	ND	0.50	NA	1	B3B0085	02/06/2013	02/06/13 13:52	
Chloromethane	ND	0.50	NA	1	B3B0085	02/06/2013	02/06/13 13:52	
cis-1,2-Dichloroethene	ND	0.50	NA	1	B3B0085	02/06/2013	02/06/13 13:52	
cis-1,3-Dichloropropene	ND	0.50	NA	1	B3B0085	02/06/2013	02/06/13 13:52	
Dibromochloromethane	ND	0.50	NA	1	B3B0085	02/06/2013	02/06/13 13:52	



Certificate of Analysis

Hargis & Associates, Inc.

Project Number : RAYTHEON MAIN, 532.30

9171 Towne Centre Drive, Suite 375

Report To : Steve Netto

San Diego , CA 92122

Reported : 02/15/2013

Client Sample ID EW-01

Lab ID: 1300389-02

Volatile Organic Compounds by EPA 8260

Analyst: SL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Dibromomethane	ND	0.50	NA	1	B3B0085	02/06/2013	02/06/13 13:52	
Dichlorodifluoromethane	ND	0.50	NA	1	B3B0085	02/06/2013	02/06/13 13:52	
Ethylbenzene	ND	0.50	NA	1	B3B0085	02/06/2013	02/06/13 13:52	
Hexachlorobutadiene	ND	0.50	NA	1	B3B0085	02/06/2013	02/06/13 13:52	
Isopropylbenzene	ND	0.50	NA	1	B3B0085	02/06/2013	02/06/13 13:52	
m,p-Xylene	ND	1.0	NA	1	B3B0085	02/06/2013	02/06/13 13:52	
Methylene chloride	ND	1.0	NA	1	B3B0085	02/06/2013	02/06/13 13:52	
n-Butylbenzene	ND	0.50	NA	1	B3B0085	02/06/2013	02/06/13 13:52	
n-Propylbenzene	ND	0.50	NA	1	B3B0085	02/06/2013	02/06/13 13:52	
Naphthalene	ND	0.50	NA	1	B3B0085	02/06/2013	02/06/13 13:52	
o-Xylene	ND	0.50	NA	1	B3B0085	02/06/2013	02/06/13 13:52	
sec-Butylbenzene	ND	0.50	NA	1	B3B0085	02/06/2013	02/06/13 13:52	
Styrene	ND	0.50	NA	1	B3B0085	02/06/2013	02/06/13 13:52	
tert-Butylbenzene	ND	0.50	NA	1	B3B0085	02/06/2013	02/06/13 13:52	
Tetrachloroethene	ND	0.50	NA	1	B3B0085	02/06/2013	02/06/13 13:52	
Toluene	ND	0.50	NA	1	B3B0085	02/06/2013	02/06/13 13:52	
trans-1,2-Dichloroethene	ND	0.50	NA	1	B3B0085	02/06/2013	02/06/13 13:52	
Trichloroethene	ND	0.50	NA	1	B3B0085	02/06/2013	02/06/13 13:52	
Trichlorofluoromethane	ND	0.50	NA	1	B3B0085	02/06/2013	02/06/13 13:52	
Vinyl chloride	ND	0.50	NA	1	B3B0085	02/06/2013	02/06/13 13:52	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>116 %</i>		<i>70 - 130</i>		B3B0085	02/06/2013	<i>02/06/13 15:04</i>	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>110 %</i>		<i>70 - 130</i>		B3B0085	02/06/2013	<i>02/06/13 13:52</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>95.0 %</i>		<i>70 - 130</i>		B3B0085	02/06/2013	<i>02/06/13 15:04</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>88.1 %</i>		<i>70 - 130</i>		B3B0085	02/06/2013	<i>02/06/13 13:52</i>	
<i>Surrogate: Dibromofluoromethane</i>	<i>109 %</i>		<i>70 - 130</i>		B3B0085	02/06/2013	<i>02/06/13 13:52</i>	
<i>Surrogate: Dibromofluoromethane</i>	<i>116 %</i>		<i>70 - 130</i>		B3B0085	02/06/2013	<i>02/06/13 15:04</i>	
<i>Surrogate: Toluene-d8</i>	<i>105 %</i>		<i>70 - 130</i>		B3B0085	02/06/2013	<i>02/06/13 15:04</i>	
<i>Surrogate: Toluene-d8</i>	<i>99.2 %</i>		<i>70 - 130</i>		B3B0085	02/06/2013	<i>02/06/13 13:52</i>	



Certificate of Analysis

Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego, CA 92122

Project Number : RAYTHEON MAIN, 532.30

Report To : Steve Netto

Reported : 02/15/2013

Client Sample ID EW-01

Lab ID: 1300389-02

1,4-Dioxane by EPA 8270: Isotope Dilution Technique

Analyst: MFR

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,4-Dioxane	58	2.0	NA	1	B3B0206	02/11/2013	02/11/13 18:03	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	<i>74.4 %</i>		<i>37 - 93</i>		B3B0206	02/11/2013	<i>02/11/13 18:03</i>	
<i>Surrogate: 2-Fluorobiphenyl</i>	<i>84.8 %</i>		<i>51 - 100</i>		B3B0206	02/11/2013	<i>02/11/13 18:03</i>	
<i>Surrogate: 4-Terphenyl-d14</i>	<i>100 %</i>		<i>58 - 113</i>		B3B0206	02/11/2013	<i>02/11/13 18:03</i>	
<i>Surrogate: Nitrobenzene-d5</i>	<i>91.6 %</i>		<i>39 - 95</i>		B3B0206	02/11/2013	<i>02/11/13 18:03</i>	



Certificate of Analysis

Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego, CA 92122

Project Number : RAYTHEON MAIN, 532.30

Report To : Steve Netto

Reported : 02/15/2013

Client Sample ID MW-21

Lab ID: 1300389-03

Volatile Organic Compounds by EPA 8260

Analyst: SL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	2.5	NA	5	B3B0118	02/07/2013	02/07/13 15:32	D6
1,1,1-Trichloroethane	ND	2.5	NA	5	B3B0118	02/07/2013	02/07/13 15:32	D6
1,1,2,2-Tetrachloroethane	ND	2.5	NA	5	B3B0118	02/07/2013	02/07/13 15:32	D6
1,1,2-Trichloroethane	12	2.5	NA	5	B3B0118	02/07/2013	02/07/13 15:32	D6
1,1-Dichloroethane	33	2.5	NA	5	B3B0118	02/07/2013	02/07/13 15:32	D6
1,1-Dichloroethene	1900	25	NA	50	B3B0085	02/06/2013	02/06/13 18:12	
1,1-Dichloropropene	ND	2.5	NA	5	B3B0118	02/07/2013	02/07/13 15:32	D6
1,2,3-Trichloropropane	ND	2.5	NA	5	B3B0118	02/07/2013	02/07/13 15:32	D6
1,2,3-Trichlorobenzene	ND	2.5	NA	5	B3B0118	02/07/2013	02/07/13 15:32	D6
1,2,4-Trichlorobenzene	ND	2.5	NA	5	B3B0118	02/07/2013	02/07/13 15:32	D6
1,2,4-Trimethylbenzene	ND	2.5	NA	5	B3B0118	02/07/2013	02/07/13 15:32	D6
1,2-Dibromo-3-chloropropane	ND	2.5	NA	5	B3B0118	02/07/2013	02/07/13 15:32	D6
1,2-Dibromoethane	ND	2.5	NA	5	B3B0118	02/07/2013	02/07/13 15:32	D6
1,2-Dichlorobenzene	ND	2.5	NA	5	B3B0118	02/07/2013	02/07/13 15:32	D6
1,2-Dichloroethane	5.8	2.5	NA	5	B3B0118	02/07/2013	02/07/13 15:32	D6
1,2-Dichloropropane	ND	2.5	NA	5	B3B0118	02/07/2013	02/07/13 15:32	D6
1,3,5-Trimethylbenzene	ND	2.5	NA	5	B3B0118	02/07/2013	02/07/13 15:32	D6
1,3-Dichlorobenzene	ND	2.5	NA	5	B3B0118	02/07/2013	02/07/13 15:32	D6
1,3-Dichloropropane	ND	2.5	NA	5	B3B0118	02/07/2013	02/07/13 15:32	D6
1,4-Dichlorobenzene	ND	2.5	NA	5	B3B0118	02/07/2013	02/07/13 15:32	D6
2,2-Dichloropropane	ND	2.5	NA	5	B3B0118	02/07/2013	02/07/13 15:32	D6
2-Chlorotoluene	ND	2.5	NA	5	B3B0118	02/07/2013	02/07/13 15:32	D6
4-Chlorotoluene	ND	2.5	NA	5	B3B0118	02/07/2013	02/07/13 15:32	D6
4-Isopropyltoluene	ND	2.5	NA	5	B3B0118	02/07/2013	02/07/13 15:32	D6
Benzene	ND	2.5	NA	5	B3B0118	02/07/2013	02/07/13 15:32	D6
Bromobenzene	ND	2.5	NA	5	B3B0118	02/07/2013	02/07/13 15:32	D6
Bromodichloromethane	ND	2.5	NA	5	B3B0118	02/07/2013	02/07/13 15:32	D6
Bromoform	ND	2.5	NA	5	B3B0118	02/07/2013	02/07/13 15:32	D6
Bromomethane	ND	2.5	NA	5	B3B0118	02/07/2013	02/07/13 15:32	D6
Carbon tetrachloride	ND	2.5	NA	5	B3B0118	02/07/2013	02/07/13 15:32	D6
Chlorobenzene	ND	2.5	NA	5	B3B0118	02/07/2013	02/07/13 15:32	D6
Chloroethane	ND	2.5	NA	5	B3B0118	02/07/2013	02/07/13 15:32	D6
Chloroform	ND	2.5	NA	5	B3B0118	02/07/2013	02/07/13 15:32	D6
Chloromethane	ND	2.5	NA	5	B3B0118	02/07/2013	02/07/13 15:32	D6
cis-1,2-Dichloroethene	ND	2.5	NA	5	B3B0118	02/07/2013	02/07/13 15:32	D6
cis-1,3-Dichloropropane	ND	2.5	NA	5	B3B0118	02/07/2013	02/07/13 15:32	D6
Dibromochloromethane	ND	2.5	NA	5	B3B0118	02/07/2013	02/07/13 15:32	D6



Certificate of Analysis

Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego, CA 92122

Project Number : RAYTHEON MAIN, 532.30

Report To : Steve Netto

Reported : 02/15/2013

Client Sample ID MW-21

Lab ID: 1300389-03

Volatile Organic Compounds by EPA 8260

Analyst: SL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Dibromomethane	ND	2.5	NA	5	B3B0118	02/07/2013	02/07/13 15:32	D6
Dichlorodifluoromethane	ND	2.5	NA	5	B3B0118	02/07/2013	02/07/13 15:32	D6
Ethylbenzene	ND	2.5	NA	5	B3B0118	02/07/2013	02/07/13 15:32	D6
Hexachlorobutadiene	ND	2.5	NA	5	B3B0118	02/07/2013	02/07/13 15:32	D6
Isopropylbenzene	ND	2.5	NA	5	B3B0118	02/07/2013	02/07/13 15:32	D6
m,p-Xylene	ND	5.0	NA	5	B3B0118	02/07/2013	02/07/13 15:32	D6
Methylene chloride	ND	5.0	NA	5	B3B0118	02/07/2013	02/07/13 15:32	D6
n-Butylbenzene	ND	2.5	NA	5	B3B0118	02/07/2013	02/07/13 15:32	D6
n-Propylbenzene	ND	2.5	NA	5	B3B0118	02/07/2013	02/07/13 15:32	D6
Naphthalene	ND	2.5	NA	5	B3B0118	02/07/2013	02/07/13 15:32	D6
o-Xylene	ND	2.5	NA	5	B3B0118	02/07/2013	02/07/13 15:32	D6
sec-Butylbenzene	ND	2.5	NA	5	B3B0118	02/07/2013	02/07/13 15:32	D6
Styrene	ND	2.5	NA	5	B3B0118	02/07/2013	02/07/13 15:32	D6
tert-Butylbenzene	ND	2.5	NA	5	B3B0118	02/07/2013	02/07/13 15:32	D6
Tetrachloroethene	5.1	2.5	NA	5	B3B0118	02/07/2013	02/07/13 15:32	D6
Toluene	ND	2.5	NA	5	B3B0118	02/07/2013	02/07/13 15:32	D6
trans-1,2-Dichloroethene	ND	2.5	NA	5	B3B0118	02/07/2013	02/07/13 15:32	D6
Trichloroethene	19	2.5	NA	5	B3B0118	02/07/2013	02/07/13 15:32	D6
Trichlorofluoromethane	ND	2.5	NA	5	B3B0118	02/07/2013	02/07/13 15:32	D6
Vinyl chloride	ND	2.5	NA	5	B3B0118	02/07/2013	02/07/13 15:32	D6

<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>102 %</i>		<i>70 - 130</i>		B3B0085	02/06/2013	<i>02/06/13 18:12</i>	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>118 %</i>		<i>70 - 130</i>		B3B0118	02/07/2013	<i>02/07/13 15:32</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>84.0 %</i>		<i>70 - 130</i>		B3B0085	02/06/2013	<i>02/06/13 18:12</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>96.4 %</i>		<i>70 - 130</i>		B3B0118	02/07/2013	<i>02/07/13 15:32</i>	
<i>Surrogate: Dibromofluoromethane</i>	<i>117 %</i>		<i>70 - 130</i>		B3B0118	02/07/2013	<i>02/07/13 15:32</i>	
<i>Surrogate: Dibromofluoromethane</i>	<i>104 %</i>		<i>70 - 130</i>		B3B0085	02/06/2013	<i>02/06/13 18:12</i>	
<i>Surrogate: Toluene-d8</i>	<i>106 %</i>		<i>70 - 130</i>		B3B0118	02/07/2013	<i>02/07/13 15:32</i>	
<i>Surrogate: Toluene-d8</i>	<i>94.4 %</i>		<i>70 - 130</i>		B3B0085	02/06/2013	<i>02/06/13 18:12</i>	



Certificate of Analysis

Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : RAYTHEON MAIN, 532.30

Report To : Steve Netto

Reported : 02/15/2013

Client Sample ID MW-21

Lab ID: 1300389-03

1,4-Dioxane by EPA 8270: Isotope Dilution Technique

Analyst: BB

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,4-Dioxane	480	10	NA	5	B3B0206	02/11/2013	02/12/13 14:10	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	<i>69.2 %</i>		<i>37 - 93</i>		B3B0206	02/11/2013	<i>02/12/13 14:10</i>	
<i>Surrogate: 2-Fluorobiphenyl</i>	<i>75.8 %</i>		<i>51 - 100</i>		B3B0206	02/11/2013	<i>02/12/13 14:10</i>	
<i>Surrogate: 4-Terphenyl-d14</i>	<i>94.6 %</i>		<i>58 - 113</i>		B3B0206	02/11/2013	<i>02/12/13 14:10</i>	
<i>Surrogate: Nitrobenzene-d5</i>	<i>78.3 %</i>		<i>39 - 95</i>		B3B0206	02/11/2013	<i>02/12/13 14:10</i>	



Certificate of Analysis

Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego, CA 92122

Project Number : RAYTHEON MAIN, 532.30

Report To : Steve Netto

Reported : 02/15/2013

Client Sample ID MW-32A

Lab ID: 1300389-04

Volatile Organic Compounds by EPA 8260

Analyst: SL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 10:24	
1,1,1-Trichloroethane	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 10:24	
1,1,2,2-Tetrachloroethane	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 10:24	
1,1,2-Trichloroethane	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 10:24	
1,1-Dichloroethane	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 10:24	
1,1-Dichloroethene	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 10:24	
1,1-Dichloropropene	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 10:24	
1,2,3-Trichloropropane	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 10:24	
1,2,3-Trichlorobenzene	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 10:24	
1,2,4-Trichlorobenzene	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 10:24	
1,2,4-Trimethylbenzene	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 10:24	
1,2-Dibromo-3-chloropropane	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 10:24	
1,2-Dibromoethane	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 10:24	
1,2-Dichlorobenzene	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 10:24	
1,2-Dichloroethane	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 10:24	
1,2-Dichloropropane	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 10:24	
1,3,5-Trimethylbenzene	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 10:24	
1,3-Dichlorobenzene	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 10:24	
1,3-Dichloropropane	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 10:24	
1,4-Dichlorobenzene	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 10:24	
2,2-Dichloropropane	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 10:24	
2-Chlorotoluene	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 10:24	
4-Chlorotoluene	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 10:24	
4-Isopropyltoluene	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 10:24	
Benzene	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 10:24	
Bromobenzene	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 10:24	
Bromodichloromethane	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 10:24	
Bromoform	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 10:24	
Bromomethane	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 10:24	
Carbon tetrachloride	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 10:24	
Chlorobenzene	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 10:24	
Chloroethane	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 10:24	
Chloroform	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 10:24	
Chloromethane	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 10:24	
cis-1,2-Dichloroethene	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 10:24	
cis-1,3-Dichloropropene	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 10:24	
Dibromochloromethane	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 10:24	



Certificate of Analysis

Hargis & Associates, Inc.

Project Number : RAYTHEON MAIN, 532.30

9171 Towne Centre Drive, Suite 375

Report To : Steve Netto

San Diego , CA 92122

Reported : 02/15/2013

Client Sample ID MW-32A

Lab ID: 1300389-04

Volatile Organic Compounds by EPA 8260

Analyst: SL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Dibromomethane	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 10:24	
Dichlorodifluoromethane	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 10:24	
Ethylbenzene	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 10:24	
Hexachlorobutadiene	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 10:24	
Isopropylbenzene	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 10:24	
m,p-Xylene	ND	1.0	NA	1	B3B0118	02/07/2013	02/07/13 10:24	
Methylene chloride	ND	1.0	NA	1	B3B0118	02/07/2013	02/07/13 10:24	
n-Butylbenzene	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 10:24	
n-Propylbenzene	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 10:24	
Naphthalene	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 10:24	
o-Xylene	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 10:24	
sec-Butylbenzene	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 10:24	
Styrene	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 10:24	
tert-Butylbenzene	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 10:24	
Tetrachloroethene	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 10:24	
Toluene	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 10:24	
trans-1,2-Dichloroethene	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 10:24	
Trichloroethene	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 10:24	
Trichlorofluoromethane	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 10:24	
Vinyl chloride	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 10:24	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>115 %</i>		<i>70 - 130</i>		B3B0118	02/07/2013	<i>02/07/13 10:24</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>90.3 %</i>		<i>70 - 130</i>		B3B0118	02/07/2013	<i>02/07/13 10:24</i>	
<i>Surrogate: Dibromofluoromethane</i>	<i>115 %</i>		<i>70 - 130</i>		B3B0118	02/07/2013	<i>02/07/13 10:24</i>	
<i>Surrogate: Toluene-d8</i>	<i>102 %</i>		<i>70 - 130</i>		B3B0118	02/07/2013	<i>02/07/13 10:24</i>	



Certificate of Analysis

Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego, CA 92122

Project Number : RAYTHEON MAIN, 532.30

Report To : Steve Netto

Reported : 02/15/2013

Client Sample ID MW-32A

Lab ID: 1300389-04

1,4-Dioxane by EPA 8270/SIM: Isotope Dilution Technique

Analyst: MFR

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,4-Dioxane	ND	0.20	0.13	1	B3B0162	02/08/2013	02/08/13 17:35	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	<i>80.0 %</i>		<i>36 - 107</i>		B3B0162	02/08/2013	<i>02/08/13 17:35</i>	
<i>Surrogate: 2-Fluorobiphenyl</i>	<i>104 %</i>		<i>42 - 120</i>		B3B0162	02/08/2013	<i>02/08/13 17:35</i>	
<i>Surrogate: 4-Terphenyl-d14</i>	<i>89.0 %</i>		<i>67 - 142</i>		B3B0162	02/08/2013	<i>02/08/13 17:35</i>	
<i>Surrogate: Nitrobenzene-d5</i>	<i>94.6 %</i>		<i>36 - 130</i>		B3B0162	02/08/2013	<i>02/08/13 17:35</i>	



Certificate of Analysis

Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego, CA 92122

Project Number : RAYTHEON MAIN, 532.30

Report To : Steve Netto

Reported : 02/15/2013

Client Sample ID MW-32C

Lab ID: 1300389-05

Volatile Organic Compounds by EPA 8260

Analyst: SL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 13:33	
1,1,1-Trichloroethane	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 13:33	
1,1,2,2-Tetrachloroethane	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 13:33	
1,1,2-Trichloroethane	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 13:33	
1,1-Dichloroethane	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 13:33	
1,1-Dichloroethene	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 13:33	
1,1-Dichloropropene	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 13:33	
1,2,3-Trichloropropane	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 13:33	
1,2,3-Trichlorobenzene	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 13:33	
1,2,4-Trichlorobenzene	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 13:33	
1,2,4-Trimethylbenzene	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 13:33	
1,2-Dibromo-3-chloropropane	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 13:33	
1,2-Dibromoethane	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 13:33	
1,2-Dichlorobenzene	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 13:33	
1,2-Dichloroethane	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 13:33	
1,2-Dichloropropane	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 13:33	
1,3,5-Trimethylbenzene	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 13:33	
1,3-Dichlorobenzene	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 13:33	
1,3-Dichloropropane	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 13:33	
1,4-Dichlorobenzene	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 13:33	
2,2-Dichloropropane	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 13:33	
2-Chlorotoluene	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 13:33	
4-Chlorotoluene	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 13:33	
4-Isopropyltoluene	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 13:33	
Benzene	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 13:33	
Bromobenzene	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 13:33	
Bromodichloromethane	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 13:33	
Bromoform	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 13:33	
Bromomethane	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 13:33	
Carbon tetrachloride	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 13:33	
Chlorobenzene	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 13:33	
Chloroethane	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 13:33	
Chloroform	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 13:33	
Chloromethane	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 13:33	
cis-1,2-Dichloroethene	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 13:33	
cis-1,3-Dichloropropene	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 13:33	
Dibromochloromethane	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 13:33	



Certificate of Analysis

Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : RAYTHEON MAIN, 532.30

Report To : Steve Netto

Reported : 02/15/2013

Client Sample ID MW-32C

Lab ID: 1300389-05

Volatile Organic Compounds by EPA 8260

Analyst: SL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Dibromomethane	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 13:33	
Dichlorodifluoromethane	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 13:33	
Ethylbenzene	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 13:33	
Hexachlorobutadiene	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 13:33	
Isopropylbenzene	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 13:33	
m,p-Xylene	ND	1.0	NA	1	B3B0118	02/07/2013	02/07/13 13:33	
Methylene chloride	ND	1.0	NA	1	B3B0118	02/07/2013	02/07/13 13:33	
n-Butylbenzene	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 13:33	
n-Propylbenzene	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 13:33	
Naphthalene	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 13:33	
o-Xylene	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 13:33	
sec-Butylbenzene	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 13:33	
Styrene	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 13:33	
tert-Butylbenzene	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 13:33	
Tetrachloroethene	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 13:33	
Toluene	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 13:33	
trans-1,2-Dichloroethene	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 13:33	
Trichloroethene	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 13:33	
Trichlorofluoromethane	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 13:33	
Vinyl chloride	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 13:33	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>117 %</i>		<i>70 - 130</i>		B3B0118	02/07/2013	<i>02/07/13 13:33</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>94.0 %</i>		<i>70 - 130</i>		B3B0118	02/07/2013	<i>02/07/13 13:33</i>	
<i>Surrogate: Dibromofluoromethane</i>	<i>116 %</i>		<i>70 - 130</i>		B3B0118	02/07/2013	<i>02/07/13 13:33</i>	
<i>Surrogate: Toluene-d8</i>	<i>105 %</i>		<i>70 - 130</i>		B3B0118	02/07/2013	<i>02/07/13 13:33</i>	



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Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : RAYTHEON MAIN, 532.30

Report To : Steve Netto

Reported : 02/15/2013

Client Sample ID MW-32C

Lab ID: 1300389-05

1,4-Dioxane by EPA 8270/SIM: Isotope Dilution Technique

Analyst: MFR

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,4-Dioxane	ND	0.20	0.13	1	B3B0162	02/08/2013	02/08/13 23:16	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	<i>84.7 %</i>		<i>36 - 107</i>		B3B0162	02/08/2013	<i>02/08/13 23:16</i>	
<i>Surrogate: 2-Fluorobiphenyl</i>	<i>110 %</i>		<i>42 - 120</i>		B3B0162	02/08/2013	<i>02/08/13 23:16</i>	
<i>Surrogate: 4-Terphenyl-d14</i>	<i>75.9 %</i>		<i>67 - 142</i>		B3B0162	02/08/2013	<i>02/08/13 23:16</i>	
<i>Surrogate: Nitrobenzene-d5</i>	<i>103 %</i>		<i>36 - 130</i>		B3B0162	02/08/2013	<i>02/08/13 23:16</i>	



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Hargis & Associates, Inc.

Project Number : RAYTHEON MAIN, 532.30

9171 Towne Centre Drive, Suite 375

Report To : Steve Netto

San Diego , CA 92122

Reported : 02/15/2013

Client Sample ID MW-3200B

Lab ID: 1300389-06

Volatile Organic Compounds by EPA 8260

Analyst: SL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	0.50	NA	1	B3B0085	02/06/2013	02/06/13 14:16	
1,1,1-Trichloroethane	ND	0.50	NA	1	B3B0085	02/06/2013	02/06/13 14:16	
1,1,2,2-Tetrachloroethane	ND	0.50	NA	1	B3B0085	02/06/2013	02/06/13 14:16	
1,1,2-Trichloroethane	ND	0.50	NA	1	B3B0085	02/06/2013	02/06/13 14:16	
1,1-Dichloroethane	1.0	0.50	NA	1	B3B0085	02/06/2013	02/06/13 14:16	
1,1-Dichloroethene	100	5.0	NA	10	B3B0085	02/06/2013	02/06/13 17:25	
1,1-Dichloropropene	ND	0.50	NA	1	B3B0085	02/06/2013	02/06/13 14:16	
1,2,3-Trichloropropane	ND	0.50	NA	1	B3B0085	02/06/2013	02/06/13 14:16	
1,2,3-Trichlorobenzene	ND	0.50	NA	1	B3B0085	02/06/2013	02/06/13 14:16	
1,2,4-Trichlorobenzene	ND	0.50	NA	1	B3B0085	02/06/2013	02/06/13 14:16	
1,2,4-Trimethylbenzene	ND	0.50	NA	1	B3B0085	02/06/2013	02/06/13 14:16	
1,2-Dibromo-3-chloropropane	ND	0.50	NA	1	B3B0085	02/06/2013	02/06/13 14:16	
1,2-Dibromoethane	ND	0.50	NA	1	B3B0085	02/06/2013	02/06/13 14:16	
1,2-Dichlorobenzene	ND	0.50	NA	1	B3B0085	02/06/2013	02/06/13 14:16	
1,2-Dichloroethane	ND	0.50	NA	1	B3B0085	02/06/2013	02/06/13 14:16	
1,2-Dichloropropane	ND	0.50	NA	1	B3B0085	02/06/2013	02/06/13 14:16	
1,3,5-Trimethylbenzene	ND	0.50	NA	1	B3B0085	02/06/2013	02/06/13 14:16	
1,3-Dichlorobenzene	ND	0.50	NA	1	B3B0085	02/06/2013	02/06/13 14:16	
1,3-Dichloropropane	ND	0.50	NA	1	B3B0085	02/06/2013	02/06/13 14:16	
1,4-Dichlorobenzene	ND	0.50	NA	1	B3B0085	02/06/2013	02/06/13 14:16	
2,2-Dichloropropane	ND	0.50	NA	1	B3B0085	02/06/2013	02/06/13 14:16	
2-Chlorotoluene	ND	0.50	NA	1	B3B0085	02/06/2013	02/06/13 14:16	
4-Chlorotoluene	ND	0.50	NA	1	B3B0085	02/06/2013	02/06/13 14:16	
4-Isopropyltoluene	ND	0.50	NA	1	B3B0085	02/06/2013	02/06/13 14:16	
Benzene	ND	0.50	NA	1	B3B0085	02/06/2013	02/06/13 14:16	
Bromobenzene	ND	0.50	NA	1	B3B0085	02/06/2013	02/06/13 14:16	
Bromodichloromethane	ND	0.50	NA	1	B3B0085	02/06/2013	02/06/13 14:16	
Bromoform	ND	0.50	NA	1	B3B0085	02/06/2013	02/06/13 14:16	
Bromomethane	ND	0.50	NA	1	B3B0085	02/06/2013	02/06/13 14:16	
Carbon tetrachloride	ND	0.50	NA	1	B3B0085	02/06/2013	02/06/13 14:16	
Chlorobenzene	ND	0.50	NA	1	B3B0085	02/06/2013	02/06/13 14:16	
Chloroethane	ND	0.50	NA	1	B3B0085	02/06/2013	02/06/13 14:16	
Chloroform	ND	0.50	NA	1	B3B0085	02/06/2013	02/06/13 14:16	
Chloromethane	ND	0.50	NA	1	B3B0085	02/06/2013	02/06/13 14:16	
cis-1,2-Dichloroethene	5.0	0.50	NA	1	B3B0085	02/06/2013	02/06/13 14:16	
cis-1,3-Dichloropropene	ND	0.50	NA	1	B3B0085	02/06/2013	02/06/13 14:16	
Dibromochloromethane	ND	0.50	NA	1	B3B0085	02/06/2013	02/06/13 14:16	



Certificate of Analysis

Hargis & Associates, Inc.

Project Number : RAYTHEON MAIN, 532.30

9171 Towne Centre Drive, Suite 375

Report To : Steve Netto

San Diego , CA 92122

Reported : 02/15/2013

Client Sample ID MW-3200B

Lab ID: 1300389-06

Volatile Organic Compounds by EPA 8260

Analyst: SL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Dibromomethane	ND	0.50	NA	1	B3B0085	02/06/2013	02/06/13 14:16	
Dichlorodifluoromethane	ND	0.50	NA	1	B3B0085	02/06/2013	02/06/13 14:16	
Ethylbenzene	ND	0.50	NA	1	B3B0085	02/06/2013	02/06/13 14:16	
Hexachlorobutadiene	ND	0.50	NA	1	B3B0085	02/06/2013	02/06/13 14:16	
Isopropylbenzene	ND	0.50	NA	1	B3B0085	02/06/2013	02/06/13 14:16	
m,p-Xylene	ND	1.0	NA	1	B3B0085	02/06/2013	02/06/13 14:16	
Methylene chloride	ND	1.0	NA	1	B3B0085	02/06/2013	02/06/13 14:16	
n-Butylbenzene	ND	0.50	NA	1	B3B0085	02/06/2013	02/06/13 14:16	
n-Propylbenzene	ND	0.50	NA	1	B3B0085	02/06/2013	02/06/13 14:16	
Naphthalene	ND	0.50	NA	1	B3B0085	02/06/2013	02/06/13 14:16	
o-Xylene	ND	0.50	NA	1	B3B0085	02/06/2013	02/06/13 14:16	
sec-Butylbenzene	ND	0.50	NA	1	B3B0085	02/06/2013	02/06/13 14:16	
Styrene	ND	0.50	NA	1	B3B0085	02/06/2013	02/06/13 14:16	
tert-Butylbenzene	ND	0.50	NA	1	B3B0085	02/06/2013	02/06/13 14:16	
Tetrachloroethene	ND	0.50	NA	1	B3B0085	02/06/2013	02/06/13 14:16	
Toluene	ND	0.50	NA	1	B3B0085	02/06/2013	02/06/13 14:16	
trans-1,2-Dichloroethene	ND	0.50	NA	1	B3B0085	02/06/2013	02/06/13 14:16	
Trichloroethene	54	0.50	NA	1	B3B0085	02/06/2013	02/06/13 14:16	
Trichlorofluoromethane	ND	0.50	NA	1	B3B0085	02/06/2013	02/06/13 14:16	
Vinyl chloride	ND	0.50	NA	1	B3B0085	02/06/2013	02/06/13 14:16	

<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>113 %</i>		<i>70 - 130</i>		B3B0085	02/06/2013	<i>02/06/13 17:25</i>	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>117 %</i>		<i>70 - 130</i>		B3B0085	02/06/2013	<i>02/06/13 14:16</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>89.2 %</i>		<i>70 - 130</i>		B3B0085	02/06/2013	<i>02/06/13 17:25</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>95.8 %</i>		<i>70 - 130</i>		B3B0085	02/06/2013	<i>02/06/13 14:16</i>	
<i>Surrogate: Dibromofluoromethane</i>	<i>117 %</i>		<i>70 - 130</i>		B3B0085	02/06/2013	<i>02/06/13 14:16</i>	
<i>Surrogate: Dibromofluoromethane</i>	<i>115 %</i>		<i>70 - 130</i>		B3B0085	02/06/2013	<i>02/06/13 17:25</i>	
<i>Surrogate: Toluene-d8</i>	<i>106 %</i>		<i>70 - 130</i>		B3B0085	02/06/2013	<i>02/06/13 14:16</i>	
<i>Surrogate: Toluene-d8</i>	<i>102 %</i>		<i>70 - 130</i>		B3B0085	02/06/2013	<i>02/06/13 17:25</i>	



Certificate of Analysis

Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego, CA 92122

Project Number : RAYTHEON MAIN, 532.30

Report To : Steve Netto

Reported : 02/15/2013

Client Sample ID MW-3200B

Lab ID: 1300389-06

1,4-Dioxane by EPA 8270/SIM: Isotope Dilution Technique

Analyst: MFR

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,4-Dioxane	3.0	0.20	0.13	1	B3B0162	02/08/2013	02/09/13 00:04	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	58.8 %		36 - 107		B3B0162	02/08/2013	02/09/13 00:04	
<i>Surrogate: 2-Fluorobiphenyl</i>	93.5 %		42 - 120		B3B0162	02/08/2013	02/09/13 00:04	
<i>Surrogate: 4-Terphenyl-d14</i>	75.8 %		67 - 142		B3B0162	02/08/2013	02/09/13 00:04	
<i>Surrogate: Nitrobenzene-d5</i>	81.4 %		36 - 130		B3B0162	02/08/2013	02/09/13 00:04	



Certificate of Analysis

Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego, CA 92122

Project Number : RAYTHEON MAIN, 532.30

Report To : Steve Netto

Reported : 02/15/2013

Client Sample ID MW-32B

Lab ID: 1300389-07

Volatile Organic Compounds by EPA 8260

Analyst: SL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	0.50	NA	1	B3B0085	02/06/2013	02/06/13 14:40	
1,1,1-Trichloroethane	ND	0.50	NA	1	B3B0085	02/06/2013	02/06/13 14:40	
1,1,2,2-Tetrachloroethane	ND	0.50	NA	1	B3B0085	02/06/2013	02/06/13 14:40	
1,1,2-Trichloroethane	ND	0.50	NA	1	B3B0085	02/06/2013	02/06/13 14:40	
1,1-Dichloroethane	0.92	0.50	NA	1	B3B0085	02/06/2013	02/06/13 14:40	
1,1-Dichloroethene	100	5.0	NA	10	B3B0085	02/06/2013	02/06/13 17:48	
1,1-Dichloropropene	ND	0.50	NA	1	B3B0085	02/06/2013	02/06/13 14:40	
1,2,3-Trichloropropane	ND	0.50	NA	1	B3B0085	02/06/2013	02/06/13 14:40	
1,2,3-Trichlorobenzene	ND	0.50	NA	1	B3B0085	02/06/2013	02/06/13 14:40	
1,2,4-Trichlorobenzene	ND	0.50	NA	1	B3B0085	02/06/2013	02/06/13 14:40	
1,2,4-Trimethylbenzene	ND	0.50	NA	1	B3B0085	02/06/2013	02/06/13 14:40	
1,2-Dibromo-3-chloropropane	ND	0.50	NA	1	B3B0085	02/06/2013	02/06/13 14:40	
1,2-Dibromoethane	ND	0.50	NA	1	B3B0085	02/06/2013	02/06/13 14:40	
1,2-Dichlorobenzene	ND	0.50	NA	1	B3B0085	02/06/2013	02/06/13 14:40	
1,2-Dichloroethane	ND	0.50	NA	1	B3B0085	02/06/2013	02/06/13 14:40	
1,2-Dichloropropane	ND	0.50	NA	1	B3B0085	02/06/2013	02/06/13 14:40	
1,3,5-Trimethylbenzene	ND	0.50	NA	1	B3B0085	02/06/2013	02/06/13 14:40	
1,3-Dichlorobenzene	ND	0.50	NA	1	B3B0085	02/06/2013	02/06/13 14:40	
1,3-Dichloropropane	ND	0.50	NA	1	B3B0085	02/06/2013	02/06/13 14:40	
1,4-Dichlorobenzene	ND	0.50	NA	1	B3B0085	02/06/2013	02/06/13 14:40	
2,2-Dichloropropane	ND	0.50	NA	1	B3B0085	02/06/2013	02/06/13 14:40	
2-Chlorotoluene	ND	0.50	NA	1	B3B0085	02/06/2013	02/06/13 14:40	
4-Chlorotoluene	ND	0.50	NA	1	B3B0085	02/06/2013	02/06/13 14:40	
4-Isopropyltoluene	ND	0.50	NA	1	B3B0085	02/06/2013	02/06/13 14:40	
Benzene	ND	0.50	NA	1	B3B0085	02/06/2013	02/06/13 14:40	
Bromobenzene	ND	0.50	NA	1	B3B0085	02/06/2013	02/06/13 14:40	
Bromodichloromethane	ND	0.50	NA	1	B3B0085	02/06/2013	02/06/13 14:40	
Bromoform	ND	0.50	NA	1	B3B0085	02/06/2013	02/06/13 14:40	
Bromomethane	ND	0.50	NA	1	B3B0085	02/06/2013	02/06/13 14:40	
Carbon tetrachloride	ND	0.50	NA	1	B3B0085	02/06/2013	02/06/13 14:40	
Chlorobenzene	ND	0.50	NA	1	B3B0085	02/06/2013	02/06/13 14:40	
Chloroethane	ND	0.50	NA	1	B3B0085	02/06/2013	02/06/13 14:40	
Chloroform	ND	0.50	NA	1	B3B0085	02/06/2013	02/06/13 14:40	
Chloromethane	ND	0.50	NA	1	B3B0085	02/06/2013	02/06/13 14:40	
cis-1,2-Dichloroethene	4.8	0.50	NA	1	B3B0085	02/06/2013	02/06/13 14:40	
cis-1,3-Dichloropropane	ND	0.50	NA	1	B3B0085	02/06/2013	02/06/13 14:40	
Dibromochloromethane	ND	0.50	NA	1	B3B0085	02/06/2013	02/06/13 14:40	



Certificate of Analysis

Hargis & Associates, Inc.

Project Number : RAYTHEON MAIN, 532.30

9171 Towne Centre Drive, Suite 375

Report To : Steve Netto

San Diego , CA 92122

Reported : 02/15/2013

Client Sample ID MW-32B

Lab ID: 1300389-07

Volatile Organic Compounds by EPA 8260

Analyst: SL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Dibromomethane	ND	0.50	NA	1	B3B0085	02/06/2013	02/06/13 14:40	
Dichlorodifluoromethane	ND	0.50	NA	1	B3B0085	02/06/2013	02/06/13 14:40	
Ethylbenzene	ND	0.50	NA	1	B3B0085	02/06/2013	02/06/13 14:40	
Hexachlorobutadiene	ND	0.50	NA	1	B3B0085	02/06/2013	02/06/13 14:40	
Isopropylbenzene	ND	0.50	NA	1	B3B0085	02/06/2013	02/06/13 14:40	
m,p-Xylene	ND	1.0	NA	1	B3B0085	02/06/2013	02/06/13 14:40	
Methylene chloride	ND	1.0	NA	1	B3B0085	02/06/2013	02/06/13 14:40	
n-Butylbenzene	ND	0.50	NA	1	B3B0085	02/06/2013	02/06/13 14:40	
n-Propylbenzene	ND	0.50	NA	1	B3B0085	02/06/2013	02/06/13 14:40	
Naphthalene	ND	0.50	NA	1	B3B0085	02/06/2013	02/06/13 14:40	
o-Xylene	ND	0.50	NA	1	B3B0085	02/06/2013	02/06/13 14:40	
sec-Butylbenzene	ND	0.50	NA	1	B3B0085	02/06/2013	02/06/13 14:40	
Styrene	ND	0.50	NA	1	B3B0085	02/06/2013	02/06/13 14:40	
tert-Butylbenzene	ND	0.50	NA	1	B3B0085	02/06/2013	02/06/13 14:40	
Tetrachloroethene	ND	0.50	NA	1	B3B0085	02/06/2013	02/06/13 14:40	
Toluene	ND	0.50	NA	1	B3B0085	02/06/2013	02/06/13 14:40	
trans-1,2-Dichloroethene	ND	0.50	NA	1	B3B0085	02/06/2013	02/06/13 14:40	
Trichloroethene	53	0.50	NA	1	B3B0085	02/06/2013	02/06/13 14:40	
Trichlorofluoromethane	ND	0.50	NA	1	B3B0085	02/06/2013	02/06/13 14:40	
Vinyl chloride	ND	0.50	NA	1	B3B0085	02/06/2013	02/06/13 14:40	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>110 %</i>		<i>70 - 130</i>		B3B0085	02/06/2013	<i>02/06/13 17:48</i>	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>115 %</i>		<i>70 - 130</i>		B3B0085	02/06/2013	<i>02/06/13 14:40</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>90.4 %</i>		<i>70 - 130</i>		B3B0085	02/06/2013	<i>02/06/13 17:48</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>93.1 %</i>		<i>70 - 130</i>		B3B0085	02/06/2013	<i>02/06/13 14:40</i>	
<i>Surrogate: Dibromofluoromethane</i>	<i>116 %</i>		<i>70 - 130</i>		B3B0085	02/06/2013	<i>02/06/13 14:40</i>	
<i>Surrogate: Dibromofluoromethane</i>	<i>111 %</i>		<i>70 - 130</i>		B3B0085	02/06/2013	<i>02/06/13 17:48</i>	
<i>Surrogate: Toluene-d8</i>	<i>102 %</i>		<i>70 - 130</i>		B3B0085	02/06/2013	<i>02/06/13 17:48</i>	
<i>Surrogate: Toluene-d8</i>	<i>104 %</i>		<i>70 - 130</i>		B3B0085	02/06/2013	<i>02/06/13 14:40</i>	



Certificate of Analysis

Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego, CA 92122

Project Number : RAYTHEON MAIN, 532.30

Report To : Steve Netto

Reported : 02/15/2013

Client Sample ID MW-32B

Lab ID: 1300389-07

1,4-Dioxane by EPA 8270/SIM: Isotope Dilution Technique

Analyst: MFR

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,4-Dioxane	3.1	0.20	0.13	1	B3B0162	02/08/2013	02/08/13 17:59	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	<i>60.0 %</i>		<i>36 - 107</i>		B3B0162	02/08/2013	<i>02/08/13 17:59</i>	
<i>Surrogate: 2-Fluorobiphenyl</i>	<i>91.9 %</i>		<i>42 - 120</i>		B3B0162	02/08/2013	<i>02/08/13 17:59</i>	
<i>Surrogate: 4-Terphenyl-d14</i>	<i>81.3 %</i>		<i>67 - 142</i>		B3B0162	02/08/2013	<i>02/08/13 17:59</i>	
<i>Surrogate: Nitrobenzene-d5</i>	<i>79.5 %</i>		<i>36 - 130</i>		B3B0162	02/08/2013	<i>02/08/13 17:59</i>	



Certificate of Analysis

Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego, CA 92122

Project Number : RAYTHEON MAIN, 532.30

Report To : Steve Netto

Reported : 02/15/2013

Client Sample ID RB-020513

Lab ID: 1300389-08

Volatile Organic Compounds by EPA 8260

Analyst: SL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	0.50	NA	1	B3B0085	02/06/2013	02/06/13 13:29	
1,1,1-Trichloroethane	ND	0.50	NA	1	B3B0085	02/06/2013	02/06/13 13:29	
1,1,2,2-Tetrachloroethane	ND	0.50	NA	1	B3B0085	02/06/2013	02/06/13 13:29	
1,1,2-Trichloroethane	ND	0.50	NA	1	B3B0085	02/06/2013	02/06/13 13:29	
1,1-Dichloroethane	ND	0.50	NA	1	B3B0085	02/06/2013	02/06/13 13:29	
1,1-Dichloroethene	ND	0.50	NA	1	B3B0085	02/06/2013	02/06/13 13:29	
1,1-Dichloropropene	ND	0.50	NA	1	B3B0085	02/06/2013	02/06/13 13:29	
1,2,3-Trichloropropane	ND	0.50	NA	1	B3B0085	02/06/2013	02/06/13 13:29	
1,2,3-Trichlorobenzene	ND	0.50	NA	1	B3B0085	02/06/2013	02/06/13 13:29	
1,2,4-Trichlorobenzene	ND	0.50	NA	1	B3B0085	02/06/2013	02/06/13 13:29	
1,2,4-Trimethylbenzene	ND	0.50	NA	1	B3B0085	02/06/2013	02/06/13 13:29	
1,2-Dibromo-3-chloropropane	ND	0.50	NA	1	B3B0085	02/06/2013	02/06/13 13:29	
1,2-Dibromoethane	ND	0.50	NA	1	B3B0085	02/06/2013	02/06/13 13:29	
1,2-Dichlorobenzene	ND	0.50	NA	1	B3B0085	02/06/2013	02/06/13 13:29	
1,2-Dichloroethane	ND	0.50	NA	1	B3B0085	02/06/2013	02/06/13 13:29	
1,2-Dichloropropane	ND	0.50	NA	1	B3B0085	02/06/2013	02/06/13 13:29	
1,3,5-Trimethylbenzene	ND	0.50	NA	1	B3B0085	02/06/2013	02/06/13 13:29	
1,3-Dichlorobenzene	ND	0.50	NA	1	B3B0085	02/06/2013	02/06/13 13:29	
1,3-Dichloropropane	ND	0.50	NA	1	B3B0085	02/06/2013	02/06/13 13:29	
1,4-Dichlorobenzene	ND	0.50	NA	1	B3B0085	02/06/2013	02/06/13 13:29	
2,2-Dichloropropane	ND	0.50	NA	1	B3B0085	02/06/2013	02/06/13 13:29	
2-Chlorotoluene	ND	0.50	NA	1	B3B0085	02/06/2013	02/06/13 13:29	
4-Chlorotoluene	ND	0.50	NA	1	B3B0085	02/06/2013	02/06/13 13:29	
4-Isopropyltoluene	ND	0.50	NA	1	B3B0085	02/06/2013	02/06/13 13:29	
Benzene	ND	0.50	NA	1	B3B0085	02/06/2013	02/06/13 13:29	
Bromobenzene	ND	0.50	NA	1	B3B0085	02/06/2013	02/06/13 13:29	
Bromodichloromethane	ND	0.50	NA	1	B3B0085	02/06/2013	02/06/13 13:29	
Bromoform	ND	0.50	NA	1	B3B0085	02/06/2013	02/06/13 13:29	
Bromomethane	ND	0.50	NA	1	B3B0085	02/06/2013	02/06/13 13:29	
Carbon tetrachloride	ND	0.50	NA	1	B3B0085	02/06/2013	02/06/13 13:29	
Chlorobenzene	ND	0.50	NA	1	B3B0085	02/06/2013	02/06/13 13:29	
Chloroethane	ND	0.50	NA	1	B3B0085	02/06/2013	02/06/13 13:29	
Chloroform	ND	0.50	NA	1	B3B0085	02/06/2013	02/06/13 13:29	
Chloromethane	ND	0.50	NA	1	B3B0085	02/06/2013	02/06/13 13:29	
cis-1,2-Dichloroethene	ND	0.50	NA	1	B3B0085	02/06/2013	02/06/13 13:29	
cis-1,3-Dichloropropene	ND	0.50	NA	1	B3B0085	02/06/2013	02/06/13 13:29	
Dibromochloromethane	ND	0.50	NA	1	B3B0085	02/06/2013	02/06/13 13:29	



Certificate of Analysis

Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : RAYTHEON MAIN, 532.30

Report To : Steve Netto

Reported : 02/15/2013

Client Sample ID RB-020513

Lab ID: 1300389-08

Volatile Organic Compounds by EPA 8260

Analyst: SL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Dibromomethane	ND	0.50	NA	1	B3B0085	02/06/2013	02/06/13 13:29	
Dichlorodifluoromethane	ND	0.50	NA	1	B3B0085	02/06/2013	02/06/13 13:29	
Ethylbenzene	ND	0.50	NA	1	B3B0085	02/06/2013	02/06/13 13:29	
Hexachlorobutadiene	ND	0.50	NA	1	B3B0085	02/06/2013	02/06/13 13:29	
Isopropylbenzene	ND	0.50	NA	1	B3B0085	02/06/2013	02/06/13 13:29	
m,p-Xylene	ND	1.0	NA	1	B3B0085	02/06/2013	02/06/13 13:29	
Methylene chloride	ND	1.0	NA	1	B3B0085	02/06/2013	02/06/13 13:29	
n-Butylbenzene	ND	0.50	NA	1	B3B0085	02/06/2013	02/06/13 13:29	
n-Propylbenzene	ND	0.50	NA	1	B3B0085	02/06/2013	02/06/13 13:29	
Naphthalene	ND	0.50	NA	1	B3B0085	02/06/2013	02/06/13 13:29	
o-Xylene	ND	0.50	NA	1	B3B0085	02/06/2013	02/06/13 13:29	
sec-Butylbenzene	ND	0.50	NA	1	B3B0085	02/06/2013	02/06/13 13:29	
Styrene	ND	0.50	NA	1	B3B0085	02/06/2013	02/06/13 13:29	
tert-Butylbenzene	ND	0.50	NA	1	B3B0085	02/06/2013	02/06/13 13:29	
Tetrachloroethene	ND	0.50	NA	1	B3B0085	02/06/2013	02/06/13 13:29	
Toluene	ND	0.50	NA	1	B3B0085	02/06/2013	02/06/13 13:29	
trans-1,2-Dichloroethene	ND	0.50	NA	1	B3B0085	02/06/2013	02/06/13 13:29	
Trichloroethene	ND	0.50	NA	1	B3B0085	02/06/2013	02/06/13 13:29	
Trichlorofluoromethane	ND	0.50	NA	1	B3B0085	02/06/2013	02/06/13 13:29	
Vinyl chloride	ND	0.50	NA	1	B3B0085	02/06/2013	02/06/13 13:29	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>109 %</i>		<i>70 - 130</i>		B3B0085	02/06/2013	<i>02/06/13 13:29</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>90.2 %</i>		<i>70 - 130</i>		B3B0085	02/06/2013	<i>02/06/13 13:29</i>	
<i>Surrogate: Dibromofluoromethane</i>	<i>111 %</i>		<i>70 - 130</i>		B3B0085	02/06/2013	<i>02/06/13 13:29</i>	
<i>Surrogate: Toluene-d8</i>	<i>101 %</i>		<i>70 - 130</i>		B3B0085	02/06/2013	<i>02/06/13 13:29</i>	



Certificate of Analysis

Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego, CA 92122

Project Number : RAYTHEON MAIN, 532.30

Report To : Steve Netto

Reported : 02/15/2013

Client Sample ID MW-18

Lab ID: 1300389-09

Volatile Organic Compounds by EPA 8260

Analyst: SL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 13:56	
1,1,1-Trichloroethane	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 13:56	
1,1,2,2-Tetrachloroethane	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 13:56	
1,1,2-Trichloroethane	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 13:56	
1,1-Dichloroethane	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 13:56	
1,1-Dichloroethene	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 13:56	
1,1-Dichloropropene	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 13:56	
1,2,3-Trichloropropane	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 13:56	
1,2,3-Trichlorobenzene	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 13:56	
1,2,4-Trichlorobenzene	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 13:56	
1,2,4-Trimethylbenzene	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 13:56	
1,2-Dibromo-3-chloropropane	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 13:56	
1,2-Dibromoethane	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 13:56	
1,2-Dichlorobenzene	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 13:56	
1,2-Dichloroethane	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 13:56	
1,2-Dichloropropane	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 13:56	
1,3,5-Trimethylbenzene	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 13:56	
1,3-Dichlorobenzene	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 13:56	
1,3-Dichloropropane	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 13:56	
1,4-Dichlorobenzene	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 13:56	
2,2-Dichloropropane	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 13:56	
2-Chlorotoluene	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 13:56	
4-Chlorotoluene	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 13:56	
4-Isopropyltoluene	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 13:56	
Benzene	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 13:56	
Bromobenzene	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 13:56	
Bromodichloromethane	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 13:56	
Bromoform	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 13:56	
Bromomethane	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 13:56	
Carbon tetrachloride	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 13:56	
Chlorobenzene	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 13:56	
Chloroethane	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 13:56	
Chloroform	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 13:56	
Chloromethane	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 13:56	
cis-1,2-Dichloroethene	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 13:56	
cis-1,3-Dichloropropene	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 13:56	
Dibromochloromethane	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 13:56	



Certificate of Analysis

Hargis & Associates, Inc.

Project Number : RAYTHEON MAIN, 532.30

9171 Towne Centre Drive, Suite 375

Report To : Steve Netto

San Diego , CA 92122

Reported : 02/15/2013

Client Sample ID MW-18

Lab ID: 1300389-09

Volatile Organic Compounds by EPA 8260

Analyst: SL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Dibromomethane	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 13:56	
Dichlorodifluoromethane	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 13:56	
Ethylbenzene	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 13:56	
Hexachlorobutadiene	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 13:56	
Isopropylbenzene	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 13:56	
m,p-Xylene	ND	1.0	NA	1	B3B0118	02/07/2013	02/07/13 13:56	
Methylene chloride	ND	1.0	NA	1	B3B0118	02/07/2013	02/07/13 13:56	
n-Butylbenzene	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 13:56	
n-Propylbenzene	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 13:56	
Naphthalene	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 13:56	
o-Xylene	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 13:56	
sec-Butylbenzene	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 13:56	
Styrene	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 13:56	
tert-Butylbenzene	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 13:56	
Tetrachloroethene	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 13:56	
Toluene	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 13:56	
trans-1,2-Dichloroethene	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 13:56	
Trichloroethene	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 13:56	
Trichlorofluoromethane	1.2	0.50	NA	1	B3B0118	02/07/2013	02/07/13 13:56	
Vinyl chloride	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 13:56	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>117 %</i>		<i>70 - 130</i>		B3B0118	02/07/2013	<i>02/07/13 13:56</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>93.2 %</i>		<i>70 - 130</i>		B3B0118	02/07/2013	<i>02/07/13 13:56</i>	
<i>Surrogate: Dibromofluoromethane</i>	<i>117 %</i>		<i>70 - 130</i>		B3B0118	02/07/2013	<i>02/07/13 13:56</i>	
<i>Surrogate: Toluene-d8</i>	<i>105 %</i>		<i>70 - 130</i>		B3B0118	02/07/2013	<i>02/07/13 13:56</i>	



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Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego, CA 92122

Project Number : RAYTHEON MAIN, 532.30

Report To : Steve Netto

Reported : 02/15/2013

Client Sample ID MW-18

Lab ID: 1300389-09

1,4-Dioxane by EPA 8270/SIM: Isotope Dilution Technique

Analyst: MFR

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,4-Dioxane	ND	0.20	0.13	1	B3B0162	02/08/2013	02/08/13 18:24	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	<i>74.6 %</i>		<i>36 - 107</i>		B3B0162	02/08/2013	<i>02/08/13 18:24</i>	
<i>Surrogate: 2-Fluorobiphenyl</i>	<i>102 %</i>		<i>42 - 120</i>		B3B0162	02/08/2013	<i>02/08/13 18:24</i>	
<i>Surrogate: 4-Terphenyl-d14</i>	<i>76.7 %</i>		<i>67 - 142</i>		B3B0162	02/08/2013	<i>02/08/13 18:24</i>	
<i>Surrogate: Nitrobenzene-d5</i>	<i>88.2 %</i>		<i>36 - 130</i>		B3B0162	02/08/2013	<i>02/08/13 18:24</i>	



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Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego, CA 92122

Project Number : RAYTHEON MAIN, 532.30

Report To : Steve Netto

Reported : 02/15/2013

Client Sample ID MW-6

Lab ID: 1300389-10

Volatile Organic Compounds by EPA 8260

Analyst: SL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 15:07	
1,1,1-Trichloroethane	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 15:07	
1,1,2,2-Tetrachloroethane	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 15:07	
1,1,2-Trichloroethane	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 15:07	
1,1-Dichloroethane	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 15:07	
1,1-Dichloroethene	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 15:07	
1,1-Dichloropropene	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 15:07	
1,2,3-Trichloropropane	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 15:07	
1,2,3-Trichlorobenzene	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 15:07	
1,2,4-Trichlorobenzene	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 15:07	
1,2,4-Trimethylbenzene	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 15:07	
1,2-Dibromo-3-chloropropane	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 15:07	
1,2-Dibromoethane	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 15:07	
1,2-Dichlorobenzene	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 15:07	
1,2-Dichloroethane	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 15:07	
1,2-Dichloropropane	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 15:07	
1,3,5-Trimethylbenzene	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 15:07	
1,3-Dichlorobenzene	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 15:07	
1,3-Dichloropropane	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 15:07	
1,4-Dichlorobenzene	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 15:07	
2,2-Dichloropropane	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 15:07	
2-Chlorotoluene	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 15:07	
4-Chlorotoluene	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 15:07	
4-Isopropyltoluene	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 15:07	
Benzene	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 15:07	
Bromobenzene	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 15:07	
Bromodichloromethane	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 15:07	
Bromoform	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 15:07	
Bromomethane	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 15:07	
Carbon tetrachloride	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 15:07	
Chlorobenzene	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 15:07	
Chloroethane	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 15:07	
Chloroform	1.5	0.50	NA	1	B3B0118	02/07/2013	02/07/13 15:07	
Chloromethane	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 15:07	
cis-1,2-Dichloroethene	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 15:07	
cis-1,3-Dichloropropene	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 15:07	
Dibromochloromethane	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 15:07	



Certificate of Analysis

Hargis & Associates, Inc.

Project Number : RAYTHEON MAIN, 532.30

9171 Towne Centre Drive, Suite 375

Report To : Steve Netto

San Diego , CA 92122

Reported : 02/15/2013

Client Sample ID MW-6

Lab ID: 1300389-10

Volatile Organic Compounds by EPA 8260

Analyst: SL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Dibromomethane	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 15:07	
Dichlorodifluoromethane	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 15:07	
Ethylbenzene	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 15:07	
Hexachlorobutadiene	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 15:07	
Isopropylbenzene	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 15:07	
m,p-Xylene	ND	1.0	NA	1	B3B0118	02/07/2013	02/07/13 15:07	
Methylene chloride	ND	1.0	NA	1	B3B0118	02/07/2013	02/07/13 15:07	
n-Butylbenzene	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 15:07	
n-Propylbenzene	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 15:07	
Naphthalene	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 15:07	
o-Xylene	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 15:07	
sec-Butylbenzene	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 15:07	
Styrene	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 15:07	
tert-Butylbenzene	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 15:07	
Tetrachloroethene	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 15:07	
Toluene	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 15:07	
trans-1,2-Dichloroethene	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 15:07	
Trichloroethene	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 15:07	
Trichlorofluoromethane	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 15:07	
Vinyl chloride	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 15:07	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>123 %</i>		<i>70 - 130</i>		B3B0118	02/07/2013	<i>02/07/13 15:07</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>96.9 %</i>		<i>70 - 130</i>		B3B0118	02/07/2013	<i>02/07/13 15:07</i>	
<i>Surrogate: Dibromofluoromethane</i>	<i>123 %</i>		<i>70 - 130</i>		B3B0118	02/07/2013	<i>02/07/13 15:07</i>	
<i>Surrogate: Toluene-d8</i>	<i>109 %</i>		<i>70 - 130</i>		B3B0118	02/07/2013	<i>02/07/13 15:07</i>	



Certificate of Analysis

Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego, CA 92122

Project Number : RAYTHEON MAIN, 532.30

Report To : Steve Netto

Reported : 02/15/2013

Client Sample ID MW-34A

Lab ID: 1300389-11

Volatile Organic Compounds by EPA 8260

Analyst: SL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 14:20	
1,1,1-Trichloroethane	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 14:20	
1,1,2,2-Tetrachloroethane	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 14:20	
1,1,2-Trichloroethane	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 14:20	
1,1-Dichloroethane	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 14:20	
1,1-Dichloroethene	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 14:20	
1,1-Dichloropropene	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 14:20	
1,2,3-Trichloropropane	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 14:20	
1,2,3-Trichlorobenzene	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 14:20	
1,2,4-Trichlorobenzene	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 14:20	
1,2,4-Trimethylbenzene	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 14:20	
1,2-Dibromo-3-chloropropane	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 14:20	
1,2-Dibromoethane	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 14:20	
1,2-Dichlorobenzene	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 14:20	
1,2-Dichloroethane	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 14:20	
1,2-Dichloropropane	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 14:20	
1,3,5-Trimethylbenzene	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 14:20	
1,3-Dichlorobenzene	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 14:20	
1,3-Dichloropropane	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 14:20	
1,4-Dichlorobenzene	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 14:20	
2,2-Dichloropropane	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 14:20	
2-Chlorotoluene	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 14:20	
4-Chlorotoluene	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 14:20	
4-Isopropyltoluene	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 14:20	
Benzene	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 14:20	
Bromobenzene	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 14:20	
Bromodichloromethane	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 14:20	
Bromoform	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 14:20	
Bromomethane	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 14:20	
Carbon tetrachloride	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 14:20	
Chlorobenzene	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 14:20	
Chloroethane	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 14:20	
Chloroform	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 14:20	
Chloromethane	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 14:20	
cis-1,2-Dichloroethene	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 14:20	
cis-1,3-Dichloropropene	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 14:20	
Dibromochloromethane	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 14:20	



Certificate of Analysis

Hargis & Associates, Inc.

Project Number : RAYTHEON MAIN, 532.30

9171 Towne Centre Drive, Suite 375

Report To : Steve Netto

San Diego , CA 92122

Reported : 02/15/2013

Client Sample ID MW-34A

Lab ID: 1300389-11

Volatile Organic Compounds by EPA 8260

Analyst: SL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Dibromomethane	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 14:20	
Dichlorodifluoromethane	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 14:20	
Ethylbenzene	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 14:20	
Hexachlorobutadiene	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 14:20	
Isopropylbenzene	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 14:20	
m,p-Xylene	ND	1.0	NA	1	B3B0118	02/07/2013	02/07/13 14:20	
Methylene chloride	ND	1.0	NA	1	B3B0118	02/07/2013	02/07/13 14:20	
n-Butylbenzene	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 14:20	
n-Propylbenzene	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 14:20	
Naphthalene	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 14:20	
o-Xylene	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 14:20	
sec-Butylbenzene	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 14:20	
Styrene	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 14:20	
tert-Butylbenzene	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 14:20	
Tetrachloroethene	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 14:20	
Toluene	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 14:20	
trans-1,2-Dichloroethene	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 14:20	
Trichloroethene	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 14:20	
Trichlorofluoromethane	0.70	0.50	NA	1	B3B0118	02/07/2013	02/07/13 14:20	
Vinyl chloride	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 14:20	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>113 %</i>		<i>70 - 130</i>		B3B0118	02/07/2013	<i>02/07/13 14:20</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>89.6 %</i>		<i>70 - 130</i>		B3B0118	02/07/2013	<i>02/07/13 14:20</i>	
<i>Surrogate: Dibromofluoromethane</i>	<i>112 %</i>		<i>70 - 130</i>		B3B0118	02/07/2013	<i>02/07/13 14:20</i>	
<i>Surrogate: Toluene-d8</i>	<i>101 %</i>		<i>70 - 130</i>		B3B0118	02/07/2013	<i>02/07/13 14:20</i>	



Certificate of Analysis

Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego, CA 92122

Project Number : RAYTHEON MAIN, 532.30

Report To : Steve Netto

Reported : 02/15/2013

Client Sample ID MW-34A

Lab ID: 1300389-11

1,4-Dioxane by EPA 8270/SIM: Isotope Dilution Technique

Analyst: MFR

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,4-Dioxane	ND	0.20	0.13	1	B3B0162	02/08/2013	02/08/13 18:48	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	<i>71.7 %</i>		<i>36 - 107</i>		B3B0162	02/08/2013	<i>02/08/13 18:48</i>	
<i>Surrogate: 2-Fluorobiphenyl</i>	<i>97.1 %</i>		<i>42 - 120</i>		B3B0162	02/08/2013	<i>02/08/13 18:48</i>	
<i>Surrogate: 4-Terphenyl-d14</i>	<i>75.8 %</i>		<i>67 - 142</i>		B3B0162	02/08/2013	<i>02/08/13 18:48</i>	
<i>Surrogate: Nitrobenzene-d5</i>	<i>85.3 %</i>		<i>36 - 130</i>		B3B0162	02/08/2013	<i>02/08/13 18:48</i>	



Certificate of Analysis

Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego, CA 92122

Project Number : RAYTHEON MAIN, 532.30

Report To : Steve Netto

Reported : 02/15/2013

Client Sample ID MW-35B

Lab ID: 1300389-12

Volatile Organic Compounds by EPA 8260

Analyst: SL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 14:44	
1,1,1-Trichloroethane	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 14:44	
1,1,2,2-Tetrachloroethane	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 14:44	
1,1,2-Trichloroethane	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 14:44	
1,1-Dichloroethane	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 14:44	
1,1-Dichloroethene	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 14:44	
1,1-Dichloropropene	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 14:44	
1,2,3-Trichloropropane	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 14:44	
1,2,3-Trichlorobenzene	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 14:44	
1,2,4-Trichlorobenzene	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 14:44	
1,2,4-Trimethylbenzene	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 14:44	
1,2-Dibromo-3-chloropropane	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 14:44	
1,2-Dibromoethane	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 14:44	
1,2-Dichlorobenzene	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 14:44	
1,2-Dichloroethane	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 14:44	
1,2-Dichloropropane	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 14:44	
1,3,5-Trimethylbenzene	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 14:44	
1,3-Dichlorobenzene	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 14:44	
1,3-Dichloropropane	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 14:44	
1,4-Dichlorobenzene	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 14:44	
2,2-Dichloropropane	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 14:44	
2-Chlorotoluene	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 14:44	
4-Chlorotoluene	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 14:44	
4-Isopropyltoluene	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 14:44	
Benzene	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 14:44	
Bromobenzene	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 14:44	
Bromodichloromethane	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 14:44	
Bromoform	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 14:44	
Bromomethane	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 14:44	
Carbon tetrachloride	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 14:44	
Chlorobenzene	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 14:44	
Chloroethane	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 14:44	
Chloroform	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 14:44	
Chloromethane	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 14:44	
cis-1,2-Dichloroethene	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 14:44	
cis-1,3-Dichloropropene	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 14:44	
Dibromochloromethane	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 14:44	



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Hargis & Associates, Inc.

Project Number : RAYTHEON MAIN, 532.30

9171 Towne Centre Drive, Suite 375

Report To : Steve Netto

San Diego , CA 92122

Reported : 02/15/2013

Client Sample ID MW-35B

Lab ID: 1300389-12

Volatile Organic Compounds by EPA 8260

Analyst: SL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Dibromomethane	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 14:44	
Dichlorodifluoromethane	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 14:44	
Ethylbenzene	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 14:44	
Hexachlorobutadiene	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 14:44	
Isopropylbenzene	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 14:44	
m,p-Xylene	ND	1.0	NA	1	B3B0118	02/07/2013	02/07/13 14:44	
Methylene chloride	ND	1.0	NA	1	B3B0118	02/07/2013	02/07/13 14:44	
n-Butylbenzene	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 14:44	
n-Propylbenzene	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 14:44	
Naphthalene	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 14:44	
o-Xylene	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 14:44	
sec-Butylbenzene	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 14:44	
Styrene	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 14:44	
tert-Butylbenzene	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 14:44	
Tetrachloroethene	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 14:44	
Toluene	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 14:44	
trans-1,2-Dichloroethene	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 14:44	
Trichloroethene	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 14:44	
Trichlorofluoromethane	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 14:44	
Vinyl chloride	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 14:44	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>114 %</i>		<i>70 - 130</i>		B3B0118	02/07/2013	<i>02/07/13 14:44</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>88.0 %</i>		<i>70 - 130</i>		B3B0118	02/07/2013	<i>02/07/13 14:44</i>	
<i>Surrogate: Dibromofluoromethane</i>	<i>115 %</i>		<i>70 - 130</i>		B3B0118	02/07/2013	<i>02/07/13 14:44</i>	
<i>Surrogate: Toluene-d8</i>	<i>101 %</i>		<i>70 - 130</i>		B3B0118	02/07/2013	<i>02/07/13 14:44</i>	



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9171 Towne Centre Drive, Suite 375

San Diego, CA 92122

Project Number : RAYTHEON MAIN, 532.30

Report To : Steve Netto

Reported : 02/15/2013

Client Sample ID MW-35B

Lab ID: 1300389-12

1,4-Dioxane by EPA 8270/SIM: Isotope Dilution Technique

Analyst: MFR

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,4-Dioxane	ND	0.20	0.13	1	B3B0162	02/08/2013	02/08/13 19:12	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	52.3 %		36 - 107		B3B0162	02/08/2013	02/08/13 19:12	
<i>Surrogate: 2-Fluorobiphenyl</i>	84.8 %		42 - 120		B3B0162	02/08/2013	02/08/13 19:12	
<i>Surrogate: 4-Terphenyl-d14</i>	72.7 %		67 - 142		B3B0162	02/08/2013	02/08/13 19:12	
<i>Surrogate: Nitrobenzene-d5</i>	78.1 %		36 - 130		B3B0162	02/08/2013	02/08/13 19:12	



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San Diego , CA 92122

Project Number : RAYTHEON MAIN, 532.30

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QUALITY CONTROL SECTION

Volatile Organic Compounds by EPA 8260 - Quality Control

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B3B0085 - MSVOAW_LL

Blank (B3B0085-BLK1)

Prepared: 2/6/2013 Analyzed: 2/6/2013

1,1,1,2-Tetrachloroethane	ND	0.50				NR			
1,1,1-Trichloroethane	ND	0.50				NR			
1,1,2,2-Tetrachloroethane	ND	0.50				NR			
1,1,2-Trichloroethane	ND	0.50				NR			
1,1-Dichloroethane	ND	0.50				NR			
1,1-Dichloroethene	ND	0.50				NR			
1,1-Dichloropropene	ND	0.50				NR			
1,2,3-Trichloropropane	ND	0.50				NR			
1,2,3-Trichlorobenzene	ND	0.50				NR			
1,2,4-Trichlorobenzene	ND	0.50				NR			
1,2,4-Trimethylbenzene	ND	0.50				NR			
1,2-Dibromo-3-chloropropane	ND	0.50				NR			
1,2-Dibromoethane	ND	0.50				NR			
1,2-Dichlorobenzene	ND	0.50				NR			
1,2-Dichloroethane	ND	0.50				NR			
1,2-Dichloropropane	ND	0.50				NR			
1,3,5-Trimethylbenzene	ND	0.50				NR			
1,3-Dichlorobenzene	ND	0.50				NR			
1,3-Dichloropropane	ND	0.50				NR			
1,4-Dichlorobenzene	ND	0.50				NR			
2,2-Dichloropropane	ND	0.50				NR			
2-Chlorotoluene	ND	0.50				NR			
4-Chlorotoluene	ND	0.50				NR			
4-Isopropyltoluene	ND	0.50				NR			
Benzene	ND	0.50				NR			
Bromobenzene	ND	0.50				NR			
Bromodichloromethane	ND	0.50				NR			
Bromoform	ND	0.50				NR			
Bromomethane	ND	0.50				NR			
Carbon tetrachloride	ND	0.50				NR			
Chlorobenzene	ND	0.50				NR			
Chloroethane	ND	0.50				NR			
Chloroform	ND	0.50				NR			
Chloromethane	ND	0.50				NR			
cis-1,2-Dichloroethene	ND	0.50				NR			
cis-1,3-Dichloropropene	ND	0.50				NR			
Dibromochloromethane	ND	0.50				NR			
Dibromomethane	ND	0.50				NR			
Dichlorodifluoromethane	ND	0.50				NR			



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9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : RAYTHEON MAIN, 532.30

Report To : Steve Netto

Reported : 02/15/2013

Volatile Organic Compounds by EPA 8260 - Quality Control (cont'd)

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B3B0085 - MSVOAW_LL (continued)

Blank (B3B0085-BLK1) - Continued

Prepared: 2/6/2013 Analyzed: 2/6/2013

Ethylbenzene	ND	0.50					NR		
Hexachlorobutadiene	ND	0.50					NR		
Isopropylbenzene	ND	0.50					NR		
m,p-Xylene	ND	1.0					NR		
Methylene chloride	ND	1.0					NR		
n-Butylbenzene	ND	0.50					NR		
n-Propylbenzene	ND	0.50					NR		
Naphthalene	ND	0.50					NR		
o-Xylene	ND	0.50					NR		
sec-Butylbenzene	ND	0.50					NR		
Styrene	ND	0.50					NR		
tert-Butylbenzene	ND	0.50					NR		
Tetrachloroethene	ND	0.50					NR		
Toluene	ND	0.50					NR		
trans-1,2-Dichloroethene	ND	0.50					NR		
Trichloroethene	ND	0.50					NR		
Trichlorofluoromethane	ND	0.50					NR		
Vinyl chloride	ND	0.50					NR		

<i>Surrogate: 1,2-Dichloroethane-d4</i>	27.19		25.0000		109	70 - 130			
<i>Surrogate: 4-Bromofluorobenzene</i>	22.68		25.0000		90.7	70 - 130			
<i>Surrogate: Dibromofluoromethane</i>	27.66		25.0000		111	70 - 130			
<i>Surrogate: Toluene-d8</i>	25.57		25.0000		102	70 - 130			

LCS (B3B0085-BS1)

Prepared: 2/6/2013 Analyzed: 2/6/2013

1,1-Dichloroethene	15.7100		20.0000		78.6	70 - 130			
Benzene	32.9000		40.0000		82.2	70 - 130			
Chlorobenzene	19.1700		20.0000		95.8	70 - 130			
MTBE	22.5600		20.0000		113	70 - 130			
Toluene	36.0900		40.0000		90.2	70 - 130			
Trichloroethene	17.5300		20.0000		87.6	70 - 130			

<i>Surrogate: 1,2-Dichloroethane-d4</i>	31.65		25.0000		127	70 - 130			
<i>Surrogate: 4-Bromofluorobenzene</i>	24.30		25.0000		97.2	70 - 130			
<i>Surrogate: Dibromofluoromethane</i>	28.81		25.0000		115	70 - 130			
<i>Surrogate: Toluene-d8</i>	26.37		25.0000		105	70 - 130			

LCS Dup (B3B0085-BSD1)

Prepared: 2/6/2013 Analyzed: 2/6/2013

1,1-Dichloroethene	18.9200		20.0000		94.6	70 - 130	18.5	20	
Benzene	34.4800		40.0000		86.2	70 - 130	4.69	20	
Chlorobenzene	19.5500		20.0000		97.8	70 - 130	1.96	20	
MTBE	19.8200		20.0000		99.1	70 - 130	12.9	20	
Toluene	38.6300		40.0000		96.6	70 - 130	6.80	20	



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Volatile Organic Compounds by EPA 8260 - Quality Control (cont'd)

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec % Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B3B0085 - MSVOAW_LL (continued)

LCS Dup (B3B0085-BSD1) - Continued

Prepared: 2/6/2013 Analyzed: 2/6/2013

Trichloroethene	19.5000		20.0000		97.5	70 - 130	10.6	20	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>28.64</i>		<i>25.0000</i>		<i>115</i>	<i>70 - 130</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>23.52</i>		<i>25.0000</i>		<i>94.1</i>	<i>70 - 130</i>			
<i>Surrogate: Dibromofluoromethane</i>	<i>28.00</i>		<i>25.0000</i>		<i>112</i>	<i>70 - 130</i>			
<i>Surrogate: Toluene-d8</i>	<i>26.22</i>		<i>25.0000</i>		<i>105</i>	<i>70 - 130</i>			

Matrix Spike (B3B0085-MS1)

Source: 1300389-02

Prepared: 2/6/2013 Analyzed: 2/6/2013

1,1-Dichloroethene	149.790		20.0000	122.270	138	70 - 130			M3
Benzene	43.2800		40.0000	ND	108	70 - 130			
Chlorobenzene	22.3100		20.0000	ND	112	70 - 130			
MTBE	21.4300		20.0000	ND	107	70 - 130			
Toluene	45.3300		40.0000	ND	113	70 - 130			
Trichloroethene	23.6500		20.0000	0.350000	116	70 - 130			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>30.28</i>		<i>25.0000</i>		<i>121</i>	<i>70 - 130</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>24.95</i>		<i>25.0000</i>		<i>99.8</i>	<i>70 - 130</i>			
<i>Surrogate: Dibromofluoromethane</i>	<i>29.48</i>		<i>25.0000</i>		<i>118</i>	<i>70 - 130</i>			
<i>Surrogate: Toluene-d8</i>	<i>27.31</i>		<i>25.0000</i>		<i>109</i>	<i>70 - 130</i>			

Matrix Spike Dup (B3B0085-MSD1)

Source: 1300389-02

Prepared: 2/6/2013 Analyzed: 2/6/2013

1,1-Dichloroethene	136.150		20.0000	122.270	69.4	70 - 130	9.54	20	M3
Benzene	40.2200		40.0000	ND	101	70 - 130	7.33	20	
Chlorobenzene	20.8000		20.0000	ND	104	70 - 130	7.01	20	
MTBE	19.6100		20.0000	ND	98.0	70 - 130	8.87	20	
Toluene	41.5600		40.0000	ND	104	70 - 130	8.68	20	
Trichloroethene	21.9500		20.0000	0.350000	108	70 - 130	7.46	20	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>27.99</i>		<i>25.0000</i>		<i>112</i>	<i>70 - 130</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>23.10</i>		<i>25.0000</i>		<i>92.4</i>	<i>70 - 130</i>			
<i>Surrogate: Dibromofluoromethane</i>	<i>27.43</i>		<i>25.0000</i>		<i>110</i>	<i>70 - 130</i>			
<i>Surrogate: Toluene-d8</i>	<i>24.94</i>		<i>25.0000</i>		<i>99.8</i>	<i>70 - 130</i>			

Batch B3B0118 - MSVOAW_LL

Blank (B3B0118-BLK1)

Prepared: 2/7/2013 Analyzed: 2/7/2013

1,1,1,2-Tetrachloroethane	ND	0.50		NR					
1,1,1-Trichloroethane	ND	0.50		NR					
1,1,2,2-Tetrachloroethane	ND	0.50		NR					
1,1,2-Trichloroethane	ND	0.50		NR					
1,1-Dichloroethane	ND	0.50		NR					
1,1-Dichloroethene	ND	0.50		NR					
1,1-Dichloropropene	ND	0.50		NR					
1,2,3-Trichloropropane	ND	0.50		NR					



Certificate of Analysis

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Report To : Steve Netto

Reported : 02/15/2013

Volatile Organic Compounds by EPA 8260 - Quality Control (cont'd)

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec % Rec	Limits	RPD	RPD Limit	Notes
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Batch B3B0118 - MSVOAW_LL (continued)

Blank (B3B0118-BLK1) - Continued

Prepared: 2/7/2013 Analyzed: 2/7/2013

1,2,3-Trichlorobenzene	ND	0.50		NR
1,2,4-Trichlorobenzene	ND	0.50		NR
1,2,4-Trimethylbenzene	ND	0.50		NR
1,2-Dibromo-3-chloropropane	ND	0.50		NR
1,2-Dibromoethane	ND	0.50		NR
1,2-Dichlorobenzene	ND	0.50		NR
1,2-Dichloroethane	ND	0.50		NR
1,2-Dichloropropane	ND	0.50		NR
1,3,5-Trimethylbenzene	ND	0.50		NR
1,3-Dichlorobenzene	ND	0.50		NR
1,3-Dichloropropane	ND	0.50		NR
1,4-Dichlorobenzene	ND	0.50		NR
2,2-Dichloropropane	ND	0.50		NR
2-Chlorotoluene	ND	0.50		NR
4-Chlorotoluene	ND	0.50		NR
4-Isopropyltoluene	ND	0.50		NR
Benzene	ND	0.50		NR
Bromobenzene	ND	0.50		NR
Bromodichloromethane	ND	0.50		NR
Bromoform	ND	0.50		NR
Bromomethane	ND	0.50		NR
Carbon tetrachloride	ND	0.50		NR
Chlorobenzene	ND	0.50		NR
Chloroethane	ND	0.50		NR
Chloroform	ND	0.50		NR
Chloromethane	ND	0.50		NR
cis-1,2-Dichloroethene	ND	0.50		NR
cis-1,3-Dichloropropene	ND	0.50		NR
Dibromochloromethane	ND	0.50		NR
Dibromomethane	ND	0.50		NR
Dichlorodifluoromethane	ND	0.50		NR
Ethylbenzene	ND	0.50		NR
Hexachlorobutadiene	ND	0.50		NR
Isopropylbenzene	ND	0.50		NR
m,p-Xylene	ND	1.0		NR
Methylene chloride	ND	1.0		NR
n-Butylbenzene	ND	0.50		NR
n-Propylbenzene	ND	0.50		NR
Naphthalene	ND	0.50		NR
o-Xylene	ND	0.50		NR
sec-Butylbenzene	ND	0.50		NR
Styrene	ND	0.50		NR



Certificate of Analysis

Hargis & Associates, Inc.

Project Number : RAYTHEON MAIN, 532.30

9171 Towne Centre Drive, Suite 375

Report To : Steve Netto

San Diego , CA 92122

Reported : 02/15/2013

Volatile Organic Compounds by EPA 8260 - Quality Control (cont'd)

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec % Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B3B0118 - MSVOAW_LL (continued)

Blank (B3B0118-BLK1) - Continued

Prepared: 2/7/2013 Analyzed: 2/7/2013

tert-Butylbenzene	ND	0.50			NR				
Tetrachloroethene	ND	0.50			NR				
Toluene	ND	0.50			NR				
trans-1,2-Dichloroethene	ND	0.50			NR				
Trichloroethene	ND	0.50			NR				
Trichlorofluoromethane	ND	0.50			NR				
Vinyl chloride	ND	0.50			NR				

<i>Surrogate: 1,2-Dichloroethane-d4</i>	30.29		25.0000		121	70 - 130			
<i>Surrogate: 4-Bromofluorobenzene</i>	24.29		25.0000		97.2	70 - 130			
<i>Surrogate: Dibromofluoromethane</i>	30.47		25.0000		122	70 - 130			
<i>Surrogate: Toluene-d8</i>	27.54		25.0000		110	70 - 130			

LCS (B3B0118-BS1)

Prepared: 2/7/2013 Analyzed: 2/7/2013

1,1-Dichloroethene	19.4500		20.0000		97.2	70 - 130			
Benzene	38.1700		40.0000		95.4	70 - 130			
Chlorobenzene	19.4100		20.0000		97.0	70 - 130			
MTBE	18.3300		20.0000		91.6	70 - 130			
Toluene	38.5900		40.0000		96.5	70 - 130			
Trichloroethene	19.1500		20.0000		95.8	70 - 130			

<i>Surrogate: 1,2-Dichloroethane-d4</i>	28.79		25.0000		115	70 - 130			
<i>Surrogate: 4-Bromofluorobenzene</i>	22.95		25.0000		91.8	70 - 130			
<i>Surrogate: Dibromofluoromethane</i>	28.28		25.0000		113	70 - 130			
<i>Surrogate: Toluene-d8</i>	25.31		25.0000		101	70 - 130			

LCS Dup (B3B0118-BSD1)

Prepared: 2/7/2013 Analyzed: 2/7/2013

1,1-Dichloroethene	18.2400		20.0000		91.2	70 - 130	6.42	20	
Benzene	36.6100		40.0000		91.5	70 - 130	4.17	20	
Chlorobenzene	18.5700		20.0000		92.8	70 - 130	4.42	20	
MTBE	18.3100		20.0000		91.6	70 - 130	0.109	20	
Toluene	37.0200		40.0000		92.6	70 - 130	4.15	20	
Trichloroethene	18.1900		20.0000		91.0	70 - 130	5.14	20	

<i>Surrogate: 1,2-Dichloroethane-d4</i>	29.06		25.0000		116	70 - 130			
<i>Surrogate: 4-Bromofluorobenzene</i>	23.36		25.0000		93.4	70 - 130			
<i>Surrogate: Dibromofluoromethane</i>	28.13		25.0000		113	70 - 130			
<i>Surrogate: Toluene-d8</i>	25.44		25.0000		102	70 - 130			

Matrix Spike (B3B0118-MS1)

Source: 1300389-04

Prepared: 2/7/2013 Analyzed: 2/7/2013

1,1-Dichloroethene	22.0100		20.0000	ND	110	70 - 130			
Benzene	43.2300		40.0000	ND	108	70 - 130			
Chlorobenzene	20.6200		20.0000	ND	103	70 - 130			
MTBE	19.1600		20.0000	ND	95.8	70 - 130			



Certificate of Analysis

Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : RAYTHEON MAIN, 532.30

Report To : Steve Netto

Reported : 02/15/2013

Volatile Organic Compounds by EPA 8260 - Quality Control (cont'd)

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B3B0118 - MSVOAW_LL (continued)

Matrix Spike (B3B0118-MS1) - Continued

Source: 1300389-04

Prepared: 2/7/2013 Analyzed: 2/7/2013

Toluene	43.0200		40.0000	ND	108	70 - 130			
Trichloroethene	21.4100		20.0000	ND	107	70 - 130			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>29.86</i>		<i>25.0000</i>		<i>119</i>	<i>70 - 130</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>23.67</i>		<i>25.0000</i>		<i>94.7</i>	<i>70 - 130</i>			
<i>Surrogate: Dibromofluoromethane</i>	<i>28.43</i>		<i>25.0000</i>		<i>114</i>	<i>70 - 130</i>			
<i>Surrogate: Toluene-d8</i>	<i>26.16</i>		<i>25.0000</i>		<i>105</i>	<i>70 - 130</i>			

Matrix Spike Dup (B3B0118-MSD1)

Source: 1300389-04

Prepared: 2/7/2013 Analyzed: 2/7/2013

1,1-Dichloroethene	22.1900		20.0000	ND	111	70 - 130	0.814	20	
Benzene	41.4300		40.0000	ND	104	70 - 130	4.25	20	
Chlorobenzene	20.1200		20.0000	ND	101	70 - 130	2.45	20	
MTBE	19.0800		20.0000	ND	95.4	70 - 130	0.418	20	
Toluene	41.5100		40.0000	ND	104	70 - 130	3.57	20	
Trichloroethene	20.9800		20.0000	ND	105	70 - 130	2.03	20	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>29.36</i>		<i>25.0000</i>		<i>117</i>	<i>70 - 130</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>23.32</i>		<i>25.0000</i>		<i>93.3</i>	<i>70 - 130</i>			
<i>Surrogate: Dibromofluoromethane</i>	<i>28.40</i>		<i>25.0000</i>		<i>114</i>	<i>70 - 130</i>			
<i>Surrogate: Toluene-d8</i>	<i>25.58</i>		<i>25.0000</i>		<i>102</i>	<i>70 - 130</i>			



Certificate of Analysis

Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : RAYTHEON MAIN, 532.30

Report To : Steve Netto

Reported : 02/15/2013

1,4-Dioxane by EPA 8270: Isotope Dilution Technique - Quality Control

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec % Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B3B0206 - MSSEMI_ISOTOPEDILN

Blank (B3B0206-BLK1)

Prepared: 2/11/2013 Analyzed: 2/11/2013

1,4-Dioxane	ND	2.0			NR				
Surrogate: 1,2-Dichlorobenzene-d4	73.27		100.000		73.3	37 - 93			
Surrogate: 2-Fluorobiphenyl	83.74		100.000		83.7	51 - 100			
Surrogate: 4-Terphenyl-d14	96.93		100.000		96.9	58 - 113			
Surrogate: Nitrobenzene-d5	91.39		100.000		91.4	39 - 95			

LCS (B3B0206-BS1)

Prepared: 2/11/2013 Analyzed: 2/11/2013

1,4-Dioxane	100.400	2.0	100.000		100	70 - 130			
Surrogate: 1,2-Dichlorobenzene-d4	66.53		100.000		66.5	37 - 93			
Surrogate: 2-Fluorobiphenyl	85.67		100.000		85.7	51 - 100			
Surrogate: 4-Terphenyl-d14	99.33		100.000		99.3	58 - 113			
Surrogate: Nitrobenzene-d5	86.55		100.000		86.6	39 - 95			

Matrix Spike (B3B0206-MS1)

Source: 1300389-02

Prepared: 2/11/2013 Analyzed: 2/11/2013

1,4-Dioxane	154.900	2.0	100.000	58.4200	96.5	70 - 130			
Surrogate: 1,2-Dichlorobenzene-d4	66.27		100.000		66.3	37 - 93			
Surrogate: 2-Fluorobiphenyl	82.42		100.000		82.4	51 - 100			
Surrogate: 4-Terphenyl-d14	97.40		100.000		97.4	58 - 113			
Surrogate: Nitrobenzene-d5	86.13		100.000		86.1	39 - 95			

Matrix Spike (B3B0206-MS2)

Source: 1300409-11

Prepared: 2/11/2013 Analyzed: 2/11/2013

1,4-Dioxane	154.870	2.0	100.000	49.0300	106	70 - 130			
Surrogate: 1,2-Dichlorobenzene-d4	72.30		100.000		72.3	37 - 93			
Surrogate: 2-Fluorobiphenyl	87.96		100.000		88.0	51 - 100			
Surrogate: 4-Terphenyl-d14	100.8		100.000		101	58 - 113			
Surrogate: Nitrobenzene-d5	93.85		100.000		93.8	39 - 95			

Matrix Spike Dup (B3B0206-MSD1)

Source: 1300389-02

Prepared: 2/11/2013 Analyzed: 2/11/2013

1,4-Dioxane	158.270	2.0	100.000	58.4200	99.9	70 - 130	2.15	20	
Surrogate: 1,2-Dichlorobenzene-d4	67.92		100.000		67.9	37 - 93			
Surrogate: 2-Fluorobiphenyl	86.40		100.000		86.4	51 - 100			
Surrogate: 4-Terphenyl-d14	98.56		100.000		98.6	58 - 113			
Surrogate: Nitrobenzene-d5	90.22		100.000		90.2	39 - 95			

Matrix Spike Dup (B3B0206-MSD2)

Source: 1300409-11

Prepared: 2/11/2013 Analyzed: 2/11/2013

1,4-Dioxane	152.130	2.0	100.000	49.0300	103	70 - 130	1.79	20	
Surrogate: 1,2-Dichlorobenzene-d4	68.66		100.000		68.7	37 - 93			
Surrogate: 2-Fluorobiphenyl	83.68		100.000		83.7	51 - 100			
Surrogate: 4-Terphenyl-d14	98.37		100.000		98.4	58 - 113			
Surrogate: Nitrobenzene-d5	90.16		100.000		90.2	39 - 95			



Certificate of Analysis

Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego, CA 92122

Project Number : RAYTHEON MAIN, 532.30

Report To : Steve Netto

Reported : 02/15/2013

1,4-Dioxane by EPA 8270/SIM: Isotope Dilution Technique - Quality Control

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec % Rec	% Rec Limits	RPD RPD	RPD Limit	Notes
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Batch B3B0162 - MSSEMI

Blank (B3B0162-BLK1)

Prepared: 2/8/2013 Analyzed: 2/8/2013

1,4-Dioxane	ND	0.20			NR				
Surrogate: 1,2-Dichlorobenzene-d4	0.8381		1.00000		83.8	36 - 107			
Surrogate: 2-Fluorobiphenyl	1.072		1.00000		107	42 - 120			
Surrogate: 4-Terphenyl-d14	0.8298		1.00000		83.0	67 - 142			
Surrogate: Nitrobenzene-d5	0.9958		1.00000		99.6	36 - 130			

LCS (B3B0162-BS1)

Prepared: 2/8/2013 Analyzed: 2/8/2013

1,4-Dioxane	1.10294	0.20	1.00000		110	70 - 130			
Surrogate: 1,2-Dichlorobenzene-d4	0.6445		1.00000		64.5	36 - 107			
Surrogate: 2-Fluorobiphenyl	0.9608		1.00000		96.1	42 - 120			
Surrogate: 4-Terphenyl-d14	0.7487		1.00000		74.9	67 - 142			
Surrogate: Nitrobenzene-d5	0.9267		1.00000		92.7	36 - 130			

Matrix Spike (B3B0162-MS1)

Source: 1300389-04

Prepared: 2/8/2013 Analyzed: 2/8/2013

1,4-Dioxane	1.07962	0.20	1.00000	ND	108	70 - 130			
Surrogate: 1,2-Dichlorobenzene-d4	0.6614		1.00000		66.1	36 - 107			
Surrogate: 2-Fluorobiphenyl	0.9656		1.00000		96.6	42 - 120			
Surrogate: 4-Terphenyl-d14	0.7758		1.00000		77.6	67 - 142			
Surrogate: Nitrobenzene-d5	0.9413		1.00000		94.1	36 - 130			

Matrix Spike Dup (B3B0162-MSD1)

Source: 1300389-04

Prepared: 2/8/2013 Analyzed: 2/8/2013

1,4-Dioxane	0.831290	0.20	1.00000	ND	83.1	70 - 130	26.0	20	R
Surrogate: 1,2-Dichlorobenzene-d4	0.7293		1.00000		72.9	36 - 107			
Surrogate: 2-Fluorobiphenyl	1.058		1.00000		106	42 - 120			
Surrogate: 4-Terphenyl-d14	0.7704		1.00000		77.0	67 - 142			
Surrogate: Nitrobenzene-d5	1.019		1.00000		102	36 - 130			



Certificate of Analysis

Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego, CA 92122

Project Number : RAYTHEON MAIN, 532.30

Report To : Steve Netto

Reported : 02/15/2013

Notes and Definitions

R	RPD value outside acceptance criteria. Calculation is based on raw values.
M3	Matrix spike recovery outside of acceptance limit due to disproportionate concentration of the analyte to spike level. The analytical batch was validated by the laboratory control sample.
D6	Sample required dilution due to high concentration of target analyte.
ND	Analyte not detected at or above reporting limit
PQL	Practical Quantitation Limit
MDL	Method Detection Limit
NR	Not Reported
RPD	Relative Percent Difference
CA1	CA-NELAP (CDPH)
CA2	CA-ELAP (CDPH)
OR1	OR-NELAP (OSPHL)
TX1	TX-NELAP (TCEQ)

Notes:

- (1) The reported MDL and PQL are based on prep ratio variation and analytical dilution.
- (2) The suffix [2C] of specific analytes signifies that the reported result is taken from the instrument's second column.

CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST FORM

DATE 2/4/13-2/5/13 PAGE 1 OF 2

PROJECT NAME RAYTHEON MAIN		PROJECT No./TASK No. 532.30		SAMPLE CONTAINERS		ANALYSIS REQUESTED		ESTIMATED CONCENTRATION RANGE (ppb) FOR VOA'S		SPECIAL HANDLING		LABORATORY INFORMATION			
PROJECT MANAGER Chris Ross		Phone No. 858-455-6500		40 ml VOA 1 L Amber		8260B VNCs 8270 SIM 1,4-Dioxane 8270 MSD 1,4-Dioxane		0 - 10 10 - 100 100 - 1,000 > 1,000		Standard TAT MS MSD		ATL			
QA MANAGER Steve Netto		Fax No. 858-455-6533										Attn:			
SAMPLER (SIGNATURE) <i>Shayne J. Koppus</i>		SAMPLER (PRINTED) ELIN HUNTER Shayne Koppus										Rachelle Arada			
LAB ID	SAMPLE ID	SAMPLE COLLECTION		MATRIX			PRESERVATION					REMARKS			
		Date	Time	Soil	Ground water	Surface water	Lab H2O	HCl	HNO3	NaOH	H2SO4		Ice		
1300389-1	TB-020413	02/04/13	1330				X	X				X			
-2	EW-01	S	1400	X			X					X	X	X	6 VOAs 2 1L Ambers
-3	MW-21		1415	X			X					X	X	X	
-4	MW-32A		02/05/13	0940	X			X				X	X	X	6 VOAs 2 1L Amber
-5	MW-32C	S	1225	X			X				X	X	X		
-6	MW-3200B		1300	X			X					X	X	X	
-7	MW-32B		1400	X			X					X	X	X	
Total number of Containers per analysis:										206		Total No. of Containers: 20/44			

Relinquished by: <i>[Signature]</i> H+A, Inc Company	Date 2/5/13 Time 1700	Received by: <i>[Signature]</i> ATL Company	Date 2/5/13 Time 1700
Relinquished by: <i>[Signature]</i> ATL Company	Date 2/5/13 Time 1730	Received by: <i>[Signature]</i> ATL Company	Date 2/5/13 Time 1730

INSTRUCTIONS

- Fill out form completely except for shaded areas (lab use only); sign only after verified for completeness.
- Complete in ballpoint pen. Draw one line through errors, initial and date correction.
- Indicate number of sample containers in analysis request space; indicate choice with ✓ or x.
- Note applicable preservatives, special instructions, and deviations from typical environmental samples.
- Consult project QA documents for specific instructions.

Sample Receipt: No. of containers correct received good condition/cold custody seals secure conforms to COC document

Temp. @ receipt 1.0 °C

Shipment Method: **Courier**

Send Results to: **Steve Netto**

9171 TOWNE CENTRE DRIVE, SUITE 375
SAN DIEGO, CA 92122 (858) 455-6500

1640 SOUTH STAPLEY DRIVE, SUITE 209
MESA, AZ 85204 (480) 345-0888

1820 EAST RIVER ROAD, SUITE 220
TUCSON, AZ 85718 (520) 881-7300

Send invoice to San Diego, CA
Attn: Accounts Payable

CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST FORM

DATE 2/5/2013 PAGE 2 OF 2

PROJECT NAME		PROJECT No./TASK No.		SAMPLE CONTAINERS		ANALYSIS REQUESTED		ESTIMATED CONCENTRATION RANGE (ppb) FOR VOA'S		SPECIAL HANDLING		LABORATORY INFORMATION					
RAYTHEON MAIN		532.30										ATL					
PROJECT MANAGER Chris Ross		Phone No. 858-455-6500										Attn: Rachele Arada					
QA MANAGER Steve Netto		Fax No. 858-455-6533															
SAMPLER (SIGNATURE)		SAMPLER (PRINTED)															
		DANIEL MORA															
		Anielle Fenber															
LAB ID	SAMPLE ID	SAMPLE COLLECTION		MATRIX		PRESERVATION					40 ml VOA 1 L Amber	8260B VOCs 8270 SIM 1,4-Dioxane 8270 MOD 1,4-Dioxane	0 - 10 10 - 100 100 - 1,000 : 1,000	Standard TAT	REMARKS		
		Date	Time	Soil	Ground water	Surface water	Lab H2O	HCl	HNO3	NaOH						H2SO4	Ice
1300389 - 8	RB-020513	2/5/13	9:00				X	X				X	X				
-9	MW-18		10:18	X			X					X					
			10:18	X								X					
-10	MW-10		14:10	X			X					X					
	MW-20			X			X					X					ASE
-11	MW-3AA		10:42	X			X					X					ACE
	↓		↓	X								X					
-12	MW-35B		16:07	X			X					X					
	↓		↓	X								X					

Total number of Containers per analysis: 53 Total No. of Containers: 18 / 44

Relinquished by: <u>Anielle Fenber</u>	Date <u>2/5/13</u>	Received by: <u>[Signature]</u>	Date <u>2/5/13</u>
<u>H+A</u> Company	Time <u>17:00</u>	<u>ATL</u> Company	Time <u>17:00</u>

Relinquished by: <u>[Signature]</u>	Date <u>2/5/13</u>	Received by: <u>[Signature]</u>	Date <u>2/5/13</u>
<u>ATL</u> Company	Time <u>17:30</u>	<u>ATL</u> Company	Time <u>17:30</u>

INSTRUCTIONS

- Fill out form completely except for shaded areas (lab use only); sign only after verified for completeness.
- Complete in ballpoint pen. Draw one line through errors, initial and date correction.
- Indicate number of sample containers in analysis request space; indicate choice with ✓ or x.
- Note applicable preservatives, special instructions, and deviations from typical environmental samples.
- Consult project QA documents for specific instructions.

Sample Receipt:

No. of containers correct

custody seals secure

Temp. @ receipt _____ °C

received good condition/cold

conforms to COC document

Shipment Method: Courier

Send Results to: Steve Netto

9171 TOWNE CENTRE DRIVE, SUITE 375
SAN DIEGO, CA 92122 (858) 455-6500

1640 SOUTH STAPLEY DRIVE, SUITE 209
MESA, AZ 85204 (480) 345-0888

1820 EAST RIVER ROAD, SUITE 220
TUCSON, AZ 85718 (520) 881-7300

Send invoice to San Diego, CA
Attn: Accounts Payable

February 19, 2013

Steve Netto
Hargis & Associates, Inc.
9171 Towne Centre Drive, Suite 375
San Diego, CA 92122
Tel: (619) 249-3166
Fax: (858) 455-6533



Re: ATL Work Order Number : 1300409
Client Reference : Raytheon, 532.30

Enclosed are the results for sample(s) received on February 06, 2013 by Advanced Technology Laboratories. The sample(s) are tested for the parameters as indicated on the enclosed chain of custody in accordance with applicable laboratory certifications. The laboratory results contained in this report specifically pertains to the sample(s) submitted.

Thank you for the opportunity to serve the needs of your company. If you have any questions, please feel free to contact me or your Project Manager.

Sincerely,

Eddie Rodriguez
Laboratory Director

The cover letter and the case narrative are an integral part of this analytical report and its absence renders the report invalid. Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Conference and/or applicable state-specific certification programs. The report cannot be reproduced without written permission from the client and Advanced Technology Laboratories.



Certificate of Analysis

Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : Raytheon, 532.30

Report To : Steve Netto

Reported : 02/19/2013

SUMMARY OF SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
TB-020613A	1300409-01	Lab H2O	2/06/13 7:30	2/06/13 17:55
MW-35A	1300409-02	Groundwater	2/06/13 9:00	2/06/13 17:55
MW-35C	1300409-03	Groundwater	2/06/13 10:20	2/06/13 17:55
MW-37	1300409-04	Groundwater	2/06/13 12:35	2/06/13 17:55
MW-33	1300409-05	Groundwater	2/06/13 14:35	2/06/13 17:55
MW-30A	1300409-06	Groundwater	2/06/13 16:25	2/06/13 17:55
MW-30B	1300409-07	Groundwater	2/06/13 16:50	2/06/13 17:55
MW-24	1300409-08	Groundwater	2/06/13 16:55	2/06/13 17:55
MW-13	1300409-09	Groundwater	2/06/13 9:13	2/06/13 17:55
MW-20	1300409-10	Groundwater	2/06/13 10:53	2/06/13 17:55
MW-16	1300409-11	Groundwater	2/06/13 12:15	2/06/13 17:55
RB-02062013	1300409-12	Lab H2O	2/06/13 11:40	2/06/13 17:55
MW-34C	1300409-13	Groundwater	2/06/13 14:27	2/06/13 17:55
MW-34B	1300409-14	Groundwater	2/06/13 14:58	2/06/13 17:55
MW-3400B	1300409-15	Groundwater	2/06/13 15:50	2/06/13 17:55



Certificate of Analysis

Hargis & Associates, Inc.

Project Number : Raytheon, 532.30

9171 Towne Centre Drive, Suite 375

Report To : Steve Netto

San Diego , CA 92122

Reported : 02/19/2013

Client Sample ID TB-020613A

Lab ID: 1300409-01

Volatile Organic Compounds by EPA 8260

Analyst: SL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 19:08	
1,1,1-Trichloroethane	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 19:08	
1,1,2,2-Tetrachloroethane	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 19:08	
1,1,2-Trichloroethane	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 19:08	
1,1-Dichloroethane	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 19:08	
1,1-Dichloroethene	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 19:08	
1,1-Dichloropropene	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 19:08	
1,2,3-Trichloropropane	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 19:08	
1,2,3-Trichlorobenzene	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 19:08	
1,2,4-Trichlorobenzene	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 19:08	
1,2,4-Trimethylbenzene	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 19:08	
1,2-Dibromo-3-chloropropane	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 19:08	
1,2-Dibromoethane	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 19:08	
1,2-Dichlorobenzene	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 19:08	
1,2-Dichloroethane	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 19:08	
1,2-Dichloropropane	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 19:08	
1,3,5-Trimethylbenzene	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 19:08	
1,3-Dichlorobenzene	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 19:08	
1,3-Dichloropropane	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 19:08	
1,4-Dichlorobenzene	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 19:08	
2,2-Dichloropropane	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 19:08	
2-Chlorotoluene	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 19:08	
4-Chlorotoluene	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 19:08	
4-Isopropyltoluene	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 19:08	
Benzene	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 19:08	
Bromobenzene	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 19:08	
Bromodichloromethane	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 19:08	
Bromoform	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 19:08	
Bromomethane	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 19:08	
Carbon tetrachloride	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 19:08	
Chlorobenzene	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 19:08	
Chloroethane	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 19:08	
Chloroform	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 19:08	
Chloromethane	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 19:08	
cis-1,2-Dichloroethene	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 19:08	
cis-1,3-Dichloropropene	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 19:08	
Dibromochloromethane	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 19:08	



Certificate of Analysis

Hargis & Associates, Inc.

Project Number : Raytheon, 532.30

9171 Towne Centre Drive, Suite 375

Report To : Steve Netto

San Diego , CA 92122

Reported : 02/19/2013

Client Sample ID TB-020613A

Lab ID: 1300409-01

Volatile Organic Compounds by EPA 8260

Analyst: SL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Dibromomethane	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 19:08	
Dichlorodifluoromethane	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 19:08	
Ethylbenzene	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 19:08	
Hexachlorobutadiene	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 19:08	
Isopropylbenzene	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 19:08	
m,p-Xylene	ND	1.0	NA	1	B3B0118	02/07/2013	02/07/13 19:08	
Methylene chloride	ND	1.0	NA	1	B3B0118	02/07/2013	02/07/13 19:08	
n-Butylbenzene	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 19:08	
n-Propylbenzene	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 19:08	
Naphthalene	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 19:08	
o-Xylene	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 19:08	
sec-Butylbenzene	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 19:08	
Styrene	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 19:08	
tert-Butylbenzene	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 19:08	
Tetrachloroethene	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 19:08	
Toluene	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 19:08	
trans-1,2-Dichloroethene	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 19:08	
Trichloroethene	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 19:08	
Trichlorofluoromethane	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 19:08	
Vinyl chloride	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 19:08	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>117 %</i>		<i>70 - 130</i>		B3B0118	02/07/2013	<i>02/07/13 19:08</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>90.1 %</i>		<i>70 - 130</i>		B3B0118	02/07/2013	<i>02/07/13 19:08</i>	
<i>Surrogate: Dibromofluoromethane</i>	<i>115 %</i>		<i>70 - 130</i>		B3B0118	02/07/2013	<i>02/07/13 19:08</i>	
<i>Surrogate: Toluene-d8</i>	<i>102 %</i>		<i>70 - 130</i>		B3B0118	02/07/2013	<i>02/07/13 19:08</i>	



Certificate of Analysis

Hargis & Associates, Inc.

Project Number : Raytheon, 532.30

9171 Towne Centre Drive, Suite 375

Report To : Steve Netto

San Diego , CA 92122

Reported : 02/19/2013

Client Sample ID MW-35A

Lab ID: 1300409-02

Volatile Organic Compounds by EPA 8260

Analyst: SL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 19:32	
1,1,1-Trichloroethane	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 19:32	
1,1,2,2-Tetrachloroethane	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 19:32	
1,1,2-Trichloroethane	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 19:32	
1,1-Dichloroethane	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 19:32	
1,1-Dichloroethene	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 19:32	
1,1-Dichloropropene	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 19:32	
1,2,3-Trichloropropane	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 19:32	
1,2,3-Trichlorobenzene	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 19:32	
1,2,4-Trichlorobenzene	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 19:32	
1,2,4-Trimethylbenzene	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 19:32	
1,2-Dibromo-3-chloropropane	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 19:32	
1,2-Dibromoethane	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 19:32	
1,2-Dichlorobenzene	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 19:32	
1,2-Dichloroethane	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 19:32	
1,2-Dichloropropane	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 19:32	
1,3,5-Trimethylbenzene	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 19:32	
1,3-Dichlorobenzene	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 19:32	
1,3-Dichloropropane	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 19:32	
1,4-Dichlorobenzene	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 19:32	
2,2-Dichloropropane	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 19:32	
2-Chlorotoluene	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 19:32	
4-Chlorotoluene	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 19:32	
4-Isopropyltoluene	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 19:32	
Benzene	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 19:32	
Bromobenzene	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 19:32	
Bromodichloromethane	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 19:32	
Bromoform	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 19:32	
Bromomethane	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 19:32	
Carbon tetrachloride	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 19:32	
Chlorobenzene	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 19:32	
Chloroethane	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 19:32	
Chloroform	0.74	0.50	NA	1	B3B0118	02/07/2013	02/07/13 19:32	
Chloromethane	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 19:32	
cis-1,2-Dichloroethene	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 19:32	
cis-1,3-Dichloropropene	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 19:32	
Dibromochloromethane	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 19:32	



Certificate of Analysis

Hargis & Associates, Inc.

Project Number : Raytheon, 532.30

9171 Towne Centre Drive, Suite 375

Report To : Steve Netto

San Diego , CA 92122

Reported : 02/19/2013

Client Sample ID MW-35A

Lab ID: 1300409-02

Volatile Organic Compounds by EPA 8260

Analyst: SL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Dibromomethane	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 19:32	
Dichlorodifluoromethane	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 19:32	
Ethylbenzene	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 19:32	
Hexachlorobutadiene	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 19:32	
Isopropylbenzene	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 19:32	
m,p-Xylene	ND	1.0	NA	1	B3B0118	02/07/2013	02/07/13 19:32	
Methylene chloride	ND	1.0	NA	1	B3B0118	02/07/2013	02/07/13 19:32	
n-Butylbenzene	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 19:32	
n-Propylbenzene	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 19:32	
Naphthalene	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 19:32	
o-Xylene	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 19:32	
sec-Butylbenzene	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 19:32	
Styrene	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 19:32	
tert-Butylbenzene	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 19:32	
Tetrachloroethene	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 19:32	
Toluene	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 19:32	
trans-1,2-Dichloroethene	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 19:32	
Trichloroethene	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 19:32	
Trichlorofluoromethane	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 19:32	
Vinyl chloride	ND	0.50	NA	1	B3B0118	02/07/2013	02/07/13 19:32	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>123 %</i>		<i>70 - 130</i>		B3B0118	02/07/2013	<i>02/07/13 19:32</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>95.6 %</i>		<i>70 - 130</i>		B3B0118	02/07/2013	<i>02/07/13 19:32</i>	
<i>Surrogate: Dibromofluoromethane</i>	<i>123 %</i>		<i>70 - 130</i>		B3B0118	02/07/2013	<i>02/07/13 19:32</i>	
<i>Surrogate: Toluene-d8</i>	<i>107 %</i>		<i>70 - 130</i>		B3B0118	02/07/2013	<i>02/07/13 19:32</i>	



Certificate of Analysis

Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego, CA 92122

Project Number : Raytheon, 532.30

Report To : Steve Netto

Reported : 02/19/2013

Client Sample ID MW-35A

Lab ID: 1300409-02

1,4-Dioxane by EPA 8270/SIM: Isotope Dilution Technique

Analyst: MFR

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,4-Dioxane	ND	0.20	0.13	1	B3B0162	02/08/2013	02/08/13 19:37	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	<i>64.9 %</i>		<i>36 - 107</i>		B3B0162	02/08/2013	<i>02/08/13 19:37</i>	
<i>Surrogate: 2-Fluorobiphenyl</i>	<i>102 %</i>		<i>42 - 120</i>		B3B0162	02/08/2013	<i>02/08/13 19:37</i>	
<i>Surrogate: 4-Terphenyl-d14</i>	<i>67.7 %</i>		<i>67 - 142</i>		B3B0162	02/08/2013	<i>02/08/13 19:37</i>	
<i>Surrogate: Nitrobenzene-d5</i>	<i>94.0 %</i>		<i>36 - 130</i>		B3B0162	02/08/2013	<i>02/08/13 19:37</i>	



Certificate of Analysis

Hargis & Associates, Inc.

Project Number : Raytheon, 532.30

9171 Towne Centre Drive, Suite 375

Report To : Steve Netto

San Diego , CA 92122

Reported : 02/19/2013

Client Sample ID MW-35C

Lab ID: 1300409-03

Volatile Organic Compounds by EPA 8260

Analyst: SL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 16:30	
1,1,1-Trichloroethane	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 16:30	
1,1,2,2-Tetrachloroethane	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 16:30	
1,1,2-Trichloroethane	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 16:30	
1,1-Dichloroethane	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 16:30	
1,1-Dichloroethene	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 16:30	
1,1-Dichloropropene	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 16:30	
1,2,3-Trichloropropane	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 16:30	
1,2,3-Trichlorobenzene	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 16:30	
1,2,4-Trichlorobenzene	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 16:30	
1,2,4-Trimethylbenzene	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 16:30	
1,2-Dibromo-3-chloropropane	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 16:30	
1,2-Dibromoethane	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 16:30	
1,2-Dichlorobenzene	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 16:30	
1,2-Dichloroethane	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 16:30	
1,2-Dichloropropane	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 16:30	
1,3,5-Trimethylbenzene	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 16:30	
1,3-Dichlorobenzene	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 16:30	
1,3-Dichloropropane	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 16:30	
1,4-Dichlorobenzene	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 16:30	
2,2-Dichloropropane	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 16:30	
2-Chlorotoluene	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 16:30	
4-Chlorotoluene	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 16:30	
4-Isopropyltoluene	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 16:30	
Benzene	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 16:30	
Bromobenzene	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 16:30	
Bromodichloromethane	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 16:30	
Bromoform	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 16:30	
Bromomethane	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 16:30	
Carbon tetrachloride	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 16:30	
Chlorobenzene	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 16:30	
Chloroethane	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 16:30	
Chloroform	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 16:30	
Chloromethane	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 16:30	
cis-1,2-Dichloroethene	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 16:30	
cis-1,3-Dichloropropene	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 16:30	
Dibromochloromethane	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 16:30	



Certificate of Analysis

Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego, CA 92122

Project Number : Raytheon, 532.30

Report To : Steve Netto

Reported : 02/19/2013

Client Sample ID MW-35C

Lab ID: 1300409-03

Volatile Organic Compounds by EPA 8260

Analyst: SL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Dibromomethane	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 16:30	
Dichlorodifluoromethane	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 16:30	
Ethylbenzene	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 16:30	
Hexachlorobutadiene	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 16:30	
Isopropylbenzene	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 16:30	
m,p-Xylene	ND	1.0	NA	1	B3B0154	02/08/2013	02/08/13 16:30	
Methylene chloride	ND	1.0	NA	1	B3B0154	02/08/2013	02/08/13 16:30	
n-Butylbenzene	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 16:30	
n-Propylbenzene	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 16:30	
Naphthalene	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 16:30	
o-Xylene	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 16:30	
sec-Butylbenzene	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 16:30	
Styrene	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 16:30	
tert-Butylbenzene	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 16:30	
Tetrachloroethene	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 16:30	
Toluene	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 16:30	
trans-1,2-Dichloroethene	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 16:30	
Trichloroethene	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 16:30	
Trichlorofluoromethane	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 16:30	
Vinyl chloride	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 16:30	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>98.2 %</i>		<i>70 - 130</i>		B3B0154	02/08/2013	<i>02/08/13 16:30</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>95.4 %</i>		<i>70 - 130</i>		B3B0154	02/08/2013	<i>02/08/13 16:30</i>	
<i>Surrogate: Dibromofluoromethane</i>	<i>100 %</i>		<i>70 - 130</i>		B3B0154	02/08/2013	<i>02/08/13 16:30</i>	
<i>Surrogate: Toluene-d8</i>	<i>95.6 %</i>		<i>70 - 130</i>		B3B0154	02/08/2013	<i>02/08/13 16:30</i>	



Certificate of Analysis

Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego, CA 92122

Project Number : Raytheon, 532.30

Report To : Steve Netto

Reported : 02/19/2013

Client Sample ID MW-35C

Lab ID: 1300409-03

1,4-Dioxane by EPA 8270/SIM: Isotope Dilution Technique

Analyst: MFR

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,4-Dioxane	ND	0.20	0.13	1	B3B0162	02/08/2013	02/08/13 20:01	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	<i>45.4 %</i>		<i>36 - 107</i>		B3B0162	02/08/2013	<i>02/08/13 20:01</i>	
<i>Surrogate: 2-Fluorobiphenyl</i>	<i>78.3 %</i>		<i>42 - 120</i>		B3B0162	02/08/2013	<i>02/08/13 20:01</i>	
<i>Surrogate: 4-Terphenyl-d14</i>	<i>58.8 %</i>		<i>67 - 142</i>		B3B0162	02/08/2013	<i>02/08/13 20:01</i>	
<i>Surrogate: Nitrobenzene-d5</i>	<i>75.2 %</i>		<i>36 - 130</i>		B3B0162	02/08/2013	<i>02/08/13 20:01</i>	



Certificate of Analysis

Hargis & Associates, Inc.

Project Number : Raytheon, 532.30

9171 Towne Centre Drive, Suite 375

Report To : Steve Netto

San Diego , CA 92122

Reported : 02/19/2013

Client Sample ID MW-37

Lab ID: 1300409-04

Volatile Organic Compounds by EPA 8260

Analyst: SL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 18:55	
1,1,1-Trichloroethane	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 18:55	
1,1,2,2-Tetrachloroethane	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 18:55	
1,1,2-Trichloroethane	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 18:55	
1,1-Dichloroethane	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 18:55	
1,1-Dichloroethene	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 18:55	
1,1-Dichloropropene	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 18:55	
1,2,3-Trichloropropane	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 18:55	
1,2,3-Trichlorobenzene	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 18:55	
1,2,4-Trichlorobenzene	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 18:55	
1,2,4-Trimethylbenzene	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 18:55	
1,2-Dibromo-3-chloropropane	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 18:55	
1,2-Dibromoethane	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 18:55	
1,2-Dichlorobenzene	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 18:55	
1,2-Dichloroethane	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 18:55	
1,2-Dichloropropane	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 18:55	
1,3,5-Trimethylbenzene	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 18:55	
1,3-Dichlorobenzene	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 18:55	
1,3-Dichloropropane	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 18:55	
1,4-Dichlorobenzene	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 18:55	
2,2-Dichloropropane	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 18:55	
2-Chlorotoluene	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 18:55	
4-Chlorotoluene	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 18:55	
4-Isopropyltoluene	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 18:55	
Benzene	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 18:55	
Bromobenzene	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 18:55	
Bromodichloromethane	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 18:55	
Bromoform	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 18:55	
Bromomethane	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 18:55	
Carbon tetrachloride	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 18:55	
Chlorobenzene	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 18:55	
Chloroethane	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 18:55	
Chloroform	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 18:55	
Chloromethane	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 18:55	
cis-1,2-Dichloroethene	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 18:55	
cis-1,3-Dichloropropene	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 18:55	
Dibromochloromethane	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 18:55	



Certificate of Analysis

Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego, CA 92122

Project Number : Raytheon, 532.30

Report To : Steve Netto

Reported : 02/19/2013

Client Sample ID MW-37

Lab ID: 1300409-04

Volatile Organic Compounds by EPA 8260

Analyst: SL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Dibromomethane	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 18:55	
Dichlorodifluoromethane	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 18:55	
Ethylbenzene	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 18:55	
Hexachlorobutadiene	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 18:55	
Isopropylbenzene	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 18:55	
m,p-Xylene	ND	1.0	NA	1	B3B0154	02/08/2013	02/08/13 18:55	
Methylene chloride	ND	1.0	NA	1	B3B0154	02/08/2013	02/08/13 18:55	
n-Butylbenzene	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 18:55	
n-Propylbenzene	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 18:55	
Naphthalene	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 18:55	
o-Xylene	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 18:55	
sec-Butylbenzene	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 18:55	
Styrene	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 18:55	
tert-Butylbenzene	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 18:55	
Tetrachloroethene	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 18:55	
Toluene	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 18:55	
trans-1,2-Dichloroethene	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 18:55	
Trichloroethene	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 18:55	
Trichlorofluoromethane	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 18:55	
Vinyl chloride	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 18:55	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>97.9 %</i>		<i>70 - 130</i>		B3B0154	02/08/2013	<i>02/08/13 18:55</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>93.8 %</i>		<i>70 - 130</i>		B3B0154	02/08/2013	<i>02/08/13 18:55</i>	
<i>Surrogate: Dibromofluoromethane</i>	<i>101 %</i>		<i>70 - 130</i>		B3B0154	02/08/2013	<i>02/08/13 18:55</i>	
<i>Surrogate: Toluene-d8</i>	<i>92.1 %</i>		<i>70 - 130</i>		B3B0154	02/08/2013	<i>02/08/13 18:55</i>	



Certificate of Analysis

Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego, CA 92122

Project Number : Raytheon, 532.30

Report To : Steve Netto

Reported : 02/19/2013

Client Sample ID MW-37

Lab ID: 1300409-04

1,4-Dioxane by EPA 8270/SIM: Isotope Dilution Technique

Analyst: MFR

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,4-Dioxane	ND	0.20	0.13	1	B3B0162	02/08/2013	02/08/13 23:40	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	<i>67.0 %</i>		<i>36 - 107</i>		B3B0162	02/08/2013	<i>02/08/13 23:40</i>	
<i>Surrogate: 2-Fluorobiphenyl</i>	<i>106 %</i>		<i>42 - 120</i>		B3B0162	02/08/2013	<i>02/08/13 23:40</i>	
<i>Surrogate: 4-Terphenyl-d14</i>	<i>64.9 %</i>		<i>67 - 142</i>		B3B0162	02/08/2013	<i>02/08/13 23:40</i>	
<i>Surrogate: Nitrobenzene-d5</i>	<i>102 %</i>		<i>36 - 130</i>		B3B0162	02/08/2013	<i>02/08/13 23:40</i>	



Certificate of Analysis

Hargis & Associates, Inc.

Project Number : Raytheon, 532.30

9171 Towne Centre Drive, Suite 375

Report To : Steve Netto

San Diego , CA 92122

Reported : 02/19/2013

Client Sample ID MW-33

Lab ID: 1300409-05

Volatile Organic Compounds by EPA 8260

Analyst: SL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 16:54	
1,1,1-Trichloroethane	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 16:54	
1,1,2,2-Tetrachloroethane	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 16:54	
1,1,2-Trichloroethane	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 16:54	
1,1-Dichloroethane	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 16:54	
1,1-Dichloroethene	5.0	0.50	NA	1	B3B0154	02/08/2013	02/08/13 16:54	
1,1-Dichloropropene	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 16:54	
1,2,3-Trichloropropane	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 16:54	
1,2,3-Trichlorobenzene	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 16:54	
1,2,4-Trichlorobenzene	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 16:54	
1,2,4-Trimethylbenzene	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 16:54	
1,2-Dibromo-3-chloropropane	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 16:54	
1,2-Dibromoethane	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 16:54	
1,2-Dichlorobenzene	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 16:54	
1,2-Dichloroethane	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 16:54	
1,2-Dichloropropane	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 16:54	
1,3,5-Trimethylbenzene	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 16:54	
1,3-Dichlorobenzene	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 16:54	
1,3-Dichloropropane	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 16:54	
1,4-Dichlorobenzene	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 16:54	
2,2-Dichloropropane	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 16:54	
2-Chlorotoluene	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 16:54	
4-Chlorotoluene	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 16:54	
4-Isopropyltoluene	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 16:54	
Benzene	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 16:54	
Bromobenzene	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 16:54	
Bromodichloromethane	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 16:54	
Bromoform	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 16:54	
Bromomethane	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 16:54	
Carbon tetrachloride	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 16:54	
Chlorobenzene	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 16:54	
Chloroethane	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 16:54	
Chloroform	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 16:54	
Chloromethane	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 16:54	
cis-1,2-Dichloroethene	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 16:54	
cis-1,3-Dichloropropene	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 16:54	
Dibromochloromethane	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 16:54	



Certificate of Analysis

Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego, CA 92122

Project Number : Raytheon, 532.30

Report To : Steve Netto

Reported : 02/19/2013

Client Sample ID MW-33

Lab ID: 1300409-05

Volatile Organic Compounds by EPA 8260

Analyst: SL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Dibromomethane	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 16:54	
Dichlorodifluoromethane	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 16:54	
Ethylbenzene	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 16:54	
Hexachlorobutadiene	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 16:54	
Isopropylbenzene	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 16:54	
m,p-Xylene	ND	1.0	NA	1	B3B0154	02/08/2013	02/08/13 16:54	
Methylene chloride	ND	1.0	NA	1	B3B0154	02/08/2013	02/08/13 16:54	
n-Butylbenzene	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 16:54	
n-Propylbenzene	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 16:54	
Naphthalene	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 16:54	
o-Xylene	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 16:54	
sec-Butylbenzene	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 16:54	
Styrene	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 16:54	
tert-Butylbenzene	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 16:54	
Tetrachloroethene	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 16:54	
Toluene	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 16:54	
trans-1,2-Dichloroethene	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 16:54	
Trichloroethene	0.92	0.50	NA	1	B3B0154	02/08/2013	02/08/13 16:54	
Trichlorofluoromethane	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 16:54	
Vinyl chloride	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 16:54	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>99.2 %</i>		<i>70 - 130</i>		B3B0154	02/08/2013	<i>02/08/13 16:54</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>100 %</i>		<i>70 - 130</i>		B3B0154	02/08/2013	<i>02/08/13 16:54</i>	
<i>Surrogate: Dibromofluoromethane</i>	<i>101 %</i>		<i>70 - 130</i>		B3B0154	02/08/2013	<i>02/08/13 16:54</i>	
<i>Surrogate: Toluene-d8</i>	<i>91.4 %</i>		<i>70 - 130</i>		B3B0154	02/08/2013	<i>02/08/13 16:54</i>	



Certificate of Analysis

Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego, CA 92122

Project Number : Raytheon, 532.30

Report To : Steve Netto

Reported : 02/19/2013

Client Sample ID MW-33

Lab ID: 1300409-05

1,4-Dioxane by EPA 8270/SIM: Isotope Dilution Technique

Analyst: MFR

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,4-Dioxane	ND	0.20	0.13	1	B3B0162	02/08/2013	02/08/13 20:26	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	53.5 %		36 - 107		B3B0162	02/08/2013	02/08/13 20:26	
<i>Surrogate: 2-Fluorobiphenyl</i>	85.4 %		42 - 120		B3B0162	02/08/2013	02/08/13 20:26	
<i>Surrogate: 4-Terphenyl-d14</i>	66.7 %		67 - 142		B3B0162	02/08/2013	02/08/13 20:26	
<i>Surrogate: Nitrobenzene-d5</i>	81.0 %		36 - 130		B3B0162	02/08/2013	02/08/13 20:26	



Certificate of Analysis

Hargis & Associates, Inc.

Project Number : Raytheon, 532.30

9171 Towne Centre Drive, Suite 375

Report To : Steve Netto

San Diego , CA 92122

Reported : 02/19/2013

Client Sample ID MW-30A

Lab ID: 1300409-06

Volatile Organic Compounds by EPA 8260

Analyst: SL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 17:18	
1,1,1-Trichloroethane	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 17:18	
1,1,2,2-Tetrachloroethane	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 17:18	
1,1,2-Trichloroethane	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 17:18	
1,1-Dichloroethane	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 17:18	
1,1-Dichloroethene	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 17:18	
1,1-Dichloropropene	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 17:18	
1,2,3-Trichloropropane	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 17:18	
1,2,3-Trichlorobenzene	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 17:18	
1,2,4-Trichlorobenzene	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 17:18	
1,2,4-Trimethylbenzene	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 17:18	
1,2-Dibromo-3-chloropropane	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 17:18	
1,2-Dibromoethane	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 17:18	
1,2-Dichlorobenzene	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 17:18	
1,2-Dichloroethane	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 17:18	
1,2-Dichloropropane	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 17:18	
1,3,5-Trimethylbenzene	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 17:18	
1,3-Dichlorobenzene	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 17:18	
1,3-Dichloropropane	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 17:18	
1,4-Dichlorobenzene	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 17:18	
2,2-Dichloropropane	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 17:18	
2-Chlorotoluene	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 17:18	
4-Chlorotoluene	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 17:18	
4-Isopropyltoluene	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 17:18	
Benzene	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 17:18	
Bromobenzene	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 17:18	
Bromodichloromethane	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 17:18	
Bromoform	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 17:18	
Bromomethane	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 17:18	
Carbon tetrachloride	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 17:18	
Chlorobenzene	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 17:18	
Chloroethane	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 17:18	
Chloroform	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 17:18	
Chloromethane	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 17:18	
cis-1,2-Dichloroethene	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 17:18	
cis-1,3-Dichloropropene	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 17:18	
Dibromochloromethane	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 17:18	



Certificate of Analysis

Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego, CA 92122

Project Number : Raytheon, 532.30

Report To : Steve Netto

Reported : 02/19/2013

Client Sample ID MW-30A

Lab ID: 1300409-06

Volatile Organic Compounds by EPA 8260

Analyst: SL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Dibromomethane	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 17:18	
Dichlorodifluoromethane	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 17:18	
Ethylbenzene	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 17:18	
Hexachlorobutadiene	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 17:18	
Isopropylbenzene	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 17:18	
m,p-Xylene	ND	1.0	NA	1	B3B0154	02/08/2013	02/08/13 17:18	
Methylene chloride	ND	1.0	NA	1	B3B0154	02/08/2013	02/08/13 17:18	
n-Butylbenzene	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 17:18	
n-Propylbenzene	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 17:18	
Naphthalene	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 17:18	
o-Xylene	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 17:18	
sec-Butylbenzene	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 17:18	
Styrene	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 17:18	
tert-Butylbenzene	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 17:18	
Tetrachloroethene	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 17:18	
Toluene	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 17:18	
trans-1,2-Dichloroethene	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 17:18	
Trichloroethene	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 17:18	
Trichlorofluoromethane	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 17:18	
Vinyl chloride	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 17:18	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>99.6 %</i>		<i>70 - 130</i>		B3B0154	02/08/2013	<i>02/08/13 17:18</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>96.0 %</i>		<i>70 - 130</i>		B3B0154	02/08/2013	<i>02/08/13 17:18</i>	
<i>Surrogate: Dibromofluoromethane</i>	<i>101 %</i>		<i>70 - 130</i>		B3B0154	02/08/2013	<i>02/08/13 17:18</i>	
<i>Surrogate: Toluene-d8</i>	<i>92.4 %</i>		<i>70 - 130</i>		B3B0154	02/08/2013	<i>02/08/13 17:18</i>	



Certificate of Analysis

Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego, CA 92122

Project Number : Raytheon, 532.30

Report To : Steve Netto

Reported : 02/19/2013

Client Sample ID MW-30A

Lab ID: 1300409-06

1,4-Dioxane by EPA 8270/SIM: Isotope Dilution Technique

Analyst: MFR

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,4-Dioxane	ND	0.20	0.13	1	B3B0162	02/08/2013	02/08/13 20:50	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	<i>54.4 %</i>		<i>36 - 107</i>		B3B0162	02/08/2013	<i>02/08/13 20:50</i>	
<i>Surrogate: 2-Fluorobiphenyl</i>	<i>83.4 %</i>		<i>42 - 120</i>		B3B0162	02/08/2013	<i>02/08/13 20:50</i>	
<i>Surrogate: 4-Terphenyl-d14</i>	<i>59.9 %</i>		<i>67 - 142</i>		B3B0162	02/08/2013	<i>02/08/13 20:50</i>	
<i>Surrogate: Nitrobenzene-d5</i>	<i>84.1 %</i>		<i>36 - 130</i>		B3B0162	02/08/2013	<i>02/08/13 20:50</i>	



Certificate of Analysis

Hargis & Associates, Inc.

Project Number : Raytheon, 532.30

9171 Towne Centre Drive, Suite 375

Report To : Steve Netto

San Diego , CA 92122

Reported : 02/19/2013

Client Sample ID MW-30B

Lab ID: 1300409-07

Volatile Organic Compounds by EPA 8260

Analyst: SL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 17:42	
1,1,1-Trichloroethane	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 17:42	
1,1,2,2-Tetrachloroethane	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 17:42	
1,1,2-Trichloroethane	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 17:42	
1,1-Dichloroethane	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 17:42	
1,1-Dichloroethene	17	0.50	NA	1	B3B0154	02/08/2013	02/08/13 17:42	
1,1-Dichloropropene	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 17:42	
1,2,3-Trichloropropane	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 17:42	
1,2,3-Trichlorobenzene	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 17:42	
1,2,4-Trichlorobenzene	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 17:42	
1,2,4-Trimethylbenzene	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 17:42	
1,2-Dibromo-3-chloropropane	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 17:42	
1,2-Dibromoethane	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 17:42	
1,2-Dichlorobenzene	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 17:42	
1,2-Dichloroethane	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 17:42	
1,2-Dichloropropane	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 17:42	
1,3,5-Trimethylbenzene	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 17:42	
1,3-Dichlorobenzene	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 17:42	
1,3-Dichloropropane	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 17:42	
1,4-Dichlorobenzene	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 17:42	
2,2-Dichloropropane	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 17:42	
2-Chlorotoluene	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 17:42	
4-Chlorotoluene	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 17:42	
4-Isopropyltoluene	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 17:42	
Benzene	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 17:42	
Bromobenzene	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 17:42	
Bromodichloromethane	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 17:42	
Bromoform	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 17:42	
Bromomethane	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 17:42	
Carbon tetrachloride	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 17:42	
Chlorobenzene	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 17:42	
Chloroethane	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 17:42	
Chloroform	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 17:42	
Chloromethane	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 17:42	
cis-1,2-Dichloroethene	4.6	0.50	NA	1	B3B0154	02/08/2013	02/08/13 17:42	
cis-1,3-Dichloropropene	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 17:42	
Dibromochloromethane	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 17:42	



Certificate of Analysis

Hargis & Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122

Project Number : Raytheon, 532.30
 Report To : Steve Netto
 Reported : 02/19/2013

Client Sample ID MW-30B
Lab ID: 1300409-07

Volatile Organic Compounds by EPA 8260

Analyst: SL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Dibromomethane	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 17:42	
Dichlorodifluoromethane	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 17:42	
Ethylbenzene	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 17:42	
Hexachlorobutadiene	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 17:42	
Isopropylbenzene	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 17:42	
m,p-Xylene	ND	1.0	NA	1	B3B0154	02/08/2013	02/08/13 17:42	
Methylene chloride	ND	1.0	NA	1	B3B0154	02/08/2013	02/08/13 17:42	
n-Butylbenzene	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 17:42	
n-Propylbenzene	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 17:42	
Naphthalene	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 17:42	
o-Xylene	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 17:42	
sec-Butylbenzene	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 17:42	
Styrene	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 17:42	
tert-Butylbenzene	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 17:42	
Tetrachloroethene	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 17:42	
Toluene	4.4	0.50	NA	1	B3B0154	02/08/2013	02/08/13 17:42	
trans-1,2-Dichloroethene	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 17:42	
Trichloroethene	96	5.0	NA	10	B3B0288	02/14/2013	02/14/13 11:20	
Trichlorofluoromethane	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 17:42	
Vinyl chloride	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 17:42	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>102 %</i>		<i>70 - 130</i>		B3B0288	02/14/2013	<i>02/14/13 11:20</i>	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>101 %</i>		<i>70 - 130</i>		B3B0154	02/08/2013	<i>02/08/13 17:42</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>98.3 %</i>		<i>70 - 130</i>		B3B0288	02/14/2013	<i>02/14/13 11:20</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>94.2 %</i>		<i>70 - 130</i>		B3B0154	02/08/2013	<i>02/08/13 17:42</i>	
<i>Surrogate: Dibromofluoromethane</i>	<i>103 %</i>		<i>70 - 130</i>		B3B0154	02/08/2013	<i>02/08/13 17:42</i>	
<i>Surrogate: Dibromofluoromethane</i>	<i>109 %</i>		<i>70 - 130</i>		B3B0288	02/14/2013	<i>02/14/13 11:20</i>	
<i>Surrogate: Toluene-d8</i>	<i>81.5 %</i>		<i>70 - 130</i>		B3B0154	02/08/2013	<i>02/08/13 17:42</i>	
<i>Surrogate: Toluene-d8</i>	<i>95.5 %</i>		<i>70 - 130</i>		B3B0288	02/14/2013	<i>02/14/13 11:20</i>	



Certificate of Analysis

Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego, CA 92122

Project Number : Raytheon, 532.30

Report To : Steve Netto

Reported : 02/19/2013

Client Sample ID MW-30B

Lab ID: 1300409-07

1,4-Dioxane by EPA 8270/SIM: Isotope Dilution Technique

Analyst: MFR

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,4-Dioxane	ND	0.20	0.13	1	B3B0162	02/08/2013	02/08/13 21:15	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	<i>63.1 %</i>		<i>36 - 107</i>		B3B0162	02/08/2013	<i>02/08/13 21:15</i>	
<i>Surrogate: 2-Fluorobiphenyl</i>	<i>87.3 %</i>		<i>42 - 120</i>		B3B0162	02/08/2013	<i>02/08/13 21:15</i>	
<i>Surrogate: 4-Terphenyl-d14</i>	<i>70.1 %</i>		<i>67 - 142</i>		B3B0162	02/08/2013	<i>02/08/13 21:15</i>	
<i>Surrogate: Nitrobenzene-d5</i>	<i>85.8 %</i>		<i>36 - 130</i>		B3B0162	02/08/2013	<i>02/08/13 21:15</i>	



Certificate of Analysis

Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego, CA 92122

Project Number : Raytheon, 532.30

Report To : Steve Netto

Reported : 02/19/2013

Client Sample ID MW-24

Lab ID: 1300409-08

Volatile Organic Compounds by EPA 8260

Analyst: SL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 11:07	
1,1,1-Trichloroethane	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 11:07	
1,1,2,2-Tetrachloroethane	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 11:07	
1,1,2-Trichloroethane	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 11:07	
1,1-Dichloroethane	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 11:07	
1,1-Dichloroethene	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 11:07	
1,1-Dichloropropene	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 11:07	
1,2,3-Trichloropropane	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 11:07	
1,2,3-Trichlorobenzene	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 11:07	
1,2,4-Trichlorobenzene	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 11:07	
1,2,4-Trimethylbenzene	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 11:07	
1,2-Dibromo-3-chloropropane	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 11:07	
1,2-Dibromoethane	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 11:07	
1,2-Dichlorobenzene	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 11:07	
1,2-Dichloroethane	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 11:07	
1,2-Dichloropropane	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 11:07	
1,3,5-Trimethylbenzene	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 11:07	
1,3-Dichlorobenzene	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 11:07	
1,3-Dichloropropane	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 11:07	
1,4-Dichlorobenzene	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 11:07	
2,2-Dichloropropane	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 11:07	
2-Chlorotoluene	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 11:07	
4-Chlorotoluene	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 11:07	
4-Isopropyltoluene	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 11:07	
Benzene	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 11:07	
Bromobenzene	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 11:07	
Bromodichloromethane	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 11:07	
Bromoform	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 11:07	
Bromomethane	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 11:07	
Carbon tetrachloride	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 11:07	
Chlorobenzene	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 11:07	
Chloroethane	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 11:07	
Chloroform	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 11:07	
Chloromethane	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 11:07	
cis-1,2-Dichloroethene	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 11:07	
cis-1,3-Dichloropropene	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 11:07	
Dibromochloromethane	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 11:07	



Certificate of Analysis

Hargis & Associates, Inc.

Project Number : Raytheon, 532.30

9171 Towne Centre Drive, Suite 375

Report To : Steve Netto

San Diego , CA 92122

Reported : 02/19/2013

Client Sample ID MW-24

Lab ID: 1300409-08

Volatile Organic Compounds by EPA 8260

Analyst: SL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Dibromomethane	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 11:07	
Dichlorodifluoromethane	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 11:07	
Ethylbenzene	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 11:07	
Hexachlorobutadiene	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 11:07	
Isopropylbenzene	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 11:07	
m,p-Xylene	ND	1.0	NA	1	B3B0190	02/11/2013	02/11/13 11:07	
Methylene chloride	ND	1.0	NA	1	B3B0190	02/11/2013	02/11/13 11:07	
n-Butylbenzene	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 11:07	
n-Propylbenzene	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 11:07	
Naphthalene	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 11:07	
o-Xylene	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 11:07	
sec-Butylbenzene	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 11:07	
Styrene	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 11:07	
tert-Butylbenzene	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 11:07	
Tetrachloroethene	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 11:07	
Toluene	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 11:07	
trans-1,2-Dichloroethene	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 11:07	
Trichloroethene	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 11:07	
Trichlorofluoromethane	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 11:07	
Vinyl chloride	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 11:07	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>109 %</i>		<i>70 - 130</i>		B3B0190	02/11/2013	<i>02/11/13 11:07</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>102 %</i>		<i>70 - 130</i>		B3B0190	02/11/2013	<i>02/11/13 11:07</i>	
<i>Surrogate: Dibromofluoromethane</i>	<i>110 %</i>		<i>70 - 130</i>		B3B0190	02/11/2013	<i>02/11/13 11:07</i>	
<i>Surrogate: Toluene-d8</i>	<i>99.0 %</i>		<i>70 - 130</i>		B3B0190	02/11/2013	<i>02/11/13 11:07</i>	



Certificate of Analysis

Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego, CA 92122

Project Number : Raytheon, 532.30

Report To : Steve Netto

Reported : 02/19/2013

Client Sample ID MW-24

Lab ID: 1300409-08

1,4-Dioxane by EPA 8270/SIM: Isotope Dilution Technique

Analyst: MFR

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,4-Dioxane	ND	0.20	0.13	1	B3B0162	02/08/2013	02/08/13 21:39	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	<i>77.7 %</i>		<i>36 - 107</i>		B3B0162	02/08/2013	<i>02/08/13 21:39</i>	
<i>Surrogate: 2-Fluorobiphenyl</i>	<i>112 %</i>		<i>42 - 120</i>		B3B0162	02/08/2013	<i>02/08/13 21:39</i>	
<i>Surrogate: 4-Terphenyl-d14</i>	<i>66.5 %</i>		<i>67 - 142</i>		B3B0162	02/08/2013	<i>02/08/13 21:39</i>	
<i>Surrogate: Nitrobenzene-d5</i>	<i>101 %</i>		<i>36 - 130</i>		B3B0162	02/08/2013	<i>02/08/13 21:39</i>	



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Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego, CA 92122

Project Number : Raytheon, 532.30

Report To : Steve Netto

Reported : 02/19/2013

Client Sample ID MW-13

Lab ID: 1300409-09

Volatile Organic Compounds by EPA 8260

Analyst: SL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 11:27	
1,1,1-Trichloroethane	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 11:27	
1,1,2,2-Tetrachloroethane	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 11:27	
1,1,2-Trichloroethane	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 11:27	
1,1-Dichloroethane	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 11:27	
1,1-Dichloroethene	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 11:27	
1,1-Dichloropropene	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 11:27	
1,2,3-Trichloropropane	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 11:27	
1,2,3-Trichlorobenzene	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 11:27	
1,2,4-Trichlorobenzene	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 11:27	
1,2,4-Trimethylbenzene	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 11:27	
1,2-Dibromo-3-chloropropane	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 11:27	
1,2-Dibromoethane	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 11:27	
1,2-Dichlorobenzene	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 11:27	
1,2-Dichloroethane	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 11:27	
1,2-Dichloropropane	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 11:27	
1,3,5-Trimethylbenzene	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 11:27	
1,3-Dichlorobenzene	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 11:27	
1,3-Dichloropropane	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 11:27	
1,4-Dichlorobenzene	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 11:27	
2,2-Dichloropropane	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 11:27	
2-Chlorotoluene	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 11:27	
4-Chlorotoluene	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 11:27	
4-Isopropyltoluene	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 11:27	
Benzene	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 11:27	
Bromobenzene	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 11:27	
Bromodichloromethane	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 11:27	
Bromoform	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 11:27	
Bromomethane	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 11:27	
Carbon tetrachloride	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 11:27	
Chlorobenzene	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 11:27	
Chloroethane	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 11:27	
Chloroform	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 11:27	
Chloromethane	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 11:27	
cis-1,2-Dichloroethene	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 11:27	
cis-1,3-Dichloropropene	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 11:27	
Dibromochloromethane	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 11:27	



Certificate of Analysis

Hargis & Associates, Inc.

Project Number : Raytheon, 532.30

9171 Towne Centre Drive, Suite 375

Report To : Steve Netto

San Diego , CA 92122

Reported : 02/19/2013

Client Sample ID MW-13

Lab ID: 1300409-09

Volatile Organic Compounds by EPA 8260

Analyst: SL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Dibromomethane	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 11:27	
Dichlorodifluoromethane	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 11:27	
Ethylbenzene	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 11:27	
Hexachlorobutadiene	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 11:27	
Isopropylbenzene	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 11:27	
m,p-Xylene	ND	1.0	NA	1	B3B0190	02/11/2013	02/11/13 11:27	
Methylene chloride	ND	1.0	NA	1	B3B0190	02/11/2013	02/11/13 11:27	
n-Butylbenzene	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 11:27	
n-Propylbenzene	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 11:27	
Naphthalene	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 11:27	
o-Xylene	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 11:27	
sec-Butylbenzene	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 11:27	
Styrene	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 11:27	
tert-Butylbenzene	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 11:27	
Tetrachloroethene	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 11:27	
Toluene	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 11:27	
trans-1,2-Dichloroethene	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 11:27	
Trichloroethene	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 11:27	
Trichlorofluoromethane	5.0	0.50	NA	1	B3B0190	02/11/2013	02/11/13 11:27	
Vinyl chloride	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 11:27	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>109 %</i>		<i>70 - 130</i>		B3B0190	02/11/2013	<i>02/11/13 11:27</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>103 %</i>		<i>70 - 130</i>		B3B0190	02/11/2013	<i>02/11/13 11:27</i>	
<i>Surrogate: Dibromofluoromethane</i>	<i>112 %</i>		<i>70 - 130</i>		B3B0190	02/11/2013	<i>02/11/13 11:27</i>	
<i>Surrogate: Toluene-d8</i>	<i>101 %</i>		<i>70 - 130</i>		B3B0190	02/11/2013	<i>02/11/13 11:27</i>	



Certificate of Analysis

Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : Raytheon, 532.30

Report To : Steve Netto

Reported : 02/19/2013

Client Sample ID MW-13

Lab ID: 1300409-09

1,4-Dioxane by EPA 8270/SIM: Isotope Dilution Technique

Analyst: MFR

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,4-Dioxane	ND	0.20	0.13	1	B3B0162	02/08/2013	02/08/13 22:03	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	<i>48.6 %</i>		<i>36 - 107</i>		B3B0162	02/08/2013	<i>02/08/13 22:03</i>	
<i>Surrogate: 2-Fluorobiphenyl</i>	<i>81.2 %</i>		<i>42 - 120</i>		B3B0162	02/08/2013	<i>02/08/13 22:03</i>	
<i>Surrogate: 4-Terphenyl-d14</i>	<i>62.0 %</i>		<i>67 - 142</i>		B3B0162	02/08/2013	<i>02/08/13 22:03</i>	
<i>Surrogate: Nitrobenzene-d5</i>	<i>80.5 %</i>		<i>36 - 130</i>		B3B0162	02/08/2013	<i>02/08/13 22:03</i>	



Certificate of Analysis

Hargis & Associates, Inc.

Project Number : Raytheon, 532.30

9171 Towne Centre Drive, Suite 375

Report To : Steve Netto

San Diego , CA 92122

Reported : 02/19/2013

Client Sample ID MW-20

Lab ID: 1300409-10

Volatile Organic Compounds by EPA 8260

Analyst: SL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 18:06	
1,1,1-Trichloroethane	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 18:06	
1,1,2,2-Tetrachloroethane	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 18:06	
1,1,2-Trichloroethane	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 18:06	
1,1-Dichloroethane	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 18:06	
1,1-Dichloroethene	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 18:06	
1,1-Dichloropropene	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 18:06	
1,2,3-Trichloropropane	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 18:06	
1,2,3-Trichlorobenzene	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 18:06	
1,2,4-Trichlorobenzene	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 18:06	
1,2,4-Trimethylbenzene	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 18:06	
1,2-Dibromo-3-chloropropane	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 18:06	
1,2-Dibromoethane	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 18:06	
1,2-Dichlorobenzene	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 18:06	
1,2-Dichloroethane	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 18:06	
1,2-Dichloropropane	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 18:06	
1,3,5-Trimethylbenzene	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 18:06	
1,3-Dichlorobenzene	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 18:06	
1,3-Dichloropropane	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 18:06	
1,4-Dichlorobenzene	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 18:06	
2,2-Dichloropropane	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 18:06	
2-Chlorotoluene	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 18:06	
4-Chlorotoluene	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 18:06	
4-Isopropyltoluene	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 18:06	
Benzene	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 18:06	
Bromobenzene	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 18:06	
Bromodichloromethane	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 18:06	
Bromoform	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 18:06	
Bromomethane	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 18:06	
Carbon tetrachloride	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 18:06	
Chlorobenzene	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 18:06	
Chloroethane	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 18:06	
Chloroform	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 18:06	
Chloromethane	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 18:06	
cis-1,2-Dichloroethene	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 18:06	
cis-1,3-Dichloropropene	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 18:06	
Dibromochloromethane	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 18:06	



Certificate of Analysis

Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego, CA 92122

Project Number : Raytheon, 532.30

Report To : Steve Netto

Reported : 02/19/2013

Client Sample ID MW-20

Lab ID: 1300409-10

Volatile Organic Compounds by EPA 8260

Analyst: SL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Dibromomethane	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 18:06	
Dichlorodifluoromethane	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 18:06	
Ethylbenzene	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 18:06	
Hexachlorobutadiene	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 18:06	
Isopropylbenzene	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 18:06	
m,p-Xylene	ND	1.0	NA	1	B3B0154	02/08/2013	02/08/13 18:06	
Methylene chloride	ND	1.0	NA	1	B3B0154	02/08/2013	02/08/13 18:06	
n-Butylbenzene	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 18:06	
n-Propylbenzene	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 18:06	
Naphthalene	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 18:06	
o-Xylene	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 18:06	
sec-Butylbenzene	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 18:06	
Styrene	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 18:06	
tert-Butylbenzene	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 18:06	
Tetrachloroethene	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 18:06	
Toluene	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 18:06	
trans-1,2-Dichloroethene	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 18:06	
Trichloroethene	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 18:06	
Trichlorofluoromethane	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 18:06	
Vinyl chloride	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 18:06	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>96.6 %</i>		<i>70 - 130</i>		B3B0154	02/08/2013	<i>02/08/13 18:06</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>93.5 %</i>		<i>70 - 130</i>		B3B0154	02/08/2013	<i>02/08/13 18:06</i>	
<i>Surrogate: Dibromofluoromethane</i>	<i>99.3 %</i>		<i>70 - 130</i>		B3B0154	02/08/2013	<i>02/08/13 18:06</i>	
<i>Surrogate: Toluene-d8</i>	<i>94.4 %</i>		<i>70 - 130</i>		B3B0154	02/08/2013	<i>02/08/13 18:06</i>	



Certificate of Analysis

Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego, CA 92122

Project Number : Raytheon, 532.30

Report To : Steve Netto

Reported : 02/19/2013

Client Sample ID MW-20

Lab ID: 1300409-10

1,4-Dioxane by EPA 8270/SIM: Isotope Dilution Technique

Analyst: MFR

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,4-Dioxane	ND	0.20	0.13	1	B3B0162	02/08/2013	02/08/13 22:28	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	75.8 %		36 - 107		B3B0162	02/08/2013	02/08/13 22:28	
<i>Surrogate: 2-Fluorobiphenyl</i>	98.3 %		42 - 120		B3B0162	02/08/2013	02/08/13 22:28	
<i>Surrogate: 4-Terphenyl-d14</i>	73.1 %		67 - 142		B3B0162	02/08/2013	02/08/13 22:28	
<i>Surrogate: Nitrobenzene-d5</i>	96.7 %		36 - 130		B3B0162	02/08/2013	02/08/13 22:28	



Certificate of Analysis

Hargis & Associates, Inc.

Project Number : Raytheon, 532.30

9171 Towne Centre Drive, Suite 375

Report To : Steve Netto

San Diego , CA 92122

Reported : 02/19/2013

Client Sample ID MW-16

Lab ID: 1300409-11

Volatile Organic Compounds by EPA 8260

Analyst: SL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	1.0	NA	2	B3B0154	02/08/2013	02/08/13 14:29	D6
1,1,1-Trichloroethane	ND	1.0	NA	2	B3B0154	02/08/2013	02/08/13 14:29	D6
1,1,2,2-Tetrachloroethane	ND	1.0	NA	2	B3B0154	02/08/2013	02/08/13 14:29	D6
1,1,2-Trichloroethane	ND	1.0	NA	2	B3B0154	02/08/2013	02/08/13 14:29	D6
1,1-Dichloroethane	3.9	1.0	NA	2	B3B0154	02/08/2013	02/08/13 14:29	D6
1,1-Dichloroethene	680	10	NA	20	B3B0154	02/08/2013	02/08/13 10:27	
1,1-Dichloropropene	ND	1.0	NA	2	B3B0154	02/08/2013	02/08/13 14:29	D6
1,2,3-Trichloropropane	ND	1.0	NA	2	B3B0154	02/08/2013	02/08/13 14:29	D6
1,2,3-Trichlorobenzene	ND	1.0	NA	2	B3B0154	02/08/2013	02/08/13 14:29	D6
1,2,4-Trichlorobenzene	ND	1.0	NA	2	B3B0154	02/08/2013	02/08/13 14:29	D6
1,2,4-Trimethylbenzene	ND	1.0	NA	2	B3B0154	02/08/2013	02/08/13 14:29	D6
1,2-Dibromo-3-chloropropane	ND	1.0	NA	2	B3B0154	02/08/2013	02/08/13 14:29	D6
1,2-Dibromoethane	ND	1.0	NA	2	B3B0154	02/08/2013	02/08/13 14:29	D6
1,2-Dichlorobenzene	ND	1.0	NA	2	B3B0154	02/08/2013	02/08/13 14:29	D6
1,2-Dichloroethane	ND	1.0	NA	2	B3B0154	02/08/2013	02/08/13 14:29	D6
1,2-Dichloropropane	ND	1.0	NA	2	B3B0154	02/08/2013	02/08/13 14:29	D6
1,3,5-Trimethylbenzene	ND	1.0	NA	2	B3B0154	02/08/2013	02/08/13 14:29	D6
1,3-Dichlorobenzene	ND	1.0	NA	2	B3B0154	02/08/2013	02/08/13 14:29	D6
1,3-Dichloropropane	ND	1.0	NA	2	B3B0154	02/08/2013	02/08/13 14:29	D6
1,4-Dichlorobenzene	ND	1.0	NA	2	B3B0154	02/08/2013	02/08/13 14:29	D6
2,2-Dichloropropane	ND	1.0	NA	2	B3B0154	02/08/2013	02/08/13 14:29	D6
2-Chlorotoluene	ND	1.0	NA	2	B3B0154	02/08/2013	02/08/13 14:29	D6
4-Chlorotoluene	ND	1.0	NA	2	B3B0154	02/08/2013	02/08/13 14:29	D6
4-Isopropyltoluene	ND	1.0	NA	2	B3B0154	02/08/2013	02/08/13 14:29	D6
Benzene	ND	1.0	NA	2	B3B0154	02/08/2013	02/08/13 14:29	D6
Bromobenzene	ND	1.0	NA	2	B3B0154	02/08/2013	02/08/13 14:29	D6
Bromodichloromethane	ND	1.0	NA	2	B3B0154	02/08/2013	02/08/13 14:29	D6
Bromoform	ND	1.0	NA	2	B3B0154	02/08/2013	02/08/13 14:29	D6
Bromomethane	ND	1.0	NA	2	B3B0154	02/08/2013	02/08/13 14:29	D6
Carbon tetrachloride	ND	1.0	NA	2	B3B0154	02/08/2013	02/08/13 14:29	D6
Chlorobenzene	ND	1.0	NA	2	B3B0154	02/08/2013	02/08/13 14:29	D6
Chloroethane	ND	1.0	NA	2	B3B0154	02/08/2013	02/08/13 14:29	D6
Chloroform	ND	1.0	NA	2	B3B0154	02/08/2013	02/08/13 14:29	D6
Chloromethane	ND	1.0	NA	2	B3B0154	02/08/2013	02/08/13 14:29	D6
cis-1,2-Dichloroethene	ND	1.0	NA	2	B3B0154	02/08/2013	02/08/13 14:29	D6
cis-1,3-Dichloropropane	ND	1.0	NA	2	B3B0154	02/08/2013	02/08/13 14:29	D6
Dibromochloromethane	ND	1.0	NA	2	B3B0154	02/08/2013	02/08/13 14:29	D6



Certificate of Analysis

Hargis & Associates, Inc.

Project Number : Raytheon, 532.30

9171 Towne Centre Drive, Suite 375

Report To : Steve Netto

San Diego , CA 92122

Reported : 02/19/2013

Client Sample ID MW-16

Lab ID: 1300409-11

Volatile Organic Compounds by EPA 8260

Analyst: SL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Dibromomethane	ND	1.0	NA	2	B3B0154	02/08/2013	02/08/13 14:29	D6
Dichlorodifluoromethane	ND	1.0	NA	2	B3B0154	02/08/2013	02/08/13 14:29	D6
Ethylbenzene	ND	1.0	NA	2	B3B0154	02/08/2013	02/08/13 14:29	D6
Hexachlorobutadiene	ND	1.0	NA	2	B3B0154	02/08/2013	02/08/13 14:29	D6
Isopropylbenzene	ND	1.0	NA	2	B3B0154	02/08/2013	02/08/13 14:29	D6
m,p-Xylene	ND	2.0	NA	2	B3B0154	02/08/2013	02/08/13 14:29	D6
Methylene chloride	ND	2.0	NA	2	B3B0154	02/08/2013	02/08/13 14:29	D6
n-Butylbenzene	ND	1.0	NA	2	B3B0154	02/08/2013	02/08/13 14:29	D6
n-Propylbenzene	ND	1.0	NA	2	B3B0154	02/08/2013	02/08/13 14:29	D6
Naphthalene	ND	1.0	NA	2	B3B0154	02/08/2013	02/08/13 14:29	D6
o-Xylene	ND	1.0	NA	2	B3B0154	02/08/2013	02/08/13 14:29	D6
sec-Butylbenzene	ND	1.0	NA	2	B3B0154	02/08/2013	02/08/13 14:29	D6
Styrene	ND	1.0	NA	2	B3B0154	02/08/2013	02/08/13 14:29	D6
tert-Butylbenzene	ND	1.0	NA	2	B3B0154	02/08/2013	02/08/13 14:29	D6
Tetrachloroethene	ND	1.0	NA	2	B3B0154	02/08/2013	02/08/13 14:29	D6
Toluene	ND	1.0	NA	2	B3B0154	02/08/2013	02/08/13 14:29	D6
trans-1,2-Dichloroethene	ND	1.0	NA	2	B3B0154	02/08/2013	02/08/13 14:29	D6
Trichloroethene	4.5	1.0	NA	2	B3B0154	02/08/2013	02/08/13 14:29	D6
Trichlorofluoromethane	ND	1.0	NA	2	B3B0154	02/08/2013	02/08/13 14:29	D6
Vinyl chloride	ND	1.0	NA	2	B3B0154	02/08/2013	02/08/13 14:29	D6
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>102 %</i>		<i>70 - 130</i>		B3B0154	02/08/2013	<i>02/08/13 10:27</i>	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>101 %</i>		<i>70 - 130</i>		B3B0154	02/08/2013	<i>02/08/13 14:29</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>108 %</i>		<i>70 - 130</i>		B3B0154	02/08/2013	<i>02/08/13 14:29</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>103 %</i>		<i>70 - 130</i>		B3B0154	02/08/2013	<i>02/08/13 10:27</i>	
<i>Surrogate: Dibromofluoromethane</i>	<i>105 %</i>		<i>70 - 130</i>		B3B0154	02/08/2013	<i>02/08/13 10:27</i>	
<i>Surrogate: Dibromofluoromethane</i>	<i>103 %</i>		<i>70 - 130</i>		B3B0154	02/08/2013	<i>02/08/13 14:29</i>	
<i>Surrogate: Toluene-d8</i>	<i>98.6 %</i>		<i>70 - 130</i>		B3B0154	02/08/2013	<i>02/08/13 14:29</i>	
<i>Surrogate: Toluene-d8</i>	<i>96.1 %</i>		<i>70 - 130</i>		B3B0154	02/08/2013	<i>02/08/13 10:27</i>	



Certificate of Analysis

Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego, CA 92122

Project Number : Raytheon, 532.30

Report To : Steve Netto

Reported : 02/19/2013

Client Sample ID MW-16

Lab ID: 1300409-11

1,4-Dioxane by EPA 8270: Isotope Dilution Technique

Analyst: MFR

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,4-Dioxane	49	2.0	NA	1	B3B0206	02/11/2013	02/11/13 18:29	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	<i>69.1 %</i>		<i>37 - 93</i>		B3B0206	02/11/2013	<i>02/11/13 18:29</i>	
<i>Surrogate: 2-Fluorobiphenyl</i>	<i>81.0 %</i>		<i>51 - 100</i>		B3B0206	02/11/2013	<i>02/11/13 18:29</i>	
<i>Surrogate: 4-Terphenyl-d14</i>	<i>91.6 %</i>		<i>58 - 113</i>		B3B0206	02/11/2013	<i>02/11/13 18:29</i>	
<i>Surrogate: Nitrobenzene-d5</i>	<i>87.6 %</i>		<i>39 - 95</i>		B3B0206	02/11/2013	<i>02/11/13 18:29</i>	



Certificate of Analysis

Hargis & Associates, Inc.

Project Number : Raytheon, 532.30

9171 Towne Centre Drive, Suite 375

Report To : Steve Netto

San Diego , CA 92122

Reported : 02/19/2013

Client Sample ID RB-02062013

Lab ID: 1300409-12

Volatile Organic Compounds by EPA 8260

Analyst: SL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 16:06	
1,1,1-Trichloroethane	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 16:06	
1,1,2,2-Tetrachloroethane	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 16:06	
1,1,2-Trichloroethane	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 16:06	
1,1-Dichloroethane	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 16:06	
1,1-Dichloroethene	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 16:06	
1,1-Dichloropropene	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 16:06	
1,2,3-Trichloropropane	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 16:06	
1,2,3-Trichlorobenzene	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 16:06	
1,2,4-Trichlorobenzene	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 16:06	
1,2,4-Trimethylbenzene	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 16:06	
1,2-Dibromo-3-chloropropane	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 16:06	
1,2-Dibromoethane	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 16:06	
1,2-Dichlorobenzene	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 16:06	
1,2-Dichloroethane	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 16:06	
1,2-Dichloropropane	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 16:06	
1,3,5-Trimethylbenzene	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 16:06	
1,3-Dichlorobenzene	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 16:06	
1,3-Dichloropropane	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 16:06	
1,4-Dichlorobenzene	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 16:06	
2,2-Dichloropropane	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 16:06	
2-Chlorotoluene	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 16:06	
4-Chlorotoluene	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 16:06	
4-Isopropyltoluene	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 16:06	
Benzene	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 16:06	
Bromobenzene	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 16:06	
Bromodichloromethane	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 16:06	
Bromoform	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 16:06	
Bromomethane	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 16:06	
Carbon tetrachloride	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 16:06	
Chlorobenzene	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 16:06	
Chloroethane	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 16:06	
Chloroform	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 16:06	
Chloromethane	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 16:06	
cis-1,2-Dichloroethene	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 16:06	
cis-1,3-Dichloropropene	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 16:06	
Dibromochloromethane	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 16:06	



Certificate of Analysis

Hargis & Associates, Inc.

Project Number : Raytheon, 532.30

9171 Towne Centre Drive, Suite 375

Report To : Steve Netto

San Diego , CA 92122

Reported : 02/19/2013

Client Sample ID RB-02062013

Lab ID: 1300409-12

Volatile Organic Compounds by EPA 8260

Analyst: SL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Dibromomethane	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 16:06	
Dichlorodifluoromethane	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 16:06	
Ethylbenzene	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 16:06	
Hexachlorobutadiene	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 16:06	
Isopropylbenzene	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 16:06	
m,p-Xylene	ND	1.0	NA	1	B3B0154	02/08/2013	02/08/13 16:06	
Methylene chloride	ND	1.0	NA	1	B3B0154	02/08/2013	02/08/13 16:06	
n-Butylbenzene	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 16:06	
n-Propylbenzene	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 16:06	
Naphthalene	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 16:06	
o-Xylene	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 16:06	
sec-Butylbenzene	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 16:06	
Styrene	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 16:06	
tert-Butylbenzene	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 16:06	
Tetrachloroethene	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 16:06	
Toluene	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 16:06	
trans-1,2-Dichloroethene	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 16:06	
Trichloroethene	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 16:06	
Trichlorofluoromethane	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 16:06	
Vinyl chloride	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 16:06	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>99.0 %</i>		<i>70 - 130</i>		B3B0154	02/08/2013	<i>02/08/13 16:06</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>98.6 %</i>		<i>70 - 130</i>		B3B0154	02/08/2013	<i>02/08/13 16:06</i>	
<i>Surrogate: Dibromofluoromethane</i>	<i>101 %</i>		<i>70 - 130</i>		B3B0154	02/08/2013	<i>02/08/13 16:06</i>	
<i>Surrogate: Toluene-d8</i>	<i>92.2 %</i>		<i>70 - 130</i>		B3B0154	02/08/2013	<i>02/08/13 16:06</i>	



Certificate of Analysis

Hargis & Associates, Inc.

Project Number : Raytheon, 532.30

9171 Towne Centre Drive, Suite 375

Report To : Steve Netto

San Diego , CA 92122

Reported : 02/19/2013

Client Sample ID MW-34C

Lab ID: 1300409-13

Volatile Organic Compounds by EPA 8260

Analyst: SL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 18:30	
1,1,1-Trichloroethane	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 18:30	
1,1,2,2-Tetrachloroethane	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 18:30	
1,1,2-Trichloroethane	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 18:30	
1,1-Dichloroethane	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 18:30	
1,1-Dichloroethene	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 18:30	
1,1-Dichloropropene	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 18:30	
1,2,3-Trichloropropane	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 18:30	
1,2,3-Trichlorobenzene	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 18:30	
1,2,4-Trichlorobenzene	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 18:30	
1,2,4-Trimethylbenzene	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 18:30	
1,2-Dibromo-3-chloropropane	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 18:30	
1,2-Dibromoethane	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 18:30	
1,2-Dichlorobenzene	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 18:30	
1,2-Dichloroethane	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 18:30	
1,2-Dichloropropane	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 18:30	
1,3,5-Trimethylbenzene	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 18:30	
1,3-Dichlorobenzene	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 18:30	
1,3-Dichloropropane	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 18:30	
1,4-Dichlorobenzene	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 18:30	
2,2-Dichloropropane	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 18:30	
2-Chlorotoluene	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 18:30	
4-Chlorotoluene	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 18:30	
4-Isopropyltoluene	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 18:30	
Benzene	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 18:30	
Bromobenzene	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 18:30	
Bromodichloromethane	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 18:30	
Bromoform	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 18:30	
Bromomethane	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 18:30	
Carbon tetrachloride	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 18:30	
Chlorobenzene	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 18:30	
Chloroethane	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 18:30	
Chloroform	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 18:30	
Chloromethane	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 18:30	
cis-1,2-Dichloroethene	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 18:30	
cis-1,3-Dichloropropene	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 18:30	
Dibromochloromethane	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 18:30	



Certificate of Analysis

Hargis & Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego , CA 92122

Project Number : Raytheon, 532.30
 Report To : Steve Netto
 Reported : 02/19/2013

Client Sample ID MW-34C
Lab ID: 1300409-13

Volatile Organic Compounds by EPA 8260

Analyst: SL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Dibromomethane	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 18:30	
Dichlorodifluoromethane	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 18:30	
Ethylbenzene	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 18:30	
Hexachlorobutadiene	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 18:30	
Isopropylbenzene	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 18:30	
m,p-Xylene	ND	1.0	NA	1	B3B0154	02/08/2013	02/08/13 18:30	
Methylene chloride	ND	1.0	NA	1	B3B0154	02/08/2013	02/08/13 18:30	
n-Butylbenzene	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 18:30	
n-Propylbenzene	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 18:30	
Naphthalene	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 18:30	
o-Xylene	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 18:30	
sec-Butylbenzene	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 18:30	
Styrene	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 18:30	
tert-Butylbenzene	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 18:30	
Tetrachloroethene	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 18:30	
Toluene	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 18:30	
trans-1,2-Dichloroethene	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 18:30	
Trichloroethene	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 18:30	
Trichlorofluoromethane	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 18:30	
Vinyl chloride	ND	0.50	NA	1	B3B0154	02/08/2013	02/08/13 18:30	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>102 %</i>		<i>70 - 130</i>		B3B0154	02/08/2013	<i>02/08/13 18:30</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>100 %</i>		<i>70 - 130</i>		B3B0154	02/08/2013	<i>02/08/13 18:30</i>	
<i>Surrogate: Dibromofluoromethane</i>	<i>105 %</i>		<i>70 - 130</i>		B3B0154	02/08/2013	<i>02/08/13 18:30</i>	
<i>Surrogate: Toluene-d8</i>	<i>96.4 %</i>		<i>70 - 130</i>		B3B0154	02/08/2013	<i>02/08/13 18:30</i>	



Certificate of Analysis

Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego, CA 92122

Project Number : Raytheon, 532.30

Report To : Steve Netto

Reported : 02/19/2013

Client Sample ID MW-34C

Lab ID: 1300409-13

1,4-Dioxane by EPA 8270/SIM: Isotope Dilution Technique

Analyst: MFR

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,4-Dioxane	ND	0.20	0.13	1	B3B0162	02/08/2013	02/08/13 22:52	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	<i>60.4 %</i>		<i>36 - 107</i>		B3B0162	02/08/2013	<i>02/08/13 22:52</i>	
<i>Surrogate: 2-Fluorobiphenyl</i>	<i>90.2 %</i>		<i>42 - 120</i>		B3B0162	02/08/2013	<i>02/08/13 22:52</i>	
<i>Surrogate: 4-Terphenyl-d14</i>	<i>74.6 %</i>		<i>67 - 142</i>		B3B0162	02/08/2013	<i>02/08/13 22:52</i>	
<i>Surrogate: Nitrobenzene-d5</i>	<i>89.8 %</i>		<i>36 - 130</i>		B3B0162	02/08/2013	<i>02/08/13 22:52</i>	



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Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego, CA 92122

Project Number : Raytheon, 532.30

Report To : Steve Netto

Reported : 02/19/2013

Client Sample ID MW-34B

Lab ID: 1300409-14

Volatile Organic Compounds by EPA 8260

Analyst: SL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	1.0	NA	2	B3B0190	02/11/2013	02/11/13 11:50	D6
1,1,1-Trichloroethane	ND	1.0	NA	2	B3B0190	02/11/2013	02/11/13 11:50	D6
1,1,2,2-Tetrachloroethane	ND	1.0	NA	2	B3B0190	02/11/2013	02/11/13 11:50	D6
1,1,2-Trichloroethane	1.7	1.0	NA	2	B3B0190	02/11/2013	02/11/13 11:50	D6
1,1-Dichloroethane	5.5	1.0	NA	2	B3B0190	02/11/2013	02/11/13 11:50	D6
1,1-Dichloroethene	580	25	NA	50	B3B0154	02/08/2013	02/08/13 15:19	
1,1-Dichloropropene	ND	1.0	NA	2	B3B0190	02/11/2013	02/11/13 11:50	D6
1,2,3-Trichloropropane	ND	1.0	NA	2	B3B0190	02/11/2013	02/11/13 11:50	D6
1,2,3-Trichlorobenzene	ND	1.0	NA	2	B3B0190	02/11/2013	02/11/13 11:50	D6
1,2,4-Trichlorobenzene	ND	1.0	NA	2	B3B0190	02/11/2013	02/11/13 11:50	D6
1,2,4-Trimethylbenzene	ND	1.0	NA	2	B3B0190	02/11/2013	02/11/13 11:50	D6
1,2-Dibromo-3-chloropropane	ND	1.0	NA	2	B3B0190	02/11/2013	02/11/13 11:50	D6
1,2-Dibromoethane	ND	1.0	NA	2	B3B0190	02/11/2013	02/11/13 11:50	D6
1,2-Dichlorobenzene	ND	1.0	NA	2	B3B0190	02/11/2013	02/11/13 11:50	D6
1,2-Dichloroethane	1.4	1.0	NA	2	B3B0190	02/11/2013	02/11/13 11:50	D6
1,2-Dichloropropane	ND	1.0	NA	2	B3B0190	02/11/2013	02/11/13 11:50	D6
1,3,5-Trimethylbenzene	ND	1.0	NA	2	B3B0190	02/11/2013	02/11/13 11:50	D6
1,3-Dichlorobenzene	ND	1.0	NA	2	B3B0190	02/11/2013	02/11/13 11:50	D6
1,3-Dichloropropane	ND	1.0	NA	2	B3B0190	02/11/2013	02/11/13 11:50	D6
1,4-Dichlorobenzene	ND	1.0	NA	2	B3B0190	02/11/2013	02/11/13 11:50	D6
2,2-Dichloropropane	ND	1.0	NA	2	B3B0190	02/11/2013	02/11/13 11:50	D6
2-Chlorotoluene	ND	1.0	NA	2	B3B0190	02/11/2013	02/11/13 11:50	D6
4-Chlorotoluene	ND	1.0	NA	2	B3B0190	02/11/2013	02/11/13 11:50	D6
4-Isopropyltoluene	ND	1.0	NA	2	B3B0190	02/11/2013	02/11/13 11:50	D6
Benzene	ND	1.0	NA	2	B3B0190	02/11/2013	02/11/13 11:50	D6
Bromobenzene	ND	1.0	NA	2	B3B0190	02/11/2013	02/11/13 11:50	D6
Bromodichloromethane	ND	1.0	NA	2	B3B0190	02/11/2013	02/11/13 11:50	D6
Bromoform	ND	1.0	NA	2	B3B0190	02/11/2013	02/11/13 11:50	D6
Bromomethane	ND	1.0	NA	2	B3B0190	02/11/2013	02/11/13 11:50	D6
Carbon tetrachloride	ND	1.0	NA	2	B3B0190	02/11/2013	02/11/13 11:50	D6
Chlorobenzene	ND	1.0	NA	2	B3B0190	02/11/2013	02/11/13 11:50	D6
Chloroethane	ND	1.0	NA	2	B3B0190	02/11/2013	02/11/13 11:50	D6
Chloroform	ND	1.0	NA	2	B3B0190	02/11/2013	02/11/13 11:50	D6
Chloromethane	ND	1.0	NA	2	B3B0190	02/11/2013	02/11/13 11:50	D6
cis-1,2-Dichloroethene	ND	1.0	NA	2	B3B0190	02/11/2013	02/11/13 11:50	D6
cis-1,3-Dichloropropane	ND	1.0	NA	2	B3B0190	02/11/2013	02/11/13 11:50	D6
Dibromochloromethane	ND	1.0	NA	2	B3B0190	02/11/2013	02/11/13 11:50	D6



Certificate of Analysis

Hargis & Associates, Inc.

Project Number : Raytheon, 532.30

9171 Towne Centre Drive, Suite 375

Report To : Steve Netto

San Diego , CA 92122

Reported : 02/19/2013

Client Sample ID MW-34B

Lab ID: 1300409-14

Volatile Organic Compounds by EPA 8260

Analyst: SL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Dibromomethane	ND	1.0	NA	2	B3B0190	02/11/2013	02/11/13 11:50	D6
Dichlorodifluoromethane	ND	1.0	NA	2	B3B0190	02/11/2013	02/11/13 11:50	D6
Ethylbenzene	ND	1.0	NA	2	B3B0190	02/11/2013	02/11/13 11:50	D6
Hexachlorobutadiene	ND	1.0	NA	2	B3B0190	02/11/2013	02/11/13 11:50	D6
Isopropylbenzene	ND	1.0	NA	2	B3B0190	02/11/2013	02/11/13 11:50	D6
m,p-Xylene	ND	2.0	NA	2	B3B0190	02/11/2013	02/11/13 11:50	D6
Methylene chloride	ND	2.0	NA	2	B3B0190	02/11/2013	02/11/13 11:50	D6
n-Butylbenzene	ND	1.0	NA	2	B3B0190	02/11/2013	02/11/13 11:50	D6
n-Propylbenzene	ND	1.0	NA	2	B3B0190	02/11/2013	02/11/13 11:50	D6
Naphthalene	ND	1.0	NA	2	B3B0190	02/11/2013	02/11/13 11:50	D6
o-Xylene	ND	1.0	NA	2	B3B0190	02/11/2013	02/11/13 11:50	D6
sec-Butylbenzene	ND	1.0	NA	2	B3B0190	02/11/2013	02/11/13 11:50	D6
Styrene	ND	1.0	NA	2	B3B0190	02/11/2013	02/11/13 11:50	D6
tert-Butylbenzene	ND	1.0	NA	2	B3B0190	02/11/2013	02/11/13 11:50	D6
Tetrachloroethene	ND	1.0	NA	2	B3B0190	02/11/2013	02/11/13 11:50	D6
Toluene	ND	1.0	NA	2	B3B0190	02/11/2013	02/11/13 11:50	D6
trans-1,2-Dichloroethene	ND	1.0	NA	2	B3B0190	02/11/2013	02/11/13 11:50	D6
Trichloroethene	ND	1.0	NA	2	B3B0190	02/11/2013	02/11/13 11:50	D6
Trichlorofluoromethane	ND	1.0	NA	2	B3B0190	02/11/2013	02/11/13 11:50	D6
Vinyl chloride	ND	1.0	NA	2	B3B0190	02/11/2013	02/11/13 11:50	D6
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>101 %</i>		<i>70 - 130</i>		B3B0154	02/08/2013	<i>02/08/13 15:19</i>	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>102 %</i>		<i>70 - 130</i>		B3B0190	02/11/2013	<i>02/11/13 11:50</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>101 %</i>		<i>70 - 130</i>		B3B0190	02/11/2013	<i>02/11/13 11:50</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>109 %</i>		<i>70 - 130</i>		B3B0154	02/08/2013	<i>02/08/13 15:19</i>	
<i>Surrogate: Dibromofluoromethane</i>	<i>104 %</i>		<i>70 - 130</i>		B3B0154	02/08/2013	<i>02/08/13 15:19</i>	
<i>Surrogate: Dibromofluoromethane</i>	<i>110 %</i>		<i>70 - 130</i>		B3B0190	02/11/2013	<i>02/11/13 11:50</i>	
<i>Surrogate: Toluene-d8</i>	<i>98.4 %</i>		<i>70 - 130</i>		B3B0154	02/08/2013	<i>02/08/13 15:19</i>	
<i>Surrogate: Toluene-d8</i>	<i>94.4 %</i>		<i>70 - 130</i>		B3B0190	02/11/2013	<i>02/11/13 11:50</i>	



Certificate of Analysis

Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego, CA 92122

Project Number : Raytheon, 532.30

Report To : Steve Netto

Reported : 02/19/2013

Client Sample ID MW-34B

Lab ID: 1300409-14

1,4-Dioxane by EPA 8270: Isotope Dilution Technique

Analyst: MFR

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,4-Dioxane	180	2.0	NA	1	B3B0206	02/11/2013	02/11/13 19:47	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	<i>65.5 %</i>		<i>37 - 93</i>		B3B0206	02/11/2013	<i>02/11/13 19:47</i>	
<i>Surrogate: 2-Fluorobiphenyl</i>	<i>73.9 %</i>		<i>51 - 100</i>		B3B0206	02/11/2013	<i>02/11/13 19:47</i>	
<i>Surrogate: 4-Terphenyl-d14</i>	<i>89.6 %</i>		<i>58 - 113</i>		B3B0206	02/11/2013	<i>02/11/13 19:47</i>	
<i>Surrogate: Nitrobenzene-d5</i>	<i>79.3 %</i>		<i>39 - 95</i>		B3B0206	02/11/2013	<i>02/11/13 19:47</i>	



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Hargis & Associates, Inc.

Project Number : Raytheon, 532.30

9171 Towne Centre Drive, Suite 375

Report To : Steve Netto

San Diego , CA 92122

Reported : 02/19/2013

Client Sample ID MW-3400B

Lab ID: 1300409-15

Volatile Organic Compounds by EPA 8260

Analyst: SL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	1.0	NA	2	B3B0190	02/11/2013	02/11/13 12:14	D6
1,1,1-Trichloroethane	ND	1.0	NA	2	B3B0190	02/11/2013	02/11/13 12:14	D6
1,1,2,2-Tetrachloroethane	ND	1.0	NA	2	B3B0190	02/11/2013	02/11/13 12:14	D6
1,1,2-Trichloroethane	1.7	1.0	NA	2	B3B0190	02/11/2013	02/11/13 12:14	D6
1,1-Dichloroethane	5.6	1.0	NA	2	B3B0190	02/11/2013	02/11/13 12:14	D6
1,1-Dichloroethene	550	25	NA	50	B3B0154	02/08/2013	02/08/13 15:42	
1,1-Dichloropropene	ND	1.0	NA	2	B3B0190	02/11/2013	02/11/13 12:14	D6
1,2,3-Trichloropropane	ND	1.0	NA	2	B3B0190	02/11/2013	02/11/13 12:14	D6
1,2,3-Trichlorobenzene	ND	1.0	NA	2	B3B0190	02/11/2013	02/11/13 12:14	D6
1,2,4-Trichlorobenzene	ND	1.0	NA	2	B3B0190	02/11/2013	02/11/13 12:14	D6
1,2,4-Trimethylbenzene	ND	1.0	NA	2	B3B0190	02/11/2013	02/11/13 12:14	D6
1,2-Dibromo-3-chloropropane	ND	1.0	NA	2	B3B0190	02/11/2013	02/11/13 12:14	D6
1,2-Dibromoethane	ND	1.0	NA	2	B3B0190	02/11/2013	02/11/13 12:14	D6
1,2-Dichlorobenzene	ND	1.0	NA	2	B3B0190	02/11/2013	02/11/13 12:14	D6
1,2-Dichloroethane	1.4	1.0	NA	2	B3B0190	02/11/2013	02/11/13 12:14	D6
1,2-Dichloropropane	ND	1.0	NA	2	B3B0190	02/11/2013	02/11/13 12:14	D6
1,3,5-Trimethylbenzene	ND	1.0	NA	2	B3B0190	02/11/2013	02/11/13 12:14	D6
1,3-Dichlorobenzene	ND	1.0	NA	2	B3B0190	02/11/2013	02/11/13 12:14	D6
1,3-Dichloropropane	ND	1.0	NA	2	B3B0190	02/11/2013	02/11/13 12:14	D6
1,4-Dichlorobenzene	ND	1.0	NA	2	B3B0190	02/11/2013	02/11/13 12:14	D6
2,2-Dichloropropane	ND	1.0	NA	2	B3B0190	02/11/2013	02/11/13 12:14	D6
2-Chlorotoluene	ND	1.0	NA	2	B3B0190	02/11/2013	02/11/13 12:14	D6
4-Chlorotoluene	ND	1.0	NA	2	B3B0190	02/11/2013	02/11/13 12:14	D6
4-Isopropyltoluene	ND	1.0	NA	2	B3B0190	02/11/2013	02/11/13 12:14	D6
Benzene	ND	1.0	NA	2	B3B0190	02/11/2013	02/11/13 12:14	D6
Bromobenzene	ND	1.0	NA	2	B3B0190	02/11/2013	02/11/13 12:14	D6
Bromodichloromethane	ND	1.0	NA	2	B3B0190	02/11/2013	02/11/13 12:14	D6
Bromoform	ND	1.0	NA	2	B3B0190	02/11/2013	02/11/13 12:14	D6
Bromomethane	ND	1.0	NA	2	B3B0190	02/11/2013	02/11/13 12:14	D6
Carbon tetrachloride	ND	1.0	NA	2	B3B0190	02/11/2013	02/11/13 12:14	D6
Chlorobenzene	ND	1.0	NA	2	B3B0190	02/11/2013	02/11/13 12:14	D6
Chloroethane	ND	1.0	NA	2	B3B0190	02/11/2013	02/11/13 12:14	D6
Chloroform	ND	1.0	NA	2	B3B0190	02/11/2013	02/11/13 12:14	D6
Chloromethane	ND	1.0	NA	2	B3B0190	02/11/2013	02/11/13 12:14	D6
cis-1,2-Dichloroethene	ND	1.0	NA	2	B3B0190	02/11/2013	02/11/13 12:14	D6
cis-1,3-Dichloropropane	ND	1.0	NA	2	B3B0190	02/11/2013	02/11/13 12:14	D6
Dibromochloromethane	ND	1.0	NA	2	B3B0190	02/11/2013	02/11/13 12:14	D6



Certificate of Analysis

Hargis & Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego , CA 92122

Project Number : Raytheon, 532.30
 Report To : Steve Netto
 Reported : 02/19/2013

Client Sample ID MW-3400B

Lab ID: 1300409-15

Volatile Organic Compounds by EPA 8260

Analyst: SL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Dibromomethane	ND	1.0	NA	2	B3B0190	02/11/2013	02/11/13 12:14	D6
Dichlorodifluoromethane	ND	1.0	NA	2	B3B0190	02/11/2013	02/11/13 12:14	D6
Ethylbenzene	ND	1.0	NA	2	B3B0190	02/11/2013	02/11/13 12:14	D6
Hexachlorobutadiene	ND	1.0	NA	2	B3B0190	02/11/2013	02/11/13 12:14	D6
Isopropylbenzene	ND	1.0	NA	2	B3B0190	02/11/2013	02/11/13 12:14	D6
m,p-Xylene	ND	2.0	NA	2	B3B0190	02/11/2013	02/11/13 12:14	D6
Methylene chloride	ND	2.0	NA	2	B3B0190	02/11/2013	02/11/13 12:14	D6
n-Butylbenzene	ND	1.0	NA	2	B3B0190	02/11/2013	02/11/13 12:14	D6
n-Propylbenzene	ND	1.0	NA	2	B3B0190	02/11/2013	02/11/13 12:14	D6
Naphthalene	ND	1.0	NA	2	B3B0190	02/11/2013	02/11/13 12:14	D6
o-Xylene	ND	1.0	NA	2	B3B0190	02/11/2013	02/11/13 12:14	D6
sec-Butylbenzene	ND	1.0	NA	2	B3B0190	02/11/2013	02/11/13 12:14	D6
Styrene	ND	1.0	NA	2	B3B0190	02/11/2013	02/11/13 12:14	D6
tert-Butylbenzene	ND	1.0	NA	2	B3B0190	02/11/2013	02/11/13 12:14	D6
Tetrachloroethene	ND	1.0	NA	2	B3B0190	02/11/2013	02/11/13 12:14	D6
Toluene	ND	1.0	NA	2	B3B0190	02/11/2013	02/11/13 12:14	D6
trans-1,2-Dichloroethene	ND	1.0	NA	2	B3B0190	02/11/2013	02/11/13 12:14	D6
Trichloroethene	ND	1.0	NA	2	B3B0190	02/11/2013	02/11/13 12:14	D6
Trichlorofluoromethane	ND	1.0	NA	2	B3B0190	02/11/2013	02/11/13 12:14	D6
Vinyl chloride	ND	1.0	NA	2	B3B0190	02/11/2013	02/11/13 12:14	D6
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>98.6 %</i>		<i>70 - 130</i>		B3B0154	02/08/2013	<i>02/08/13 15:42</i>	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>110 %</i>		<i>70 - 130</i>		B3B0190	02/11/2013	<i>02/11/13 12:14</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>97.6 %</i>		<i>70 - 130</i>		B3B0154	02/08/2013	<i>02/08/13 15:42</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>97.0 %</i>		<i>70 - 130</i>		B3B0190	02/11/2013	<i>02/11/13 12:14</i>	
<i>Surrogate: Dibromofluoromethane</i>	<i>112 %</i>		<i>70 - 130</i>		B3B0190	02/11/2013	<i>02/11/13 12:14</i>	
<i>Surrogate: Dibromofluoromethane</i>	<i>101 %</i>		<i>70 - 130</i>		B3B0154	02/08/2013	<i>02/08/13 15:42</i>	
<i>Surrogate: Toluene-d8</i>	<i>96.5 %</i>		<i>70 - 130</i>		B3B0190	02/11/2013	<i>02/11/13 12:14</i>	
<i>Surrogate: Toluene-d8</i>	<i>92.4 %</i>		<i>70 - 130</i>		B3B0154	02/08/2013	<i>02/08/13 15:42</i>	



Certificate of Analysis

Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego, CA 92122

Project Number : Raytheon, 532.30

Report To : Steve Netto

Reported : 02/19/2013

Client Sample ID MW-3400B

Lab ID: 1300409-15

1,4-Dioxane by EPA 8270: Isotope Dilution Technique

Analyst: BB

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,4-Dioxane	170	2.0	NA	1	B3B0206	02/11/2013	02/12/13 11:35	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	<i>66.8 %</i>		<i>37 - 93</i>		B3B0206	02/11/2013	<i>02/12/13 11:35</i>	
<i>Surrogate: 2-Fluorobiphenyl</i>	<i>78.1 %</i>		<i>51 - 100</i>		B3B0206	02/11/2013	<i>02/12/13 11:35</i>	
<i>Surrogate: 4-Terphenyl-d14</i>	<i>96.6 %</i>		<i>58 - 113</i>		B3B0206	02/11/2013	<i>02/12/13 11:35</i>	
<i>Surrogate: Nitrobenzene-d5</i>	<i>84.1 %</i>		<i>39 - 95</i>		B3B0206	02/11/2013	<i>02/12/13 11:35</i>	



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9171 Towne Centre Drive, Suite 375

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San Diego , CA 92122

Reported : 02/19/2013

QUALITY CONTROL SECTION

Volatile Organic Compounds by EPA 8260 - Quality Control

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B3B0118 - MSVOAW_LL

Blank (B3B0118-BLK1)

Prepared: 2/7/2013 Analyzed: 2/7/2013

1,1,1,2-Tetrachloroethane	ND	0.50				NR			
1,1,1-Trichloroethane	ND	0.50				NR			
1,1,2,2-Tetrachloroethane	ND	0.50				NR			
1,1,2-Trichloroethane	ND	0.50				NR			
1,1-Dichloroethane	ND	0.50				NR			
1,1-Dichloroethene	ND	0.50				NR			
1,1-Dichloropropene	ND	0.50				NR			
1,2,3-Trichloropropane	ND	0.50				NR			
1,2,3-Trichlorobenzene	ND	0.50				NR			
1,2,4-Trichlorobenzene	ND	0.50				NR			
1,2,4-Trimethylbenzene	ND	0.50				NR			
1,2-Dibromo-3-chloropropane	ND	0.50				NR			
1,2-Dibromoethane	ND	0.50				NR			
1,2-Dichlorobenzene	ND	0.50				NR			
1,2-Dichloroethane	ND	0.50				NR			
1,2-Dichloropropane	ND	0.50				NR			
1,3,5-Trimethylbenzene	ND	0.50				NR			
1,3-Dichlorobenzene	ND	0.50				NR			
1,3-Dichloropropane	ND	0.50				NR			
1,4-Dichlorobenzene	ND	0.50				NR			
2,2-Dichloropropane	ND	0.50				NR			
2-Chlorotoluene	ND	0.50				NR			
4-Chlorotoluene	ND	0.50				NR			
4-Isopropyltoluene	ND	0.50				NR			
Benzene	ND	0.50				NR			
Bromobenzene	ND	0.50				NR			
Bromodichloromethane	ND	0.50				NR			
Bromoform	ND	0.50				NR			
Bromomethane	ND	0.50				NR			
Carbon tetrachloride	ND	0.50				NR			
Chlorobenzene	ND	0.50				NR			
Chloroethane	ND	0.50				NR			
Chloroform	ND	0.50				NR			
Chloromethane	ND	0.50				NR			
cis-1,2-Dichloroethene	ND	0.50				NR			
cis-1,3-Dichloropropene	ND	0.50				NR			
Dibromochloromethane	ND	0.50				NR			
Dibromomethane	ND	0.50				NR			
Dichlorodifluoromethane	ND	0.50				NR			



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Hargis & Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego , CA 92122

Project Number : Raytheon, 532.30
 Report To : Steve Netto
 Reported : 02/19/2013

Volatile Organic Compounds by EPA 8260 - Quality Control (cont'd)

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B3B0118 - MSVOAW_LL (continued)

Blank (B3B0118-BLK1) - Continued

Prepared: 2/7/2013 Analyzed: 2/7/2013

Ethylbenzene	ND	0.50					NR		
Hexachlorobutadiene	ND	0.50					NR		
Isopropylbenzene	ND	0.50					NR		
m,p-Xylene	ND	1.0					NR		
Methylene chloride	ND	1.0					NR		
n-Butylbenzene	ND	0.50					NR		
n-Propylbenzene	ND	0.50					NR		
Naphthalene	ND	0.50					NR		
o-Xylene	ND	0.50					NR		
sec-Butylbenzene	ND	0.50					NR		
Styrene	ND	0.50					NR		
tert-Butylbenzene	ND	0.50					NR		
Tetrachloroethene	ND	0.50					NR		
Toluene	ND	0.50					NR		
trans-1,2-Dichloroethene	ND	0.50					NR		
Trichloroethene	ND	0.50					NR		
Trichlorofluoromethane	ND	0.50					NR		
Vinyl chloride	ND	0.50					NR		

<i>Surrogate: 1,2-Dichloroethane-d4</i>	30.29		25.0000		121	70 - 130			
<i>Surrogate: 4-Bromofluorobenzene</i>	24.29		25.0000		97.2	70 - 130			
<i>Surrogate: Dibromofluoromethane</i>	30.47		25.0000		122	70 - 130			
<i>Surrogate: Toluene-d8</i>	27.54		25.0000		110	70 - 130			

LCS (B3B0118-BS1)

Prepared: 2/7/2013 Analyzed: 2/7/2013

1,1-Dichloroethene	19.4500		20.0000		97.2	70 - 130			
Benzene	38.1700		40.0000		95.4	70 - 130			
Chlorobenzene	19.4100		20.0000		97.0	70 - 130			
MTBE	18.3300		20.0000		91.6	70 - 130			
Toluene	38.5900		40.0000		96.5	70 - 130			
Trichloroethene	19.1500		20.0000		95.8	70 - 130			

<i>Surrogate: 1,2-Dichloroethane-d4</i>	28.79		25.0000		115	70 - 130			
<i>Surrogate: 4-Bromofluorobenzene</i>	22.95		25.0000		91.8	70 - 130			
<i>Surrogate: Dibromofluoromethane</i>	28.28		25.0000		113	70 - 130			
<i>Surrogate: Toluene-d8</i>	25.31		25.0000		101	70 - 130			

LCS Dup (B3B0118-BSD1)

Prepared: 2/7/2013 Analyzed: 2/7/2013

1,1-Dichloroethene	18.2400		20.0000		91.2	70 - 130	6.42	20	
Benzene	36.6100		40.0000		91.5	70 - 130	4.17	20	
Chlorobenzene	18.5700		20.0000		92.8	70 - 130	4.42	20	
MTBE	18.3100		20.0000		91.6	70 - 130	0.109	20	
Toluene	37.0200		40.0000		92.6	70 - 130	4.15	20	



Certificate of Analysis

Hargis & Associates, Inc.

Project Number : Raytheon, 532.30

9171 Towne Centre Drive, Suite 375

Report To : Steve Netto

San Diego , CA 92122

Reported : 02/19/2013

Volatile Organic Compounds by EPA 8260 - Quality Control (cont'd)

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec % Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B3B0118 - MSVOAW_LL (continued)

LCS Dup (B3B0118-BSD1) - Continued

Prepared: 2/7/2013 Analyzed: 2/7/2013

Trichloroethene	18.1900		20.0000		91.0	70 - 130	5.14	20	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>29.06</i>		<i>25.0000</i>		<i>116</i>	<i>70 - 130</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>23.36</i>		<i>25.0000</i>		<i>93.4</i>	<i>70 - 130</i>			
<i>Surrogate: Dibromofluoromethane</i>	<i>28.13</i>		<i>25.0000</i>		<i>113</i>	<i>70 - 130</i>			
<i>Surrogate: Toluene-d8</i>	<i>25.44</i>		<i>25.0000</i>		<i>102</i>	<i>70 - 130</i>			

Matrix Spike (B3B0118-MS1)

Source: 1300389-04

Prepared: 2/7/2013 Analyzed: 2/7/2013

1,1-Dichloroethene	22.0100		20.0000	ND	110	70 - 130			
Benzene	43.2300		40.0000	ND	108	70 - 130			
Chlorobenzene	20.6200		20.0000	ND	103	70 - 130			
MTBE	19.1600		20.0000	ND	95.8	70 - 130			
Toluene	43.0200		40.0000	ND	108	70 - 130			
Trichloroethene	21.4100		20.0000	ND	107	70 - 130			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>29.86</i>		<i>25.0000</i>		<i>119</i>	<i>70 - 130</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>23.67</i>		<i>25.0000</i>		<i>94.7</i>	<i>70 - 130</i>			
<i>Surrogate: Dibromofluoromethane</i>	<i>28.43</i>		<i>25.0000</i>		<i>114</i>	<i>70 - 130</i>			
<i>Surrogate: Toluene-d8</i>	<i>26.16</i>		<i>25.0000</i>		<i>105</i>	<i>70 - 130</i>			

Matrix Spike Dup (B3B0118-MSD1)

Source: 1300389-04

Prepared: 2/7/2013 Analyzed: 2/7/2013

1,1-Dichloroethene	22.1900		20.0000	ND	111	70 - 130	0.814	20	
Benzene	41.4300		40.0000	ND	104	70 - 130	4.25	20	
Chlorobenzene	20.1200		20.0000	ND	101	70 - 130	2.45	20	
MTBE	19.0800		20.0000	ND	95.4	70 - 130	0.418	20	
Toluene	41.5100		40.0000	ND	104	70 - 130	3.57	20	
Trichloroethene	20.9800		20.0000	ND	105	70 - 130	2.03	20	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>29.36</i>		<i>25.0000</i>		<i>117</i>	<i>70 - 130</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>23.32</i>		<i>25.0000</i>		<i>93.3</i>	<i>70 - 130</i>			
<i>Surrogate: Dibromofluoromethane</i>	<i>28.40</i>		<i>25.0000</i>		<i>114</i>	<i>70 - 130</i>			
<i>Surrogate: Toluene-d8</i>	<i>25.58</i>		<i>25.0000</i>		<i>102</i>	<i>70 - 130</i>			

Batch B3B0154 - MSVOAW_LL

Blank (B3B0154-BLK1)

Prepared: 2/8/2013 Analyzed: 2/8/2013

1,1,1,2-Tetrachloroethane	ND	0.50		NR					
1,1,1-Trichloroethane	ND	0.50		NR					
1,1,2,2-Tetrachloroethane	ND	0.50		NR					
1,1,2-Trichloroethane	ND	0.50		NR					
1,1-Dichloroethane	ND	0.50		NR					
1,1-Dichloroethene	ND	0.50		NR					
1,1-Dichloropropene	ND	0.50		NR					
1,2,3-Trichloropropane	ND	0.50		NR					



Certificate of Analysis

Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego, CA 92122

Project Number : Raytheon, 532.30

Report To : Steve Netto

Reported : 02/19/2013

Volatile Organic Compounds by EPA 8260 - Quality Control (cont'd)

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec % Rec	% Rec Limits	RPD RPD	RPD Limit	Notes
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Batch B3B0154 - MSVOAW_LL (continued)

Blank (B3B0154-BLK1) - Continued

Prepared: 2/8/2013 Analyzed: 2/8/2013

1,2,3-Trichlorobenzene	ND	0.50			NR				
1,2,4-Trichlorobenzene	ND	0.50			NR				
1,2,4-Trimethylbenzene	ND	0.50			NR				
1,2-Dibromo-3-chloropropane	ND	0.50			NR				
1,2-Dibromoethane	ND	0.50			NR				
1,2-Dichlorobenzene	ND	0.50			NR				
1,2-Dichloroethane	ND	0.50			NR				
1,2-Dichloropropane	ND	0.50			NR				
1,3,5-Trimethylbenzene	ND	0.50			NR				
1,3-Dichlorobenzene	ND	0.50			NR				
1,3-Dichloropropane	ND	0.50			NR				
1,4-Dichlorobenzene	ND	0.50			NR				
2,2-Dichloropropane	ND	0.50			NR				
2-Chlorotoluene	ND	0.50			NR				
4-Chlorotoluene	ND	0.50			NR				
4-Isopropyltoluene	ND	0.50			NR				
Benzene	ND	0.50			NR				
Bromobenzene	ND	0.50			NR				
Bromodichloromethane	ND	0.50			NR				
Bromoform	ND	0.50			NR				
Bromomethane	ND	0.50			NR				
Carbon tetrachloride	ND	0.50			NR				
Chlorobenzene	ND	0.50			NR				
Chloroethane	ND	0.50			NR				
Chloroform	ND	0.50			NR				
Chloromethane	ND	0.50			NR				
cis-1,2-Dichloroethene	ND	0.50			NR				
cis-1,3-Dichloropropene	ND	0.50			NR				
Dibromochloromethane	ND	0.50			NR				
Dibromomethane	ND	0.50			NR				
Dichlorodifluoromethane	ND	0.50			NR				
Ethylbenzene	ND	0.50			NR				
Hexachlorobutadiene	ND	0.50			NR				
Isopropylbenzene	ND	0.50			NR				
m,p-Xylene	ND	1.0			NR				
Methylene chloride	ND	1.0			NR				
n-Butylbenzene	ND	0.50			NR				
n-Propylbenzene	ND	0.50			NR				
Naphthalene	ND	0.50			NR				
o-Xylene	ND	0.50			NR				
sec-Butylbenzene	ND	0.50			NR				
Styrene	ND	0.50			NR				



Certificate of Analysis

Hargis & Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego , CA 92122

Project Number : Raytheon, 532.30
 Report To : Steve Netto
 Reported : 02/19/2013

Volatile Organic Compounds by EPA 8260 - Quality Control (cont'd)

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec % Rec	% Rec Limits	RPD RPD	RPD Limit	Notes
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Batch B3B0154 - MSVOAW_LL (continued)

Blank (B3B0154-BLK1) - Continued

Prepared: 2/8/2013 Analyzed: 2/8/2013

tert-Butylbenzene	ND	0.50			NR				
Tetrachloroethene	ND	0.50			NR				
Toluene	ND	0.50			NR				
trans-1,2-Dichloroethene	ND	0.50			NR				
Trichloroethene	ND	0.50			NR				
Trichlorofluoromethane	ND	0.50			NR				
Vinyl chloride	ND	0.50			NR				
<hr/>									
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>24.91</i>		<i>25.0000</i>		<i>99.6</i>	<i>70 - 130</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>26.20</i>		<i>25.0000</i>		<i>105</i>	<i>70 - 130</i>			
<i>Surrogate: Dibromofluoromethane</i>	<i>25.25</i>		<i>25.0000</i>		<i>101</i>	<i>70 - 130</i>			
<i>Surrogate: Toluene-d8</i>	<i>24.64</i>		<i>25.0000</i>		<i>98.6</i>	<i>70 - 130</i>			

LCS (B3B0154-BS1)

Prepared: 2/8/2013 Analyzed: 2/8/2013

1,1-Dichloroethene	20.7400		20.0000		104	70 - 130			
Benzene	41.1400		40.0000		103	70 - 130			
Chlorobenzene	19.9400		20.0000		99.7	70 - 130			
MTBE	16.3500		20.0000		81.8	70 - 130			
Toluene	46.0200		40.0000		115	70 - 130			
Trichloroethene	19.6100		20.0000		98.0	70 - 130			
<hr/>									
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>23.87</i>		<i>25.0000</i>		<i>95.5</i>	<i>70 - 130</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>26.02</i>		<i>25.0000</i>		<i>104</i>	<i>70 - 130</i>			
<i>Surrogate: Dibromofluoromethane</i>	<i>24.03</i>		<i>25.0000</i>		<i>96.1</i>	<i>70 - 130</i>			
<i>Surrogate: Toluene-d8</i>	<i>27.58</i>		<i>25.0000</i>		<i>110</i>	<i>70 - 130</i>			

LCS Dup (B3B0154-BSD1)

Prepared: 2/8/2013 Analyzed: 2/8/2013

1,1-Dichloroethene	18.9900		20.0000		95.0	70 - 130	8.81	20	
Benzene	38.7200		40.0000		96.8	70 - 130	6.06	20	
Chlorobenzene	19.3000		20.0000		96.5	70 - 130	3.26	20	
MTBE	15.5400		20.0000		77.7	70 - 130	5.08	20	
Toluene	43.2000		40.0000		108	70 - 130	6.32	20	
Trichloroethene	18.5500		20.0000		92.8	70 - 130	5.56	20	
<hr/>									
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>23.14</i>		<i>25.0000</i>		<i>92.6</i>	<i>70 - 130</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>25.94</i>		<i>25.0000</i>		<i>104</i>	<i>70 - 130</i>			
<i>Surrogate: Dibromofluoromethane</i>	<i>23.85</i>		<i>25.0000</i>		<i>95.4</i>	<i>70 - 130</i>			
<i>Surrogate: Toluene-d8</i>	<i>27.04</i>		<i>25.0000</i>		<i>108</i>	<i>70 - 130</i>			

Matrix Spike (B3B0154-MS1)

Source: 1300409-11

Prepared: 2/8/2013 Analyzed: 2/8/2013

1,1-Dichloroethene	607.740		20.0000	574.600	166	70 - 130			M3
Benzene	47.1200		40.0000	ND	118	70 - 130			
Chlorobenzene	22.3400		20.0000	ND	112	70 - 130			
MTBE	17.3400		20.0000	ND	86.7	70 - 130			



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Volatile Organic Compounds by EPA 8260 - Quality Control (cont'd)

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec % Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B3B0154 - MSVOAW_LL (continued)

Matrix Spike (B3B0154-MS1) - Continued

Source: 1300409-11

Prepared: 2/8/2013 Analyzed: 2/8/2013

Toluene	50.8500		40.0000	ND	127	70 - 130			
Trichloroethene	25.6700		20.0000	4.54000	106	70 - 130			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>24.59</i>		<i>25.0000</i>		<i>98.4</i>	<i>70 - 130</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>27.48</i>		<i>25.0000</i>		<i>110</i>	<i>70 - 130</i>			
<i>Surrogate: Dibromofluoromethane</i>	<i>25.42</i>		<i>25.0000</i>		<i>102</i>	<i>70 - 130</i>			
<i>Surrogate: Toluene-d8</i>	<i>26.98</i>		<i>25.0000</i>		<i>108</i>	<i>70 - 130</i>			

Matrix Spike Dup (B3B0154-MSD1)

Source: 1300409-11

Prepared: 2/8/2013 Analyzed: 2/8/2013

1,1-Dichloroethene	623.540		20.0000	574.600	245	70 - 130	2.57	20	M3
Benzene	45.3200		40.0000	ND	113	70 - 130	3.89	20	
Chlorobenzene	21.2700		20.0000	ND	106	70 - 130	4.91	20	
MTBE	16.8600		20.0000	ND	84.3	70 - 130	2.81	20	
Toluene	49.0300		40.0000	ND	123	70 - 130	3.64	20	
Trichloroethene	24.9800		20.0000	4.54000	102	70 - 130	2.72	20	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>23.39</i>		<i>25.0000</i>		<i>93.6</i>	<i>70 - 130</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>25.28</i>		<i>25.0000</i>		<i>101</i>	<i>70 - 130</i>			
<i>Surrogate: Dibromofluoromethane</i>	<i>23.92</i>		<i>25.0000</i>		<i>95.7</i>	<i>70 - 130</i>			
<i>Surrogate: Toluene-d8</i>	<i>26.17</i>		<i>25.0000</i>		<i>105</i>	<i>70 - 130</i>			

Batch B3B0190 - MSVOAW_LL

Blank (B3B0190-BLK1)

Prepared: 2/11/2013 Analyzed: 2/11/2013

1,1,1,2-Tetrachloroethane	ND	0.50		NR					
1,1,1-Trichloroethane	ND	0.50		NR					
1,1,2,2-Tetrachloroethane	ND	0.50		NR					
1,1,2-Trichloroethane	ND	0.50		NR					
1,1-Dichloroethane	ND	0.50		NR					
1,1-Dichloroethene	ND	0.50		NR					
1,1-Dichloropropene	ND	0.50		NR					
1,2,3-Trichloropropane	ND	0.50		NR					
1,2,3-Trichlorobenzene	ND	0.50		NR					
1,2,4-Trichlorobenzene	ND	0.50		NR					
1,2,4-Trimethylbenzene	ND	0.50		NR					
1,2-Dibromo-3-chloropropane	ND	0.50		NR					
1,2-Dibromoethane	ND	0.50		NR					
1,2-Dichlorobenzene	ND	0.50		NR					
1,2-Dichloroethane	ND	0.50		NR					
1,2-Dichloropropane	ND	0.50		NR					
1,3,5-Trimethylbenzene	ND	0.50		NR					
1,3-Dichlorobenzene	ND	0.50		NR					
1,3-Dichloropropane	ND	0.50		NR					



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Volatile Organic Compounds by EPA 8260 - Quality Control (cont'd)

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec % Rec	Limits Limits	RPD RPD	Limit Limit	Notes
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Batch B3B0190 - MSVOAW_LL (continued)

Blank (B3B0190-BLK1) - Continued

Prepared: 2/11/2013 Analyzed: 2/11/2013

1,4-Dichlorobenzene	ND	0.50			NR				
2,2-Dichloropropane	ND	0.50			NR				
2-Chlorotoluene	ND	0.50			NR				
4-Chlorotoluene	ND	0.50			NR				
4-Isopropyltoluene	ND	0.50			NR				
Benzene	ND	0.50			NR				
Bromobenzene	ND	0.50			NR				
Bromodichloromethane	ND	0.50			NR				
Bromoform	ND	0.50			NR				
Bromomethane	ND	0.50			NR				
Carbon tetrachloride	ND	0.50			NR				
Chlorobenzene	ND	0.50			NR				
Chloroethane	ND	0.50			NR				
Chloroform	ND	0.50			NR				
Chloromethane	ND	0.50			NR				
cis-1,2-Dichloroethene	ND	0.50			NR				
cis-1,3-Dichloropropene	ND	0.50			NR				
Dibromochloromethane	ND	0.50			NR				
Dibromomethane	ND	0.50			NR				
Dichlorodifluoromethane	ND	0.50			NR				
Ethylbenzene	ND	0.50			NR				
Hexachlorobutadiene	ND	0.50			NR				
Isopropylbenzene	ND	0.50			NR				
m,p-Xylene	ND	1.0			NR				
Methylene chloride	ND	1.0			NR				
n-Butylbenzene	ND	0.50			NR				
n-Propylbenzene	ND	0.50			NR				
Naphthalene	ND	0.50			NR				
o-Xylene	ND	0.50			NR				
sec-Butylbenzene	ND	0.50			NR				
Styrene	ND	0.50			NR				
tert-Butylbenzene	ND	0.50			NR				
Tetrachloroethene	ND	0.50			NR				
Toluene	ND	0.50			NR				
trans-1,2-Dichloroethene	ND	0.50			NR				
Trichloroethene	ND	0.50			NR				
Trichlorofluoromethane	ND	0.50			NR				
Vinyl chloride	ND	0.50			NR				
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Surrogate: 1,2-Dichloroethane-d4	28.12		25.0000		112	70 - 130			
Surrogate: 4-Bromofluorobenzene	30.01		25.0000		120	70 - 130			
Surrogate: Dibromofluoromethane	28.13		25.0000		113	70 - 130			



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Volatile Organic Compounds by EPA 8260 - Quality Control (cont'd)

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec % Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B3B0190 - MSVOAW_LL (continued)

Blank (B3B0190-BLK1) - Continued

Prepared: 2/11/2013 Analyzed: 2/11/2013

Surrogate: Toluene-d8 26.54 25.0000 106 70 - 130

LCS (B3B0190-BS1)

Prepared: 2/11/2013 Analyzed: 2/11/2013

1,1-Dichloroethene	18.9400		20.0000	94.7	70 - 130
Benzene	39.6800		40.0000	99.2	70 - 130
Chlorobenzene	19.7300		20.0000	98.6	70 - 130
MTBE	16.1300		20.0000	80.6	70 - 130
Toluene	43.4800		40.0000	109	70 - 130
Trichloroethene	19.2400		20.0000	96.2	70 - 130

<i>Surrogate: 1,2-Dichloroethane-d4</i>	24.09		25.0000	96.4	70 - 130
<i>Surrogate: 4-Bromofluorobenzene</i>	26.59		25.0000	106	70 - 130
<i>Surrogate: Dibromofluoromethane</i>	24.72		25.0000	98.9	70 - 130
<i>Surrogate: Toluene-d8</i>	27.27		25.0000	109	70 - 130

LCS Dup (B3B0190-BSD1)

Prepared: 2/11/2013 Analyzed: 2/11/2013

1,1-Dichloroethene	20.6300		20.0000	103	70 - 130	8.54	20
Benzene	42.1700		40.0000	105	70 - 130	6.08	20
Chlorobenzene	21.0600		20.0000	105	70 - 130	6.52	20
MTBE	17.4400		20.0000	87.2	70 - 130	7.80	20
Toluene	47.0200		40.0000	118	70 - 130	7.82	20
Trichloroethene	20.5700		20.0000	103	70 - 130	6.68	20

<i>Surrogate: 1,2-Dichloroethane-d4</i>	25.94		25.0000	104	70 - 130
<i>Surrogate: 4-Bromofluorobenzene</i>	28.54		25.0000	114	70 - 130
<i>Surrogate: Dibromofluoromethane</i>	26.23		25.0000	105	70 - 130
<i>Surrogate: Toluene-d8</i>	28.89		25.0000	116	70 - 130

Batch B3B0288 - MSVOAW_LL

Blank (B3B0288-BLK1)

Prepared: 2/14/2013 Analyzed: 2/14/2013

1,1,1,2-Tetrachloroethane	ND	0.50		NR
1,1,1-Trichloroethane	ND	0.50		NR
1,1,2,2-Tetrachloroethane	ND	0.50		NR
1,1,2-Trichloroethane	ND	0.50		NR
1,1-Dichloroethane	ND	0.50		NR
1,1-Dichloroethene	ND	0.50		NR
1,1-Dichloropropene	ND	0.50		NR
1,2,3-Trichloropropane	ND	0.50		NR
1,2,3-Trichlorobenzene	ND	0.50		NR
1,2,4-Trichlorobenzene	ND	0.50		NR
1,2,4-Trimethylbenzene	ND	0.50		NR
1,2-Dibromo-3-chloropropane	ND	0.50		NR



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Volatile Organic Compounds by EPA 8260 - Quality Control (cont'd)

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec % Rec	Limits Limits	RPD RPD	RPD Limit	Notes
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Batch B3B0288 - MSVOAW_LL (continued)

Blank (B3B0288-BLK1) - Continued

Prepared: 2/14/2013 Analyzed: 2/14/2013

1,2-Dibromoethane	ND	0.50		NR
1,2-Dichlorobenzene	ND	0.50		NR
1,2-Dichloroethane	ND	0.50		NR
1,2-Dichloropropane	ND	0.50		NR
1,3,5-Trimethylbenzene	ND	0.50		NR
1,3-Dichlorobenzene	ND	0.50		NR
1,3-Dichloropropane	ND	0.50		NR
1,4-Dichlorobenzene	ND	0.50		NR
2,2-Dichloropropane	ND	0.50		NR
2-Chlorotoluene	ND	0.50		NR
4-Chlorotoluene	ND	0.50		NR
4-Isopropyltoluene	ND	0.50		NR
Benzene	ND	0.50		NR
Bromobenzene	ND	0.50		NR
Bromodichloromethane	ND	0.50		NR
Bromoform	ND	0.50		NR
Bromomethane	ND	0.50		NR
Carbon tetrachloride	ND	0.50		NR
Chlorobenzene	ND	0.50		NR
Chloroethane	ND	0.50		NR
Chloroform	ND	0.50		NR
Chloromethane	ND	0.50		NR
cis-1,2-Dichloroethene	ND	0.50		NR
cis-1,3-Dichloropropene	ND	0.50		NR
Dibromochloromethane	ND	0.50		NR
Dibromomethane	ND	0.50		NR
Dichlorodifluoromethane	ND	0.50		NR
Ethylbenzene	ND	0.50		NR
Hexachlorobutadiene	ND	0.50		NR
Isopropylbenzene	ND	0.50		NR
m,p-Xylene	ND	1.0		NR
Methylene chloride	ND	1.0		NR
n-Butylbenzene	ND	0.50		NR
n-Propylbenzene	ND	0.50		NR
Naphthalene	ND	0.50		NR
o-Xylene	ND	0.50		NR
sec-Butylbenzene	ND	0.50		NR
Styrene	ND	0.50		NR
tert-Butylbenzene	ND	0.50		NR
Tetrachloroethene	ND	0.50		NR
Toluene	ND	0.50		NR
trans-1,2-Dichloroethene	ND	0.50		NR



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Volatile Organic Compounds by EPA 8260 - Quality Control (cont'd)

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B3B0288 - MSVOAW_LL (continued)

Blank (B3B0288-BLK1) - Continued

Prepared: 2/14/2013 Analyzed: 2/14/2013

Trichloroethene	ND	0.50			NR				
Trichlorofluoromethane	ND	0.50			NR				
Vinyl chloride	ND	0.50			NR				
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>27.25</i>		<i>25.0000</i>		<i>109</i>	<i>70 - 130</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>26.57</i>		<i>25.0000</i>		<i>106</i>	<i>70 - 130</i>			
<i>Surrogate: Dibromofluoromethane</i>	<i>28.48</i>		<i>25.0000</i>		<i>114</i>	<i>70 - 130</i>			
<i>Surrogate: Toluene-d8</i>	<i>27.01</i>		<i>25.0000</i>		<i>108</i>	<i>70 - 130</i>			

LCS (B3B0288-BS1)

Prepared: 2/14/2013 Analyzed: 2/14/2013

1,1-Dichloroethene	19.3000		20.0000		96.5	70 - 130			
Benzene	40.5600		40.0000		101	70 - 130			
Chlorobenzene	20.3300		20.0000		102	70 - 130			
MTBE	16.6700		20.0000		83.4	70 - 130			
Toluene	46.3900		40.0000		116	70 - 130			
Trichloroethene	19.0100		20.0000		95.0	70 - 130			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>25.79</i>		<i>25.0000</i>		<i>103</i>	<i>70 - 130</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>25.89</i>		<i>25.0000</i>		<i>104</i>	<i>70 - 130</i>			
<i>Surrogate: Dibromofluoromethane</i>	<i>26.42</i>		<i>25.0000</i>		<i>106</i>	<i>70 - 130</i>			
<i>Surrogate: Toluene-d8</i>	<i>28.23</i>		<i>25.0000</i>		<i>113</i>	<i>70 - 130</i>			

LCS Dup (B3B0288-BSD1)

Prepared: 2/14/2013 Analyzed: 2/14/2013

1,1-Dichloroethene	18.8500		20.0000		94.2	70 - 130	2.36	20	
Benzene	39.2500		40.0000		98.1	70 - 130	3.28	20	
Chlorobenzene	20.2700		20.0000		101	70 - 130	0.296	20	
MTBE	16.1100		20.0000		80.6	70 - 130	3.42	20	
Toluene	45.3000		40.0000		113	70 - 130	2.38	20	
Trichloroethene	19.3500		20.0000		96.8	70 - 130	1.77	20	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>25.85</i>		<i>25.0000</i>		<i>103</i>	<i>70 - 130</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>26.58</i>		<i>25.0000</i>		<i>106</i>	<i>70 - 130</i>			
<i>Surrogate: Dibromofluoromethane</i>	<i>26.96</i>		<i>25.0000</i>		<i>108</i>	<i>70 - 130</i>			
<i>Surrogate: Toluene-d8</i>	<i>27.77</i>		<i>25.0000</i>		<i>111</i>	<i>70 - 130</i>			



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1,4-Dioxane by EPA 8270: Isotope Dilution Technique - Quality Control

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec % Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B3B0206 - MSSEMI_ISOTOPEDILN

Blank (B3B0206-BLK1)

Prepared: 2/11/2013 Analyzed: 2/11/2013

1,4-Dioxane	ND	2.0			NR				
Surrogate: 1,2-Dichlorobenzene-d4	73.27		100.000		73.3	37 - 93			
Surrogate: 2-Fluorobiphenyl	83.74		100.000		83.7	51 - 100			
Surrogate: 4-Terphenyl-d14	96.93		100.000		96.9	58 - 113			
Surrogate: Nitrobenzene-d5	91.39		100.000		91.4	39 - 95			

LCS (B3B0206-BS1)

Prepared: 2/11/2013 Analyzed: 2/11/2013

1,4-Dioxane	100.400	2.0	100.000		100	70 - 130			
Surrogate: 1,2-Dichlorobenzene-d4	66.53		100.000		66.5	37 - 93			
Surrogate: 2-Fluorobiphenyl	85.67		100.000		85.7	51 - 100			
Surrogate: 4-Terphenyl-d14	99.33		100.000		99.3	58 - 113			
Surrogate: Nitrobenzene-d5	86.55		100.000		86.6	39 - 95			

Matrix Spike (B3B0206-MS1)

Source: 1300389-02

Prepared: 2/11/2013 Analyzed: 2/11/2013

1,4-Dioxane	154.900	2.0	100.000	58.4200	96.5	70 - 130			
Surrogate: 1,2-Dichlorobenzene-d4	66.27		100.000		66.3	37 - 93			
Surrogate: 2-Fluorobiphenyl	82.42		100.000		82.4	51 - 100			
Surrogate: 4-Terphenyl-d14	97.40		100.000		97.4	58 - 113			
Surrogate: Nitrobenzene-d5	86.13		100.000		86.1	39 - 95			

Matrix Spike (B3B0206-MS2)

Source: 1300409-11

Prepared: 2/11/2013 Analyzed: 2/11/2013

1,4-Dioxane	154.870	2.0	100.000	49.0300	106	70 - 130			
Surrogate: 1,2-Dichlorobenzene-d4	72.30		100.000		72.3	37 - 93			
Surrogate: 2-Fluorobiphenyl	87.96		100.000		88.0	51 - 100			
Surrogate: 4-Terphenyl-d14	100.8		100.000		101	58 - 113			
Surrogate: Nitrobenzene-d5	93.85		100.000		93.8	39 - 95			

Matrix Spike Dup (B3B0206-MSD1)

Source: 1300389-02

Prepared: 2/11/2013 Analyzed: 2/11/2013

1,4-Dioxane	158.270	2.0	100.000	58.4200	99.9	70 - 130	2.15	20	
Surrogate: 1,2-Dichlorobenzene-d4	67.92		100.000		67.9	37 - 93			
Surrogate: 2-Fluorobiphenyl	86.40		100.000		86.4	51 - 100			
Surrogate: 4-Terphenyl-d14	98.56		100.000		98.6	58 - 113			
Surrogate: Nitrobenzene-d5	90.22		100.000		90.2	39 - 95			

Matrix Spike Dup (B3B0206-MSD2)

Source: 1300409-11

Prepared: 2/11/2013 Analyzed: 2/11/2013

1,4-Dioxane	152.130	2.0	100.000	49.0300	103	70 - 130	1.79	20	
Surrogate: 1,2-Dichlorobenzene-d4	68.66		100.000		68.7	37 - 93			
Surrogate: 2-Fluorobiphenyl	83.68		100.000		83.7	51 - 100			
Surrogate: 4-Terphenyl-d14	98.37		100.000		98.4	58 - 113			
Surrogate: Nitrobenzene-d5	90.16		100.000		90.2	39 - 95			



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 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122

Project Number : Raytheon, 532.30
 Report To : Steve Netto
 Reported : 02/19/2013

1,4-Dioxane by EPA 8270/SIM: Isotope Dilution Technique - Quality Control

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec % Rec	% Rec Limits	RPD RPD	RPD Limit	Notes
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Batch B3B0162 - MSSEMI

Blank (B3B0162-BLK1)

Prepared: 2/8/2013 Analyzed: 2/8/2013

1,4-Dioxane	ND	0.20			NR				
Surrogate: 1,2-Dichlorobenzene-d4	0.8381		1.00000		83.8	36 - 107			
Surrogate: 2-Fluorobiphenyl	1.072		1.00000		107	42 - 120			
Surrogate: 4-Terphenyl-d14	0.8298		1.00000		83.0	67 - 142			
Surrogate: Nitrobenzene-d5	0.9958		1.00000		99.6	36 - 130			

LCS (B3B0162-BS1)

Prepared: 2/8/2013 Analyzed: 2/8/2013

1,4-Dioxane	1.10294	0.20	1.00000		110	70 - 130			
Surrogate: 1,2-Dichlorobenzene-d4	0.6445		1.00000		64.5	36 - 107			
Surrogate: 2-Fluorobiphenyl	0.9608		1.00000		96.1	42 - 120			
Surrogate: 4-Terphenyl-d14	0.7487		1.00000		74.9	67 - 142			
Surrogate: Nitrobenzene-d5	0.9267		1.00000		92.7	36 - 130			

Matrix Spike (B3B0162-MS1)

Source: 1300389-04

Prepared: 2/8/2013 Analyzed: 2/8/2013

1,4-Dioxane	1.07962	0.20	1.00000	ND	108	70 - 130			
Surrogate: 1,2-Dichlorobenzene-d4	0.6614		1.00000		66.1	36 - 107			
Surrogate: 2-Fluorobiphenyl	0.9656		1.00000		96.6	42 - 120			
Surrogate: 4-Terphenyl-d14	0.7758		1.00000		77.6	67 - 142			
Surrogate: Nitrobenzene-d5	0.9413		1.00000		94.1	36 - 130			

Matrix Spike Dup (B3B0162-MSD1)

Source: 1300389-04

Prepared: 2/8/2013 Analyzed: 2/8/2013

1,4-Dioxane	0.831290	0.20	1.00000	ND	83.1	70 - 130	26.0	20	R
Surrogate: 1,2-Dichlorobenzene-d4	0.7293		1.00000		72.9	36 - 107			
Surrogate: 2-Fluorobiphenyl	1.058		1.00000		106	42 - 120			
Surrogate: 4-Terphenyl-d14	0.7704		1.00000		77.0	67 - 142			
Surrogate: Nitrobenzene-d5	1.019		1.00000		102	36 - 130			



Certificate of Analysis

Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego, CA 92122

Project Number : Raytheon, 532.30

Report To : Steve Netto

Reported : 02/19/2013

Notes and Definitions

R	RPD value outside acceptance criteria. Calculation is based on raw values.
M3	Matrix spike recovery outside of acceptance limit due to disproportionate concentration of the analyte to spike level. The analytical batch was validated by the laboratory control sample.
D6	Sample required dilution due to high concentration of target analyte.
ND	Analyte not detected at or above reporting limit
PQL	Practical Quantitation Limit
MDL	Method Detection Limit
NR	Not Reported
RPD	Relative Percent Difference
CA1	CA-NELAP (CDPH)
CA2	CA-ELAP (CDPH)
OR1	OR-NELAP (OSPHL)
TX1	TX-NELAP (TCEQ)

Notes:

- (1) The reported MDL and PQL are based on prep ratio variation and analytical dilution.
- (2) The suffix [2C] of specific analytes signifies that the reported result is taken from the instrument's second column.

CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST FORM

PROJECT NAME Raytheon		PROJECT No./TASK No. 532.30		SAMPLE CONTAINERS		ANALYSIS REQUESTED		ESTIMATED CONCENTRATION RANGE (ppb) FOR VOA'S		SPECIAL HANDLING		LABORATORY INFORMATION													
PROJECT MANAGER Steve Netto		Phone No. 858-455-6500										ATL													
QA MANAGER		Fax No. 858-455-6533										Attn: Rachelle Arada													
SAMPLER (SIGNATURE) <i>[Signature]</i>				SAMPLER (PRINTED) EDIN HUNTER ANELLIE FOMBERG																					
LAB ID	SAMPLE ID	SAMPLE COLLECTION		MATRIX			PRESERVATION			40 ml VOA	1L Amber	VOCS 8260B	1,4-Dioxane 8270 MUD	1,4-Dioxane 8270 SIM	0-10	10-100	100-1,000	1,000-10,000	>10,000	Standard TAT	MS collected	MSD collected	REMARKS		
		Date	Time	Soil	Ground water	Surface water	Lab H2O	HCl	HNO3															NaOH	H2SO4	Ice
1300409-1	TB-020613A	02/06/13	0730				X	X							X										
-2	MW-35A		0900	X			X								X										
	↓		↓	X			X				1		X												
-3	MW-35C		1020	X			X				1		X												
	↓		↓	X			X				1		X												
-4	MW-37		1235	X			X				3		X												
	↓		↓	X			X				1		X												
-5	MW-33		1435	X			X				3		X												
	↓		↓	X			X				1		X												
-6	MW-30B		1025	X			X				3		X												
	↓		↓	X			X				1		X												
-7	MW-30A		1050	X			X				3		X												
	↓		↓	X			X				1		X												
-8	MW-24		1055	X			X				1		X												
Total number of Containers per analysis:										20		107		Total No. of Containers: <u>279</u> <u>20/107</u>											
Relinquished by: <i>[Signature]</i> H+A, INC		Date 2/6/13	Received by: <i>[Signature]</i>		Date 2/6/13	INSTRUCTIONS										Shipment Method: <u>Courier</u>									
Company		Time 1705	Company		Time 1705	<ol style="list-style-type: none"> Fill out form completely except for shaded areas (lab use only); sign only after verified for completeness. Complete in ballpoint pen. Draw one line through errors, initial and date correction. Indicate number of sample containers in analysis request space; indicate choice with ✓ or x. Note applicable preservatives, special instructions, and deviations from typical environmental samples. Consult project QA documents for specific instructions. 										Send Results to: <u>Steve Netto</u>									
Relinquished by: <i>[Signature]</i>		Date 2/6/13	Received by: <i>[Signature]</i>		Date 2/6/13	Sample Receipt:										<input checked="" type="checkbox"/> 9171 TOWNE CENTRE DRIVE, SUITE 375 SAN DIEGO, CA 92122 (858) 455-6500 <input type="checkbox"/> 1640 SOUTH STAPLEY DRIVE, SUITE 124 MESA, AZ 85204 (480) 345-0888 <input type="checkbox"/> 1820 EAST RIVER ROAD, SUITE 220 TUCSON, AZ 85718 (520) 881-7300									
Company		Time 1755	Company		Time 1755	<input type="checkbox"/> No. of containers correct <input type="checkbox"/> custody seals secure <input checked="" type="checkbox"/> received good condition/cold <input type="checkbox"/> conforms to COC document										Send invoice to San Diego, CA Attn: Accounts Payable									

CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST FORM

PROJECT NAME		PROJECT No./TASK No.		SAMPLE CONTAINERS		ANALYSIS REQUESTED		ESTIMATED CONCENTRATION RANGE (ppb) FOR VOAS		SPECIAL HANDLING		LABORATORY INFORMATION					
RAYTHEON MAIN		532.30										ATI					
PROJECT MANAGER Chris Ross		Phone No. 858-455-6500										Attn:					
QA MANAGER Steve Netto		Fax No. 858-455-6533										Rachelle Arada					
SAMPLER (SIGNATURE) <i>[Signature]</i>		SAMPLER (PRINTED) DANIEL MORA															
SAMPLER (SIGNATURE) <i>[Signature]</i>		SAMPLER (PRINTED) SHAYNE KARRUS															
LAB ID	SAMPLE ID	SAMPLE COLLECTION		MATRIX		PRESERVATION					40 ml VOA 1 L Amber	3260B VOCs	3270 SIM 1,4-Dioxane 3270 MID 1,4-Dioxane	0 - 10 10 - 100 100 - 1,000 > 1,000	Standard TAT	REMARKS	
		Date	Time	Soil	Ground-water	Surface water	Lab H2O	HCl	HNO3	NaOH							H2SO4	Ice
	1300409-9'	MW-13	02/06/13	913	X		X			X		3	X			X	
	↓	↓	↓	↓	X					X		1	X			X	
	-10'	MW-20		1053	X		X			X		3	X			X	
	↓	↓	↓	↓	X					X		1	X			X	
	-11'	MW-16		1215	X		X			X		3				X	MS/MSD
	↓	↓	↓	↓	X					X		1				X	
	-12'	PS-02062013		1140			X	X		X		3				X	
	-13'	MW-34C		1427	X		X			X		3				X	
	↓	↓	↓	↓	X					X		1				X	
	-14'	MW-34B		1458	X		X			X		3	X			X	
	↓	↓	↓	↓	X					X		1		X		X	
	-15'	MW-3400B		1500	X					X		3	X			X	
	↓	↓	↓	↓	X					X		1		X		X	
	-8'	MW-24		1455	X		X			X		3	X			X	
Total number of Containers per analysis:												14/10		Total No. of Containers: <u>30/27</u>			
Relinquished by: <i>[Signature]</i> H+A Company		Date <u>2/10/13</u> Time <u>1105</u>	Received by: <i>[Signature]</i> Company		Date <u>2/10/13</u> Time <u>1205</u>	INSTRUCTIONS										Shipment Method: <u>Courier</u>	
Relinquished by: <i>[Signature]</i> Company		Date <u>2/10/13</u> Time <u>1735</u>	Received by: <i>[Signature]</i> Company		Date <u>2/10/13</u> Time <u>1735</u>	<ol style="list-style-type: none"> Fill out form completely except for shaded areas (lab use only); sign only after verified for completeness. Complete in ballpoint pen. Draw one line through errors, initial and date correction. Indicate number of sample containers in analysis request space; indicate choice with ✓ or x. Note applicable preservatives, special instructions, and deviations from typical environmental samples. Consult project QA documents for specific instructions. 										Send Results to: <u>Steve Netto</u>	
						Sample Receipt: <input type="checkbox"/> No. of containers correct <input type="checkbox"/> custody seals secure <input checked="" type="checkbox"/> received good condition/cold <input type="checkbox"/> conforms to COC document										<input checked="" type="checkbox"/> 9171 TOWNE CENTRE DRIVE, SUITE 375 SAN DIEGO, CA 92122 (858) 455-6500 <input type="checkbox"/> 1640 SOUTH STAPLEY DRIVE, SUITE 209 MESA, AZ 85204 (480) 345-0888 <input type="checkbox"/> 1820 EAST RIVER ROAD, SUITE 220 TUCSON, AZ 85718 (520) 881-7300 Send invoice to San Diego, CA Attn: Accounts Payable	

Fernando Diwa

From: Erin Hunter [EHunter@HARGIS.COM]
Sent: Wednesday, February 06, 2013 7:01 PM
To: Fernando Diwa
Cc: Carmen Aguila; Rachelle Arada
Subject: Re: RAYTHEON MAIN, 532.30

Fernando -

Sorry again for the mix up on the COC. All three samples should be analyzed for EPA 8260B. MW-16 should also be analyzed for 1,4-Dioxane by 8270 MOD. We should have also collected MS MSD samples from that well. MW-34C should be also analyzed for 1,4-dioxane by 8270 SIM.

Hopefully that covers them all.

Thanks again!
Erin

Sent from my iPhone

On Feb 6, 2013, at 6:55 PM, "Fernando Diwa" <Fernando@atlglobal.com> wrote:

> Hi Erin,
>
> Samples MW-16, RB-02062013 and MW-34C were not marked for analyses. Please advise if you need these samples to be analyzed. See attached COC (Page 2 of 2).
>
> Regards,
> Fernando Diwa
> [cid:image001.jpg@01CE049B.966DBFE0]Advanced Technology Laboratories
> www.atlglobal.com<<http://www.atlglobal.com>>
> Tel: (562) 989-4045 ext. 236
> Fax: (562) 989-8807
> Advanced Technology Laboratories is a full-service environmental lab
> providing organic and inorganic analyses of soil, water, wastewater, storm water and hazardous waste samples. ATL is accredited by the State of California, NELAP and State of Nevada and holds various SBE, DBE and MBE certificates and a USDA soil permit. ATL takes pride in providing our customers with quick turnaround time, excellent customer service and defensible data while offering very competitive rates. Advanced Technology Labs - Your Partner for Quality Environmental Testing
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>
> <image001.jpg>
> <DOC_20130206175345.pdf>

Rachelle Arada

From: Erin Hunter [EHunter@HARGIS.COM]
Sent: Tuesday, February 19, 2013 2:07 PM
To: Rachelle Arada
Cc: Carmen Aguila
Subject: Results for Raytheon, 532.30 (ATL# 1300409)
Attachments: 1300409.pdf; 1300409.xls

Rachelle –

After reviewing field notes and reviewing the lab data it has come to my attention that two of our sample were mislabeled in the field.

- MW-30B (1300409-06) should be labeled as **MW-30A**
- MW-30A (1300409-07) should be labeled as **MW-30B**

Could please update the results with these changes and send me the revised PDF and EDD? Let me know if you have any questions or concerns.

Thanks,
Erin Hunter

Erin J. Hunter
Hydrogeologist
Hargis + Associates, Inc.
858.455.6500 ext. 115
ehunter@hargis.com

From: Rachelle Arada [<mailto:Rachelle@atlglobal.com>]
Sent: Monday, February 18, 2013 3:24 PM
To: Steve Netto; Stacia Prazen
Cc: Anita Akacki; Erin Hunter
Subject: Results for Raytheon, 532.30 (ATL# 1300409)

Hi,

Attached are the results for the above project.

Rachelle Arada
Project Manager



Advanced Technology Laboratories
www.atlglobal.com
Tel: (562) 989-4045 ext. 237
Fax: (562) 989-4040

Advanced Technology Laboratories is a full-service environmental lab providing organic and inorganic analyses of soil, water, wastewater, storm water and hazardous waste samples. ATL is accredited by the State of California, NELAP and State of Oregon (Air) and holds various SBE, DBE and MBE certificates and a USDA soil permit. ATL takes pride in providing our customers with quick turnaround time, excellent customer service and defensible data while offering very competitive rates. *Advanced Technology Labs - Your Partner for Quality Environmental Testing*

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February 19, 2013

Steve Netto
Hargis & Associates, Inc.
9171 Towne Centre Drive, Suite 375
San Diego, CA 92122
Tel: (619) 249-3166
Fax: (858) 455-6533

ACCREDITED IN ACCORDANCE WITH

ELAP No.: 1838
NELAP No.: 02107CA
CSDLAC No.: 10196
ORELAP No.: CA300003
TCEQ No.: T104704502

Re: ATL Work Order Number : 1300426
Client Reference : RAYTHEON MAIN, 532.30

Enclosed are the results for sample(s) received on February 07, 2013 by Advanced Technology Laboratories. The sample(s) are tested for the parameters as indicated on the enclosed chain of custody in accordance with applicable laboratory certifications. The laboratory results contained in this report specifically pertains to the sample(s) submitted.

Thank you for the opportunity to serve the needs of your company. If you have any questions, please feel free to contact me or your Project Manager.

Sincerely,



Eddie Rodriguez
Laboratory Director

The cover letter and the case narrative are an integral part of this analytical report and its absence renders the report invalid. Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Conference and/or applicable state-specific certification programs. The report cannot be reproduced without written permission from the client and Advanced Technology Laboratories.



Certificate of Analysis

Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego, CA 92122

Project Number : RAYTHEON MAIN, 532.30

Report To : Steve Netto

Reported : 02/19/2013

SUMMARY OF SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
TB-020713	1300426-01	Lab H2O	2/07/13 8:00	2/07/13 18:13
MW-28	1300426-02	Groundwater	2/07/13 8:40	2/07/13 18:13
MW-2900	1300426-03	Groundwater	2/07/13 9:00	2/07/13 18:13
MW-29	1300426-04	Groundwater	2/07/13 9:45	2/07/13 18:13
MW-27	1300426-05	Groundwater	2/07/13 11:55	2/07/13 18:13
MW-3600	1300426-06	Groundwater	2/07/13 14:00	2/07/13 18:13
MW-36	1300426-07	Groundwater	2/07/13 0:00	2/07/13 18:13
P-09	1300426-08	Groundwater	2/07/13 9:45	2/07/13 18:13
P-07	1300426-09	Groundwater	2/07/13 13:35	2/07/13 18:13
MW-15	1300426-10	Groundwater	2/07/13 16:25	2/07/13 18:13

CASE NARRATIVE

Sample Receiving/General Comments

All samples were collected on 02/07/13 as indicated on the sample container label.

Headspace >5-6mm was noted in two vials of all samples MW-29 and MW-2900.



Certificate of Analysis

Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego, CA 92122

Project Number : RAYTHEON MAIN, 532.30

Report To : Steve Netto

Reported : 02/19/2013

Client Sample ID TB-020713

Lab ID: 1300426-01

Volatile Organic Compounds by EPA 8260

Analyst: SL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 16:36	
1,1,1-Trichloroethane	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 16:36	
1,1,2,2-Tetrachloroethane	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 16:36	
1,1,2-Trichloroethane	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 16:36	
1,1-Dichloroethane	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 16:36	
1,1-Dichloroethene	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 16:36	
1,1-Dichloropropene	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 16:36	
1,2,3-Trichloropropane	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 16:36	
1,2,3-Trichlorobenzene	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 16:36	
1,2,4-Trichlorobenzene	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 16:36	
1,2,4-Trimethylbenzene	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 16:36	
1,2-Dibromo-3-chloropropane	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 16:36	
1,2-Dibromoethane	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 16:36	
1,2-Dichlorobenzene	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 16:36	
1,2-Dichloroethane	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 16:36	
1,2-Dichloropropane	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 16:36	
1,3,5-Trimethylbenzene	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 16:36	
1,3-Dichlorobenzene	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 16:36	
1,3-Dichloropropane	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 16:36	
1,4-Dichlorobenzene	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 16:36	
2,2-Dichloropropane	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 16:36	
2-Chlorotoluene	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 16:36	
4-Chlorotoluene	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 16:36	
4-Isopropyltoluene	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 16:36	
Benzene	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 16:36	
Bromobenzene	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 16:36	
Bromodichloromethane	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 16:36	
Bromoform	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 16:36	
Bromomethane	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 16:36	
Carbon tetrachloride	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 16:36	
Chlorobenzene	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 16:36	
Chloroethane	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 16:36	
Chloroform	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 16:36	
Chloromethane	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 16:36	
cis-1,2-Dichloroethene	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 16:36	
cis-1,3-Dichloropropene	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 16:36	
Dibromochloromethane	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 16:36	



Certificate of Analysis

Hargis & Associates, Inc.

Project Number : RAYTHEON MAIN, 532.30

9171 Towne Centre Drive, Suite 375

Report To : Steve Netto

San Diego , CA 92122

Reported : 02/19/2013

Client Sample ID TB-020713

Lab ID: 1300426-01

Volatile Organic Compounds by EPA 8260

Analyst: SL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Dibromomethane	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 16:36	
Dichlorodifluoromethane	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 16:36	
Ethylbenzene	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 16:36	
Hexachlorobutadiene	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 16:36	
Isopropylbenzene	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 16:36	
m,p-Xylene	ND	1.0	NA	1	B3B0155	02/11/2013	02/11/13 16:36	
Methylene chloride	ND	1.0	NA	1	B3B0155	02/11/2013	02/11/13 16:36	
n-Butylbenzene	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 16:36	
n-Propylbenzene	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 16:36	
Naphthalene	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 16:36	
o-Xylene	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 16:36	
sec-Butylbenzene	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 16:36	
Styrene	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 16:36	
tert-Butylbenzene	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 16:36	
Tetrachloroethene	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 16:36	
Toluene	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 16:36	
trans-1,2-Dichloroethene	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 16:36	
Trichloroethene	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 16:36	
Trichlorofluoromethane	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 16:36	
Vinyl chloride	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 16:36	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>111 %</i>		<i>70 - 130</i>		B3B0155	02/11/2013	<i>02/11/13 16:36</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>87.0 %</i>		<i>70 - 130</i>		B3B0155	02/11/2013	<i>02/11/13 16:36</i>	
<i>Surrogate: Dibromofluoromethane</i>	<i>112 %</i>		<i>70 - 130</i>		B3B0155	02/11/2013	<i>02/11/13 16:36</i>	
<i>Surrogate: Toluene-d8</i>	<i>98.7 %</i>		<i>70 - 130</i>		B3B0155	02/11/2013	<i>02/11/13 16:36</i>	



Certificate of Analysis

Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego, CA 92122

Project Number : RAYTHEON MAIN, 532.30

Report To : Steve Netto

Reported : 02/19/2013

Client Sample ID MW-28

Lab ID: 1300426-02

Volatile Organic Compounds by EPA 8260

Analyst: SL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 16:59	
1,1,1-Trichloroethane	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 16:59	
1,1,2,2-Tetrachloroethane	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 16:59	
1,1,2-Trichloroethane	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 16:59	
1,1-Dichloroethane	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 16:59	
1,1-Dichloroethene	1.3	0.50	NA	1	B3B0155	02/11/2013	02/11/13 16:59	
1,1-Dichloropropene	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 16:59	
1,2,3-Trichloropropane	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 16:59	
1,2,3-Trichlorobenzene	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 16:59	
1,2,4-Trichlorobenzene	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 16:59	
1,2,4-Trimethylbenzene	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 16:59	
1,2-Dibromo-3-chloropropane	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 16:59	
1,2-Dibromoethane	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 16:59	
1,2-Dichlorobenzene	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 16:59	
1,2-Dichloroethane	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 16:59	
1,2-Dichloropropane	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 16:59	
1,3,5-Trimethylbenzene	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 16:59	
1,3-Dichlorobenzene	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 16:59	
1,3-Dichloropropane	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 16:59	
1,4-Dichlorobenzene	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 16:59	
2,2-Dichloropropane	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 16:59	
2-Chlorotoluene	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 16:59	
4-Chlorotoluene	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 16:59	
4-Isopropyltoluene	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 16:59	
Benzene	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 16:59	
Bromobenzene	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 16:59	
Bromodichloromethane	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 16:59	
Bromoform	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 16:59	
Bromomethane	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 16:59	
Carbon tetrachloride	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 16:59	
Chlorobenzene	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 16:59	
Chloroethane	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 16:59	
Chloroform	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 16:59	
Chloromethane	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 16:59	
cis-1,2-Dichloroethene	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 16:59	
cis-1,3-Dichloropropene	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 16:59	
Dibromochloromethane	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 16:59	



Certificate of Analysis

Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego, CA 92122

Project Number : RAYTHEON MAIN, 532.30

Report To : Steve Netto

Reported : 02/19/2013

Client Sample ID MW-28

Lab ID: 1300426-02

Volatile Organic Compounds by EPA 8260

Analyst: SL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Dibromomethane	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 16:59	
Dichlorodifluoromethane	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 16:59	
Ethylbenzene	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 16:59	
Hexachlorobutadiene	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 16:59	
Isopropylbenzene	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 16:59	
m,p-Xylene	ND	1.0	NA	1	B3B0155	02/11/2013	02/11/13 16:59	
Methylene chloride	ND	1.0	NA	1	B3B0155	02/11/2013	02/11/13 16:59	
n-Butylbenzene	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 16:59	
n-Propylbenzene	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 16:59	
Naphthalene	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 16:59	
o-Xylene	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 16:59	
sec-Butylbenzene	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 16:59	
Styrene	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 16:59	
tert-Butylbenzene	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 16:59	
Tetrachloroethene	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 16:59	
Toluene	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 16:59	
trans-1,2-Dichloroethene	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 16:59	
Trichloroethene	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 16:59	
Trichlorofluoromethane	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 16:59	
Vinyl chloride	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 16:59	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>121 %</i>		<i>70 - 130</i>		B3B0155	02/11/2013	<i>02/11/13 16:59</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>85.0 %</i>		<i>70 - 130</i>		B3B0155	02/11/2013	<i>02/11/13 16:59</i>	
<i>Surrogate: Dibromofluoromethane</i>	<i>108 %</i>		<i>70 - 130</i>		B3B0155	02/11/2013	<i>02/11/13 16:59</i>	
<i>Surrogate: Toluene-d8</i>	<i>97.9 %</i>		<i>70 - 130</i>		B3B0155	02/11/2013	<i>02/11/13 16:59</i>	



Certificate of Analysis

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9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : RAYTHEON MAIN, 532.30

Report To : Steve Netto

Reported : 02/19/2013

Client Sample ID MW-28

Lab ID: 1300426-02

1,4-Dioxane by EPA 8270/SIM: Isotope Dilution Technique

Analyst: BB

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,4-Dioxane	ND	0.20	0.13	1	B3B0222	02/12/2013	02/12/13 14:31	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	<i>120 %</i>		<i>36 - 107</i>		B3B0222	02/12/2013	<i>02/12/13 14:31</i>	<i>S1</i>
<i>Surrogate: 2-Fluorobiphenyl</i>	<i>109 %</i>		<i>42 - 120</i>		B3B0222	02/12/2013	<i>02/12/13 14:31</i>	
<i>Surrogate: 4-Terphenyl-d14</i>	<i>81.9 %</i>		<i>67 - 142</i>		B3B0222	02/12/2013	<i>02/12/13 14:31</i>	
<i>Surrogate: Nitrobenzene-d5</i>	<i>148 %</i>		<i>36 - 130</i>		B3B0222	02/12/2013	<i>02/12/13 14:31</i>	<i>S1</i>



Certificate of Analysis

Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego, CA 92122

Project Number : RAYTHEON MAIN, 532.30

Report To : Steve Netto

Reported : 02/19/2013

Client Sample ID MW-2900

Lab ID: 1300426-03

Volatile Organic Compounds by EPA 8260

Analyst: SL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	1.0	NA	2	B3B0155	02/11/2013	02/11/13 18:36	D6
1,1,1-Trichloroethane	ND	1.0	NA	2	B3B0155	02/11/2013	02/11/13 18:36	D6
1,1,2,2-Tetrachloroethane	ND	1.0	NA	2	B3B0155	02/11/2013	02/11/13 18:36	D6
1,1,2-Trichloroethane	1.1	1.0	NA	2	B3B0155	02/11/2013	02/11/13 18:36	D6
1,1-Dichloroethane	3.7	1.0	NA	2	B3B0155	02/11/2013	02/11/13 18:36	D6
1,1-Dichloroethene	370	5.0	NA	10	B3B0155	02/11/2013	02/11/13 13:28	
1,1-Dichloropropene	ND	1.0	NA	2	B3B0155	02/11/2013	02/11/13 18:36	D6
1,2,3-Trichloropropane	ND	1.0	NA	2	B3B0155	02/11/2013	02/11/13 18:36	D6
1,2,3-Trichlorobenzene	ND	1.0	NA	2	B3B0155	02/11/2013	02/11/13 18:36	D6
1,2,4-Trichlorobenzene	ND	1.0	NA	2	B3B0155	02/11/2013	02/11/13 18:36	D6
1,2,4-Trimethylbenzene	ND	1.0	NA	2	B3B0155	02/11/2013	02/11/13 18:36	D6
1,2-Dibromo-3-chloropropane	ND	1.0	NA	2	B3B0155	02/11/2013	02/11/13 18:36	D6
1,2-Dibromoethane	ND	1.0	NA	2	B3B0155	02/11/2013	02/11/13 18:36	D6
1,2-Dichlorobenzene	ND	1.0	NA	2	B3B0155	02/11/2013	02/11/13 18:36	D6
1,2-Dichloroethane	1.0	1.0	NA	2	B3B0155	02/11/2013	02/11/13 18:36	D6
1,2-Dichloropropane	ND	1.0	NA	2	B3B0155	02/11/2013	02/11/13 18:36	D6
1,3,5-Trimethylbenzene	ND	1.0	NA	2	B3B0155	02/11/2013	02/11/13 18:36	D6
1,3-Dichlorobenzene	ND	1.0	NA	2	B3B0155	02/11/2013	02/11/13 18:36	D6
1,3-Dichloropropane	ND	1.0	NA	2	B3B0155	02/11/2013	02/11/13 18:36	D6
1,4-Dichlorobenzene	ND	1.0	NA	2	B3B0155	02/11/2013	02/11/13 18:36	D6
2,2-Dichloropropane	ND	1.0	NA	2	B3B0155	02/11/2013	02/11/13 18:36	D6
2-Chlorotoluene	ND	1.0	NA	2	B3B0155	02/11/2013	02/11/13 18:36	D6
4-Chlorotoluene	ND	1.0	NA	2	B3B0155	02/11/2013	02/11/13 18:36	D6
4-Isopropyltoluene	ND	1.0	NA	2	B3B0155	02/11/2013	02/11/13 18:36	D6
Benzene	ND	1.0	NA	2	B3B0155	02/11/2013	02/11/13 18:36	D6
Bromobenzene	ND	1.0	NA	2	B3B0155	02/11/2013	02/11/13 18:36	D6
Bromodichloromethane	ND	1.0	NA	2	B3B0155	02/11/2013	02/11/13 18:36	D6
Bromoform	ND	1.0	NA	2	B3B0155	02/11/2013	02/11/13 18:36	D6
Bromomethane	ND	1.0	NA	2	B3B0155	02/11/2013	02/11/13 18:36	D6
Carbon tetrachloride	ND	1.0	NA	2	B3B0155	02/11/2013	02/11/13 18:36	D6
Chlorobenzene	ND	1.0	NA	2	B3B0155	02/11/2013	02/11/13 18:36	D6
Chloroethane	ND	1.0	NA	2	B3B0155	02/11/2013	02/11/13 18:36	D6
Chloroform	ND	1.0	NA	2	B3B0155	02/11/2013	02/11/13 18:36	D6
Chloromethane	ND	1.0	NA	2	B3B0155	02/11/2013	02/11/13 18:36	D6
cis-1,2-Dichloroethene	ND	1.0	NA	2	B3B0155	02/11/2013	02/11/13 18:36	D6
cis-1,3-Dichloropropane	ND	1.0	NA	2	B3B0155	02/11/2013	02/11/13 18:36	D6
Dibromochloromethane	ND	1.0	NA	2	B3B0155	02/11/2013	02/11/13 18:36	D6



Certificate of Analysis

Hargis & Associates, Inc.

Project Number : RAYTHEON MAIN, 532.30

9171 Towne Centre Drive, Suite 375

Report To : Steve Netto

San Diego , CA 92122

Reported : 02/19/2013

Client Sample ID MW-2900

Lab ID: 1300426-03

Volatile Organic Compounds by EPA 8260

Analyst: SL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Dibromomethane	ND	1.0	NA	2	B3B0155	02/11/2013	02/11/13 18:36	D6
Dichlorodifluoromethane	ND	1.0	NA	2	B3B0155	02/11/2013	02/11/13 18:36	D6
Ethylbenzene	ND	1.0	NA	2	B3B0155	02/11/2013	02/11/13 18:36	D6
Hexachlorobutadiene	ND	1.0	NA	2	B3B0155	02/11/2013	02/11/13 18:36	D6
Isopropylbenzene	ND	1.0	NA	2	B3B0155	02/11/2013	02/11/13 18:36	D6
m,p-Xylene	ND	2.0	NA	2	B3B0155	02/11/2013	02/11/13 18:36	D6
Methylene chloride	ND	2.0	NA	2	B3B0155	02/11/2013	02/11/13 18:36	D6
n-Butylbenzene	ND	1.0	NA	2	B3B0155	02/11/2013	02/11/13 18:36	D6
n-Propylbenzene	ND	1.0	NA	2	B3B0155	02/11/2013	02/11/13 18:36	D6
Naphthalene	ND	1.0	NA	2	B3B0155	02/11/2013	02/11/13 18:36	D6
o-Xylene	ND	1.0	NA	2	B3B0155	02/11/2013	02/11/13 18:36	D6
sec-Butylbenzene	ND	1.0	NA	2	B3B0155	02/11/2013	02/11/13 18:36	D6
Styrene	ND	1.0	NA	2	B3B0155	02/11/2013	02/11/13 18:36	D6
tert-Butylbenzene	ND	1.0	NA	2	B3B0155	02/11/2013	02/11/13 18:36	D6
Tetrachloroethene	1.0	1.0	NA	2	B3B0155	02/11/2013	02/11/13 18:36	D6
Toluene	ND	1.0	NA	2	B3B0155	02/11/2013	02/11/13 18:36	D6
trans-1,2-Dichloroethene	ND	1.0	NA	2	B3B0155	02/11/2013	02/11/13 18:36	D6
Trichloroethene	8.2	1.0	NA	2	B3B0155	02/11/2013	02/11/13 18:36	D6
Trichlorofluoromethane	2.0	1.0	NA	2	B3B0155	02/11/2013	02/11/13 18:36	D6
Vinyl chloride	ND	1.0	NA	2	B3B0155	02/11/2013	02/11/13 18:36	D6

<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>106 %</i>	<i>70 - 130</i>			B3B0155	02/11/2013	<i>02/11/13 13:28</i>	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>116 %</i>	<i>70 - 130</i>			B3B0155	02/11/2013	<i>02/11/13 18:36</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>85.0 %</i>	<i>70 - 130</i>			B3B0155	02/11/2013	<i>02/11/13 13:28</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>90.6 %</i>	<i>70 - 130</i>			B3B0155	02/11/2013	<i>02/11/13 18:36</i>	
<i>Surrogate: Dibromofluoromethane</i>	<i>117 %</i>	<i>70 - 130</i>			B3B0155	02/11/2013	<i>02/11/13 18:36</i>	
<i>Surrogate: Dibromofluoromethane</i>	<i>110 %</i>	<i>70 - 130</i>			B3B0155	02/11/2013	<i>02/11/13 13:28</i>	
<i>Surrogate: Toluene-d8</i>	<i>104 %</i>	<i>70 - 130</i>			B3B0155	02/11/2013	<i>02/11/13 13:28</i>	
<i>Surrogate: Toluene-d8</i>	<i>103 %</i>	<i>70 - 130</i>			B3B0155	02/11/2013	<i>02/11/13 18:36</i>	



Certificate of Analysis

Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : RAYTHEON MAIN, 532.30

Report To : Steve Netto

Reported : 02/19/2013

Client Sample ID MW-2900

Lab ID: 1300426-03

1,4-Dioxane by EPA 8270: Isotope Dilution Technique

Analyst: BB

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,4-Dioxane	130	2.0	NA	1	B3B0206	02/11/2013	02/12/13 12:26	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	<i>67.9 %</i>		<i>37 - 93</i>		B3B0206	02/11/2013	<i>02/12/13 12:26</i>	
<i>Surrogate: 2-Fluorobiphenyl</i>	<i>79.2 %</i>		<i>51 - 100</i>		B3B0206	02/11/2013	<i>02/12/13 12:26</i>	
<i>Surrogate: 4-Terphenyl-d14</i>	<i>98.4 %</i>		<i>58 - 113</i>		B3B0206	02/11/2013	<i>02/12/13 12:26</i>	
<i>Surrogate: Nitrobenzene-d5</i>	<i>83.6 %</i>		<i>39 - 95</i>		B3B0206	02/11/2013	<i>02/12/13 12:26</i>	



Certificate of Analysis

Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : RAYTHEON MAIN, 532.30

Report To : Steve Netto

Reported : 02/19/2013

Client Sample ID MW-29

Lab ID: 1300426-04

Volatile Organic Compounds by EPA 8260

Analyst: SL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	1.0	NA	2	B3B0155	02/11/2013	02/11/13 19:01	D6
1,1,1-Trichloroethane	ND	1.0	NA	2	B3B0155	02/11/2013	02/11/13 19:01	D6
1,1,2,2-Tetrachloroethane	ND	1.0	NA	2	B3B0155	02/11/2013	02/11/13 19:01	D6
1,1,2-Trichloroethane	1.2	1.0	NA	2	B3B0155	02/11/2013	02/11/13 19:01	D6
1,1-Dichloroethane	3.8	1.0	NA	2	B3B0155	02/11/2013	02/11/13 19:01	D6
1,1-Dichloroethene	410	5.0	NA	10	B3B0155	02/11/2013	02/11/13 13:52	
1,1-Dichloropropene	ND	1.0	NA	2	B3B0155	02/11/2013	02/11/13 19:01	D6
1,2,3-Trichloropropane	ND	1.0	NA	2	B3B0155	02/11/2013	02/11/13 19:01	D6
1,2,3-Trichlorobenzene	ND	1.0	NA	2	B3B0155	02/11/2013	02/11/13 19:01	D6
1,2,4-Trichlorobenzene	ND	1.0	NA	2	B3B0155	02/11/2013	02/11/13 19:01	D6
1,2,4-Trimethylbenzene	ND	1.0	NA	2	B3B0155	02/11/2013	02/11/13 19:01	D6
1,2-Dibromo-3-chloropropane	ND	1.0	NA	2	B3B0155	02/11/2013	02/11/13 19:01	D6
1,2-Dibromoethane	ND	1.0	NA	2	B3B0155	02/11/2013	02/11/13 19:01	D6
1,2-Dichlorobenzene	ND	1.0	NA	2	B3B0155	02/11/2013	02/11/13 19:01	D6
1,2-Dichloroethane	ND	1.0	NA	2	B3B0155	02/11/2013	02/11/13 19:01	D6
1,2-Dichloropropane	ND	1.0	NA	2	B3B0155	02/11/2013	02/11/13 19:01	D6
1,3,5-Trimethylbenzene	ND	1.0	NA	2	B3B0155	02/11/2013	02/11/13 19:01	D6
1,3-Dichlorobenzene	ND	1.0	NA	2	B3B0155	02/11/2013	02/11/13 19:01	D6
1,3-Dichloropropane	ND	1.0	NA	2	B3B0155	02/11/2013	02/11/13 19:01	D6
1,4-Dichlorobenzene	ND	1.0	NA	2	B3B0155	02/11/2013	02/11/13 19:01	D6
2,2-Dichloropropane	ND	1.0	NA	2	B3B0155	02/11/2013	02/11/13 19:01	D6
2-Chlorotoluene	ND	1.0	NA	2	B3B0155	02/11/2013	02/11/13 19:01	D6
4-Chlorotoluene	ND	1.0	NA	2	B3B0155	02/11/2013	02/11/13 19:01	D6
4-Isopropyltoluene	ND	1.0	NA	2	B3B0155	02/11/2013	02/11/13 19:01	D6
Benzene	ND	1.0	NA	2	B3B0155	02/11/2013	02/11/13 19:01	D6
Bromobenzene	ND	1.0	NA	2	B3B0155	02/11/2013	02/11/13 19:01	D6
Bromodichloromethane	ND	1.0	NA	2	B3B0155	02/11/2013	02/11/13 19:01	D6
Bromoform	ND	1.0	NA	2	B3B0155	02/11/2013	02/11/13 19:01	D6
Bromomethane	ND	1.0	NA	2	B3B0155	02/11/2013	02/11/13 19:01	D6
Carbon tetrachloride	ND	1.0	NA	2	B3B0155	02/11/2013	02/11/13 19:01	D6
Chlorobenzene	ND	1.0	NA	2	B3B0155	02/11/2013	02/11/13 19:01	D6
Chloroethane	ND	1.0	NA	2	B3B0155	02/11/2013	02/11/13 19:01	D6
Chloroform	ND	1.0	NA	2	B3B0155	02/11/2013	02/11/13 19:01	D6
Chloromethane	ND	1.0	NA	2	B3B0155	02/11/2013	02/11/13 19:01	D6
cis-1,2-Dichloroethene	ND	1.0	NA	2	B3B0155	02/11/2013	02/11/13 19:01	D6
cis-1,3-Dichloropropane	ND	1.0	NA	2	B3B0155	02/11/2013	02/11/13 19:01	D6
Dibromochloromethane	ND	1.0	NA	2	B3B0155	02/11/2013	02/11/13 19:01	D6



Certificate of Analysis

Hargis & Associates, Inc.

Project Number : RAYTHEON MAIN, 532.30

9171 Towne Centre Drive, Suite 375

Report To : Steve Netto

San Diego , CA 92122

Reported : 02/19/2013

Client Sample ID MW-29

Lab ID: 1300426-04

Volatile Organic Compounds by EPA 8260

Analyst: SL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Dibromomethane	ND	1.0	NA	2	B3B0155	02/11/2013	02/11/13 19:01	D6
Dichlorodifluoromethane	ND	1.0	NA	2	B3B0155	02/11/2013	02/11/13 19:01	D6
Ethylbenzene	ND	1.0	NA	2	B3B0155	02/11/2013	02/11/13 19:01	D6
Hexachlorobutadiene	ND	1.0	NA	2	B3B0155	02/11/2013	02/11/13 19:01	D6
Isopropylbenzene	ND	1.0	NA	2	B3B0155	02/11/2013	02/11/13 19:01	D6
m,p-Xylene	ND	2.0	NA	2	B3B0155	02/11/2013	02/11/13 19:01	D6
Methylene chloride	ND	2.0	NA	2	B3B0155	02/11/2013	02/11/13 19:01	D6
n-Butylbenzene	ND	1.0	NA	2	B3B0155	02/11/2013	02/11/13 19:01	D6
n-Propylbenzene	ND	1.0	NA	2	B3B0155	02/11/2013	02/11/13 19:01	D6
Naphthalene	ND	1.0	NA	2	B3B0155	02/11/2013	02/11/13 19:01	D6
o-Xylene	ND	1.0	NA	2	B3B0155	02/11/2013	02/11/13 19:01	D6
sec-Butylbenzene	ND	1.0	NA	2	B3B0155	02/11/2013	02/11/13 19:01	D6
Styrene	ND	1.0	NA	2	B3B0155	02/11/2013	02/11/13 19:01	D6
tert-Butylbenzene	ND	1.0	NA	2	B3B0155	02/11/2013	02/11/13 19:01	D6
Tetrachloroethene	1.0	1.0	NA	2	B3B0155	02/11/2013	02/11/13 19:01	D6
Toluene	ND	1.0	NA	2	B3B0155	02/11/2013	02/11/13 19:01	D6
trans-1,2-Dichloroethene	ND	1.0	NA	2	B3B0155	02/11/2013	02/11/13 19:01	D6
Trichloroethene	8.3	1.0	NA	2	B3B0155	02/11/2013	02/11/13 19:01	D6
Trichlorofluoromethane	1.9	1.0	NA	2	B3B0155	02/11/2013	02/11/13 19:01	D6
Vinyl chloride	ND	1.0	NA	2	B3B0155	02/11/2013	02/11/13 19:01	D6
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>115 %</i>		<i>70 - 130</i>		B3B0155	02/11/2013	<i>02/11/13 13:52</i>	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>108 %</i>		<i>70 - 130</i>		B3B0155	02/11/2013	<i>02/11/13 19:01</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>91.2 %</i>		<i>70 - 130</i>		B3B0155	02/11/2013	<i>02/11/13 13:52</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>86.0 %</i>		<i>70 - 130</i>		B3B0155	02/11/2013	<i>02/11/13 19:01</i>	
<i>Surrogate: Dibromofluoromethane</i>	<i>110 %</i>		<i>70 - 130</i>		B3B0155	02/11/2013	<i>02/11/13 19:01</i>	
<i>Surrogate: Dibromofluoromethane</i>	<i>117 %</i>		<i>70 - 130</i>		B3B0155	02/11/2013	<i>02/11/13 13:52</i>	
<i>Surrogate: Toluene-d8</i>	<i>102 %</i>		<i>70 - 130</i>		B3B0155	02/11/2013	<i>02/11/13 13:52</i>	
<i>Surrogate: Toluene-d8</i>	<i>98.2 %</i>		<i>70 - 130</i>		B3B0155	02/11/2013	<i>02/11/13 19:01</i>	



Certificate of Analysis

Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego, CA 92122

Project Number : RAYTHEON MAIN, 532.30

Report To : Steve Netto

Reported : 02/19/2013

Client Sample ID MW-29

Lab ID: 1300426-04

1,4-Dioxane by EPA 8270: Isotope Dilution Technique

Analyst: BB

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,4-Dioxane	130	2.0	NA	1	B3B0206	02/11/2013	02/12/13 12:52	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	<i>64.6 %</i>		<i>37 - 93</i>		B3B0206	02/11/2013	<i>02/12/13 12:52</i>	
<i>Surrogate: 2-Fluorobiphenyl</i>	<i>74.7 %</i>		<i>51 - 100</i>		B3B0206	02/11/2013	<i>02/12/13 12:52</i>	
<i>Surrogate: 4-Terphenyl-d14</i>	<i>100 %</i>		<i>58 - 113</i>		B3B0206	02/11/2013	<i>02/12/13 12:52</i>	
<i>Surrogate: Nitrobenzene-d5</i>	<i>79.1 %</i>		<i>39 - 95</i>		B3B0206	02/11/2013	<i>02/12/13 12:52</i>	



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Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego, CA 92122

Project Number : RAYTHEON MAIN, 532.30

Report To : Steve Netto

Reported : 02/19/2013

Client Sample ID MW-27

Lab ID: 1300426-05

Volatile Organic Compounds by EPA 8260

Analyst: SL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 11:31	
1,1,1-Trichloroethane	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 11:31	
1,1,2,2-Tetrachloroethane	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 11:31	
1,1,2-Trichloroethane	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 11:31	
1,1-Dichloroethane	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 11:31	
1,1-Dichloroethene	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 11:31	
1,1-Dichloropropene	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 11:31	
1,2,3-Trichloropropane	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 11:31	
1,2,3-Trichlorobenzene	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 11:31	
1,2,4-Trichlorobenzene	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 11:31	
1,2,4-Trimethylbenzene	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 11:31	
1,2-Dibromo-3-chloropropane	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 11:31	
1,2-Dibromoethane	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 11:31	
1,2-Dichlorobenzene	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 11:31	
1,2-Dichloroethane	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 11:31	
1,2-Dichloropropane	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 11:31	
1,3,5-Trimethylbenzene	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 11:31	
1,3-Dichlorobenzene	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 11:31	
1,3-Dichloropropane	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 11:31	
1,4-Dichlorobenzene	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 11:31	
2,2-Dichloropropane	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 11:31	
2-Chlorotoluene	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 11:31	
4-Chlorotoluene	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 11:31	
4-Isopropyltoluene	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 11:31	
Benzene	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 11:31	
Bromobenzene	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 11:31	
Bromodichloromethane	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 11:31	
Bromoform	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 11:31	
Bromomethane	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 11:31	
Carbon tetrachloride	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 11:31	
Chlorobenzene	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 11:31	
Chloroethane	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 11:31	
Chloroform	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 11:31	
Chloromethane	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 11:31	
cis-1,2-Dichloroethene	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 11:31	
cis-1,3-Dichloropropene	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 11:31	
Dibromochloromethane	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 11:31	



Certificate of Analysis

Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego, CA 92122

Project Number : RAYTHEON MAIN, 532.30

Report To : Steve Netto

Reported : 02/19/2013

Client Sample ID MW-27

Lab ID: 1300426-05

Volatile Organic Compounds by EPA 8260

Analyst: SL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Dibromomethane	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 11:31	
Dichlorodifluoromethane	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 11:31	
Ethylbenzene	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 11:31	
Hexachlorobutadiene	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 11:31	
Isopropylbenzene	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 11:31	
m,p-Xylene	ND	1.0	NA	1	B3B0155	02/11/2013	02/11/13 11:31	
Methylene chloride	ND	1.0	NA	1	B3B0155	02/11/2013	02/11/13 11:31	
n-Butylbenzene	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 11:31	
n-Propylbenzene	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 11:31	
Naphthalene	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 11:31	
o-Xylene	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 11:31	
sec-Butylbenzene	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 11:31	
Styrene	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 11:31	
tert-Butylbenzene	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 11:31	
Tetrachloroethene	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 11:31	
Toluene	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 11:31	
trans-1,2-Dichloroethene	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 11:31	
Trichloroethene	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 11:31	
Trichlorofluoromethane	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 11:31	
Vinyl chloride	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 11:31	
Surrogate: 1,2-Dichloroethane-d4	115 %		70 - 130		B3B0155	02/11/2013	02/11/13 11:31	
Surrogate: 4-Bromofluorobenzene	89.8 %		70 - 130		B3B0155	02/11/2013	02/11/13 11:31	
Surrogate: Dibromofluoromethane	116 %		70 - 130		B3B0155	02/11/2013	02/11/13 11:31	
Surrogate: Toluene-d8	103 %		70 - 130		B3B0155	02/11/2013	02/11/13 11:31	



Certificate of Analysis

Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : RAYTHEON MAIN, 532.30

Report To : Steve Netto

Reported : 02/19/2013

Client Sample ID MW-27

Lab ID: 1300426-05

1,4-Dioxane by EPA 8270/SIM: Isotope Dilution Technique

Analyst: BB

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,4-Dioxane	ND	0.20	0.13	1	B3B0222	02/12/2013	02/12/13 14:56	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	<i>100 %</i>		<i>36 - 107</i>		B3B0222	02/12/2013	<i>02/12/13 14:56</i>	
<i>Surrogate: 2-Fluorobiphenyl</i>	<i>99.8 %</i>		<i>42 - 120</i>		B3B0222	02/12/2013	<i>02/12/13 14:56</i>	
<i>Surrogate: 4-Terphenyl-d14</i>	<i>84.6 %</i>		<i>67 - 142</i>		B3B0222	02/12/2013	<i>02/12/13 14:56</i>	
<i>Surrogate: Nitrobenzene-d5</i>	<i>124 %</i>		<i>36 - 130</i>		B3B0222	02/12/2013	<i>02/12/13 14:56</i>	



Certificate of Analysis

Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego, CA 92122

Project Number : RAYTHEON MAIN, 532.30

Report To : Steve Netto

Reported : 02/19/2013

Client Sample ID MW-3600

Lab ID: 1300426-06

Volatile Organic Compounds by EPA 8260

Analyst: SL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 17:23	
1,1,1-Trichloroethane	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 17:23	
1,1,2,2-Tetrachloroethane	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 17:23	
1,1,2-Trichloroethane	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 17:23	
1,1-Dichloroethane	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 17:23	
1,1-Dichloroethene	26	0.50	NA	1	B3B0155	02/11/2013	02/11/13 17:23	
1,1-Dichloropropene	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 17:23	
1,2,3-Trichloropropane	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 17:23	
1,2,3-Trichlorobenzene	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 17:23	
1,2,4-Trichlorobenzene	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 17:23	
1,2,4-Trimethylbenzene	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 17:23	
1,2-Dibromo-3-chloropropane	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 17:23	
1,2-Dibromoethane	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 17:23	
1,2-Dichlorobenzene	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 17:23	
1,2-Dichloroethane	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 17:23	
1,2-Dichloropropane	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 17:23	
1,3,5-Trimethylbenzene	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 17:23	
1,3-Dichlorobenzene	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 17:23	
1,3-Dichloropropane	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 17:23	
1,4-Dichlorobenzene	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 17:23	
2,2-Dichloropropane	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 17:23	
2-Chlorotoluene	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 17:23	
4-Chlorotoluene	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 17:23	
4-Isopropyltoluene	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 17:23	
Benzene	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 17:23	
Bromobenzene	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 17:23	
Bromodichloromethane	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 17:23	
Bromoform	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 17:23	
Bromomethane	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 17:23	
Carbon tetrachloride	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 17:23	
Chlorobenzene	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 17:23	
Chloroethane	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 17:23	
Chloroform	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 17:23	
Chloromethane	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 17:23	
cis-1,2-Dichloroethene	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 17:23	
cis-1,3-Dichloropropane	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 17:23	
Dibromochloromethane	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 17:23	



Certificate of Analysis

Hargis & Associates, Inc.

Project Number : RAYTHEON MAIN, 532.30

9171 Towne Centre Drive, Suite 375

Report To : Steve Netto

San Diego , CA 92122

Reported : 02/19/2013

Client Sample ID MW-3600

Lab ID: 1300426-06

Volatile Organic Compounds by EPA 8260

Analyst: SL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Dibromomethane	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 17:23	
Dichlorodifluoromethane	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 17:23	
Ethylbenzene	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 17:23	
Hexachlorobutadiene	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 17:23	
Isopropylbenzene	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 17:23	
m,p-Xylene	ND	1.0	NA	1	B3B0155	02/11/2013	02/11/13 17:23	
Methylene chloride	ND	1.0	NA	1	B3B0155	02/11/2013	02/11/13 17:23	
n-Butylbenzene	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 17:23	
n-Propylbenzene	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 17:23	
Naphthalene	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 17:23	
o-Xylene	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 17:23	
sec-Butylbenzene	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 17:23	
Styrene	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 17:23	
tert-Butylbenzene	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 17:23	
Tetrachloroethene	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 17:23	
Toluene	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 17:23	
trans-1,2-Dichloroethene	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 17:23	
Trichloroethene	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 17:23	
Trichlorofluoromethane	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 17:23	
Vinyl chloride	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 17:23	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>98.2 %</i>		<i>70 - 130</i>		B3B0155	02/11/2013	<i>02/11/13 17:23</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>84.0 %</i>		<i>70 - 130</i>		B3B0155	02/11/2013	<i>02/11/13 17:23</i>	
<i>Surrogate: Dibromofluoromethane</i>	<i>70.8 %</i>		<i>70 - 130</i>		B3B0155	02/11/2013	<i>02/11/13 17:23</i>	
<i>Surrogate: Toluene-d8</i>	<i>97.8 %</i>		<i>70 - 130</i>		B3B0155	02/11/2013	<i>02/11/13 17:23</i>	



Certificate of Analysis

Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego, CA 92122

Project Number : RAYTHEON MAIN, 532.30

Report To : Steve Netto

Reported : 02/19/2013

Client Sample ID MW-3600

Lab ID: 1300426-06

1,4-Dioxane by EPA 8270/SIM: Isotope Dilution Technique

Analyst: BB

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,4-Dioxane	1.5	0.20	0.13	1	B3B0222	02/12/2013	02/12/13 15:20	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	<i>117 %</i>		<i>36 - 107</i>		B3B0222	02/12/2013	<i>02/12/13 15:20</i>	S10
<i>Surrogate: 2-Fluorobiphenyl</i>	<i>105 %</i>		<i>42 - 120</i>		B3B0222	02/12/2013	<i>02/12/13 15:20</i>	
<i>Surrogate: 4-Terphenyl-d14</i>	<i>78.2 %</i>		<i>67 - 142</i>		B3B0222	02/12/2013	<i>02/12/13 15:20</i>	
<i>Surrogate: Nitrobenzene-d5</i>	<i>143 %</i>		<i>36 - 130</i>		B3B0222	02/12/2013	<i>02/12/13 15:20</i>	S10



Certificate of Analysis

Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego, CA 92122

Project Number : RAYTHEON MAIN, 532.30

Report To : Steve Netto

Reported : 02/19/2013

Client Sample ID MW-36

Lab ID: 1300426-07

Volatile Organic Compounds by EPA 8260

Analyst: SL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 17:47	
1,1,1-Trichloroethane	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 17:47	
1,1,2,2-Tetrachloroethane	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 17:47	
1,1,2-Trichloroethane	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 17:47	
1,1-Dichloroethane	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 17:47	
1,1-Dichloroethene	28	0.50	NA	1	B3B0155	02/11/2013	02/11/13 17:47	
1,1-Dichloropropene	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 17:47	
1,2,3-Trichloropropane	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 17:47	
1,2,3-Trichlorobenzene	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 17:47	
1,2,4-Trichlorobenzene	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 17:47	
1,2,4-Trimethylbenzene	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 17:47	
1,2-Dibromo-3-chloropropane	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 17:47	
1,2-Dibromoethane	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 17:47	
1,2-Dichlorobenzene	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 17:47	
1,2-Dichloroethane	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 17:47	
1,2-Dichloropropane	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 17:47	
1,3,5-Trimethylbenzene	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 17:47	
1,3-Dichlorobenzene	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 17:47	
1,3-Dichloropropane	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 17:47	
1,4-Dichlorobenzene	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 17:47	
2,2-Dichloropropane	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 17:47	
2-Chlorotoluene	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 17:47	
4-Chlorotoluene	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 17:47	
4-Isopropyltoluene	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 17:47	
Benzene	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 17:47	
Bromobenzene	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 17:47	
Bromodichloromethane	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 17:47	
Bromoform	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 17:47	
Bromomethane	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 17:47	
Carbon tetrachloride	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 17:47	
Chlorobenzene	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 17:47	
Chloroethane	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 17:47	
Chloroform	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 17:47	
Chloromethane	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 17:47	
cis-1,2-Dichloroethene	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 17:47	
cis-1,3-Dichloropropane	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 17:47	
Dibromochloromethane	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 17:47	



Certificate of Analysis

Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : RAYTHEON MAIN, 532.30

Report To : Steve Netto

Reported : 02/19/2013

Client Sample ID MW-36

Lab ID: 1300426-07

Volatile Organic Compounds by EPA 8260

Analyst: SL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Dibromomethane	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 17:47	
Dichlorodifluoromethane	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 17:47	
Ethylbenzene	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 17:47	
Hexachlorobutadiene	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 17:47	
Isopropylbenzene	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 17:47	
m,p-Xylene	ND	1.0	NA	1	B3B0155	02/11/2013	02/11/13 17:47	
Methylene chloride	ND	1.0	NA	1	B3B0155	02/11/2013	02/11/13 17:47	
n-Butylbenzene	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 17:47	
n-Propylbenzene	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 17:47	
Naphthalene	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 17:47	
o-Xylene	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 17:47	
sec-Butylbenzene	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 17:47	
Styrene	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 17:47	
tert-Butylbenzene	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 17:47	
Tetrachloroethene	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 17:47	
Toluene	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 17:47	
trans-1,2-Dichloroethene	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 17:47	
Trichloroethene	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 17:47	
Trichlorofluoromethane	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 17:47	
Vinyl chloride	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 17:47	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>111 %</i>		<i>70 - 130</i>		B3B0155	02/11/2013	<i>02/11/13 17:47</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>93.6 %</i>		<i>70 - 130</i>		B3B0155	02/11/2013	<i>02/11/13 17:47</i>	
<i>Surrogate: Dibromofluoromethane</i>	<i>77.6 %</i>		<i>70 - 130</i>		B3B0155	02/11/2013	<i>02/11/13 17:47</i>	
<i>Surrogate: Toluene-d8</i>	<i>108 %</i>		<i>70 - 130</i>		B3B0155	02/11/2013	<i>02/11/13 17:47</i>	



Certificate of Analysis

Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego, CA 92122

Project Number : RAYTHEON MAIN, 532.30

Report To : Steve Netto

Reported : 02/19/2013

Client Sample ID MW-36

Lab ID: 1300426-07

1,4-Dioxane by EPA 8270/SIM: Isotope Dilution Technique

Analyst: BB

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,4-Dioxane	1.8	0.20	0.13	1	B3B0222	02/12/2013	02/12/13 15:45	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	<i>106 %</i>		<i>36 - 107</i>		B3B0222	02/12/2013	<i>02/12/13 15:45</i>	
<i>Surrogate: 2-Fluorobiphenyl</i>	<i>97.2 %</i>		<i>42 - 120</i>		B3B0222	02/12/2013	<i>02/12/13 15:45</i>	
<i>Surrogate: 4-Terphenyl-d14</i>	<i>77.9 %</i>		<i>67 - 142</i>		B3B0222	02/12/2013	<i>02/12/13 15:45</i>	
<i>Surrogate: Nitrobenzene-d5</i>	<i>136 %</i>		<i>36 - 130</i>		B3B0222	02/12/2013	<i>02/12/13 15:45</i>	S10



Certificate of Analysis

Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego, CA 92122

Project Number : RAYTHEON MAIN, 532.30

Report To : Steve Netto

Reported : 02/19/2013

Client Sample ID P-09

Lab ID: 1300426-08

Volatile Organic Compounds by EPA 8260

Analyst: SL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 18:10	
1,1,1-Trichloroethane	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 18:10	
1,1,2,2-Tetrachloroethane	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 18:10	
1,1,2-Trichloroethane	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 18:10	
1,1-Dichloroethane	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 18:10	
1,1-Dichloroethene	5.2	0.50	NA	1	B3B0155	02/11/2013	02/11/13 18:10	
1,1-Dichloropropene	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 18:10	
1,2,3-Trichloropropane	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 18:10	
1,2,3-Trichlorobenzene	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 18:10	
1,2,4-Trichlorobenzene	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 18:10	
1,2,4-Trimethylbenzene	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 18:10	
1,2-Dibromo-3-chloropropane	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 18:10	
1,2-Dibromoethane	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 18:10	
1,2-Dichlorobenzene	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 18:10	
1,2-Dichloroethane	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 18:10	
1,2-Dichloropropane	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 18:10	
1,3,5-Trimethylbenzene	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 18:10	
1,3-Dichlorobenzene	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 18:10	
1,3-Dichloropropane	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 18:10	
1,4-Dichlorobenzene	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 18:10	
2,2-Dichloropropane	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 18:10	
2-Chlorotoluene	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 18:10	
4-Chlorotoluene	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 18:10	
4-Isopropyltoluene	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 18:10	
Benzene	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 18:10	
Bromobenzene	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 18:10	
Bromodichloromethane	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 18:10	
Bromoform	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 18:10	
Bromomethane	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 18:10	
Carbon tetrachloride	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 18:10	
Chlorobenzene	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 18:10	
Chloroethane	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 18:10	
Chloroform	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 18:10	
Chloromethane	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 18:10	
cis-1,2-Dichloroethene	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 18:10	
cis-1,3-Dichloropropane	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 18:10	
Dibromochloromethane	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 18:10	



Certificate of Analysis

Hargis & Associates, Inc.

Project Number : RAYTHEON MAIN, 532.30

9171 Towne Centre Drive, Suite 375

Report To : Steve Netto

San Diego , CA 92122

Reported : 02/19/2013

Client Sample ID P-09

Lab ID: 1300426-08

Volatile Organic Compounds by EPA 8260

Analyst: SL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Dibromomethane	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 18:10	
Dichlorodifluoromethane	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 18:10	
Ethylbenzene	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 18:10	
Hexachlorobutadiene	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 18:10	
Isopropylbenzene	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 18:10	
m,p-Xylene	ND	1.0	NA	1	B3B0155	02/11/2013	02/11/13 18:10	
Methylene chloride	ND	1.0	NA	1	B3B0155	02/11/2013	02/11/13 18:10	
n-Butylbenzene	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 18:10	
n-Propylbenzene	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 18:10	
Naphthalene	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 18:10	
o-Xylene	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 18:10	
sec-Butylbenzene	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 18:10	
Styrene	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 18:10	
tert-Butylbenzene	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 18:10	
Tetrachloroethene	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 18:10	
Toluene	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 18:10	
trans-1,2-Dichloroethene	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 18:10	
Trichloroethene	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 18:10	
Trichlorofluoromethane	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 18:10	
Vinyl chloride	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 18:10	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>124 %</i>		<i>70 - 130</i>		B3B0155	02/11/2013	<i>02/11/13 18:10</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>97.2 %</i>		<i>70 - 130</i>		B3B0155	02/11/2013	<i>02/11/13 18:10</i>	
<i>Surrogate: Dibromofluoromethane</i>	<i>122 %</i>		<i>70 - 130</i>		B3B0155	02/11/2013	<i>02/11/13 18:10</i>	
<i>Surrogate: Toluene-d8</i>	<i>109 %</i>		<i>70 - 130</i>		B3B0155	02/11/2013	<i>02/11/13 18:10</i>	



Certificate of Analysis

Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego, CA 92122

Project Number : RAYTHEON MAIN, 532.30

Report To : Steve Netto

Reported : 02/19/2013

Client Sample ID P-09

Lab ID: 1300426-08

1,4-Dioxane by EPA 8270/SIM: Isotope Dilution Technique

Analyst: BB

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,4-Dioxane	ND	0.20	0.13	1	B3B0222	02/12/2013	02/12/13 16:09	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	<i>109 %</i>		<i>36 - 107</i>		B3B0222	02/12/2013	<i>02/12/13 16:09</i>	<i>S1</i>
<i>Surrogate: 2-Fluorobiphenyl</i>	<i>109 %</i>		<i>42 - 120</i>		B3B0222	02/12/2013	<i>02/12/13 16:09</i>	
<i>Surrogate: 4-Terphenyl-d14</i>	<i>77.1 %</i>		<i>67 - 142</i>		B3B0222	02/12/2013	<i>02/12/13 16:09</i>	
<i>Surrogate: Nitrobenzene-d5</i>	<i>150 %</i>		<i>36 - 130</i>		B3B0222	02/12/2013	<i>02/12/13 16:09</i>	<i>S1</i>



Certificate of Analysis

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9171 Towne Centre Drive, Suite 375

San Diego, CA 92122

Project Number : RAYTHEON MAIN, 532.30

Report To : Steve Netto

Reported : 02/19/2013

Client Sample ID P-07

Lab ID: 1300426-09

Volatile Organic Compounds by EPA 8260

Analyst: SL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	2.5	NA	5	B3B0155	02/11/2013	02/11/13 19:26	D6
1,1,1-Trichloroethane	ND	2.5	NA	5	B3B0155	02/11/2013	02/11/13 19:26	D6
1,1,2,2-Tetrachloroethane	ND	2.5	NA	5	B3B0155	02/11/2013	02/11/13 19:26	D6
1,1,2-Trichloroethane	7.2	2.5	NA	5	B3B0155	02/11/2013	02/11/13 19:26	D6
1,1-Dichloroethane	22	2.5	NA	5	B3B0155	02/11/2013	02/11/13 19:26	D6
1,1-Dichloroethene	1600	10	NA	20	B3B0350	02/18/2013	02/18/13 11:40	
1,1-Dichloropropene	ND	2.5	NA	5	B3B0155	02/11/2013	02/11/13 19:26	D6
1,2,3-Trichloropropane	ND	2.5	NA	5	B3B0155	02/11/2013	02/11/13 19:26	D6
1,2,3-Trichlorobenzene	ND	2.5	NA	5	B3B0155	02/11/2013	02/11/13 19:26	D6
1,2,4-Trichlorobenzene	ND	2.5	NA	5	B3B0155	02/11/2013	02/11/13 19:26	D6
1,2,4-Trimethylbenzene	ND	2.5	NA	5	B3B0155	02/11/2013	02/11/13 19:26	D6
1,2-Dibromo-3-chloropropane	ND	2.5	NA	5	B3B0155	02/11/2013	02/11/13 19:26	D6
1,2-Dibromoethane	ND	2.5	NA	5	B3B0155	02/11/2013	02/11/13 19:26	D6
1,2-Dichlorobenzene	ND	2.5	NA	5	B3B0155	02/11/2013	02/11/13 19:26	D6
1,2-Dichloroethane	6.6	2.5	NA	5	B3B0155	02/11/2013	02/11/13 19:26	D6
1,2-Dichloropropane	ND	2.5	NA	5	B3B0155	02/11/2013	02/11/13 19:26	D6
1,3,5-Trimethylbenzene	ND	2.5	NA	5	B3B0155	02/11/2013	02/11/13 19:26	D6
1,3-Dichlorobenzene	ND	2.5	NA	5	B3B0155	02/11/2013	02/11/13 19:26	D6
1,3-Dichloropropane	ND	2.5	NA	5	B3B0155	02/11/2013	02/11/13 19:26	D6
1,4-Dichlorobenzene	ND	2.5	NA	5	B3B0155	02/11/2013	02/11/13 19:26	D6
2,2-Dichloropropane	ND	2.5	NA	5	B3B0155	02/11/2013	02/11/13 19:26	D6
2-Chlorotoluene	ND	2.5	NA	5	B3B0155	02/11/2013	02/11/13 19:26	D6
4-Chlorotoluene	ND	2.5	NA	5	B3B0155	02/11/2013	02/11/13 19:26	D6
4-Isopropyltoluene	ND	2.5	NA	5	B3B0155	02/11/2013	02/11/13 19:26	D6
Benzene	ND	2.5	NA	5	B3B0155	02/11/2013	02/11/13 19:26	D6
Bromobenzene	ND	2.5	NA	5	B3B0155	02/11/2013	02/11/13 19:26	D6
Bromodichloromethane	ND	2.5	NA	5	B3B0155	02/11/2013	02/11/13 19:26	D6
Bromoform	ND	2.5	NA	5	B3B0155	02/11/2013	02/11/13 19:26	D6
Bromomethane	ND	2.5	NA	5	B3B0155	02/11/2013	02/11/13 19:26	D6
Carbon tetrachloride	ND	2.5	NA	5	B3B0155	02/11/2013	02/11/13 19:26	D6
Chlorobenzene	ND	2.5	NA	5	B3B0155	02/11/2013	02/11/13 19:26	D6
Chloroethane	ND	2.5	NA	5	B3B0155	02/11/2013	02/11/13 19:26	D6
Chloroform	ND	2.5	NA	5	B3B0155	02/11/2013	02/11/13 19:26	D6
Chloromethane	ND	2.5	NA	5	B3B0155	02/11/2013	02/11/13 19:26	D6
cis-1,2-Dichloroethene	ND	2.5	NA	5	B3B0155	02/11/2013	02/11/13 19:26	D6
cis-1,3-Dichloropropane	ND	2.5	NA	5	B3B0155	02/11/2013	02/11/13 19:26	D6
Dibromochloromethane	ND	2.5	NA	5	B3B0155	02/11/2013	02/11/13 19:26	D6



Certificate of Analysis

Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : RAYTHEON MAIN, 532.30

Report To : Steve Netto

Reported : 02/19/2013

Client Sample ID P-07

Lab ID: 1300426-09

Volatile Organic Compounds by EPA 8260

Analyst: SL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Dibromomethane	ND	2.5	NA	5	B3B0155	02/11/2013	02/11/13 19:26	D6
Dichlorodifluoromethane	ND	2.5	NA	5	B3B0155	02/11/2013	02/11/13 19:26	D6
Ethylbenzene	ND	2.5	NA	5	B3B0155	02/11/2013	02/11/13 19:26	D6
Hexachlorobutadiene	ND	2.5	NA	5	B3B0155	02/11/2013	02/11/13 19:26	D6
Isopropylbenzene	ND	2.5	NA	5	B3B0155	02/11/2013	02/11/13 19:26	D6
m,p-Xylene	ND	5.0	NA	5	B3B0155	02/11/2013	02/11/13 19:26	D6
Methylene chloride	ND	5.0	NA	5	B3B0155	02/11/2013	02/11/13 19:26	D6
n-Butylbenzene	ND	2.5	NA	5	B3B0155	02/11/2013	02/11/13 19:26	D6
n-Propylbenzene	ND	2.5	NA	5	B3B0155	02/11/2013	02/11/13 19:26	D6
Naphthalene	ND	2.5	NA	5	B3B0155	02/11/2013	02/11/13 19:26	D6
o-Xylene	ND	2.5	NA	5	B3B0155	02/11/2013	02/11/13 19:26	D6
sec-Butylbenzene	ND	2.5	NA	5	B3B0155	02/11/2013	02/11/13 19:26	D6
Styrene	ND	2.5	NA	5	B3B0155	02/11/2013	02/11/13 19:26	D6
tert-Butylbenzene	ND	2.5	NA	5	B3B0155	02/11/2013	02/11/13 19:26	D6
Tetrachloroethene	4.8	2.5	NA	5	B3B0155	02/11/2013	02/11/13 19:26	D6
Toluene	ND	2.5	NA	5	B3B0155	02/11/2013	02/11/13 19:26	D6
trans-1,2-Dichloroethene	ND	2.5	NA	5	B3B0155	02/11/2013	02/11/13 19:26	D6
Trichloroethene	5.9	2.5	NA	5	B3B0155	02/11/2013	02/11/13 19:26	D6
Trichlorofluoromethane	2.8	2.5	NA	5	B3B0155	02/11/2013	02/11/13 19:26	D6
Vinyl chloride	ND	2.5	NA	5	B3B0155	02/11/2013	02/11/13 19:26	D6

<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>104 %</i>		<i>70 - 130</i>		B3B0350	02/18/2013	<i>02/18/13 11:40</i>	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>108 %</i>		<i>70 - 130</i>		B3B0155	02/11/2013	<i>02/11/13 19:26</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>76.8 %</i>		<i>70 - 130</i>		B3B0350	02/18/2013	<i>02/18/13 11:40</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>84.0 %</i>		<i>70 - 130</i>		B3B0155	02/11/2013	<i>02/11/13 19:26</i>	
<i>Surrogate: Dibromofluoromethane</i>	<i>108 %</i>		<i>70 - 130</i>		B3B0155	02/11/2013	<i>02/11/13 19:26</i>	
<i>Surrogate: Dibromofluoromethane</i>	<i>102 %</i>		<i>70 - 130</i>		B3B0350	02/18/2013	<i>02/18/13 11:40</i>	
<i>Surrogate: Toluene-d8</i>	<i>88.7 %</i>		<i>70 - 130</i>		B3B0350	02/18/2013	<i>02/18/13 11:40</i>	
<i>Surrogate: Toluene-d8</i>	<i>96.2 %</i>		<i>70 - 130</i>		B3B0155	02/11/2013	<i>02/11/13 19:26</i>	



Certificate of Analysis

Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego, CA 92122

Project Number : RAYTHEON MAIN, 532.30

Report To : Steve Netto

Reported : 02/19/2013

Client Sample ID P-07

Lab ID: 1300426-09

1,4-Dioxane by EPA 8270: Isotope Dilution Technique

Analyst: BB

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,4-Dioxane	1900	20	NA	10	B3B0206	02/11/2013	02/12/13 13:18	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	<i>64.6 %</i>		<i>37 - 93</i>		B3B0206	02/11/2013	<i>02/12/13 13:18</i>	
<i>Surrogate: 2-Fluorobiphenyl</i>	<i>68.8 %</i>		<i>51 - 100</i>		B3B0206	02/11/2013	<i>02/12/13 13:18</i>	
<i>Surrogate: 4-Terphenyl-d14</i>	<i>89.8 %</i>		<i>58 - 113</i>		B3B0206	02/11/2013	<i>02/12/13 13:18</i>	
<i>Surrogate: Nitrobenzene-d5</i>	<i>61.0 %</i>		<i>39 - 95</i>		B3B0206	02/11/2013	<i>02/12/13 13:18</i>	



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9171 Towne Centre Drive, Suite 375

San Diego, CA 92122

Project Number : RAYTHEON MAIN, 532.30

Report To : Steve Netto

Reported : 02/19/2013

Client Sample ID MW-15

Lab ID: 1300426-10

Volatile Organic Compounds by EPA 8260

Analyst: SL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 15:02	
1,1,1-Trichloroethane	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 15:02	
1,1,2,2-Tetrachloroethane	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 15:02	
1,1,2-Trichloroethane	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 15:02	
1,1-Dichloroethane	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 15:02	
1,1-Dichloroethene	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 15:02	
1,1-Dichloropropene	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 15:02	
1,2,3-Trichloropropane	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 15:02	
1,2,3-Trichlorobenzene	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 15:02	
1,2,4-Trichlorobenzene	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 15:02	
1,2,4-Trimethylbenzene	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 15:02	
1,2-Dibromo-3-chloropropane	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 15:02	
1,2-Dibromoethane	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 15:02	
1,2-Dichlorobenzene	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 15:02	
1,2-Dichloroethane	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 15:02	
1,2-Dichloropropane	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 15:02	
1,3,5-Trimethylbenzene	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 15:02	
1,3-Dichlorobenzene	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 15:02	
1,3-Dichloropropane	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 15:02	
1,4-Dichlorobenzene	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 15:02	
2,2-Dichloropropane	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 15:02	
2-Chlorotoluene	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 15:02	
4-Chlorotoluene	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 15:02	
4-Isopropyltoluene	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 15:02	
Benzene	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 15:02	
Bromobenzene	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 15:02	
Bromodichloromethane	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 15:02	
Bromoform	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 15:02	
Bromomethane	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 15:02	
Carbon tetrachloride	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 15:02	
Chlorobenzene	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 15:02	
Chloroethane	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 15:02	
Chloroform	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 15:02	
Chloromethane	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 15:02	
cis-1,2-Dichloroethene	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 15:02	
cis-1,3-Dichloropropene	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 15:02	
Dibromochloromethane	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 15:02	



Certificate of Analysis

Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego, CA 92122

Project Number : RAYTHEON MAIN, 532.30

Report To : Steve Netto

Reported : 02/19/2013

Client Sample ID MW-15

Lab ID: 1300426-10

Volatile Organic Compounds by EPA 8260

Analyst: SL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Dibromomethane	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 15:02	
Dichlorodifluoromethane	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 15:02	
Ethylbenzene	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 15:02	
Hexachlorobutadiene	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 15:02	
Isopropylbenzene	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 15:02	
m,p-Xylene	ND	1.0	NA	1	B3B0155	02/11/2013	02/11/13 15:02	
Methylene chloride	ND	1.0	NA	1	B3B0155	02/11/2013	02/11/13 15:02	
n-Butylbenzene	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 15:02	
n-Propylbenzene	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 15:02	
Naphthalene	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 15:02	
o-Xylene	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 15:02	
sec-Butylbenzene	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 15:02	
Styrene	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 15:02	
tert-Butylbenzene	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 15:02	
Tetrachloroethene	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 15:02	
Toluene	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 15:02	
trans-1,2-Dichloroethene	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 15:02	
Trichloroethene	4.0	0.50	NA	1	B3B0155	02/11/2013	02/11/13 15:02	
Trichlorofluoromethane	5.8	0.50	NA	1	B3B0155	02/11/2013	02/11/13 15:02	
Vinyl chloride	ND	0.50	NA	1	B3B0155	02/11/2013	02/11/13 15:02	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>106 %</i>		<i>70 - 130</i>		B3B0155	02/11/2013	<i>02/11/13 15:02</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>88.3 %</i>		<i>70 - 130</i>		B3B0155	02/11/2013	<i>02/11/13 15:02</i>	
<i>Surrogate: Dibromofluoromethane</i>	<i>73.4 %</i>		<i>70 - 130</i>		B3B0155	02/11/2013	<i>02/11/13 15:02</i>	
<i>Surrogate: Toluene-d8</i>	<i>101 %</i>		<i>70 - 130</i>		B3B0155	02/11/2013	<i>02/11/13 15:02</i>	



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9171 Towne Centre Drive, Suite 375

Report To : Steve Netto

San Diego , CA 92122

Reported : 02/19/2013

QUALITY CONTROL SECTION

Volatile Organic Compounds by EPA 8260 - Quality Control

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec % Rec	% Rec Limits	RPD RPD	RPD Limit	Notes
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Batch B3B0155 - MSVOAW_LL

Blank (B3B0155-BLK1)

Prepared: 2/11/2013 Analyzed: 2/11/2013

1,1,1,2-Tetrachloroethane	ND	0.50			NR				
1,1,1-Trichloroethane	ND	0.50			NR				
1,1,2,2-Tetrachloroethane	ND	0.50			NR				
1,1,2-Trichloroethane	ND	0.50			NR				
1,1-Dichloroethane	ND	0.50			NR				
1,1-Dichloroethene	ND	0.50			NR				
1,1-Dichloropropene	ND	0.50			NR				
1,2,3-Trichloropropane	ND	0.50			NR				
1,2,3-Trichlorobenzene	ND	0.50			NR				
1,2,4-Trichlorobenzene	ND	0.50			NR				
1,2,4-Trimethylbenzene	ND	0.50			NR				
1,2-Dibromo-3-chloropropane	ND	0.50			NR				
1,2-Dibromoethane	ND	0.50			NR				
1,2-Dichlorobenzene	ND	0.50			NR				
1,2-Dichloroethane	ND	0.50			NR				
1,2-Dichloropropane	ND	0.50			NR				
1,3,5-Trimethylbenzene	ND	0.50			NR				
1,3-Dichlorobenzene	ND	0.50			NR				
1,3-Dichloropropane	ND	0.50			NR				
1,4-Dichlorobenzene	ND	0.50			NR				
2,2-Dichloropropane	ND	0.50			NR				
2-Chlorotoluene	ND	0.50			NR				
4-Chlorotoluene	ND	0.50			NR				
4-Isopropyltoluene	ND	0.50			NR				
Benzene	ND	0.50			NR				
Bromobenzene	ND	0.50			NR				
Bromodichloromethane	ND	0.50			NR				
Bromoform	ND	0.50			NR				
Bromomethane	ND	0.50			NR				
Carbon tetrachloride	ND	0.50			NR				
Chlorobenzene	ND	0.50			NR				
Chloroethane	ND	0.50			NR				
Chloroform	ND	0.50			NR				
Chloromethane	ND	0.50			NR				
cis-1,2-Dichloroethene	ND	0.50			NR				
cis-1,3-Dichloropropene	ND	0.50			NR				
Dibromochloromethane	ND	0.50			NR				
Dibromomethane	ND	0.50			NR				
Dichlorodifluoromethane	ND	0.50			NR				



Certificate of Analysis

Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : RAYTHEON MAIN, 532.30

Report To : Steve Netto

Reported : 02/19/2013

Volatile Organic Compounds by EPA 8260 - Quality Control (cont'd)

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B3B0155 - MSVOAW_LL (continued)

Blank (B3B0155-BLK1) - Continued

Prepared: 2/11/2013 Analyzed: 2/11/2013

Ethylbenzene	ND	0.50				NR			
Hexachlorobutadiene	ND	0.50				NR			
Isopropylbenzene	ND	0.50				NR			
m,p-Xylene	ND	1.0				NR			
Methylene chloride	ND	1.0				NR			
n-Butylbenzene	ND	0.50				NR			
n-Propylbenzene	ND	0.50				NR			
Naphthalene	ND	0.50				NR			
o-Xylene	ND	0.50				NR			
sec-Butylbenzene	ND	0.50				NR			
Styrene	ND	0.50				NR			
tert-Butylbenzene	ND	0.50				NR			
Tetrachloroethene	ND	0.50				NR			
Toluene	ND	0.50				NR			
trans-1,2-Dichloroethene	ND	0.50				NR			
Trichloroethene	ND	0.50				NR			
Trichlorofluoromethane	ND	0.50				NR			
Vinyl chloride	ND	0.50				NR			

<i>Surrogate: 1,2-Dichloroethane-d4</i>	27.92		25.0000		112	70 - 130			
<i>Surrogate: 4-Bromofluorobenzene</i>	22.89		25.0000		91.6	70 - 130			
<i>Surrogate: Dibromofluoromethane</i>	28.82		25.0000		115	70 - 130			
<i>Surrogate: Toluene-d8</i>	26.46		25.0000		106	70 - 130			

LCS (B3B0155-BS1)

Prepared: 2/11/2013 Analyzed: 2/11/2013

1,1-Dichloroethene	19.8800		20.0000		99.4	70 - 130			
Benzene	39.2200		40.0000		98.0	70 - 130			
Chlorobenzene	20.2700		20.0000		101	70 - 130			
MTBE	19.3900		20.0000		97.0	70 - 130			
Toluene	39.3700		40.0000		98.4	70 - 130			
Trichloroethene	19.6400		20.0000		98.2	70 - 130			

<i>Surrogate: 1,2-Dichloroethane-d4</i>	27.87		25.0000		111	70 - 130			
<i>Surrogate: 4-Bromofluorobenzene</i>	22.83		25.0000		91.3	70 - 130			
<i>Surrogate: Dibromofluoromethane</i>	27.25		25.0000		109	70 - 130			
<i>Surrogate: Toluene-d8</i>	24.87		25.0000		99.5	70 - 130			

LCS Dup (B3B0155-BSD1)

Prepared: 2/11/2013 Analyzed: 2/11/2013

1,1-Dichloroethene	19.4100		20.0000		97.0	70 - 130	2.39	20	
Benzene	40.5500		40.0000		101	70 - 130	3.33	20	
Chlorobenzene	20.6300		20.0000		103	70 - 130	1.76	20	
MTBE	20.0100		20.0000		100	70 - 130	3.15	20	
Toluene	40.7700		40.0000		102	70 - 130	3.49	20	



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Volatile Organic Compounds by EPA 8260 - Quality Control (cont'd)

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec % Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B3B0155 - MSVOAW_LL (continued)

LCS Dup (B3B0155-BSD1) - Continued

Prepared: 2/11/2013 Analyzed: 2/11/2013

Trichloroethene	20.2500		20.0000		101	70 - 130	3.06	20	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	29.33		25.0000		117	70 - 130			
<i>Surrogate: 4-Bromofluorobenzene</i>	23.74		25.0000		95.0	70 - 130			
<i>Surrogate: Dibromofluoromethane</i>	28.80		25.0000		115	70 - 130			
<i>Surrogate: Toluene-d8</i>	26.50		25.0000		106	70 - 130			

Matrix Spike (B3B0155-MS1)

Source: 1300426-05

Prepared: 2/11/2013 Analyzed: 2/11/2013

1,1-Dichloroethene	23.2200		20.0000	ND	116	70 - 130			
Benzene	46.9200		40.0000	ND	117	70 - 130			
Chlorobenzene	22.5100		20.0000	ND	113	70 - 130			
MTBE	19.3000		20.0000	ND	96.5	70 - 130			
Toluene	46.3400		40.0000	ND	116	70 - 130			
Trichloroethene	23.0000		20.0000	ND	115	70 - 130			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	32.24		25.0000		129	70 - 130			
<i>Surrogate: 4-Bromofluorobenzene</i>	24.35		25.0000		97.4	70 - 130			
<i>Surrogate: Dibromofluoromethane</i>	29.38		25.0000		118	70 - 130			
<i>Surrogate: Toluene-d8</i>	26.60		25.0000		106	70 - 130			

Matrix Spike Dup (B3B0155-MSD1)

Source: 1300426-05

Prepared: 2/11/2013 Analyzed: 2/11/2013

1,1-Dichloroethene	23.3400		20.0000	ND	117	70 - 130	0.515	20	
Benzene	45.9500		40.0000	ND	115	70 - 130	2.09	20	
Chlorobenzene	22.0400		20.0000	ND	110	70 - 130	2.11	20	
MTBE	19.4500		20.0000	ND	97.2	70 - 130	0.774	20	
Toluene	44.8500		40.0000	ND	112	70 - 130	3.27	20	
Trichloroethene	22.2500		20.0000	ND	111	70 - 130	3.31	20	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	29.38		25.0000		118	70 - 130			
<i>Surrogate: 4-Bromofluorobenzene</i>	23.44		25.0000		93.8	70 - 130			
<i>Surrogate: Dibromofluoromethane</i>	28.63		25.0000		115	70 - 130			
<i>Surrogate: Toluene-d8</i>	25.55		25.0000		102	70 - 130			

Batch B3B0350 - MSVOAW_LL

Blank (B3B0350-BLK1)

Prepared: 2/18/2013 Analyzed: 2/18/2013

1,1,1,2-Tetrachloroethane	ND	0.50		NR					
1,1,1-Trichloroethane	ND	0.50		NR					
1,1,2,2-Tetrachloroethane	ND	0.50		NR					
1,1,2-Trichloroethane	ND	0.50		NR					
1,1-Dichloroethane	ND	0.50		NR					
1,1-Dichloroethene	ND	0.50		NR					
1,1-Dichloropropene	ND	0.50		NR					
1,2,3-Trichloropropane	ND	0.50		NR					



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9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : RAYTHEON MAIN, 532.30

Report To : Steve Netto

Reported : 02/19/2013

Volatile Organic Compounds by EPA 8260 - Quality Control (cont'd)

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B3B0350 - MSVOAW_LL (continued)

Blank (B3B0350-BLK1) - Continued

Prepared: 2/18/2013 Analyzed: 2/18/2013

1,2,3-Trichlorobenzene	ND	0.50			NR
1,2,4-Trichlorobenzene	ND	0.50			NR
1,2,4-Trimethylbenzene	ND	0.50			NR
1,2-Dibromo-3-chloropropane	ND	0.50			NR
1,2-Dibromoethane	ND	0.50			NR
1,2-Dichlorobenzene	ND	0.50			NR
1,2-Dichloroethane	ND	0.50			NR
1,2-Dichloropropane	ND	0.50			NR
1,3,5-Trimethylbenzene	ND	0.50			NR
1,3-Dichlorobenzene	ND	0.50			NR
1,3-Dichloropropane	ND	0.50			NR
1,4-Dichlorobenzene	ND	0.50			NR
2,2-Dichloropropane	ND	0.50			NR
2-Chlorotoluene	ND	0.50			NR
4-Chlorotoluene	ND	0.50			NR
4-Isopropyltoluene	ND	0.50			NR
Benzene	ND	0.50			NR
Bromobenzene	ND	0.50			NR
Bromodichloromethane	ND	0.50			NR
Bromoform	ND	0.50			NR
Bromomethane	ND	0.50			NR
Carbon tetrachloride	ND	0.50			NR
Chlorobenzene	ND	0.50			NR
Chloroethane	ND	0.50			NR
Chloroform	ND	0.50			NR
Chloromethane	ND	0.50			NR
cis-1,2-Dichloroethene	ND	0.50			NR
cis-1,3-Dichloropropene	ND	0.50			NR
Dibromochloromethane	ND	0.50			NR
Dibromomethane	ND	0.50			NR
Dichlorodifluoromethane	ND	0.50			NR
Ethylbenzene	ND	0.50			NR
Hexachlorobutadiene	ND	0.50			NR
Isopropylbenzene	ND	0.50			NR
m,p-Xylene	ND	1.0			NR
Methylene chloride	ND	1.0			NR
n-Butylbenzene	ND	0.50			NR
n-Propylbenzene	ND	0.50			NR
Naphthalene	ND	0.50			NR
o-Xylene	ND	0.50			NR
sec-Butylbenzene	ND	0.50			NR
Styrene	ND	0.50			NR



Certificate of Analysis

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Project Number : RAYTHEON MAIN, 532.30

Report To : Steve Netto

Reported : 02/19/2013

Volatile Organic Compounds by EPA 8260 - Quality Control (cont'd)

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec % Rec	% Rec Limits	RPD RPD	RPD Limit	Notes
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Batch B3B0350 - MSVOAW_LL (continued)

Blank (B3B0350-BLK1) - Continued

Prepared: 2/18/2013 Analyzed: 2/18/2013

tert-Butylbenzene	ND	0.50			NR				
Tetrachloroethene	ND	0.50			NR				
Toluene	ND	0.50			NR				
trans-1,2-Dichloroethene	ND	0.50			NR				
Trichloroethene	ND	0.50			NR				
Trichlorofluoromethane	ND	0.50			NR				
Vinyl chloride	ND	0.50			NR				
<hr/>									
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>23.82</i>		<i>25.0000</i>		<i>95.3</i>	<i>70 - 130</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>18.47</i>		<i>25.0000</i>		<i>73.9</i>	<i>70 - 130</i>			
<i>Surrogate: Dibromofluoromethane</i>	<i>24.11</i>		<i>25.0000</i>		<i>96.4</i>	<i>70 - 130</i>			
<i>Surrogate: Toluene-d8</i>	<i>21.08</i>		<i>25.0000</i>		<i>84.3</i>	<i>70 - 130</i>			

LCS (B3B0350-BS1)

Prepared: 2/18/2013 Analyzed: 2/18/2013

1,1-Dichloroethene	16.0000		20.0000		80.0	70 - 130			
Benzene	36.9700		40.0000		92.4	70 - 130			
Chlorobenzene	19.1600		20.0000		95.8	70 - 130			
MTBE	16.4100		20.0000		82.0	70 - 130			
Toluene	37.0600		40.0000		92.6	70 - 130			
Trichloroethene	17.7300		20.0000		88.6	70 - 130			
<hr/>									
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>28.13</i>		<i>25.0000</i>		<i>113</i>	<i>70 - 130</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>21.79</i>		<i>25.0000</i>		<i>87.2</i>	<i>70 - 130</i>			
<i>Surrogate: Dibromofluoromethane</i>	<i>27.56</i>		<i>25.0000</i>		<i>110</i>	<i>70 - 130</i>			
<i>Surrogate: Toluene-d8</i>	<i>24.02</i>		<i>25.0000</i>		<i>96.1</i>	<i>70 - 130</i>			

LCS Dup (B3B0350-BSD1)

Prepared: 2/18/2013 Analyzed: 2/18/2013

1,1-Dichloroethene	14.6500		20.0000		73.2	70 - 130	8.81	20	
Benzene	33.6700		40.0000		84.2	70 - 130	9.34	20	
Chlorobenzene	18.2800		20.0000		91.4	70 - 130	4.70	20	
MTBE	15.5600		20.0000		77.8	70 - 130	5.32	20	
Toluene	34.7300		40.0000		86.8	70 - 130	6.49	20	
Trichloroethene	16.6300		20.0000		83.2	70 - 130	6.40	20	
<hr/>									
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>26.12</i>		<i>25.0000</i>		<i>104</i>	<i>70 - 130</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>20.37</i>		<i>25.0000</i>		<i>81.5</i>	<i>70 - 130</i>			
<i>Surrogate: Dibromofluoromethane</i>	<i>25.28</i>		<i>25.0000</i>		<i>101</i>	<i>70 - 130</i>			
<i>Surrogate: Toluene-d8</i>	<i>22.15</i>		<i>25.0000</i>		<i>88.6</i>	<i>70 - 130</i>			



Certificate of Analysis

Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : RAYTHEON MAIN, 532.30

Report To : Steve Netto

Reported : 02/19/2013

1,4-Dioxane by EPA 8270: Isotope Dilution Technique - Quality Control

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec % Rec	% Rec Limits	RPD RPD	RPD Limit	Notes
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Batch B3B0206 - MSSEMI_ISOTOPEDILN

Blank (B3B0206-BLK1)

Prepared: 2/11/2013 Analyzed: 2/11/2013

1,4-Dioxane	ND	2.0			NR				
Surrogate: 1,2-Dichlorobenzene-d4	73.27		100.000		73.3	37 - 93			
Surrogate: 2-Fluorobiphenyl	83.74		100.000		83.7	51 - 100			
Surrogate: 4-Terphenyl-d14	96.93		100.000		96.9	58 - 113			
Surrogate: Nitrobenzene-d5	91.39		100.000		91.4	39 - 95			

LCS (B3B0206-BS1)

Prepared: 2/11/2013 Analyzed: 2/11/2013

1,4-Dioxane	100.400	2.0	100.000		100	70 - 130			
Surrogate: 1,2-Dichlorobenzene-d4	66.53		100.000		66.5	37 - 93			
Surrogate: 2-Fluorobiphenyl	85.67		100.000		85.7	51 - 100			
Surrogate: 4-Terphenyl-d14	99.33		100.000		99.3	58 - 113			
Surrogate: Nitrobenzene-d5	86.55		100.000		86.6	39 - 95			

Matrix Spike (B3B0206-MS1)

Source: 1300389-02

Prepared: 2/11/2013 Analyzed: 2/11/2013

1,4-Dioxane	154.900	2.0	100.000	58.4200	96.5	70 - 130			
Surrogate: 1,2-Dichlorobenzene-d4	66.27		100.000		66.3	37 - 93			
Surrogate: 2-Fluorobiphenyl	82.42		100.000		82.4	51 - 100			
Surrogate: 4-Terphenyl-d14	97.40		100.000		97.4	58 - 113			
Surrogate: Nitrobenzene-d5	86.13		100.000		86.1	39 - 95			

Matrix Spike (B3B0206-MS2)

Source: 1300409-11

Prepared: 2/11/2013 Analyzed: 2/11/2013

1,4-Dioxane	154.870	2.0	100.000	49.0300	106	70 - 130			
Surrogate: 1,2-Dichlorobenzene-d4	72.30		100.000		72.3	37 - 93			
Surrogate: 2-Fluorobiphenyl	87.96		100.000		88.0	51 - 100			
Surrogate: 4-Terphenyl-d14	100.8		100.000		101	58 - 113			
Surrogate: Nitrobenzene-d5	93.85		100.000		93.8	39 - 95			

Matrix Spike Dup (B3B0206-MSD1)

Source: 1300389-02

Prepared: 2/11/2013 Analyzed: 2/11/2013

1,4-Dioxane	158.270	2.0	100.000	58.4200	99.9	70 - 130	2.15	20	
Surrogate: 1,2-Dichlorobenzene-d4	67.92		100.000		67.9	37 - 93			
Surrogate: 2-Fluorobiphenyl	86.40		100.000		86.4	51 - 100			
Surrogate: 4-Terphenyl-d14	98.56		100.000		98.6	58 - 113			
Surrogate: Nitrobenzene-d5	90.22		100.000		90.2	39 - 95			

Matrix Spike Dup (B3B0206-MSD2)

Source: 1300409-11

Prepared: 2/11/2013 Analyzed: 2/11/2013

1,4-Dioxane	152.130	2.0	100.000	49.0300	103	70 - 130	1.79	20	
Surrogate: 1,2-Dichlorobenzene-d4	68.66		100.000		68.7	37 - 93			
Surrogate: 2-Fluorobiphenyl	83.68		100.000		83.7	51 - 100			
Surrogate: 4-Terphenyl-d14	98.37		100.000		98.4	58 - 113			
Surrogate: Nitrobenzene-d5	90.16		100.000		90.2	39 - 95			



Certificate of Analysis

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Project Number : RAYTHEON MAIN, 532.30
 Report To : Steve Netto
 Reported : 02/19/2013

1,4-Dioxane by EPA 8270/SIM: Isotope Dilution Technique - Quality Control

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec % Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B3B0222 - MSSEMI

Blank (B3B0222-BLK1)

Prepared: 2/12/2013 Analyzed: 2/12/2013

1,4-Dioxane	ND	0.20			NR				
Surrogate: 1,2-Dichlorobenzene-d4	1.185		1.00000		119	36 - 107			S1
Surrogate: 2-Fluorobiphenyl	1.149		1.00000		115	42 - 120			
Surrogate: 4-Terphenyl-d14	0.8541		1.00000		85.4	67 - 142			
Surrogate: Nitrobenzene-d5	1.329		1.00000		133	36 - 130			S1

LCS (B3B0222-BS1)

Prepared: 2/12/2013 Analyzed: 2/12/2013

1,4-Dioxane	0.727860	0.20	1.00000		72.8	70 - 130			
Surrogate: 1,2-Dichlorobenzene-d4	0.7483		1.00000		74.8	36 - 107			
Surrogate: 2-Fluorobiphenyl	1.076		1.00000		108	42 - 120			
Surrogate: 4-Terphenyl-d14	0.8147		1.00000		81.5	67 - 142			
Surrogate: Nitrobenzene-d5	1.227		1.00000		123	36 - 130			

LCS Dup (B3B0222-BSD1)

Prepared: 2/12/2013 Analyzed: 2/12/2013

1,4-Dioxane	0.780660	0.20	1.00000		78.1	70 - 130	7.00	20	
Surrogate: 1,2-Dichlorobenzene-d4	0.9206		1.00000		92.1	36 - 107			
Surrogate: 2-Fluorobiphenyl	1.063		1.00000		106	42 - 120			
Surrogate: 4-Terphenyl-d14	0.7900		1.00000		79.0	67 - 142			
Surrogate: Nitrobenzene-d5	1.150		1.00000		115	36 - 130			

Matrix Spike (B3B0222-MS1)

Source: 1300426-05

Prepared: 2/12/2013 Analyzed: 2/12/2013

1,4-Dioxane	0.801830	0.20	1.00000	ND	80.2	70 - 130			
Surrogate: 1,2-Dichlorobenzene-d4	1.001		1.00000		100	36 - 107			
Surrogate: 2-Fluorobiphenyl	1.022		1.00000		102	42 - 120			
Surrogate: 4-Terphenyl-d14	0.8100		1.00000		81.0	67 - 142			
Surrogate: Nitrobenzene-d5	1.219		1.00000		122	36 - 130			

Matrix Spike Dup (B3B0222-MSD1)

Source: 1300426-05

Prepared: 2/12/2013 Analyzed: 2/12/2013

1,4-Dioxane	0.861170	0.20	1.00000	ND	86.1	70 - 130	7.14	20	
Surrogate: 1,2-Dichlorobenzene-d4	1.037		1.00000		104	36 - 107			
Surrogate: 2-Fluorobiphenyl	1.017		1.00000		102	42 - 120			
Surrogate: 4-Terphenyl-d14	0.7984		1.00000		79.8	67 - 142			
Surrogate: Nitrobenzene-d5	1.240		1.00000		124	36 - 130			



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San Diego , CA 92122

Project Number : RAYTHEON MAIN, 532.30

Report To : Steve Netto

Reported : 02/19/2013

Notes and Definitions

S10	Surrogate recovery outside of laboratory acceptance limit possibly due to matrix interference.
S1	Surrogate recovery was above laboratory acceptance limit. No target analyte was detected in the sample.
D6	Sample required dilution due to high concentration of target analyte.
ND	Analyte not detected at or above reporting limit
PQL	Practical Quantitation Limit
MDL	Method Detection Limit
NR	Not Reported
RPD	Relative Percent Difference
CA1	CA-NELAP (CDPH)
CA2	CA-ELAP (CDPH)
OR1	OR-NELAP (OSPHL)
TX1	TX-NELAP (TCEQ)

Notes:

- (1) The reported MDL and PQL are based on prep ratio variation and analytical dilution.
- (2) The suffix [2C] of specific analytes signifies that the reported result is taken from the instrument's second column.

CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST FORM

PROJECT NAME		PROJECT No./TASK No.		SAMPLE CONTAINERS		ANALYSIS REQUESTED		ESTIMATED CONCENTRATION RANGE (ppb) FOR VOA'S		SPECIAL HANDLING		LABORATORY INFORMATION				
RAYTHEON MAIN		532.30										ATL				
PROJECT MANAGER Chris Ross		Phone No. 858-455-6500										Attn: Rachelle Arada				
QA MANAGER Steve Netto		Fax No. 858-455-6533														
SAMPLER (SIGNATURE)		SAMPLER (PRINTED)														
<i>[Signature]</i>		CEIN HUNTER Shayne Kappus														
LAB ID	SAMPLE ID	SAMPLE COLLECTION		MATRIX			PRESERVATION				40 ml VOA 1 L Amber	8260B VOCs 8270 SMI 1,4-Dioxane 8270 MOD 1,4-Dioxane	0 - 10 10 - 100 100 - 1,000 > 1,000	Standard TAT MS MSD	REMARKS	
		Date	Time	Soil	Ground-water	Surface water	Lab H2O	HCl	HNO3	NaOH						H2SO4	Ice
135042C-1	TB-0207B	2/7/13	0800				X	X				X	X	X	X	
-2	MW-28		0840	X			X					X	X	X	X	
	↓		↓	X								X	X	X	X	
-3	MW-2900		0900	X			X					X	X	X	X	
	↓		↓	X								X	X	X	X	
-4	MW-29		0945	X			X					X	X	X	X	
	↓		↓	X								X	X	X	X	
-5	MW-27		1155	X			X					X	X	X	X	6 VOA's
	↓		↓	X								X	X	X	X	2, 3 L Ambers
-6	MW-3600		1400	X			X					X	X	X	X	
	↓		↓	X								X	X	X	X	
-7	MW-36			X			X					X	X	X	X	
	↓		↓	X								X	X	X	X	
Total number of Containers per analysis:											106	Total No. of Containers: 20/51				

Relinquished by: <i>[Signature]</i>	Date: <u>2/7/13</u>	Received by: <u>A. MANKA</u>	Date: <u>2/7/13</u>	INSTRUCTIONS	Shipment Method: <u>Courier</u>
<u>HAI, Inc</u>	Time: <u>1725</u>	Company: <u>ATL</u>	Time: <u>3:25P</u>		
Relinquished by: <u>MANKA</u>	Date: <u>2/7/13</u>	Received by: <i>[Signature]</i>	Date: <u>2/7/13</u>	<ol style="list-style-type: none"> Fill out form completely except for shaded areas (lab use only); sign only after verified for completeness. Complete in ballpoint pen. Draw one line through errors, initial and date correction. Indicate number of sample containers in analysis request space; indicate choice with ✓ or x. Note applicable preservatives, special instructions, and deviations from typical environmental samples. Consult project QA documents for specific instructions. 	<input checked="" type="checkbox"/> 9171 TOWNE CENTRE DRIVE, SUITE 375 SAN DIEGO, CA 92122 (858) 455-8500 <input type="checkbox"/> 1640 SOUTH STAPLEY DRIVE, SUITE 209 MESA, AZ 85204 (480) 345-0888 <input type="checkbox"/> 1820 EAST RIVER ROAD, SUITE 220 TUCSON, AZ 85718 (520) 881-7300
<u>ATL</u>	Time: <u>6:13P</u>	Company: <u>ATL</u>	Time: <u>12:13</u>			Sample Receipt: 72.4 °C ☐ No. of containers correct ☒ received good condition/cold ☐ custody seals secure ☐ conforms to COC document	Send invoice to San Diego, CA Attn: Accounts Payable

CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST FORM

PROJECT NAME		PROJECT No./TASK No.		SAMPLE CONTAINERS		ANALYSIS REQUESTED		ESTIMATED CONCENTRATION RANGE (ppb) FOR VOA'S		SPECIAL HANDLING		LABORATORY INFORMATION					
RAYTHEON MAIN		532.30										ATI					
PROJECT MANAGER Chris Ross		Phone No. 858-455-6500										Attn:					
QA MANAGER Steve Netto		Fax No. 858-455-6533										Rachelle Arada					
SAMPLER (SIGNATURE)				SAMPLER (PRINTED)													
				DANIEL MORA													
				ANIELLE FENDER													
LAB ID	SAMPLE ID	SAMPLE COLLECTION		MATRIX			PRESERVATION					40 ml VOA 1 L Amber	8260B VOCs 8270 SIM 1,4-Dioxane 8270 MOD 1,4-Dioxane	0 - 10 10 - 100 100 - 1,000 > 1,000	Standard TAT	REMARKS	
		Date	Time	Soil	Ground water	Surface water	Lab H2O	HCl	HNO3	NaOH	H2SO4						Ice
1300420 - 8	P-09	2/7/13	9:45	X			X				X			X			
	↓		↓	X			X				X			X			
	P-07		13:35	X			X				X			X			
	↓		↓	X			X				X			X			
	MW-15		11:25	X			X				X			X			
	↓		↓	X			X				X			X			
	MW-08																
	MW-18																

Total number of Containers per analysis: 92

Total No. of Containers: 11/07

Relinquished by:	Date	Received by:	Date
	2/7/13	A. M. KUBNIK	2/7/13
Company	Time	Company	Time
H+A Inc	1725	ATL	5:25
Relinquished by:	Date	Received by:	Date
	2/7/13		2/7/13
Company	Time	Company	Time
ATL	6:13	ATL	1817

INSTRUCTIONS

- Fill out form completely except for shaded areas (lab use only); sign only after verified for completeness.
- Complete in ballpoint pen. Draw one line through errors, initial and date correction.
- Indicate number of sample containers in analysis request space; indicate choice with ✓ or X.
- Note applicable preservatives, special instructions, and deviations from typical environmental samples.
- Consult project QA documents for specific instructions.

Sample Receipt:

No. of containers correct received good condition/cold

custody seals secure conforms to COC document

Temp. @ receipt _____ °C

Shipment Method: Courier

Send Results to: Steve Netto

9171 TOWNE CENTRE DRIVE, SUITE 375
SAN DIEGO, CA 92122 (858) 455-0888

1640 SOUTH STAPLEY DRIVE, SUITE 209
MESA, AZ 85204 (480) 345-0888

1820 EAST RIVER ROAD, SUITE 220
TUCSON, AZ 85718 (520) 881-7300

Send invoice to San Diego, CA
Attn: Accounts Payable

February 19, 2013

Steve Netto
Hargis & Associates, Inc.
9171 Towne Centre Drive, Suite 375
San Diego, CA 92122
Tel: (619) 249-3166
Fax: (858) 455-6533



Re: ATL Work Order Number : 1300453
Client Reference : RAYTHEON MAIN, 532.30

Enclosed are the results for sample(s) received on February 08, 2013 by Advanced Technology Laboratories. The sample(s) are tested for the parameters as indicated on the enclosed chain of custody in accordance with applicable laboratory certifications. The laboratory results contained in this report specifically pertains to the sample(s) submitted.

Thank you for the opportunity to serve the needs of your company. If you have any questions, please feel free to contact me or your Project Manager.

Sincerely,

Eddie Rodriguez
Laboratory Director

The cover letter and the case narrative are an integral part of this analytical report and its absence renders the report invalid. Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Conference and/or applicable state-specific certification programs. The report cannot be reproduced without written permission from the client and Advanced Technology Laboratories.



Certificate of Analysis

Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : RAYTHEON MAIN, 532.30

Report To : Steve Netto

Reported : 02/19/2013

SUMMARY OF SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
TB-020813	1300453-01	Lab H2O	2/08/13 8:00	2/08/13 14:30
MW-31	1300453-02	Groundwater	2/08/13 9:00	2/08/13 14:30
MW-08	1300453-03	Groundwater	2/08/13 9:30	2/08/13 14:30
MW-26C	1300453-04	Groundwater	2/08/13 11:15	2/08/13 14:30
MW-09	1300453-05	Groundwater	2/08/13 9:35	2/08/13 14:30



Certificate of Analysis

Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego, CA 92122

Project Number : RAYTHEON MAIN, 532.30

Report To : Steve Netto

Reported : 02/19/2013

Client Sample ID TB-020813

Lab ID: 1300453-01

Volatile Organic Compounds by EPA 8260

Analyst: SL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 16:14	
1,1,1-Trichloroethane	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 16:14	
1,1,2,2-Tetrachloroethane	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 16:14	
1,1,2-Trichloroethane	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 16:14	
1,1-Dichloroethane	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 16:14	
1,1-Dichloroethene	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 16:14	
1,1-Dichloropropene	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 16:14	
1,2,3-Trichloropropane	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 16:14	
1,2,3-Trichlorobenzene	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 16:14	
1,2,4-Trichlorobenzene	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 16:14	
1,2,4-Trimethylbenzene	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 16:14	
1,2-Dibromo-3-chloropropane	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 16:14	
1,2-Dibromoethane	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 16:14	
1,2-Dichlorobenzene	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 16:14	
1,2-Dichloroethane	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 16:14	
1,2-Dichloropropane	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 16:14	
1,3,5-Trimethylbenzene	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 16:14	
1,3-Dichlorobenzene	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 16:14	
1,3-Dichloropropane	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 16:14	
1,4-Dichlorobenzene	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 16:14	
2,2-Dichloropropane	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 16:14	
2-Chlorotoluene	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 16:14	
4-Chlorotoluene	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 16:14	
4-Isopropyltoluene	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 16:14	
Benzene	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 16:14	
Bromobenzene	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 16:14	
Bromodichloromethane	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 16:14	
Bromoform	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 16:14	
Bromomethane	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 16:14	
Carbon tetrachloride	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 16:14	
Chlorobenzene	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 16:14	
Chloroethane	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 16:14	
Chloroform	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 16:14	
Chloromethane	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 16:14	
cis-1,2-Dichloroethene	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 16:14	
cis-1,3-Dichloropropene	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 16:14	
Dibromochloromethane	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 16:14	



Certificate of Analysis

Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego, CA 92122

Project Number : RAYTHEON MAIN, 532.30

Report To : Steve Netto

Reported : 02/19/2013

Client Sample ID TB-020813

Lab ID: 1300453-01

Volatile Organic Compounds by EPA 8260

Analyst: SL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Dibromomethane	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 16:14	
Dichlorodifluoromethane	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 16:14	
Ethylbenzene	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 16:14	
Hexachlorobutadiene	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 16:14	
Isopropylbenzene	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 16:14	
m,p-Xylene	ND	1.0	NA	1	B3B0190	02/11/2013	02/11/13 16:14	
Methylene chloride	ND	1.0	NA	1	B3B0190	02/11/2013	02/11/13 16:14	
n-Butylbenzene	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 16:14	
n-Propylbenzene	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 16:14	
Naphthalene	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 16:14	
o-Xylene	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 16:14	
sec-Butylbenzene	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 16:14	
Styrene	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 16:14	
tert-Butylbenzene	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 16:14	
Tetrachloroethene	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 16:14	
Toluene	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 16:14	
trans-1,2-Dichloroethene	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 16:14	
Trichloroethene	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 16:14	
Trichlorofluoromethane	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 16:14	
Vinyl chloride	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 16:14	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>108 %</i>		<i>70 - 130</i>		B3B0190	02/11/2013	<i>02/11/13 16:14</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>95.4 %</i>		<i>70 - 130</i>		B3B0190	02/11/2013	<i>02/11/13 16:14</i>	
<i>Surrogate: Dibromofluoromethane</i>	<i>110 %</i>		<i>70 - 130</i>		B3B0190	02/11/2013	<i>02/11/13 16:14</i>	
<i>Surrogate: Toluene-d8</i>	<i>96.8 %</i>		<i>70 - 130</i>		B3B0190	02/11/2013	<i>02/11/13 16:14</i>	



Certificate of Analysis

Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego, CA 92122

Project Number : RAYTHEON MAIN, 532.30

Report To : Steve Netto

Reported : 02/19/2013

Client Sample ID MW-31

Lab ID: 1300453-02

Volatile Organic Compounds by EPA 8260

Analyst: SL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 17:26	
1,1,1-Trichloroethane	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 17:26	
1,1,2,2-Tetrachloroethane	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 17:26	
1,1,2-Trichloroethane	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 17:26	
1,1-Dichloroethane	1.8	0.50	NA	1	B3B0190	02/11/2013	02/11/13 17:26	
1,1-Dichloroethene	330	5.0	NA	10	B3B0190	02/11/2013	02/11/13 17:50	
1,1-Dichloropropene	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 17:26	
1,2,3-Trichloropropane	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 17:26	
1,2,3-Trichlorobenzene	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 17:26	
1,2,4-Trichlorobenzene	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 17:26	
1,2,4-Trimethylbenzene	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 17:26	
1,2-Dibromo-3-chloropropane	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 17:26	
1,2-Dibromoethane	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 17:26	
1,2-Dichlorobenzene	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 17:26	
1,2-Dichloroethane	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 17:26	
1,2-Dichloropropane	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 17:26	
1,3,5-Trimethylbenzene	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 17:26	
1,3-Dichlorobenzene	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 17:26	
1,3-Dichloropropane	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 17:26	
1,4-Dichlorobenzene	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 17:26	
2,2-Dichloropropane	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 17:26	
2-Chlorotoluene	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 17:26	
4-Chlorotoluene	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 17:26	
4-Isopropyltoluene	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 17:26	
Benzene	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 17:26	
Bromobenzene	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 17:26	
Bromodichloromethane	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 17:26	
Bromoform	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 17:26	
Bromomethane	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 17:26	
Carbon tetrachloride	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 17:26	
Chlorobenzene	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 17:26	
Chloroethane	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 17:26	
Chloroform	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 17:26	
Chloromethane	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 17:26	
cis-1,2-Dichloroethene	0.87	0.50	NA	1	B3B0190	02/11/2013	02/11/13 17:26	
cis-1,3-Dichloropropane	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 17:26	
Dibromochloromethane	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 17:26	



Certificate of Analysis

Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : RAYTHEON MAIN, 532.30

Report To : Steve Netto

Reported : 02/19/2013

Client Sample ID MW-31

Lab ID: 1300453-02

Volatile Organic Compounds by EPA 8260

Analyst: SL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Dibromomethane	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 17:26	
Dichlorodifluoromethane	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 17:26	
Ethylbenzene	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 17:26	
Hexachlorobutadiene	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 17:26	
Isopropylbenzene	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 17:26	
m,p-Xylene	ND	1.0	NA	1	B3B0190	02/11/2013	02/11/13 17:26	
Methylene chloride	ND	1.0	NA	1	B3B0190	02/11/2013	02/11/13 17:26	
n-Butylbenzene	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 17:26	
n-Propylbenzene	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 17:26	
Naphthalene	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 17:26	
o-Xylene	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 17:26	
sec-Butylbenzene	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 17:26	
Styrene	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 17:26	
tert-Butylbenzene	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 17:26	
Tetrachloroethene	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 17:26	
Toluene	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 17:26	
trans-1,2-Dichloroethene	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 17:26	
Trichloroethene	21	0.50	NA	1	B3B0190	02/11/2013	02/11/13 17:26	
Trichlorofluoromethane	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 17:26	
Vinyl chloride	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 17:26	

<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>106 %</i>	<i>70 - 130</i>			B3B0190	02/11/2013	<i>02/11/13 17:50</i>	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>107 %</i>	<i>70 - 130</i>			B3B0190	02/11/2013	<i>02/11/13 17:26</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>99.5 %</i>	<i>70 - 130</i>			B3B0190	02/11/2013	<i>02/11/13 17:50</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>99.3 %</i>	<i>70 - 130</i>			B3B0190	02/11/2013	<i>02/11/13 17:26</i>	
<i>Surrogate: Dibromofluoromethane</i>	<i>113 %</i>	<i>70 - 130</i>			B3B0190	02/11/2013	<i>02/11/13 17:26</i>	
<i>Surrogate: Dibromofluoromethane</i>	<i>111 %</i>	<i>70 - 130</i>			B3B0190	02/11/2013	<i>02/11/13 17:50</i>	
<i>Surrogate: Toluene-d8</i>	<i>89.6 %</i>	<i>70 - 130</i>			B3B0190	02/11/2013	<i>02/11/13 17:50</i>	
<i>Surrogate: Toluene-d8</i>	<i>84.6 %</i>	<i>70 - 130</i>			B3B0190	02/11/2013	<i>02/11/13 17:26</i>	



Certificate of Analysis

Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego, CA 92122

Project Number : RAYTHEON MAIN, 532.30

Report To : Steve Netto

Reported : 02/19/2013

Client Sample ID MW-31

Lab ID: 1300453-02

1,4-Dioxane by EPA 8270/SIM: Isotope Dilution Technique

Analyst: BB

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,4-Dioxane	4.9	0.20	0.13	1	B3B0222	02/12/2013	02/12/13 16:33	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	<i>93.8 %</i>		<i>36 - 107</i>		B3B0222	02/12/2013	<i>02/12/13 16:33</i>	
<i>Surrogate: 2-Fluorobiphenyl</i>	<i>89.4 %</i>		<i>42 - 120</i>		B3B0222	02/12/2013	<i>02/12/13 16:33</i>	
<i>Surrogate: 4-Terphenyl-d14</i>	<i>75.7 %</i>		<i>67 - 142</i>		B3B0222	02/12/2013	<i>02/12/13 16:33</i>	
<i>Surrogate: Nitrobenzene-d5</i>	<i>119 %</i>		<i>36 - 130</i>		B3B0222	02/12/2013	<i>02/12/13 16:33</i>	



Certificate of Analysis

Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego, CA 92122

Project Number : RAYTHEON MAIN, 532.30

Report To : Steve Netto

Reported : 02/19/2013

Client Sample ID MW-08

Lab ID: 1300453-03

Volatile Organic Compounds by EPA 8260

Analyst: SL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 12:48	
1,1,1-Trichloroethane	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 12:48	
1,1,2,2-Tetrachloroethane	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 12:48	
1,1,2-Trichloroethane	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 12:48	
1,1-Dichloroethane	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 12:48	
1,1-Dichloroethene	16	0.50	NA	1	B3B0217	02/12/2013	02/12/13 12:48	
1,1-Dichloropropene	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 12:48	
1,2,3-Trichloropropane	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 12:48	
1,2,3-Trichlorobenzene	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 12:48	
1,2,4-Trichlorobenzene	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 12:48	
1,2,4-Trimethylbenzene	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 12:48	
1,2-Dibromo-3-chloropropane	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 12:48	
1,2-Dibromoethane	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 12:48	
1,2-Dichlorobenzene	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 12:48	
1,2-Dichloroethane	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 12:48	
1,2-Dichloropropane	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 12:48	
1,3,5-Trimethylbenzene	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 12:48	
1,3-Dichlorobenzene	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 12:48	
1,3-Dichloropropane	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 12:48	
1,4-Dichlorobenzene	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 12:48	
2,2-Dichloropropane	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 12:48	
2-Chlorotoluene	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 12:48	
4-Chlorotoluene	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 12:48	
4-Isopropyltoluene	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 12:48	
Benzene	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 12:48	
Bromobenzene	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 12:48	
Bromodichloromethane	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 12:48	
Bromoform	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 12:48	
Bromomethane	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 12:48	
Carbon tetrachloride	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 12:48	
Chlorobenzene	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 12:48	
Chloroethane	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 12:48	
Chloroform	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 12:48	
Chloromethane	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 12:48	
cis-1,2-Dichloroethene	1.8	0.50	NA	1	B3B0217	02/12/2013	02/12/13 12:48	
cis-1,3-Dichloropropane	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 12:48	
Dibromochloromethane	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 12:48	



Certificate of Analysis

Hargis & Associates, Inc.

Project Number : RAYTHEON MAIN, 532.30

9171 Towne Centre Drive, Suite 375

Report To : Steve Netto

San Diego , CA 92122

Reported : 02/19/2013

Client Sample ID MW-08

Lab ID: 1300453-03

Volatile Organic Compounds by EPA 8260

Analyst: SL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Dibromomethane	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 12:48	
Dichlorodifluoromethane	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 12:48	
Ethylbenzene	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 12:48	
Hexachlorobutadiene	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 12:48	
Isopropylbenzene	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 12:48	
m,p-Xylene	ND	1.0	NA	1	B3B0217	02/12/2013	02/12/13 12:48	
Methylene chloride	ND	1.0	NA	1	B3B0217	02/12/2013	02/12/13 12:48	
n-Butylbenzene	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 12:48	
n-Propylbenzene	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 12:48	
Naphthalene	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 12:48	
o-Xylene	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 12:48	
sec-Butylbenzene	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 12:48	
Styrene	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 12:48	
tert-Butylbenzene	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 12:48	
Tetrachloroethene	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 12:48	
Toluene	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 12:48	
trans-1,2-Dichloroethene	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 12:48	
Trichloroethene	41	0.50	NA	1	B3B0217	02/12/2013	02/12/13 12:48	
Trichlorofluoromethane	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 12:48	
Vinyl chloride	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 12:48	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>112 %</i>		<i>70 - 130</i>		B3B0217	02/12/2013	<i>02/12/13 12:48</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>85.0 %</i>		<i>70 - 130</i>		B3B0217	02/12/2013	<i>02/12/13 12:48</i>	
<i>Surrogate: Dibromofluoromethane</i>	<i>112 %</i>		<i>70 - 130</i>		B3B0217	02/12/2013	<i>02/12/13 12:48</i>	
<i>Surrogate: Toluene-d8</i>	<i>95.5 %</i>		<i>70 - 130</i>		B3B0217	02/12/2013	<i>02/12/13 12:48</i>	



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Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego, CA 92122

Project Number : RAYTHEON MAIN, 532.30

Report To : Steve Netto

Reported : 02/19/2013

Client Sample ID MW-08

Lab ID: 1300453-03

1,4-Dioxane by EPA 8270/SIM: Isotope Dilution Technique

Analyst: BB

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,4-Dioxane	1.1	0.20	0.13	1	B3B0222	02/12/2013	02/12/13 16:58	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	<i>108 %</i>		<i>36 - 107</i>		B3B0222	02/12/2013	<i>02/12/13 16:58</i>	S10
<i>Surrogate: 2-Fluorobiphenyl</i>	<i>106 %</i>		<i>42 - 120</i>		B3B0222	02/12/2013	<i>02/12/13 16:58</i>	
<i>Surrogate: 4-Terphenyl-d14</i>	<i>78.5 %</i>		<i>67 - 142</i>		B3B0222	02/12/2013	<i>02/12/13 16:58</i>	
<i>Surrogate: Nitrobenzene-d5</i>	<i>131 %</i>		<i>36 - 130</i>		B3B0222	02/12/2013	<i>02/12/13 16:58</i>	S10



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Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego, CA 92122

Project Number : RAYTHEON MAIN, 532.30

Report To : Steve Netto

Reported : 02/19/2013

Client Sample ID MW-26C

Lab ID: 1300453-04

Volatile Organic Compounds by EPA 8260

Analyst: SL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 16:38	
1,1,1-Trichloroethane	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 16:38	
1,1,2,2-Tetrachloroethane	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 16:38	
1,1,2-Trichloroethane	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 16:38	
1,1-Dichloroethane	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 16:38	
1,1-Dichloroethene	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 16:38	
1,1-Dichloropropene	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 16:38	
1,2,3-Trichloropropane	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 16:38	
1,2,3-Trichlorobenzene	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 16:38	
1,2,4-Trichlorobenzene	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 16:38	
1,2,4-Trimethylbenzene	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 16:38	
1,2-Dibromo-3-chloropropane	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 16:38	
1,2-Dibromoethane	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 16:38	
1,2-Dichlorobenzene	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 16:38	
1,2-Dichloroethane	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 16:38	
1,2-Dichloropropane	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 16:38	
1,3,5-Trimethylbenzene	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 16:38	
1,3-Dichlorobenzene	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 16:38	
1,3-Dichloropropane	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 16:38	
1,4-Dichlorobenzene	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 16:38	
2,2-Dichloropropane	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 16:38	
2-Chlorotoluene	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 16:38	
4-Chlorotoluene	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 16:38	
4-Isopropyltoluene	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 16:38	
Benzene	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 16:38	
Bromobenzene	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 16:38	
Bromodichloromethane	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 16:38	
Bromoform	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 16:38	
Bromomethane	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 16:38	
Carbon tetrachloride	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 16:38	
Chlorobenzene	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 16:38	
Chloroethane	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 16:38	
Chloroform	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 16:38	
Chloromethane	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 16:38	
cis-1,2-Dichloroethene	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 16:38	
cis-1,3-Dichloropropene	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 16:38	
Dibromochloromethane	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 16:38	



Certificate of Analysis

Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego, CA 92122

Project Number : RAYTHEON MAIN, 532.30

Report To : Steve Netto

Reported : 02/19/2013

Client Sample ID MW-26C

Lab ID: 1300453-04

Volatile Organic Compounds by EPA 8260

Analyst: SL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Dibromomethane	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 16:38	
Dichlorodifluoromethane	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 16:38	
Ethylbenzene	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 16:38	
Hexachlorobutadiene	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 16:38	
Isopropylbenzene	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 16:38	
m,p-Xylene	ND	1.0	NA	1	B3B0190	02/11/2013	02/11/13 16:38	
Methylene chloride	ND	1.0	NA	1	B3B0190	02/11/2013	02/11/13 16:38	
n-Butylbenzene	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 16:38	
n-Propylbenzene	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 16:38	
Naphthalene	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 16:38	
o-Xylene	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 16:38	
sec-Butylbenzene	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 16:38	
Styrene	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 16:38	
tert-Butylbenzene	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 16:38	
Tetrachloroethene	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 16:38	
Toluene	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 16:38	
trans-1,2-Dichloroethene	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 16:38	
Trichloroethene	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 16:38	
Trichlorofluoromethane	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 16:38	
Vinyl chloride	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 16:38	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>110 %</i>		<i>70 - 130</i>		B3B0190	02/11/2013	<i>02/11/13 16:38</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>99.9 %</i>		<i>70 - 130</i>		B3B0190	02/11/2013	<i>02/11/13 16:38</i>	
<i>Surrogate: Dibromofluoromethane</i>	<i>112 %</i>		<i>70 - 130</i>		B3B0190	02/11/2013	<i>02/11/13 16:38</i>	
<i>Surrogate: Toluene-d8</i>	<i>99.4 %</i>		<i>70 - 130</i>		B3B0190	02/11/2013	<i>02/11/13 16:38</i>	



Certificate of Analysis

Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : RAYTHEON MAIN, 532.30

Report To : Steve Netto

Reported : 02/19/2013

Client Sample ID MW-26C

Lab ID: 1300453-04

1,4-Dioxane by EPA 8270/SIM: Isotope Dilution Technique

Analyst: BB

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,4-Dioxane	ND	0.20	0.13	1	B3B0222	02/12/2013	02/12/13 17:22	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	<i>101 %</i>		<i>36 - 107</i>		B3B0222	02/12/2013	<i>02/12/13 17:22</i>	
<i>Surrogate: 2-Fluorobiphenyl</i>	<i>103 %</i>		<i>42 - 120</i>		B3B0222	02/12/2013	<i>02/12/13 17:22</i>	
<i>Surrogate: 4-Terphenyl-d14</i>	<i>73.0 %</i>		<i>67 - 142</i>		B3B0222	02/12/2013	<i>02/12/13 17:22</i>	
<i>Surrogate: Nitrobenzene-d5</i>	<i>133 %</i>		<i>36 - 130</i>		B3B0222	02/12/2013	<i>02/12/13 17:22</i>	S1



Certificate of Analysis

Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : RAYTHEON MAIN, 532.30

Report To : Steve Netto

Reported : 02/19/2013

Client Sample ID MW-09

Lab ID: 1300453-05

Volatile Organic Compounds by EPA 8260

Analyst: SL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 17:02	
1,1,1-Trichloroethane	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 17:02	
1,1,2,2-Tetrachloroethane	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 17:02	
1,1,2-Trichloroethane	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 17:02	
1,1-Dichloroethane	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 17:02	
1,1-Dichloroethene	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 17:02	
1,1-Dichloropropene	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 17:02	
1,2,3-Trichloropropane	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 17:02	
1,2,3-Trichlorobenzene	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 17:02	
1,2,4-Trichlorobenzene	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 17:02	
1,2,4-Trimethylbenzene	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 17:02	
1,2-Dibromo-3-chloropropane	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 17:02	
1,2-Dibromoethane	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 17:02	
1,2-Dichlorobenzene	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 17:02	
1,2-Dichloroethane	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 17:02	
1,2-Dichloropropane	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 17:02	
1,3,5-Trimethylbenzene	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 17:02	
1,3-Dichlorobenzene	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 17:02	
1,3-Dichloropropane	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 17:02	
1,4-Dichlorobenzene	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 17:02	
2,2-Dichloropropane	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 17:02	
2-Chlorotoluene	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 17:02	
4-Chlorotoluene	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 17:02	
4-Isopropyltoluene	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 17:02	
Benzene	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 17:02	
Bromobenzene	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 17:02	
Bromodichloromethane	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 17:02	
Bromoform	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 17:02	
Bromomethane	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 17:02	
Carbon tetrachloride	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 17:02	
Chlorobenzene	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 17:02	
Chloroethane	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 17:02	
Chloroform	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 17:02	
Chloromethane	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 17:02	
cis-1,2-Dichloroethene	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 17:02	
cis-1,3-Dichloropropene	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 17:02	
Dibromochloromethane	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 17:02	



Certificate of Analysis

Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : RAYTHEON MAIN, 532.30

Report To : Steve Netto

Reported : 02/19/2013

Client Sample ID MW-09

Lab ID: 1300453-05

Volatile Organic Compounds by EPA 8260

Analyst: SL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Dibromomethane	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 17:02	
Dichlorodifluoromethane	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 17:02	
Ethylbenzene	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 17:02	
Hexachlorobutadiene	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 17:02	
Isopropylbenzene	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 17:02	
m,p-Xylene	ND	1.0	NA	1	B3B0190	02/11/2013	02/11/13 17:02	
Methylene chloride	ND	1.0	NA	1	B3B0190	02/11/2013	02/11/13 17:02	
n-Butylbenzene	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 17:02	
n-Propylbenzene	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 17:02	
Naphthalene	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 17:02	
o-Xylene	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 17:02	
sec-Butylbenzene	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 17:02	
Styrene	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 17:02	
tert-Butylbenzene	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 17:02	
Tetrachloroethene	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 17:02	
Toluene	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 17:02	
trans-1,2-Dichloroethene	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 17:02	
Trichloroethene	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 17:02	
Trichlorofluoromethane	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 17:02	
Vinyl chloride	ND	0.50	NA	1	B3B0190	02/11/2013	02/11/13 17:02	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>110 %</i>		<i>70 - 130</i>		B3B0190	02/11/2013	<i>02/11/13 17:02</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>109 %</i>		<i>70 - 130</i>		B3B0190	02/11/2013	<i>02/11/13 17:02</i>	
<i>Surrogate: Dibromofluoromethane</i>	<i>115 %</i>		<i>70 - 130</i>		B3B0190	02/11/2013	<i>02/11/13 17:02</i>	
<i>Surrogate: Toluene-d8</i>	<i>97.5 %</i>		<i>70 - 130</i>		B3B0190	02/11/2013	<i>02/11/13 17:02</i>	



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9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : RAYTHEON MAIN, 532.30

Report To : Steve Netto

Reported : 02/19/2013

Client Sample ID MW-09

Lab ID: 1300453-05

1,4-Dioxane by EPA 8270/SIM: Isotope Dilution Technique

Analyst: BB

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,4-Dioxane	ND	0.20	0.13	1	B3B0222	02/12/2013	02/12/13 17:47	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	<i>96.4 %</i>		<i>36 - 107</i>		B3B0222	02/12/2013	<i>02/12/13 17:47</i>	
<i>Surrogate: 2-Fluorobiphenyl</i>	<i>95.4 %</i>		<i>42 - 120</i>		B3B0222	02/12/2013	<i>02/12/13 17:47</i>	
<i>Surrogate: 4-Terphenyl-d14</i>	<i>76.8 %</i>		<i>67 - 142</i>		B3B0222	02/12/2013	<i>02/12/13 17:47</i>	
<i>Surrogate: Nitrobenzene-d5</i>	<i>125 %</i>		<i>36 - 130</i>		B3B0222	02/12/2013	<i>02/12/13 17:47</i>	



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Hargis & Associates, Inc.

Project Number : RAYTHEON MAIN, 532.30

9171 Towne Centre Drive, Suite 375

Report To : Steve Netto

San Diego , CA 92122

Reported : 02/19/2013

QUALITY CONTROL SECTION

Volatile Organic Compounds by EPA 8260 - Quality Control

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B3B0190 - MSVOAW_LL

Blank (B3B0190-BLK1)

Prepared: 2/11/2013 Analyzed: 2/11/2013

1,1,1,2-Tetrachloroethane	ND	0.50				NR			
1,1,1-Trichloroethane	ND	0.50				NR			
1,1,2,2-Tetrachloroethane	ND	0.50				NR			
1,1,2-Trichloroethane	ND	0.50				NR			
1,1-Dichloroethane	ND	0.50				NR			
1,1-Dichloroethene	ND	0.50				NR			
1,1-Dichloropropene	ND	0.50				NR			
1,2,3-Trichloropropane	ND	0.50				NR			
1,2,3-Trichlorobenzene	ND	0.50				NR			
1,2,4-Trichlorobenzene	ND	0.50				NR			
1,2,4-Trimethylbenzene	ND	0.50				NR			
1,2-Dibromo-3-chloropropane	ND	0.50				NR			
1,2-Dibromoethane	ND	0.50				NR			
1,2-Dichlorobenzene	ND	0.50				NR			
1,2-Dichloroethane	ND	0.50				NR			
1,2-Dichloropropane	ND	0.50				NR			
1,3,5-Trimethylbenzene	ND	0.50				NR			
1,3-Dichlorobenzene	ND	0.50				NR			
1,3-Dichloropropane	ND	0.50				NR			
1,4-Dichlorobenzene	ND	0.50				NR			
2,2-Dichloropropane	ND	0.50				NR			
2-Chlorotoluene	ND	0.50				NR			
4-Chlorotoluene	ND	0.50				NR			
4-Isopropyltoluene	ND	0.50				NR			
Benzene	ND	0.50				NR			
Bromobenzene	ND	0.50				NR			
Bromodichloromethane	ND	0.50				NR			
Bromoform	ND	0.50				NR			
Bromomethane	ND	0.50				NR			
Carbon tetrachloride	ND	0.50				NR			
Chlorobenzene	ND	0.50				NR			
Chloroethane	ND	0.50				NR			
Chloroform	ND	0.50				NR			
Chloromethane	ND	0.50				NR			
cis-1,2-Dichloroethene	ND	0.50				NR			
cis-1,3-Dichloropropene	ND	0.50				NR			
Dibromochloromethane	ND	0.50				NR			
Dibromomethane	ND	0.50				NR			
Dichlorodifluoromethane	ND	0.50				NR			



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Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : RAYTHEON MAIN, 532.30

Report To : Steve Netto

Reported : 02/19/2013

Volatile Organic Compounds by EPA 8260 - Quality Control (cont'd)

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B3B0190 - MSVOAW_LL (continued)

Blank (B3B0190-BLK1) - Continued

Prepared: 2/11/2013 Analyzed: 2/11/2013

Ethylbenzene	ND	0.50					NR		
Hexachlorobutadiene	ND	0.50					NR		
Isopropylbenzene	ND	0.50					NR		
m,p-Xylene	ND	1.0					NR		
Methylene chloride	ND	1.0					NR		
n-Butylbenzene	ND	0.50					NR		
n-Propylbenzene	ND	0.50					NR		
Naphthalene	ND	0.50					NR		
o-Xylene	ND	0.50					NR		
sec-Butylbenzene	ND	0.50					NR		
Styrene	ND	0.50					NR		
tert-Butylbenzene	ND	0.50					NR		
Tetrachloroethene	ND	0.50					NR		
Toluene	ND	0.50					NR		
trans-1,2-Dichloroethene	ND	0.50					NR		
Trichloroethene	ND	0.50					NR		
Trichlorofluoromethane	ND	0.50					NR		
Vinyl chloride	ND	0.50					NR		

<i>Surrogate: 1,2-Dichloroethane-d4</i>	28.12		25.0000		112	70 - 130			
<i>Surrogate: 4-Bromofluorobenzene</i>	30.01		25.0000		120	70 - 130			
<i>Surrogate: Dibromofluoromethane</i>	28.13		25.0000		113	70 - 130			
<i>Surrogate: Toluene-d8</i>	26.54		25.0000		106	70 - 130			

LCS (B3B0190-BS1)

Prepared: 2/11/2013 Analyzed: 2/11/2013

1,1-Dichloroethene	18.9400		20.0000		94.7	70 - 130			
Benzene	39.6800		40.0000		99.2	70 - 130			
Chlorobenzene	19.7300		20.0000		98.6	70 - 130			
MTBE	16.1300		20.0000		80.6	70 - 130			
Toluene	43.4800		40.0000		109	70 - 130			
Trichloroethene	19.2400		20.0000		96.2	70 - 130			

<i>Surrogate: 1,2-Dichloroethane-d4</i>	24.09		25.0000		96.4	70 - 130			
<i>Surrogate: 4-Bromofluorobenzene</i>	26.59		25.0000		106	70 - 130			
<i>Surrogate: Dibromofluoromethane</i>	24.72		25.0000		98.9	70 - 130			
<i>Surrogate: Toluene-d8</i>	27.27		25.0000		109	70 - 130			

LCS Dup (B3B0190-BSD1)

Prepared: 2/11/2013 Analyzed: 2/11/2013

1,1-Dichloroethene	20.6300		20.0000		103	70 - 130	8.54	20	
Benzene	42.1700		40.0000		105	70 - 130	6.08	20	
Chlorobenzene	21.0600		20.0000		105	70 - 130	6.52	20	
MTBE	17.4400		20.0000		87.2	70 - 130	7.80	20	
Toluene	47.0200		40.0000		118	70 - 130	7.82	20	



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Project Number : RAYTHEON MAIN, 532.30

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Volatile Organic Compounds by EPA 8260 - Quality Control (cont'd)

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B3B0190 - MSVOAW_LL (continued)

LCS Dup (B3B0190-BSD1) - Continued

Prepared: 2/11/2013 Analyzed: 2/11/2013

Trichloroethene	20.5700		20.0000		103	70 - 130	6.68	20	
Surrogate: 1,2-Dichloroethane-d4	25.94		25.0000		104	70 - 130			
Surrogate: 4-Bromofluorobenzene	28.54		25.0000		114	70 - 130			
Surrogate: Dibromofluoromethane	26.23		25.0000		105	70 - 130			
Surrogate: Toluene-d8	28.89		25.0000		116	70 - 130			

Batch B3B0217 - MSVOAW_LL

Blank (B3B0217-BLK1)

Prepared: 2/12/2013 Analyzed: 2/12/2013

1,1,1,2-Tetrachloroethane	ND	0.50			NR				
1,1,1-Trichloroethane	ND	0.50			NR				
1,1,2,2-Tetrachloroethane	ND	0.50			NR				
1,1,2-Trichloroethane	ND	0.50			NR				
1,1-Dichloroethane	ND	0.50			NR				
1,1-Dichloroethene	ND	0.50			NR				
1,1-Dichloropropene	ND	0.50			NR				
1,2,3-Trichloropropane	ND	0.50			NR				
1,2,3-Trichlorobenzene	ND	0.50			NR				
1,2,4-Trichlorobenzene	ND	0.50			NR				
1,2,4-Trimethylbenzene	ND	0.50			NR				
1,2-Dibromo-3-chloropropane	ND	0.50			NR				
1,2-Dibromoethane	ND	0.50			NR				
1,2-Dichlorobenzene	ND	0.50			NR				
1,2-Dichloroethane	ND	0.50			NR				
1,2-Dichloropropane	ND	0.50			NR				
1,3,5-Trimethylbenzene	ND	0.50			NR				
1,3-Dichlorobenzene	ND	0.50			NR				
1,3-Dichloropropane	ND	0.50			NR				
1,4-Dichlorobenzene	ND	0.50			NR				
2,2-Dichloropropane	ND	0.50			NR				
2-Chlorotoluene	ND	0.50			NR				
4-Chlorotoluene	ND	0.50			NR				
4-Isopropyltoluene	ND	0.50			NR				
Benzene	ND	0.50			NR				
Bromobenzene	ND	0.50			NR				
Bromodichloromethane	ND	0.50			NR				
Bromoform	ND	0.50			NR				
Bromomethane	ND	0.50			NR				
Carbon tetrachloride	ND	0.50			NR				
Chlorobenzene	ND	0.50			NR				
Chloroethane	ND	0.50			NR				



Certificate of Analysis

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San Diego , CA 92122

Project Number : RAYTHEON MAIN, 532.30

Report To : Steve Netto

Reported : 02/19/2013

Volatile Organic Compounds by EPA 8260 - Quality Control (cont'd)

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B3B0217 - MSVOAW_LL (continued)

Blank (B3B0217-BLK1) - Continued

Prepared: 2/12/2013 Analyzed: 2/12/2013

Chloroform	ND	0.50				NR			
Chloromethane	ND	0.50				NR			
cis-1,2-Dichloroethene	ND	0.50				NR			
cis-1,3-Dichloropropene	ND	0.50				NR			
Dibromochloromethane	ND	0.50				NR			
Dibromomethane	ND	0.50				NR			
Dichlorodifluoromethane	ND	0.50				NR			
Ethylbenzene	ND	0.50				NR			
Hexachlorobutadiene	ND	0.50				NR			
Isopropylbenzene	ND	0.50				NR			
m,p-Xylene	ND	1.0				NR			
Methylene chloride	ND	1.0				NR			
n-Butylbenzene	ND	0.50				NR			
n-Propylbenzene	ND	0.50				NR			
Naphthalene	ND	0.50				NR			
o-Xylene	ND	0.50				NR			
sec-Butylbenzene	ND	0.50				NR			
Styrene	ND	0.50				NR			
tert-Butylbenzene	ND	0.50				NR			
Tetrachloroethene	ND	0.50				NR			
Toluene	ND	0.50				NR			
trans-1,2-Dichloroethene	ND	0.50				NR			
Trichloroethene	ND	0.50				NR			
Trichlorofluoromethane	ND	0.50				NR			
Vinyl chloride	ND	0.50				NR			

<i>Surrogate: 1,2-Dichloroethane-d4</i>	27.63		25.0000		111	70 - 130			
<i>Surrogate: 4-Bromofluorobenzene</i>	22.80		25.0000		91.2	70 - 130			
<i>Surrogate: Dibromofluoromethane</i>	19.76		25.0000		79.0	70 - 130			
<i>Surrogate: Toluene-d8</i>	26.43		25.0000		106	70 - 130			

LCS (B3B0217-BS1)

Prepared: 2/12/2013 Analyzed: 2/12/2013

1,1-Dichloroethene	20.4100		20.0000		102	70 - 130			
Benzene	40.3300		40.0000		101	70 - 130			
Chlorobenzene	19.6000		20.0000		98.0	70 - 130			
MTBE	18.5300		20.0000		92.6	70 - 130			
Toluene	39.1700		40.0000		97.9	70 - 130			
Trichloroethene	19.3700		20.0000		96.8	70 - 130			

<i>Surrogate: 1,2-Dichloroethane-d4</i>	28.89		25.0000		116	70 - 130			
<i>Surrogate: 4-Bromofluorobenzene</i>	22.24		25.0000		89.0	70 - 130			
<i>Surrogate: Dibromofluoromethane</i>	28.27		25.0000		113	70 - 130			
<i>Surrogate: Toluene-d8</i>	24.62		25.0000		98.5	70 - 130			



Certificate of Analysis

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9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : RAYTHEON MAIN, 532.30

Report To : Steve Netto

Reported : 02/19/2013

Volatile Organic Compounds by EPA 8260 - Quality Control (cont'd)

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B3B0217 - MSVOAW_LL (continued)

LCS Dup (B3B0217-BSD1)

Prepared: 2/12/2013 Analyzed: 2/12/2013

1,1-Dichloroethene	18.4000		20.0000		92.0	70 - 130	10.4	20	
Benzene	38.9200		40.0000		97.3	70 - 130	3.56	20	
Chlorobenzene	19.5700		20.0000		97.8	70 - 130	0.153	20	
MTBE	18.5900		20.0000		93.0	70 - 130	0.323	20	
Toluene	38.5200		40.0000		96.3	70 - 130	1.67	20	
Trichloroethene	18.6500		20.0000		93.2	70 - 130	3.79	20	
<hr/>									
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>30.20</i>		<i>25.0000</i>		<i>121</i>	<i>70 - 130</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>24.15</i>		<i>25.0000</i>		<i>96.6</i>	<i>70 - 130</i>			
<i>Surrogate: Dibromofluoromethane</i>	<i>29.84</i>		<i>25.0000</i>		<i>119</i>	<i>70 - 130</i>			
<i>Surrogate: Toluene-d8</i>	<i>26.56</i>		<i>25.0000</i>		<i>106</i>	<i>70 - 130</i>			



Certificate of Analysis

Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : RAYTHEON MAIN, 532.30

Report To : Steve Netto

Reported : 02/19/2013

1,4-Dioxane by EPA 8270/SIM: Isotope Dilution Technique - Quality Control

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec % Rec	% Rec Limits	RPD RPD	RPD Limit	Notes
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Batch B3B0222 - MSSEMI

Blank (B3B0222-BLK1)

Prepared: 2/12/2013 Analyzed: 2/12/2013

1,4-Dioxane	ND	0.20			NR				
Surrogate: 1,2-Dichlorobenzene-d4	1.185		1.00000		119	36 - 107			S1
Surrogate: 2-Fluorobiphenyl	1.149		1.00000		115	42 - 120			
Surrogate: 4-Terphenyl-d14	0.8541		1.00000		85.4	67 - 142			
Surrogate: Nitrobenzene-d5	1.329		1.00000		133	36 - 130			S1

LCS (B3B0222-BS1)

Prepared: 2/12/2013 Analyzed: 2/12/2013

1,4-Dioxane	0.727860	0.20	1.00000		72.8	70 - 130			
Surrogate: 1,2-Dichlorobenzene-d4	0.7483		1.00000		74.8	36 - 107			
Surrogate: 2-Fluorobiphenyl	1.076		1.00000		108	42 - 120			
Surrogate: 4-Terphenyl-d14	0.8147		1.00000		81.5	67 - 142			
Surrogate: Nitrobenzene-d5	1.227		1.00000		123	36 - 130			

LCS Dup (B3B0222-BSD1)

Prepared: 2/12/2013 Analyzed: 2/12/2013

1,4-Dioxane	0.780660	0.20	1.00000		78.1	70 - 130	7.00	20	
Surrogate: 1,2-Dichlorobenzene-d4	0.9206		1.00000		92.1	36 - 107			
Surrogate: 2-Fluorobiphenyl	1.063		1.00000		106	42 - 120			
Surrogate: 4-Terphenyl-d14	0.7900		1.00000		79.0	67 - 142			
Surrogate: Nitrobenzene-d5	1.150		1.00000		115	36 - 130			

Matrix Spike (B3B0222-MS1)

Source: 1300426-05

Prepared: 2/12/2013 Analyzed: 2/12/2013

1,4-Dioxane	0.801830	0.20	1.00000	ND	80.2	70 - 130			
Surrogate: 1,2-Dichlorobenzene-d4	1.001		1.00000		100	36 - 107			
Surrogate: 2-Fluorobiphenyl	1.022		1.00000		102	42 - 120			
Surrogate: 4-Terphenyl-d14	0.8100		1.00000		81.0	67 - 142			
Surrogate: Nitrobenzene-d5	1.219		1.00000		122	36 - 130			

Matrix Spike Dup (B3B0222-MSD1)

Source: 1300426-05

Prepared: 2/12/2013 Analyzed: 2/12/2013

1,4-Dioxane	0.861170	0.20	1.00000	ND	86.1	70 - 130	7.14	20	
Surrogate: 1,2-Dichlorobenzene-d4	1.037		1.00000		104	36 - 107			
Surrogate: 2-Fluorobiphenyl	1.017		1.00000		102	42 - 120			
Surrogate: 4-Terphenyl-d14	0.7984		1.00000		79.8	67 - 142			
Surrogate: Nitrobenzene-d5	1.240		1.00000		124	36 - 130			



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Project Number : RAYTHEON MAIN, 532.30

Report To : Steve Netto

Reported : 02/19/2013


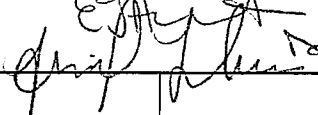
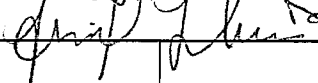
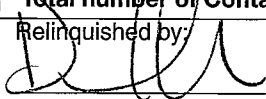
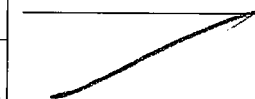
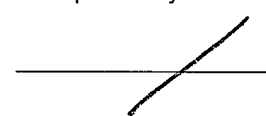
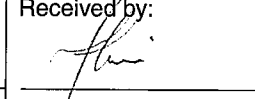
Notes and Definitions

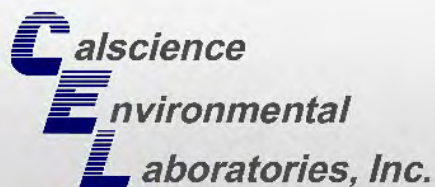
S10	Surrogate recovery outside of laboratory acceptance limit possibly due to matrix interference.
S1	Surrogate recovery was above laboratory acceptance limit. No target analyte was detected in the sample.
ND	Analyte not detected at or above reporting limit
PQL	Practical Quantitation Limit
MDL	Method Detection Limit
NR	Not Reported
RPD	Relative Percent Difference
CA1	CA-NELAP (CDPH)
CA2	CA-ELAP (CDPH)
OR1	OR-NELAP (OSPHL)
TX1	TX-NELAP (TCEQ)

Notes:

- (1) The reported MDL and PQL are based on prep ratio variation and analytical dilution.
- (2) The suffix [2C] of specific analytes signifies that the reported result is taken from the instrument's second column.

CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST FORM

PROJECT NAME		PROJECT No./TASK No.		SAMPLE CONTAINERS		ANALYSIS REQUESTED		ESTIMATED CONCENTRATION RANGE (ppb) FOR VOA'S		SPECIAL HANDLING		LABORATORY INFORMATION					
RAYTHEON MAIN		532.30										ATL					
PROJECT MANAGER Chris Ross		Phone No. 858-455-6500										Attn: Rachele Arada					
QA MANAGER Steve Netto		Fax No. 858-455-6533															
SAMPLER (SIGNATURE) 				SAMPLER (PRINTED) D. MORA													
SAMPLER (SIGNATURE) 				SAMPLER (PRINTED) ERIN HUNTER													
SAMPLER (SIGNATURE) 				SAMPLER (PRINTED) ANIEL FENDER													
LAB ID	SAMPLE ID	SAMPLE COLLECTION		MATRIX		PRESERVATION						40 ml VOA 1 L Amber	8260B VOCs 8270 SIM 1,4-Dioxane 8270 MOD 1,4-Dioxane	0 - 10 10 - 100 100 - 1,000 > 1,000	Standard TAT	REMARKS	
		Date	Time	Soil	Ground-water	Surface water	Lab H2O	HCl	HNO3	NaOH	H2SO4						Ice
1300453-1	TB-020813/	2/18/13	0800			X	X										
-2	MW-31		0900	X		X											
	↓		↓	X		X											
-3	MW-08		0930	X		X											
	↓		↓	X		X											
-4	MW-26C		1115	X		X											
	↓		↓	X		X											
-5	MW-09		9:35	X		X											
	↓		↓	X		X											
Total number of Containers per analysis:												44	Total No. of Containers: _____				
Relinquished by: 		Date: 2/18/13	Received by: 		Date: _____	INSTRUCTIONS 1. Fill out form completely except for shaded areas (lab use only); sign only after verified for completeness. 2. Complete in ballpoint pen. Draw one line through errors, initial and date correction. 3. Indicate number of sample containers in analysis request space; indicate choice with ✓ or x. 4. Note applicable preservatives, special instructions, and deviations from typical environmental samples. 5. Consult project QA documents for specific instructions.						Shipment Method: <u>Courier</u>					
Company: HFA, INC		Time: 1430	Company: _____		Time: _____							Send Results to: <u>Steve Netto</u>					
Relinquished by: 		Date: _____	Received by: 		Date: 2/18/13	Sample Receipt: <input type="checkbox"/> No. of containers correct <input checked="" type="checkbox"/> received good condition/cold <input type="checkbox"/> custody seals secure <input type="checkbox"/> conforms to COC document						<input checked="" type="checkbox"/> 9171 TOWNE CENTRE DRIVE, SUITE 375 SAN DIEGO, CA 92122 (858) 455-6500 <input type="checkbox"/> 1640 SOUTH STAPLEY DRIVE, SUITE 209 MESA, AZ 85204 (480) 345-0888 <input type="checkbox"/> 1820 EAST RIVER ROAD, SUITE 220 TUCSON, AZ 85718 (520) 881-7300					
Company: _____		Time: _____	Company: ATL		Time: 1430	Temp. @ receipt <u>7.8</u> °C						Send invoice to San Diego, CA Attn: Accounts Payable					



Supplemental Report 1

The original report has been revised/corrected.

- Sample ID revised MW-30B changed to MW-30A

**CALSCIENCE****WORK ORDER NUMBER: 13-02-0452***The difference is service*

AIR | SOIL | WATER | MARINE CHEMISTRY

Analytical Report For**Client:** Hargis + Associates, Inc.**Client Project Name:** Raytheon Main / 532.30**Attention:** Steve Netto9171 Towne Centre Drive, Suite 375
San Diego, CA 92122-6215

 Approved for release on 02/22/2013 by:
 Virendra Patel
 Project Manager

ResultLink ▶

Email your PM ▶



Calscience Environmental Laboratories, Inc. (Calscience) certifies that the test results provided in this report meet all NELAC requirements for parameters for which accreditation is required or available. Any exceptions to NELAC requirements are noted in the case narrative. The original report of subcontracted analyses, if any, is attached to this report. The results in this report are limited to the sample(s) tested and any reproduction thereof must be made in its entirety. The client or recipient of this report is specifically prohibited from making material changes to said report and, to the extent that such changes are made, Calscience is not responsible, legally or otherwise. The client or recipient agrees to indemnify Calscience for any litigation which may arise.



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Work Order Number: 13-02-0452

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Client: Hargis + Associates, Inc.
9171 Towne Centre Drive, Suite 375
San Diego, CA 92122-6215
Attn: Steve Netto

Work Order: 13-02-0452
Project name: Raytheon Main / 532.30
Received: 02/07/13 18:10

DETECTIONS SUMMARY

Client Sample ID

Analyte	Result	Qualifiers	Reporting Limit	Units	Method	Extraction
MW-34B (13-02-0452-4)						
1,4-Dioxane	250		1.0	ug/L	EPA 8270C(M) Isotope Dilution	EPA 3520C
1,1-Dichloroethane	4.6		1.0	ug/L	EPA 8260B	EPA 5030C
1,2-Dichloroethane	1.0		0.50	ug/L	EPA 8260B	EPA 5030C
1,1-Dichloroethene	440		5.0	ug/L	EPA 8260B	EPA 5030C
1,1,2-Trichloroethane	2.0		1.0	ug/L	EPA 8260B	EPA 5030C
MW-29 (13-02-0452-5)						
1,4-Dioxane	160		1.0	ug/L	EPA 8270C(M) Isotope Dilution	EPA 3520C
1,1-Dichloroethane	2.6		2.0	ug/L	EPA 8260B	EPA 5030C
1,1-Dichloroethene	290		2.0	ug/L	EPA 8260B	EPA 5030C
Trichloroethene	7.3		2.0	ug/L	EPA 8260B	EPA 5030C

Subcontracted analyses, if any, are not included in this summary.

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*MDL is shown.

Analytical Report



Hargis + Associates, Inc.
9171 Towne Centre Drive, Suite 375
San Diego, CA 92122-6215

Date Received: 02/07/13
Work Order No: 13-02-0452
Preparation: EPA 3520C
Method: EPA 8270C(M) Isotope Dilution

Project: Raytheon Main / 532.30

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-37	13-02-0452-2-D	02/06/13 12:35	Aqueous	GC/MS DDD	02/08/13	02/13/13 16:22	130208L16

Parameter	Result	RL	DF	Qual	Units
1,4-Dioxane	ND	1.0	1		ug/L
<u>Surrogates:</u>	<u>REC (%)</u>	<u>Control Limits</u>		<u>Qual</u>	
Nitrobenzene-d5	45	56-123		2,6	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-30A	13-02-0452-3-D	02/06/13 16:25	Aqueous	GC/MS DDD	02/08/13	02/13/13 17:39	130208L16

Parameter	Result	RL	DF	Qual	Units
1,4-Dioxane	ND	1.0	1		ug/L
<u>Surrogates:</u>	<u>REC (%)</u>	<u>Control Limits</u>		<u>Qual</u>	
Nitrobenzene-d5	49	56-123		2,6	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-34B	13-02-0452-4-D	02/06/13 15:58	Aqueous	GC/MS DDD	02/08/13	02/13/13 18:04	130208L16

Parameter	Result	RL	DF	Qual	Units
1,4-Dioxane	250	1.0	1		ug/L
<u>Surrogates:</u>	<u>REC (%)</u>	<u>Control Limits</u>		<u>Qual</u>	
Nitrobenzene-d5	39	56-123		2,6	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-29	13-02-0452-5-D	02/07/13 09:45	Aqueous	GC/MS DDD	02/08/13	02/13/13 18:30	130208L16

Parameter	Result	RL	DF	Qual	Units
1,4-Dioxane	160	1.0	1		ug/L
<u>Surrogates:</u>	<u>REC (%)</u>	<u>Control Limits</u>		<u>Qual</u>	
Nitrobenzene-d5	86	56-123			

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Analytical Report



Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 02/07/13
 Work Order No: 13-02-0452
 Preparation: EPA 3520C
 Method: EPA 8270C(M) Isotope Dilution

Project: Raytheon Main / 532.30

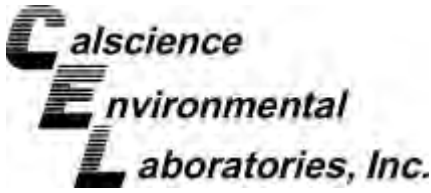
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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-09-004-2,192	N/A	Aqueous	GC/MS DDD	02/08/13	02/12/13 17:12	130208L16

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qual</u>	<u>Units</u>
1,4-Dioxane	ND	1.0	1		ug/L
<u>Surrogates:</u>	<u>REC (%)</u>	<u>Control Limits</u>		<u>Qual</u>	
Nitrobenzene-d5	90	56-123			

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RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers



Analytical Report



Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 02/07/13
 Work Order No: 13-02-0452
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Raytheon Main / 532.30

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
TB-020613B	13-02-0452-1-A	02/06/13 08:00	Aqueous	GC/MS Z	02/08/13	02/08/13 12:47	130208L01

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Acetone	ND	20	1		1,3-Dichloropropane	ND	1.0	1	
Benzene	ND	0.50	1		2,2-Dichloropropane	ND	1.0	1	
Bromobenzene	ND	1.0	1		1,1-Dichloropropene	ND	1.0	1	
Bromochloromethane	ND	1.0	1		c-1,3-Dichloropropene	ND	0.50	1	
Bromodichloromethane	ND	1.0	1		t-1,3-Dichloropropene	ND	0.50	1	
Bromoform	ND	1.0	1		Ethylbenzene	ND	1.0	1	
Bromomethane	ND	10	1		2-Hexanone	ND	10	1	
2-Butanone	ND	10	1		Isopropylbenzene	ND	1.0	1	
n-Butylbenzene	ND	1.0	1		p-Isopropyltoluene	ND	1.0	1	
sec-Butylbenzene	ND	1.0	1		Methylene Chloride	ND	10	1	
tert-Butylbenzene	ND	1.0	1		4-Methyl-2-Pentanone	ND	10	1	
Carbon Disulfide	ND	10	1		Naphthalene	ND	10	1	
Carbon Tetrachloride	ND	0.50	1		n-Propylbenzene	ND	1.0	1	
Chlorobenzene	ND	1.0	1		Styrene	ND	1.0	1	
Chloroethane	ND	5.0	1		1,1,1,2-Tetrachloroethane	ND	1.0	1	
Chloroform	ND	1.0	1		1,1,2,2-Tetrachloroethane	ND	1.0	1	
Chloromethane	ND	10	1		Tetrachloroethene	ND	1.0	1	
2-Chlorotoluene	ND	1.0	1		Toluene	ND	1.0	1	
4-Chlorotoluene	ND	1.0	1		1,2,3-Trichlorobenzene	ND	1.0	1	
Dibromochloromethane	ND	1.0	1		1,2,4-Trichlorobenzene	ND	1.0	1	
1,2-Dibromo-3-Chloropropane	ND	5.0	1		1,1,1-Trichloroethane	ND	1.0	1	
1,2-Dibromoethane	ND	1.0	1		1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	10	1	
Dibromomethane	ND	1.0	1		1,1,2-Trichloroethane	ND	1.0	1	
1,2-Dichlorobenzene	ND	1.0	1		Trichloroethene	ND	1.0	1	
1,3-Dichlorobenzene	ND	1.0	1		Trichlorofluoromethane	ND	10	1	
1,4-Dichlorobenzene	ND	1.0	1		1,2,3-Trichloropropane	ND	5.0	1	
Dichlorodifluoromethane	ND	1.0	1		1,2,4-Trimethylbenzene	ND	1.0	1	
1,1-Dichloroethane	ND	1.0	1		1,3,5-Trimethylbenzene	ND	1.0	1	
1,2-Dichloroethane	ND	0.50	1		Vinyl Acetate	ND	10	1	
1,1-Dichloroethene	ND	1.0	1		Vinyl Chloride	ND	0.50	1	
c-1,2-Dichloroethene	ND	1.0	1		p/m-Xylene	ND	1.0	1	
t-1,2-Dichloroethene	ND	1.0	1		o-Xylene	ND	1.0	1	
1,2-Dichloropropane	ND	1.0	1						
Surrogates:	REC (%)	Control Limits	Qual		Surrogates:	REC (%)	Control Limits	Qual	
1,4-Bromofluorobenzene	103	80-120			Dibromofluoromethane	104	80-126		
1,2-Dichloroethane-d4	95	80-134			Toluene-d8	98	80-120		

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RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Analytical Report

Hargis + Associates, Inc.
9171 Towne Centre Drive, Suite 375
San Diego, CA 92122-6215

Date Received: 02/07/13
Work Order No: 13-02-0452
Preparation: EPA 5030C
Method: EPA 8260B
Units: ug/L

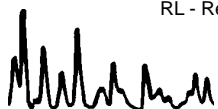
Project: Raytheon Main / 532.30

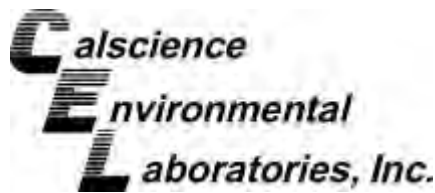
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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-37	13-02-0452-2-A	02/06/13 12:35	Aqueous	GC/MS Z	02/08/13	02/08/13 19:07	130208L01

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Acetone	ND	20	1		1,3-Dichloropropane	ND	1.0	1	
Benzene	ND	0.50	1		2,2-Dichloropropane	ND	1.0	1	
Bromobenzene	ND	1.0	1		1,1-Dichloropropene	ND	1.0	1	
Bromochloromethane	ND	1.0	1		c-1,3-Dichloropropene	ND	0.50	1	
Bromodichloromethane	ND	1.0	1		t-1,3-Dichloropropene	ND	0.50	1	
Bromoform	ND	1.0	1		Ethylbenzene	ND	1.0	1	
Bromomethane	ND	10	1		2-Hexanone	ND	10	1	
2-Butanone	ND	10	1		Isopropylbenzene	ND	1.0	1	
n-Butylbenzene	ND	1.0	1		p-Isopropyltoluene	ND	1.0	1	
sec-Butylbenzene	ND	1.0	1		Methylene Chloride	ND	10	1	
tert-Butylbenzene	ND	1.0	1		4-Methyl-2-Pentanone	ND	10	1	
Carbon Disulfide	ND	10	1		Naphthalene	ND	10	1	
Carbon Tetrachloride	ND	0.50	1		n-Propylbenzene	ND	1.0	1	
Chlorobenzene	ND	1.0	1		Styrene	ND	1.0	1	
Chloroethane	ND	5.0	1		1,1,1,2-Tetrachloroethane	ND	1.0	1	
Chloroform	ND	1.0	1		1,1,2,2-Tetrachloroethane	ND	1.0	1	
Chloromethane	ND	10	1		Tetrachloroethene	ND	1.0	1	
2-Chlorotoluene	ND	1.0	1		Toluene	ND	1.0	1	
4-Chlorotoluene	ND	1.0	1		1,2,3-Trichlorobenzene	ND	1.0	1	
Dibromochloromethane	ND	1.0	1		1,2,4-Trichlorobenzene	ND	1.0	1	
1,2-Dibromo-3-Chloropropane	ND	5.0	1		1,1,1-Trichloroethane	ND	1.0	1	
1,2-Dibromoethane	ND	1.0	1		1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	10	1	
Dibromomethane	ND	1.0	1		1,1,2-Trichloroethane	ND	1.0	1	
1,2-Dichlorobenzene	ND	1.0	1		Trichloroethene	ND	1.0	1	
1,3-Dichlorobenzene	ND	1.0	1		Trichlorofluoromethane	ND	10	1	
1,4-Dichlorobenzene	ND	1.0	1		1,2,3-Trichloropropane	ND	5.0	1	
Dichlorodifluoromethane	ND	1.0	1		1,2,4-Trimethylbenzene	ND	1.0	1	
1,1-Dichloroethane	ND	1.0	1		1,3,5-Trimethylbenzene	ND	1.0	1	
1,2-Dichloroethane	ND	0.50	1		Vinyl Acetate	ND	10	1	
1,1-Dichloroethene	ND	1.0	1		Vinyl Chloride	ND	0.50	1	
c-1,2-Dichloroethene	ND	1.0	1		p/m-Xylene	ND	1.0	1	
t-1,2-Dichloroethene	ND	1.0	1		o-Xylene	ND	1.0	1	
1,2-Dichloropropane	ND	1.0	1						
<u>Surrogates:</u>	<u>REC (%)</u>	<u>Control Limits</u>	<u>Qual</u>		<u>Surrogates:</u>	<u>REC (%)</u>	<u>Control Limits</u>	<u>Qual</u>	
1,4-Bromofluorobenzene	102	80-120			Dibromofluoromethane	100	80-126		
1,2-Dichloroethane-d4	91	80-134			Toluene-d8	100	80-120		

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers





Analytical Report



Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 02/07/13
 Work Order No: 13-02-0452
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Raytheon Main / 532.30

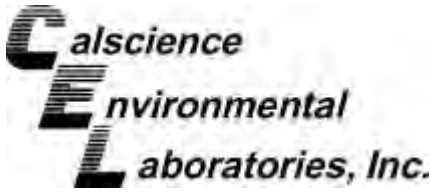
Page 3 of 7

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-30A	13-02-0452-3-A	02/06/13 16:25	Aqueous	GC/MS Z	02/08/13	02/08/13 19:34	130208L01

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Acetone	ND	20	1		1,3-Dichloropropane	ND	1.0	1	
Benzene	ND	0.50	1		2,2-Dichloropropane	ND	1.0	1	
Bromobenzene	ND	1.0	1		1,1-Dichloropropene	ND	1.0	1	
Bromochloromethane	ND	1.0	1		c-1,3-Dichloropropene	ND	0.50	1	
Bromodichloromethane	ND	1.0	1		t-1,3-Dichloropropene	ND	0.50	1	
Bromoform	ND	1.0	1		Ethylbenzene	ND	1.0	1	
Bromomethane	ND	10	1		2-Hexanone	ND	10	1	
2-Butanone	ND	10	1		Isopropylbenzene	ND	1.0	1	
n-Butylbenzene	ND	1.0	1		p-Isopropyltoluene	ND	1.0	1	
sec-Butylbenzene	ND	1.0	1		Methylene Chloride	ND	10	1	
tert-Butylbenzene	ND	1.0	1		4-Methyl-2-Pentanone	ND	10	1	
Carbon Disulfide	ND	10	1		Naphthalene	ND	10	1	
Carbon Tetrachloride	ND	0.50	1		n-Propylbenzene	ND	1.0	1	
Chlorobenzene	ND	1.0	1		Styrene	ND	1.0	1	
Chloroethane	ND	5.0	1		1,1,1,2-Tetrachloroethane	ND	1.0	1	
Chloroform	ND	1.0	1		1,1,2,2-Tetrachloroethane	ND	1.0	1	
Chloromethane	ND	10	1		Tetrachloroethene	ND	1.0	1	
2-Chlorotoluene	ND	1.0	1		Toluene	ND	1.0	1	
4-Chlorotoluene	ND	1.0	1		1,2,3-Trichlorobenzene	ND	1.0	1	
Dibromochloromethane	ND	1.0	1		1,2,4-Trichlorobenzene	ND	1.0	1	
1,2-Dibromo-3-Chloropropane	ND	5.0	1		1,1,1-Trichloroethane	ND	1.0	1	
1,2-Dibromoethane	ND	1.0	1		1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	10	1	
Dibromomethane	ND	1.0	1		1,1,2-Trichloroethane	ND	1.0	1	
1,2-Dichlorobenzene	ND	1.0	1		Trichloroethene	ND	1.0	1	
1,3-Dichlorobenzene	ND	1.0	1		Trichlorofluoromethane	ND	10	1	
1,4-Dichlorobenzene	ND	1.0	1		1,2,3-Trichloropropane	ND	5.0	1	
Dichlorodifluoromethane	ND	1.0	1		1,2,4-Trimethylbenzene	ND	1.0	1	
1,1-Dichloroethane	ND	1.0	1		1,3,5-Trimethylbenzene	ND	1.0	1	
1,2-Dichloroethane	ND	0.50	1		Vinyl Acetate	ND	10	1	
1,1-Dichloroethene	ND	1.0	1		Vinyl Chloride	ND	0.50	1	
c-1,2-Dichloroethene	ND	1.0	1		p/m-Xylene	ND	1.0	1	
t-1,2-Dichloroethene	ND	1.0	1		o-Xylene	ND	1.0	1	
1,2-Dichloropropane	ND	1.0	1						
Surrogates:	REC (%)	Control Limits	Qual		Surrogates:	REC (%)	Control Limits	Qual	
1,4-Bromofluorobenzene	102	80-120			Dibromofluoromethane	101	80-126		
1,2-Dichloroethane-d4	95	80-134			Toluene-d8	98	80-120		

Return to Contents

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers



Analytical Report



Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 02/07/13
 Work Order No: 13-02-0452
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Raytheon Main / 532.30

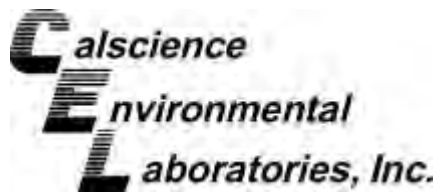
Page 4 of 7

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-34B	13-02-0452-4-A	02/06/13 15:58	Aqueous	GC/MS Z	02/08/13	02/08/13 20:02	130208L01

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Acetone	ND	20	1		1,3-Dichloropropane	ND	1.0	1	
Benzene	ND	0.50	1		2,2-Dichloropropane	ND	1.0	1	
Bromobenzene	ND	1.0	1		1,1-Dichloropropene	ND	1.0	1	
Bromochloromethane	ND	1.0	1		c-1,3-Dichloropropene	ND	0.50	1	
Bromodichloromethane	ND	1.0	1		t-1,3-Dichloropropene	ND	0.50	1	
Bromoform	ND	1.0	1		Ethylbenzene	ND	1.0	1	
Bromomethane	ND	10	1		2-Hexanone	ND	10	1	
2-Butanone	ND	10	1		Isopropylbenzene	ND	1.0	1	
n-Butylbenzene	ND	1.0	1		p-Isopropyltoluene	ND	1.0	1	
sec-Butylbenzene	ND	1.0	1		Methylene Chloride	ND	10	1	
tert-Butylbenzene	ND	1.0	1		4-Methyl-2-Pentanone	ND	10	1	
Carbon Disulfide	ND	10	1		Naphthalene	ND	10	1	
Carbon Tetrachloride	ND	0.50	1		n-Propylbenzene	ND	1.0	1	
Chlorobenzene	ND	1.0	1		Styrene	ND	1.0	1	
Chloroethane	ND	5.0	1		1,1,1,2-Tetrachloroethane	ND	1.0	1	
Chloroform	ND	1.0	1		1,1,2,2-Tetrachloroethane	ND	1.0	1	
Chloromethane	ND	10	1		Tetrachloroethene	ND	1.0	1	
2-Chlorotoluene	ND	1.0	1		Toluene	ND	1.0	1	
4-Chlorotoluene	ND	1.0	1		1,2,3-Trichlorobenzene	ND	1.0	1	
Dibromochloromethane	ND	1.0	1		1,2,4-Trichlorobenzene	ND	1.0	1	
1,2-Dibromo-3-Chloropropane	ND	5.0	1		1,1,1-Trichloroethane	ND	1.0	1	
1,2-Dibromoethane	ND	1.0	1		1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	10	1	
Dibromomethane	ND	1.0	1		1,1,2-Trichloroethane	2.0	1.0	1	
1,2-Dichlorobenzene	ND	1.0	1		Trichloroethene	ND	1.0	1	
1,3-Dichlorobenzene	ND	1.0	1		Trichlorofluoromethane	ND	10	1	
1,4-Dichlorobenzene	ND	1.0	1		1,2,3-Trichloropropane	ND	5.0	1	
Dichlorodifluoromethane	ND	1.0	1		1,2,4-Trimethylbenzene	ND	1.0	1	
1,1-Dichloroethane	4.6	1.0	1		1,3,5-Trimethylbenzene	ND	1.0	1	
1,2-Dichloroethane	1.0	0.50	1		Vinyl Acetate	ND	10	1	
1,1-Dichloroethene	440	5.0	5		Vinyl Chloride	ND	0.50	1	
c-1,2-Dichloroethene	ND	1.0	1		p/m-Xylene	ND	1.0	1	
t-1,2-Dichloroethene	ND	1.0	1		o-Xylene	ND	1.0	1	
1,2-Dichloropropane	ND	1.0	1						
<u>Surrogates:</u>	<u>REC (%)</u>	<u>Control Limits</u>	<u>Qual</u>		<u>Surrogates:</u>	<u>REC (%)</u>	<u>Control Limits</u>	<u>Qual</u>	
1,4-Bromofluorobenzene	102	80-120			Dibromofluoromethane	103	80-126		
1,2-Dichloroethane-d4	96	80-134			Toluene-d8	98	80-120		

Return to Contents

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers



Analytical Report



Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 02/07/13
 Work Order No: 13-02-0452
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Raytheon Main / 532.30

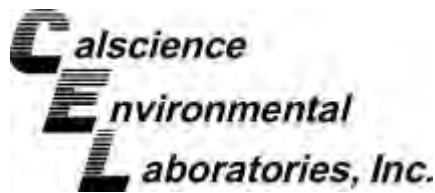
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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-29	13-02-0452-5-B	02/07/13 09:45	Aqueous	GC/MS Z	02/11/13	02/11/13 15:19	130211L01

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Acetone	ND	40	2		1,3-Dichloropropane	ND	2.0	2	
Benzene	ND	1.0	2		2,2-Dichloropropane	ND	2.0	2	
Bromobenzene	ND	2.0	2		1,1-Dichloropropene	ND	2.0	2	
Bromochloromethane	ND	2.0	2		c-1,3-Dichloropropene	ND	1.0	2	
Bromodichloromethane	ND	2.0	2		t-1,3-Dichloropropene	ND	1.0	2	
Bromoform	ND	2.0	2		Ethylbenzene	ND	2.0	2	
Bromomethane	ND	20	2		2-Hexanone	ND	20	2	
2-Butanone	ND	20	2		Isopropylbenzene	ND	2.0	2	
n-Butylbenzene	ND	2.0	2		p-Isopropyltoluene	ND	2.0	2	
sec-Butylbenzene	ND	2.0	2		Methylene Chloride	ND	20	2	
tert-Butylbenzene	ND	2.0	2		4-Methyl-2-Pentanone	ND	20	2	
Carbon Disulfide	ND	20	2		Naphthalene	ND	20	2	
Carbon Tetrachloride	ND	1.0	2		n-Propylbenzene	ND	2.0	2	
Chlorobenzene	ND	2.0	2		Styrene	ND	2.0	2	
Chloroethane	ND	10	2		1,1,1,2-Tetrachloroethane	ND	2.0	2	
Chloroform	ND	2.0	2		1,1,2,2-Tetrachloroethane	ND	2.0	2	
Chloromethane	ND	20	2		Tetrachloroethene	ND	2.0	2	
2-Chlorotoluene	ND	2.0	2		Toluene	ND	2.0	2	
4-Chlorotoluene	ND	2.0	2		1,2,3-Trichlorobenzene	ND	2.0	2	
Dibromochloromethane	ND	2.0	2		1,2,4-Trichlorobenzene	ND	2.0	2	
1,2-Dibromo-3-Chloropropane	ND	10	2		1,1,1-Trichloroethane	ND	2.0	2	
1,2-Dibromoethane	ND	2.0	2		1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	20	2	
Dibromomethane	ND	2.0	2		1,1,2-Trichloroethane	ND	2.0	2	
1,2-Dichlorobenzene	ND	2.0	2		Trichloroethene	7.3	2.0	2	
1,3-Dichlorobenzene	ND	2.0	2		Trichlorofluoromethane	ND	20	2	
1,4-Dichlorobenzene	ND	2.0	2		1,2,3-Trichloropropane	ND	10	2	
Dichlorodifluoromethane	ND	2.0	2		1,2,4-Trimethylbenzene	ND	2.0	2	
1,1-Dichloroethane	2.6	2.0	2		1,3,5-Trimethylbenzene	ND	2.0	2	
1,2-Dichloroethane	ND	1.0	2		Vinyl Acetate	ND	20	2	
1,1-Dichloroethene	290	2.0	2		Vinyl Chloride	ND	1.0	2	
c-1,2-Dichloroethene	ND	2.0	2		p/m-Xylene	ND	2.0	2	
t-1,2-Dichloroethene	ND	2.0	2		o-Xylene	ND	2.0	2	
1,2-Dichloropropane	ND	2.0	2						
Surrogates:	REC (%)	Control Limits	Qual		Surrogates:	REC (%)	Control Limits	Qual	
1,4-Bromofluorobenzene	103	80-120			Dibromofluoromethane	101	80-126		
1,2-Dichloroethane-d4	95	80-134			Toluene-d8	99	80-120		

Return to Contents

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers



Analytical Report



Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 02/07/13
 Work Order No: 13-02-0452
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Raytheon Main / 532.30

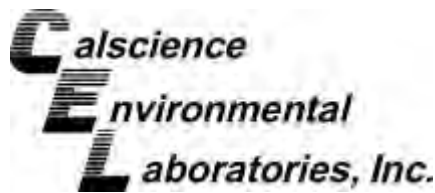
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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-14-001-10,021	N/A	Aqueous	GC/MS Z	02/08/13	02/08/13 12:20	130208L01

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Acetone	ND	20	1		1,3-Dichloropropane	ND	1.0	1	
Benzene	ND	0.50	1		2,2-Dichloropropane	ND	1.0	1	
Bromobenzene	ND	1.0	1		1,1-Dichloropropene	ND	1.0	1	
Bromochloromethane	ND	1.0	1		c-1,3-Dichloropropene	ND	0.50	1	
Bromodichloromethane	ND	1.0	1		t-1,3-Dichloropropene	ND	0.50	1	
Bromoform	ND	1.0	1		Ethylbenzene	ND	1.0	1	
Bromomethane	ND	10	1		2-Hexanone	ND	10	1	
2-Butanone	ND	10	1		Isopropylbenzene	ND	1.0	1	
n-Butylbenzene	ND	1.0	1		p-Isopropyltoluene	ND	1.0	1	
sec-Butylbenzene	ND	1.0	1		Methylene Chloride	ND	10	1	
tert-Butylbenzene	ND	1.0	1		4-Methyl-2-Pentanone	ND	10	1	
Carbon Disulfide	ND	10	1		Naphthalene	ND	10	1	
Carbon Tetrachloride	ND	0.50	1		n-Propylbenzene	ND	1.0	1	
Chlorobenzene	ND	1.0	1		Styrene	ND	1.0	1	
Chloroethane	ND	5.0	1		1,1,1,2-Tetrachloroethane	ND	1.0	1	
Chloroform	ND	1.0	1		1,1,2,2-Tetrachloroethane	ND	1.0	1	
Chloromethane	ND	10	1		Tetrachloroethene	ND	1.0	1	
2-Chlorotoluene	ND	1.0	1		Toluene	ND	1.0	1	
4-Chlorotoluene	ND	1.0	1		1,2,3-Trichlorobenzene	ND	1.0	1	
Dibromochloromethane	ND	1.0	1		1,2,4-Trichlorobenzene	ND	1.0	1	
1,2-Dibromo-3-Chloropropane	ND	5.0	1		1,1,1-Trichloroethane	ND	1.0	1	
1,2-Dibromoethane	ND	1.0	1		1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	10	1	
Dibromomethane	ND	1.0	1		1,1,2-Trichloroethane	ND	1.0	1	
1,2-Dichlorobenzene	ND	1.0	1		Trichloroethene	ND	1.0	1	
1,3-Dichlorobenzene	ND	1.0	1		Trichlorofluoromethane	ND	10	1	
1,4-Dichlorobenzene	ND	1.0	1		1,2,3-Trichloropropane	ND	5.0	1	
Dichlorodifluoromethane	ND	1.0	1		1,2,4-Trimethylbenzene	ND	1.0	1	
1,1-Dichloroethane	ND	1.0	1		1,3,5-Trimethylbenzene	ND	1.0	1	
1,2-Dichloroethane	ND	0.50	1		Vinyl Acetate	ND	10	1	
1,1-Dichloroethene	ND	1.0	1		Vinyl Chloride	ND	0.50	1	
c-1,2-Dichloroethene	ND	1.0	1		p/m-Xylene	ND	1.0	1	
t-1,2-Dichloroethene	ND	1.0	1		o-Xylene	ND	1.0	1	
1,2-Dichloropropane	ND	1.0	1						
Surrogates:	REC (%)	Control Limits	DF	Qual	Surrogates:	REC (%)	Control Limits	DF	Qual
1,4-Bromofluorobenzene	101	80-120			Dibromofluoromethane	101	80-126		
1,2-Dichloroethane-d4	94	80-134			Toluene-d8	98	80-120		

Return to Contents

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers



Analytical Report



Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 02/07/13
 Work Order No: 13-02-0452
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Raytheon Main / 532.30

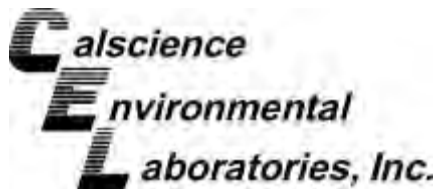
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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-14-001-10,037	N/A	Aqueous	GC/MS Z	02/11/13	02/11/13 14:52	130211L01

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Acetone	ND	20	1		1,3-Dichloropropane	ND	1.0	1	
Benzene	ND	0.50	1		2,2-Dichloropropane	ND	1.0	1	
Bromobenzene	ND	1.0	1		1,1-Dichloropropene	ND	1.0	1	
Bromochloromethane	ND	1.0	1		c-1,3-Dichloropropene	ND	0.50	1	
Bromodichloromethane	ND	1.0	1		t-1,3-Dichloropropene	ND	0.50	1	
Bromoform	ND	1.0	1		Ethylbenzene	ND	1.0	1	
Bromomethane	ND	10	1		2-Hexanone	ND	10	1	
2-Butanone	ND	10	1		Isopropylbenzene	ND	1.0	1	
n-Butylbenzene	ND	1.0	1		p-Isopropyltoluene	ND	1.0	1	
sec-Butylbenzene	ND	1.0	1		Methylene Chloride	ND	10	1	
tert-Butylbenzene	ND	1.0	1		4-Methyl-2-Pentanone	ND	10	1	
Carbon Disulfide	ND	10	1		Naphthalene	ND	10	1	
Carbon Tetrachloride	ND	0.50	1		n-Propylbenzene	ND	1.0	1	
Chlorobenzene	ND	1.0	1		Styrene	ND	1.0	1	
Chloroethane	ND	5.0	1		1,1,1,2-Tetrachloroethane	ND	1.0	1	
Chloroform	ND	1.0	1		1,1,2,2-Tetrachloroethane	ND	1.0	1	
Chloromethane	ND	10	1		Tetrachloroethene	ND	1.0	1	
2-Chlorotoluene	ND	1.0	1		Toluene	ND	1.0	1	
4-Chlorotoluene	ND	1.0	1		1,2,3-Trichlorobenzene	ND	1.0	1	
Dibromochloromethane	ND	1.0	1		1,2,4-Trichlorobenzene	ND	1.0	1	
1,2-Dibromo-3-Chloropropane	ND	5.0	1		1,1,1-Trichloroethane	ND	1.0	1	
1,2-Dibromoethane	ND	1.0	1		1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	10	1	
Dibromomethane	ND	1.0	1		1,1,2-Trichloroethane	ND	1.0	1	
1,2-Dichlorobenzene	ND	1.0	1		Trichloroethene	ND	1.0	1	
1,3-Dichlorobenzene	ND	1.0	1		Trichlorofluoromethane	ND	10	1	
1,4-Dichlorobenzene	ND	1.0	1		1,2,3-Trichloropropane	ND	5.0	1	
Dichlorodifluoromethane	ND	1.0	1		1,2,4-Trimethylbenzene	ND	1.0	1	
1,1-Dichloroethane	ND	1.0	1		1,3,5-Trimethylbenzene	ND	1.0	1	
1,2-Dichloroethane	ND	0.50	1		Vinyl Acetate	ND	10	1	
1,1-Dichloroethene	ND	1.0	1		Vinyl Chloride	ND	0.50	1	
c-1,2-Dichloroethene	ND	1.0	1		p/m-Xylene	ND	1.0	1	
t-1,2-Dichloroethene	ND	1.0	1		o-Xylene	ND	1.0	1	
1,2-Dichloropropane	ND	1.0	1						
Surrogates:	REC (%)	Control Limits	DF	Qual	Surrogates:	REC (%)	Control Limits	DF	Qual
1,4-Bromofluorobenzene	102	80-120			Dibromofluoromethane	103	80-126		
1,2-Dichloroethane-d4	95	80-134			Toluene-d8	99	80-120		

Return to Contents

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers



Quality Control - Spike/Spike Duplicate



Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 02/07/13
 Work Order No: 13-02-0452
 Preparation: EPA 5030C
 Method: EPA 8260B

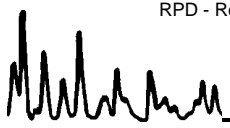
Project Raytheon Main / 532.30

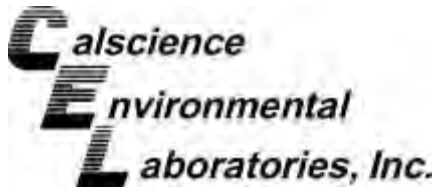
Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
13-02-0448-2	Aqueous	GC/MS Z	02/08/13	02/08/13	130208S01

Parameter	SAMPLE CONC	SPIKE ADDED	MS CONC	MS %REC	MSD CONC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Benzene	ND	50.00	48.79	98	48.26	97	78-120	1	0-20	
Carbon Tetrachloride	ND	50.00	48.76	98	48.91	98	67-139	0	0-20	
Chlorobenzene	ND	50.00	48.15	96	47.45	95	80-120	1	0-20	
1,2-Dibromoethane	ND	50.00	49.10	98	48.52	97	80-123	1	0-20	
1,2-Dichlorobenzene	ND	50.00	47.65	95	47.64	95	76-120	0	0-20	
1,2-Dichloroethane	ND	50.00	46.22	92	45.33	91	76-130	2	0-20	
1,1-Dichloroethene	ND	50.00	39.29	79	39.85	80	70-130	1	0-27	
Ethylbenzene	ND	50.00	46.47	93	46.04	92	73-127	1	0-20	
Toluene	ND	50.00	50.29	101	50.13	100	72-126	0	0-20	
Trichloroethene	ND	50.00	47.14	94	46.55	93	74-122	1	0-20	
Vinyl Chloride	ND	50.00	41.14	82	41.82	84	65-131	2	0-24	
p/m-Xylene	ND	100.0	97.90	98	96.60	97	70-130	1	0-30	
o-Xylene	ND	50.00	51.15	102	50.90	102	70-130	0	0-30	
Methyl-t-Butyl Ether (MTBE)	4.337	50.00	47.60	87	48.66	89	69-123	2	0-20	

Return to Contents

RPD - Relative Percent Difference , CL - Control Limit





Quality Control - Spike/Spike Duplicate



Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 02/07/13
 Work Order No: 13-02-0452
 Preparation: EPA 5030C
 Method: EPA 8260B

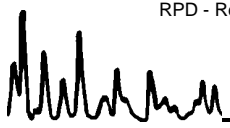
Project Raytheon Main / 532.30

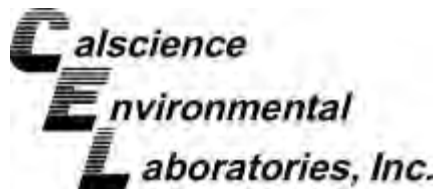
Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
MW-29	Aqueous	GC/MS Z	02/11/13	02/11/13	130211S01

Parameter	SAMPLE CONC	SPIKE ADDED	MS CONC	MS %REC	MSD CONC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Benzene	ND	100.0	95.52	96	95.25	95	78-120	0	0-20	
Carbon Tetrachloride	ND	100.0	96.32	96	94.89	95	67-139	1	0-20	
Chlorobenzene	ND	100.0	92.63	93	92.84	93	80-120	0	0-20	
1,2-Dibromoethane	ND	100.0	99.58	100	99.30	99	80-123	0	0-20	
1,2-Dichlorobenzene	ND	100.0	92.81	93	93.10	93	76-120	0	0-20	
1,2-Dichloroethane	ND	100.0	95.76	96	94.25	94	76-130	2	0-20	
1,1-Dichloroethene	288.3	100.0	377.0	89	365.6	77	70-130	3	0-27	
Ethylbenzene	ND	100.0	87.32	87	87.82	88	73-127	1	0-20	
Toluene	ND	100.0	97.17	97	96.72	97	72-126	0	0-20	
Trichloroethene	7.290	100.0	97.76	90	96.09	89	74-122	2	0-20	
Vinyl Chloride	ND	100.0	94.26	94	93.20	93	65-131	1	0-24	
p/m-Xylene	ND	200.0	186.3	93	186.7	93	70-130	0	0-30	
o-Xylene	ND	100.0	99.00	99	99.33	99	70-130	0	0-30	
Methyl-t-Butyl Ether (MTBE)	ND	100.0	96.35	96	94.94	95	69-123	1	0-20	

Return to Contents

RPD - Relative Percent Difference , CL - Control Limit





Quality Control - LCS/LCS Duplicate



Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: N/A
 Work Order No: 13-02-0452
 Preparation: EPA 3520C
 Method: EPA 8270C(M) Isotope Dilution

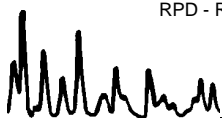
Project: Raytheon Main / 532.30

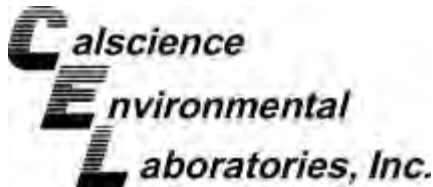
Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-09-004-2,192	Aqueous	GC/MS DDD	02/08/13	02/12/13	130208L16

Parameter	<u>SPIKE ADDED</u>	<u>LCS CONC</u>	<u>LCS %REC</u>	<u>LCSD CONC</u>	<u>LCSD %REC</u>	<u>%REC CL</u>	<u>RPD</u>	<u>RPD CL</u>	<u>Qualifiers</u>
1,4-Dioxane	200.0	203.3	102	168.3	84	50-130	19	0-20	

Return to Contents

RPD - Relative Percent Difference , CL - Control Limit





Quality Control - LCS/LCS Duplicate



Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: N/A
 Work Order No: 13-02-0452
 Preparation: EPA 5030C
 Method: EPA 8260B

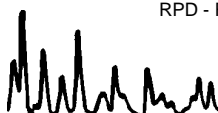
Project: Raytheon Main / 532.30

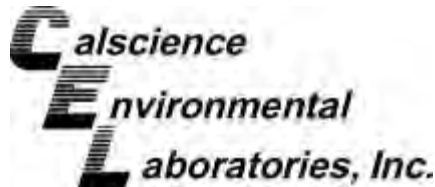
Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number					
099-14-001-10,021	Aqueous	GC/MS Z	02/08/13	02/08/13	130208L01					
Parameter	<u>SPIKE ADDED</u>	<u>LCS CONC</u>	<u>LCS %REC</u>	<u>LCSD CONC</u>	<u>LCSD %REC</u>	<u>%REC CL</u>	<u>ME CL</u>	<u>RPD</u>	<u>RPD CL</u>	<u>Qualifiers</u>
Benzene	50.00	48.09	96	47.72	95	80-120	73-127	1	0-20	
Carbon Tetrachloride	50.00	48.75	97	48.09	96	66-138	54-150	1	0-20	
Chlorobenzene	50.00	47.85	96	47.22	94	80-120	73-127	1	0-20	
1,2-Dibromoethane	50.00	48.04	96	49.65	99	80-120	73-127	3	0-20	
1,2-Dichlorobenzene	50.00	47.72	95	47.39	95	80-120	73-127	1	0-20	
1,2-Dichloroethane	50.00	45.78	92	46.15	92	80-129	72-137	1	0-20	
1,1-Dichloroethene	50.00	40.28	81	39.36	79	71-131	61-141	2	0-20	
Ethylbenzene	50.00	46.03	92	44.93	90	80-123	73-130	2	0-20	
Toluene	50.00	50.15	100	49.09	98	79-121	72-128	2	0-20	
Trichloroethene	50.00	46.44	93	45.53	91	80-120	73-127	2	0-20	
Vinyl Chloride	50.00	43.27	87	42.43	85	70-136	59-147	2	0-20	
p/m-Xylene	100.0	97.24	97	95.10	95	75-125	67-133	2	0-25	
o-Xylene	50.00	51.10	102	50.40	101	75-125	67-133	1	0-25	
Methyl-t-Butyl Ether (MTBE)	50.00	45.48	91	47.00	94	72-126	63-135	3	0-22	

Total number of LCS compounds : 14
 Total number of ME compounds : 0
 Total number of ME compounds allowed : 1
 LCS ME CL validation result : Pass

Return to Contents

RPD - Relative Percent Difference , CL - Control Limit





Quality Control - LCS/LCS Duplicate



Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: N/A
 Work Order No: 13-02-0452
 Preparation: EPA 5030C
 Method: EPA 8260B

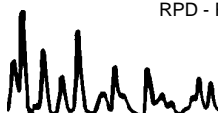
Project: Raytheon Main / 532.30

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number					
099-14-001-10,037	Aqueous	GC/MS Z	02/11/13	02/11/13	130211L01					
Parameter	<u>SPIKE ADDED</u>	<u>LCS CONC</u>	<u>LCS %REC</u>	<u>LCSD CONC</u>	<u>LCSD %REC</u>	<u>%REC CL</u>	<u>ME CL</u>	<u>RPD</u>	<u>RPD CL</u>	<u>Qualifiers</u>
Benzene	50.00	47.29	95	46.46	93	80-120	73-127	2	0-20	
Carbon Tetrachloride	50.00	47.98	96	46.85	94	66-138	54-150	2	0-20	
Chlorobenzene	50.00	45.93	92	45.20	90	80-120	73-127	2	0-20	
1,2-Dibromoethane	50.00	47.55	95	48.13	96	80-120	73-127	1	0-20	
1,2-Dichlorobenzene	50.00	46.37	93	45.90	92	80-120	73-127	1	0-20	
1,2-Dichloroethane	50.00	46.01	92	45.84	92	80-129	72-137	0	0-20	
1,1-Dichloroethene	50.00	40.11	80	39.32	79	71-131	61-141	2	0-20	
Ethylbenzene	50.00	43.96	88	43.18	86	80-123	73-130	2	0-20	
Toluene	50.00	48.56	97	47.60	95	79-121	72-128	2	0-20	
Trichloroethene	50.00	44.80	90	44.47	89	80-120	73-127	1	0-20	
Vinyl Chloride	50.00	47.01	94	46.19	92	70-136	59-147	2	0-20	
p/m-Xylene	100.0	93.43	93	91.62	92	75-125	67-133	2	0-25	
o-Xylene	50.00	49.54	99	48.71	97	75-125	67-133	2	0-25	
Methyl-t-Butyl Ether (MTBE)	50.00	48.47	97	48.38	97	72-126	63-135	0	0-22	

Total number of LCS compounds : 14
 Total number of ME compounds : 0
 Total number of ME compounds allowed : 1
 LCS ME CL validation result : Pass

Return to Contents

RPD - Relative Percent Difference , CL - Control Limit



WORK ORDER #: 13-02-0452

Lab Sample Number	Client Sample ID	Method	Extraction	Date/Time Analyzed	Chemist ID	Instrument	Analytical Location
1-A	TB-020613B	EPA 8260B	EPA 5030C	02/8/2013 12:47	796	GC/MS Z	2
2-A	MW-37	EPA 8260B	EPA 5030C	02/8/2013 19:07	796	GC/MS Z	2
2-D	MW-37	EPA 8270C(M) Iso	EPA 3520C	02/13/2013 16:22	851	GC/MS DD	1
3-A	MW-30A	EPA 8260B	EPA 5030C	02/8/2013 19:34	796	GC/MS Z	2
3-D	MW-30A	EPA 8270C(M) Iso	EPA 3520C	02/13/2013 17:39	851	GC/MS DD	1
4-A	MW-34B	EPA 8260B	EPA 5030C	02/8/2013 20:02	796	GC/MS Z	2
4-B	MW-34B	EPA 8260B	EPA 5030C	02/11/2013 15:47	796	GC/MS Z	2
4-D	MW-34B	EPA 8270C(M) Iso	EPA 3520C	02/13/2013 18:04	851	GC/MS DD	1
5-B	MW-29	EPA 8260B	EPA 5030C	02/11/2013 15:19	796	GC/MS Z	2
5-D	MW-29	EPA 8270C(M) Iso	EPA 3520C	02/13/2013 18:30	851	GC/MS DD	1

Return to Contents

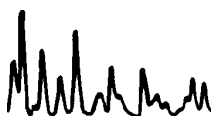
Location	Description
1	7440 Lincoln Way, Garden Grove, CA 92841
2	7445 Lampson Avenue, Garden Grove, CA 92841

Work Order Number: 13-02-0452

<u>Qualifier</u>	<u>Definition</u>
*	See applicable analysis comment.
<	Less than the indicated value.
>	Greater than the indicated value.
1	Surrogate compound recovery was out of control due to a required sample dilution. Therefore, the sample data was reported without further clarification.
2	Surrogate compound recovery was out of control due to matrix interference. The associated method blank surrogate spike compound was in control and, therefore, the sample data was reported without further clarification.
3	Recovery of the Matrix Spike (MS) or Matrix Spike Duplicate (MSD) compound was out of control due to matrix interference. The associated LCS and/or LCSD was in control and, therefore, the sample data was reported without further clarification.
4	The MS/MSD RPD was out of control due to matrix interference. The LCS/LCSD RPD was in control and, therefore, the sample data was reported without further clarification.
5	The PDS/PDSD or PES/PESD associated with this batch of samples was out of control due to a matrix interference effect. The associated batch LCS/LCSD was in control and, hence, the associated sample data was reported without further clarification.
6	Surrogate recovery below the acceptance limit.
7	Surrogate recovery above the acceptance limit.
B	Analyte was present in the associated method blank.
BU	Sample analyzed after holding time expired.
E	Concentration exceeds the calibration range.
ET	Sample was extracted past end of recommended max. holding time.
HD	The chromatographic pattern was inconsistent with the profile of the reference fuel standard.
HDH	The sample chromatographic pattern for TPH matches the chromatographic pattern of the specified standard but heavier hydrocarbons were also present (or detected).
HDL	The sample chromatographic pattern for TPH matches the chromatographic pattern of the specified standard but lighter hydrocarbons were also present (or detected).
J	Analyte was detected at a concentration below the reporting limit and above the laboratory method detection limit. Reported value is estimated.
ME	LCS/LCSD Recovery Percentage is within Marginal Exceedance (ME) Control Limit range.
ND	Parameter not detected at the indicated reporting limit.
Q	Spike recovery and RPD control limits do not apply resulting from the parameter concentration in the sample exceeding the spike concentration by a factor of four or greater.
SG	The sample extract was subjected to Silica Gel treatment prior to analysis.
X	% Recovery and/or RPD out-of-range.
Z	Analyte presence was not confirmed by second column or GC/MS analysis.

Solid - Unless otherwise indicated, solid sample data is reported on a wet weight basis, not corrected for % moisture. All QC results are reported on a wet weight basis.

For any analysis identified as a "field" test with a holding time (HT) \leq 15 minutes where the sample is received outside of HT, CalScience will adhere to its internal HT of 24 hours. In cases where sample analysis does not meet CalScience's internal HT, results will be appropriately qualified.



13-02-0452

Virendra Patel

From: Erin Hunter [EHunter@HARGIS.COM]
Sent: Friday, February 22, 2013 8:44 AM
To: Virendra Patel
Cc: Emma Dennison
Subject: RE: Raytheon Main / 532.30 / CEL 13-02-0452 - Final PDF and EDD files.

Virendra –

We mislabeled one the wells that we sampled. Could you please make the following revision on the EDD and PDF?

- MW-30B (Lab Sample # 13-02-0452-3-A and 13-02-0452-3-D) should be labeled as **MW-30A**

Please let me know if you have questions.

Thanks!
Erin

Erin J. Hunter
Hydrogeologist
Hargis + Associates, Inc.
858.455.6500 ext. 115
ehunter@hargis.com

From: Virendra Patel [<mailto:vpatel@calscience.com>]
Sent: Thursday, February 21, 2013 3:12 PM
To: Anita Akackj; Erin Hunter; ksimon@hargis.com; Stacia Prazen; Steve Netto
Cc: Emma Dennison
Subject: Raytheon Main / 532.30 / CEL 13-02-0452 - Final PDF and EDD files.

<<13-02-0452.pdf>> <<13020452.csv>>

Final PDF and EDD files attached for the subject project samples collected on 02/06-07/2013. **Note, final hard copies of the report will not be mailed to your attention, therefore, we ask that you print the attached files and accept them as final.**

Final Invoice will be sent of Jennifer McKinney's attention.

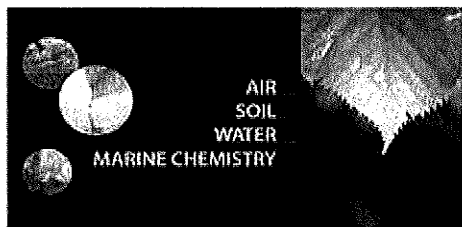
Please call with any questions or concerns.

Best Regards,

Virendra Patel
Project Manager

 **CalScience**

7440 Lincoln Way
Garden Grove, CA 92841-1427
(714) 895-5494
www.calscience.com



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CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST FORM

DATE 2/16/13 - 2/7/13 PAGE 1 OF 1

Revised COC
Received 02/08/13 @ 10:13 AM

PROJECT NAME RAYTHEON MAIN		PROJECT No./TASK No. 532.30		SAMPLE CONTAINERS		ANALYSIS REQUESTED		ESTIMATED CONCENTRATION RANGE (ppb) FOR VOAS		SPECIAL HANDLING		LABORATORY INFORMATION				
PROJECT MANAGER Chris Ross		Phone No. 858-455-6500						13-02-0452				Calscience				
QA MANAGER Steve Netto		Fax No. 858-455-6533										Attn:				
SAMPLER (SIGNATURE) <i>[Signature]</i>		SAMPLER (PRINTED) ERIN HUNTER										Virendra Patel				
LAB ID	SAMPLE ID	SAMPLE COLLECTION		MATRIX		PRESERVATION				40 ml VOA 1 L Amber	8260B VOCs 8270 MOD 1,4-Dioxane		0 - 10 10 - 100 100 - 1,000 > 1,000	Standard TAT	REMARKS	
		Date	Time	Soil	Ground-water	Surface water	Lab H2O	HCl	HNO3		NaOH	H2SO4				Ice
1	TB-02003B	02/06/13	0900			X	X				X	X				
2	MW-37		1235	X			X				X	X				
3	MW-30B		1025	X			X				X	X				
4	MW-34B		1558	X			X				X	X				
5	MW-29	2/07/13	0945	X			X				X	X				

Total number of Containers per analysis: 12 **Total No. of Containers:** 10/10

Relinquished by: <i>[Signature]</i> A+H, Inc Company	Date Received by: <u>2/7/13</u> Time <u>18:10</u>	Received by: <u>Dannyle</u> Company <u>ca</u>	Date <u>2/7/13</u> Time <u>18:10</u>	INSTRUCTIONS 1. Fill out form completely except for shaded areas (lab use only); sign only after verified for completeness. 2. Complete in ballpoint pen. Draw one line through errors, initial and date correction. 3. Indicate number of sample containers in analysis request space; indicate choice with ✓ or x. 4. Note applicable preservatives, special instructions, and deviations from typical environmental samples. 5. Consult project QA documents for specific instructions.	Shipment Method: <u>Courier</u> Send Results to: <u>Steve Netto</u> <input checked="" type="checkbox"/> 9171 TOWNE CENTRE DRIVE, SUITE 375 SAN DIEGO, CA 92122 (858) 455-6500 <input type="checkbox"/> 1640 SOUTH STAPLEY DRIVE, SUITE 209 MESA, AZ 85204 (480) 345-0888 <input type="checkbox"/> 1820 EAST RIVER ROAD, SUITE 220 TUCSON, AZ 85718 (520) 881-7300
Relinquished by:	Date	Received by:	Date			Sample Receipt: ☐ No. of containers correct ☐ custody seals secure	Temp. @ receipt _____ °C ☐ received good condition/cold ☐ conforms to COC document

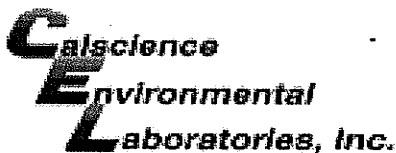
CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST FORM

DATE 2/16/13 - 2/7/13 PAGE 1 OF 1

PROJECT NAME RAYTHEON MAIN		PROJECT No./TASK No. 532.30		SAMPLE CONTAINERS	ANALYSIS REQUESTED	ESTIMATED CONCENTRATION RANGE (ppb) FOR VOAS	SPECIAL HANDLING	LABORATORY INFORMATION
PROJECT MANAGER Chris Ross		Phone No. 858-455-6500		40 ml VOA I L Amber 8260B VOCs 8270 MOD 1,4-Dioxane	0 - 10 10 - 100 100 - 1,000 > 1,000	13-02-0452	Standard TAT	LABORATORY INFORMATION
QA MANAGER Steve Netto		Fax No. 858-455-6533						CaScience
SAMPLER (SIGNATURE) 		SAMPLER (PRINTED) ERIN HUNTER						Attn: Virendra Patel

LAB ID	SAMPLE ID	SAMPLE COLLECTION		MATRIX		PRESERVATION					40 ml VOA I L Amber	8260B VOCs 8270 MOD 1,4-Dioxane	ESTIMATED CONCENTRATION RANGE (ppb) FOR VOAS	SPECIAL HANDLING	LABORATORY INFORMATION	
		Date	Time	Soil	Ground-water	Surface water	Lab H2O	HCl	HNO3	NaOH						H2SO4	Ice
1	TB-02063B	02/06/13	0900			X	X					2	X	X	X	
2	MW-37		1235	X		X						3	X	X	X	
			↓	X								1	X	X	X	
3	MW-30B		1025	X		X						3	X	X	X	
	↓		↓	X								1	X	X	X	
4	MW-34B		1558	X		X						3	X	X	X	
	↓		↓	X								1	X	X	X	
5	MW-29	2/07/13		X		X						3	X	X	X	
	↓		↓	X								1	X	X	X	

Total number of Containers per analysis:				(14) (14)	Total No. of Containers:				(10) (10)
Relinquished by: 		Date Received by: 2/7/13		Date 2/7/13		INSTRUCTIONS 1. Fill out form completely except for shaded areas (lab use only); sign only after verified for completeness. 2. Complete in ballpoint pen. Draw one line through errors, initial and date correction. 3. Indicate number of sample containers in analysis request space; indicate choice with ✓ or x. 4. Note applicable preservatives, special instructions, and deviations from typical environmental samples. 5. Consult project QA documents for specific instructions.			
Company A+H, Inc		Company DANNY		Time 18:10					
Relinquished by:		Date		Date					
Company		Company		Time		Sample Receipt:		Temp. @ receipt _____ °C	
						<input type="checkbox"/> No. of containers correct <input type="checkbox"/> custody secure		<input type="checkbox"/> received good condition/cold <input type="checkbox"/> conforms to COC document	
Shipment Method: Courier				Send Results to: Steve Netto					
<input checked="" type="checkbox"/> 9171 TOWNE CENTRE DRIVE, SUITE 375 SAN DIEGO, CA 92122 (858) 455-6500				<input type="checkbox"/> 1640 SOUTH STAPLEY DRIVE, SUITE 209 MESA, AZ 85204 (480) 345-0888					
<input type="checkbox"/> 1820 EAST RIVER ROAD, SUITE 220 TUCSON, AZ 85718 (520) 881-7300				Send invoice to San Diego, CA Attn: Accounts Payable					



WORK ORDER #: 13-02-0452

SAMPLE RECEIPT FORM

Cooler 1 of 1

CLIENT: Hargis + Associates

DATE: 02/07/13

TEMPERATURE: Thermometer ID: SC2 (Criteria: 0.0 °C - 6.0 °C, not frozen except sediment/tissue)
Temperature 3.6 °C - 0.2 °C (CF) = 3.4 °C [X] Blank [] Sample
[] Sample(s) outside temperature criteria (PM/APM contacted by: _____).
[] Sample(s) outside temperature criteria but received on ice/chilled on same day of sampling.
[] Received at ambient temperature, placed on ice for transport by Courier.
Ambient Temperature: [] Air [] Filter Initial: b.c

CUSTODY SEALS INTACT:
[] Cooler [] _____ [] No (Not Intact) [X] Not Present [] N/A Initial: b.c
[] Sample [] _____ [] No (Not Intact) [X] Not Present Initial: TS

SAMPLE CONDITION:
Chain-Of-Custody (COC) document(s) received with samples..... [X] Yes [] No [] N/A
COC document(s) received complete..... [X] Yes [] No [] N/A
[X] Collection date/time, matrix, and/or # of containers logged in based on sample labels. 2/7/13
[] No analysis requested. [] Not relinquished. [] No date/time relinquished.
* Sampler's name indicated on COC..... [X] Yes [] No [] N/A
Sample container label(s) consistent with COC..... [X] Yes [] No [] N/A
Sample container(s) intact and good condition..... [X] Yes [] No [] N/A
Proper containers and sufficient volume for analyses requested..... [X] Yes [] No [] N/A
Analyses received within holding time..... [X] Yes [] No [] N/A
pH / Res. Chlorine / Diss. Sulfide / Diss. Oxygen received within 24 hours... [] Yes [] No [X] N/A
Proper preservation noted on COC or sample container..... [X] Yes [] No [] N/A
[] Unpreserved vials received for Volatiles analysis
Volatile analysis container(s) free of headspace..... [X] Yes [] No [] N/A
Tedlar bag(s) free of condensation..... [] Yes [] No [X] N/A

CONTAINER TYPE:
Solid: [] 4ozCGJ [] 8ozCGJ [] 16ozCGJ [] Sleeve () [] EnCores® [] TerraCores® [] _____
Water: [] VOA [X] VOAh [] VOAna2 [] 125AGB [] 125AGBh [] 125AGBp [X] 1AGB [] 1AGBna2 [] 1AGBs
[] 500AGB [] 500AGJ [] 500AGJs [] 250AGB [] 250CGB [] 250CGBs [] 1PB [] 1PBna [] 500PB
[] 250PB [] 250PBn [] 125PB [] 125PBzanna [] 100PJ [] 100PJna2 [] _____ [] _____ [] _____
Air: [] Tedlar® [] Canister Other: [] _____ Trip Blank Lot#: N/A Labeled/Checked by: TS
Container: C: Clear A: Amber P: Plastic G: Glass J: Jar B: Bottle Z: Ziploc/Resealable Bag E: Envelope Reviewed by: YL
Preservative: h: HCL n: HNO3 na2: Na2S2O3 na: NaOH p: H3PO4 s: H2SO4 u: Ultra-pure zanna: ZnAc2+NaOH f: Filtered Scanned by: YL

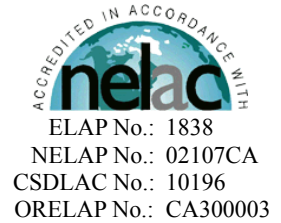


GROUNDWATER EXTRACTION AND TREATMENT SYSTEM ANALYTICAL RESULTS

APPENDIX A
LABORATORY ANALYTICAL REPORTS
(*SECOND QUARTER 2012*)

March 20, 2012

Steve Netto
Hargis & Associates, Inc.
9171 Towne Centre Drive, Suite 375
San Diego, CA 92122
Tel: (619) 249-3166
Fax: (858) 455-6533



Re: ATL Work Order Number : 1200860
Client Reference : Raytheon Fullerton - Quarterly, 532.15

Enclosed are the results for sample(s) received on March 09, 2012 by Advanced Technology Laboratories. The sample(s) are tested for the parameters as indicated on the enclosed chain of custody in accordance with applicable laboratory certifications. The laboratory results contained in this report specifically pertains to the sample(s) submitted.

Thank you for the opportunity to serve the needs of your company. If you have any questions, please feel free to contact me or your Project Manager.

Sincerely,

A handwritten signature in black ink, appearing to read "Eddie Rodriguez", followed by the initials "ER" in a smaller, less legible script.

Eddie Rodriguez
Laboratory Director

The cover letter and the case narrative are an integral part of this analytical report and its absence renders the report invalid. The report cannot be reproduced without written permission from the client and Advanced Technology Laboratories.



Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : Raytheon Fullerton - Quarterly, 532.15

Report To : Steve Netto

Reported : 03/20/2012

SUMMARY OF SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
EW-02	1200860-01	Groundwater	3/09/12 10:25	3/09/12 11:48
POX	1200860-02	Groundwater	3/09/12 9:10	3/09/12 11:48
MW-21	1200860-03	Groundwater	3/09/12 9:40	3/09/12 11:48
INF	1200860-04	Groundwater	3/09/12 8:40	3/09/12 11:48

CASE NARRATIVE

Samples for Alkalinity (310.1) were subcontracted to AETL with ELAP Cert.# 1541.



Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : Raytheon Fullerton - Quarterly, 532.15

Report To : Steve Netto

Reported : 03/20/2012

Client Sample ID EW-02

Lab ID: 1200860-01

Anions Scan by Ion Chromatography EPA 300.0

Analyst: Phali

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Chloride	97	5.0	NA	10	B2C0266	03/09/2012	03/09/12 17:06	
Nitrate as N	5.0	0.10	NA	1	B2C0266	03/09/2012	03/09/12 14:04	
Nitrite, as N	ND	0.10	NA	1	B2C0266	03/09/2012	03/09/12 14:04	
ortho-Phosphate (As P)	ND	0.05	NA	1	B2C0266	03/09/2012	03/09/12 14:04	
Sulfate	140	10	NA	10	B2C0266	03/09/2012	03/09/12 17:06	

Chemical Oxygen Demand by EPA 410.4

Analyst: LA

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Chemical Oxygen Demand	ND	5.0	NA	1	B2C0351	03/13/2012	03/13/12 13:00	

Total Metals by ICP-AES EPA 6010B

Analyst: KK/HF

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Selenium	ND	0.01	NA	1	B2C0370	03/14/2012	03/14/12 15:56	

Dissolved Metals by ICP-AES EPA 6010B

Analyst: KK/HF

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Calcium	85	0.50	NA	1	B2C0369	03/14/2012	03/14/12 16:37	
Iron	ND	0.50	NA	1	B2C0369	03/14/2012	03/14/12 16:37	
Magnesium	26	0.10	NA	1	B2C0369	03/14/2012	03/14/12 16:37	
Manganese	ND	0.50	NA	1	B2C0369	03/14/2012	03/14/12 16:37	
Selenium	ND	0.01	NA	1	B2C0369	03/14/2012	03/14/12 16:37	
Sodium	74	1.0	NA	1	B2C0369	03/14/2012	03/14/12 16:37	

Total Organic Carbon by SM 5310B

Analyst: PT

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Organic Carbon, Total	ND	3.0	NA	1	B2C0420	03/15/2012	03/15/12 22:36	J



Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : Raytheon Fullerton - Quarterly, 532.15

Report To : Steve Netto

Reported : 03/20/2012

Client Sample ID POX

Lab ID: 1200860-02

Anions Scan by Ion Chromatography EPA 300.0

Analyst: Phali

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Chloride	190	10	NA	20	B2C0266	03/09/2012	03/09/12 17:40	
Nitrate as N	6.3	0.10	NA	1	B2C0266	03/09/2012	03/09/12 14:15	
Nitrite, as N	ND	0.10	NA	1	B2C0266	03/09/2012	03/09/12 14:15	
ortho-Phosphate (As P)	ND	0.05	NA	1	B2C0266	03/09/2012	03/09/12 14:15	
Sulfate	140	5.0	NA	5	B2C0266	03/09/2012	03/09/12 16:55	

Chemical Oxygen Demand by EPA 410.4

Analyst: LA

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Chemical Oxygen Demand	10.3	5.0	NA	1	B2C0351	03/13/2012	03/13/12 13:00	

Total Organic Carbon by SM 5310B

Analyst: PT

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Organic Carbon, Total	ND	3.0	NA	1	B2C0420	03/15/2012	03/15/12 22:51	J



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 9171 Towne Centre Drive, Suite 375
 San Diego , CA 92122

Project Number : Raytheon Fullerton - Quarterly, 532.15
 Report To : Steve Netto
 Reported : 03/20/2012

Client Sample ID MW-21
Lab ID: 1200860-03

Anions Scan by Ion Chromatography EPA 300.0

Analyst: Phali

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Chloride	450	25	NA	50	B2C0266	03/09/2012	03/09/12 18:03	
Nitrate as N	10	0.20	NA	2	B2C0266	03/09/2012	03/09/12 14:26	D1
Nitrite, as N	ND	0.20	NA	2	B2C0266	03/09/2012	03/09/12 14:26	D1
ortho-Phosphate (As P)	ND	0.10	NA	2	B2C0266	03/09/2012	03/09/12 14:26	D1
Sulfate	120	10	NA	10	B2C0266	03/09/2012	03/09/12 17:17	

Chemical Oxygen Demand by EPA 410.4

Analyst: LA

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Chemical Oxygen Demand	ND	5.0	NA	1	B2C0351	03/13/2012	03/13/12 13:00	

Total Metals by ICP-AES EPA 6010B

Analyst: KK/HF

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Selenium	ND	0.01	NA	1	B2C0370	03/14/2012	03/14/12 15:59	

Dissolved Metals by ICP-AES EPA 6010B

Analyst: KK/HF

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Calcium	190	0.50	NA	1	B2C0369	03/14/2012	03/14/12 16:43	
Iron	ND	0.50	NA	1	B2C0369	03/14/2012	03/14/12 16:43	
Magnesium	52	0.10	NA	1	B2C0369	03/14/2012	03/14/12 16:43	
Manganese	ND	0.50	NA	1	B2C0369	03/14/2012	03/14/12 16:43	
Selenium	ND	0.01	NA	1	B2C0369	03/14/2012	03/14/12 16:43	
Sodium	160	5.0	NA	5	B2C0369	03/14/2012	03/15/12 08:40	

Total Organic Carbon by SM 5310B

Analyst: PT

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Organic Carbon, Total	ND	3.0	NA	1	B2C0420	03/15/2012	03/15/12 23:05	



Hargis & Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego , CA 92122

Project Number : Raytheon Fullerton - Quarterly, 532.15
 Report To : Steve Netto
 Reported : 03/20/2012

Client Sample ID INF
Lab ID: 1200860-04

Anions Scan by Ion Chromatography EPA 300.0

Analyst: Phali

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Chloride	190	10	NA	20	B2C0266	03/09/2012	03/09/12 17:52	
Nitrate as N	6.3	0.10	NA	1	B2C0266	03/09/2012	03/09/12 14:38	
Nitrite, as N	ND	0.10	NA	1	B2C0266	03/09/2012	03/09/12 14:38	
ortho-Phosphate (As P)	ND	0.05	NA	1	B2C0266	03/09/2012	03/09/12 14:38	
Sulfate	130	10	NA	10	B2C0266	03/09/2012	03/09/12 17:29	

Chemical Oxygen Demand by EPA 410.4

Analyst: LA

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Chemical Oxygen Demand	6.0	5.0	NA	1	B2C0351	03/13/2012	03/13/12 13:00	

Total Metals by ICP-AES EPA 6010B

Analyst: KK/HF

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Selenium	ND	0.01	NA	1	B2C0370	03/14/2012	03/14/12 16:04	

Dissolved Metals by ICP-AES EPA 6010B

Analyst: KK/HF

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Calcium	100	0.50	NA	1	B2C0369	03/14/2012	03/14/12 16:44	
Iron	ND	0.50	NA	1	B2C0369	03/14/2012	03/14/12 16:44	
Magnesium	30	0.10	NA	1	B2C0369	03/14/2012	03/14/12 16:44	
Manganese	ND	0.50	NA	1	B2C0369	03/14/2012	03/14/12 16:44	
Selenium	ND	0.01	NA	1	B2C0369	03/14/2012	03/14/12 16:44	
Sodium	89	1.0	NA	1	B2C0369	03/14/2012	03/14/12 16:44	

Total Organic Carbon by SM 5310B

Analyst: PT

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Organic Carbon, Total	ND	3.0	NA	1	B2C0420	03/15/2012	03/15/12 23:18	



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Project Number : Raytheon Fullerton - Quarterly, 532.15
 Report To : Steve Netto
 Reported : 03/20/2012

QUALITY CONTROL SECTION

Anions Scan by Ion Chromatography EPA 300.0 - Quality Control

Analyte	Result (mg/L)	PQL (mg/L)	Spike Level	Source Result	% Rec % Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B2C0266 - No_Prep_IC_1

Blank (B2C0266-BLK1)

Prepared: 3/9/2012 Analyzed: 3/9/2012

Chloride	ND	0.50			NR				
Nitrate as N	ND	0.10			NR				
Nitrite, as N	ND	0.10			NR				
ortho-Phosphate (As P)	ND	0.05			NR				
Sulfate	ND	1.0			NR				

LCS (B2C0266-BS1)

Prepared: 3/9/2012 Analyzed: 3/9/2012

Chloride	0.98	0.50	1.00		98	90 - 110			
Nitrate as N	0.98	0.10	1.00		98	90 - 110			
Nitrite, as N	0.97	0.10	1.00		97	90 - 110			
ortho-Phosphate (As P)	1.0	0.05	1.00		102	90 - 110			
Sulfate	2.1	1.0	2.00		103	90 - 110			

Duplicate (B2C0266-DUP1)

Source: 1200849-01RE1

Prepared: 3/9/2012 Analyzed: 3/9/2012

Chloride	110	25			NR			20	
Nitrate as N	ND	5.0			NR			20	
Nitrite, as N	ND	5.0			NR			20	
ortho-Phosphate (As P)	ND	2.5			NR			20	
Sulfate	730	50			NR			20	

Matrix Spike (B2C0266-MS1)

Source: 1200849-01RE1

Prepared: 3/9/2012 Analyzed: 3/9/2012

Chloride	4.4		2.50		175	80 - 120			
Nitrate as N	2.7		2.50		109	80 - 120			
Nitrite, as N	2.6		2.50		105	80 - 120			
ortho-Phosphate (As P)	3.2		2.50		129	80 - 120			M1
Sulfate	20		5.00		404	80 - 120			

Matrix Spike Dup (B2C0266-MSD1)

Source: 1200849-01RE1

Prepared: 3/9/2012 Analyzed: 3/9/2012

Chloride	4.4		2.50		174	80 - 120	0.04	20	
Nitrate as N	2.6		2.50		106	80 - 120	3	20	
Nitrite, as N	2.6		2.50		105	80 - 120	0.3	20	
ortho-Phosphate (As P)	3.3		2.50		130	80 - 120	0.9	20	M1
Sulfate	20		5.00		405	80 - 120	0.3	20	



Hargis & Associates, Inc.
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 San Diego , CA 92122

Project Number : Raytheon Fullerton - Quarterly, 532.15
 Report To : Steve Netto
 Reported : 03/20/2012

Chemical Oxygen Demand by EPA 410.4 - Quality Control

Analyte	Result (mg/L)	PQL (mg/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B2C0351 - Prep_WC_1_W

Blank (B2C0351-BLK1)

Prepared: 3/13/2012 Analyzed: 3/13/2012

Chemical Oxygen Demand

ND

5.0

NR

LCS (B2C0351-BS1)

Prepared: 3/13/2012 Analyzed: 3/13/2012

Chemical Oxygen Demand

476.1

5.0

500

95

80 - 120

Matrix Spike (B2C0351-MS1)

Source: 1200808-01

Prepared: 3/13/2012 Analyzed: 3/13/2012

Chemical Oxygen Demand

529

5.0

500

33.8

99

80 - 120

Matrix Spike Dup (B2C0351-MSD1)

Source: 1200808-01

Prepared: 3/13/2012 Analyzed: 3/13/2012

Chemical Oxygen Demand

533

5.0

500

33.8

100

80 - 120

0.7

20



Hargis & Associates, Inc.
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 San Diego , CA 92122

Project Number : Raytheon Fullerton - Quarterly, 532.15
 Report To : Steve Netto
 Reported : 03/20/2012

Total Metals by ICP-AES EPA 6010B - Quality Control

Analyte	Result (mg/L)	PQL (mg/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B2C0370 - EPA 3010A

Blank (B2C0370-BLK1)

Prepared: 3/14/2012 Analyzed: 3/14/2012

Selenium ND 0.01 NR

LCS (B2C0370-BS1)

Prepared: 3/14/2012 Analyzed: 3/14/2012

Selenium 0.89 0.01 1.00 89.3 85 - 115

Matrix Spike (B2C0370-MS1)

Source: 1200860-04

Prepared: 3/14/2012 Analyzed: 3/14/2012

Selenium 2.4 0.01 2.50 ND 94.1 78 - 116

Matrix Spike Dup (B2C0370-MSD1)

Source: 1200860-04

Prepared: 3/14/2012 Analyzed: 3/14/2012

Selenium 2.3 0.01 2.50 ND 90.1 78 - 116 4.33 20



Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : Raytheon Fullerton - Quarterly, 532.15

Report To : Steve Netto

Reported : 03/20/2012

Dissolved Metals by ICP-AES EPA 6010B - Quality Control

Analyte	Result (mg/L)	PQL (mg/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B2C0369 - EPA 3010A

Blank (B2C0369-BLK1)

Prepared: 3/14/2012 Analyzed: 3/14/2012

Calcium	ND	0.50			NR				
Iron	0.61	0.50			NR				
Magnesium	ND	0.10			NR				
Manganese	ND	0.50			NR				
Selenium	ND	0.01			NR				
Sodium	ND	1.0			NR				

LCS (B2C0369-BS1)

Prepared: 3/14/2012 Analyzed: 3/14/2012

Calcium	19	0.50	20.0		97.5	85 - 115			
Iron	19	0.50			NR	85 - 115			B
Magnesium	19	0.10	20.0		94.3	85 - 115			
Manganese	18	0.50	20.0		90.1	85 - 115			
Selenium	0.91	0.01	1.00		90.7	85 - 115			
Sodium	16	1.0	16.0		97.8	85 - 115			

Matrix Spike (B2C0369-MS1)

Source: 1200860-04

Prepared: 3/14/2012 Analyzed: 3/14/2012

Calcium	130	0.50	20.0	100	159	5 - 159			
Iron	19	0.50	20.0	0.04	95.7	71 - 118			B
Magnesium	52	0.10	20.0	30	110	69 - 126			
Manganese	18	0.50	20.0	0.004	89.8	79 - 109			
Selenium	2.3	0.01	2.50	ND	93.4	78 - 116			
Sodium	120	1.0	20.0	89	149	70 - 130			E

Matrix Spike (B2C0369-MS2)

Source: 1200860-04

Prepared: 3/14/2012 Analyzed: 3/15/2012

Calcium	130	2.5	20.0	100	139	5 - 159			
Iron	19	2.5	20.0	0.04	95.9	71 - 118			B
Magnesium	53	0.50	20.0	30	112	69 - 126			
Manganese	20	2.5	20.0	0.004	98.4	79 - 109			
Selenium	2.3	0.05	2.50	ND	91.5	78 - 116			
Sodium	120	5.0	20.0	89	149	70 - 130			M1

Matrix Spike Dup (B2C0369-MSD1)

Source: 1200860-04

Prepared: 3/14/2012 Analyzed: 3/14/2012

Calcium	130	0.50	20.0	100	145	5 - 159	2.04	20	
Iron	19	0.50	20.0	0.04	96.1	71 - 118	0.334	20	B
Magnesium	51	0.10	20.0	30	106	69 - 126	1.56	20	
Manganese	18	0.50	20.0	0.004	89.3	79 - 109	0.624	20	
Selenium	2.3	0.01	2.50	ND	92.2	78 - 116	1.26	20	
Sodium	120	1.0	20.0	89	139	70 - 130	1.69	20	E

Matrix Spike Dup (B2C0369-MSD2)

Source: 1200860-04

Prepared: 3/14/2012 Analyzed: 3/15/2012

Calcium	130	2.5	20.0	100	120	5 - 159	2.92	20	
Iron	19	2.5	20.0	0.04	92.3	71 - 118	3.72	20	B



Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : Raytheon Fullerton - Quarterly, 532.15

Report To : Steve Netto

Reported : 03/20/2012

Dissolved Metals by ICP-AES EPA 6010B - Quality Control (cont'd)

Analyte	Result (mg/L)	PQL (mg/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B2C0369 - EPA 3010A (continued)

Matrix Spike Dup (B2C0369-MSD2) - Continued

Source: 1200860-04

Prepared: 3/14/2012 Analyzed: 3/15/2012

Magnesium	51	0.50	20.0	30	107	69 - 126	2.00	20	
Manganese	19	2.5	20.0	0.004	95.9	79 - 109	2.59	20	
Selenium	2.3	0.05	2.50	ND	90.7	78 - 116	0.815	20	
Sodium	120	5.0	20.0	89	134	70 - 130	2.44	20	M1



Hargis & Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego , CA 92122

Project Number : Raytheon Fullerton - Quarterly, 532.15
 Report To : Steve Netto
 Reported : 03/20/2012

Total Organic Carbon by SM 5310B - Quality Control

Analyte	Result (mg/L)	PQL (mg/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
---------	------------------	---------------	----------------	------------------	-------	-----------------	-----	--------------	-------

Batch B2C0420 - No_Prep_II_W

Blank (B2C0420-BLK1)

Prepared: 3/15/2012 Analyzed: 3/15/2012

Organic Carbon, Total	ND	3.0				NR			
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LCS (B2C0420-BS1)

Prepared: 3/15/2012 Analyzed: 3/15/2012

Organic Carbon, Total	18.6	3.0	19.9		93	80 - 120			
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LCS Dup (B2C0420-BSD1)

Prepared: 3/15/2012 Analyzed: 3/15/2012

Organic Carbon, Total	18.5	3.0	19.9		93	80 - 120	0.2	20	
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9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : Raytheon Fullerton - Quarterly, 532.15

Report To : Steve Netto

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Notes and Definitions

M1	Matrix spike recovery outside of acceptance limit. The analytical batch was validated by the laboratory control sample.
J	Analyte detected below the Practical Quantitation Limit but above or equal to the Method Detection Limit. Result is an estimated concentration.
E	Result value above quantitation range.
D1	Sample required dilution due to possible matrix interference.
B	Analyte detected in the associated method blank.
ND	Analyte not detected at or above reporting limit
PQL	Practical Quantitation Limit
MDL	Method Detection Limit
NR	Not Reported
RPD	Relative Percent Difference
CA1	CA-NELAP (CDPH)
CA2	CA-ELAP (CDPH)
OR1	OR-NELAP (OSPHL)
TX1	TX-NELAP (TCEQ)



American Environmental Testing Laboratory Inc.

2834 & 2908 North Naomi Street Burbank, CA 91504 • DOHS NO: 1541, LACSD NO: 10181
Tel: (888) 288-AETL • (818) 845-8200 • Fax: (818) 845-8840 • www.aetlab.com

Ordered By

Advanced Technology Laboratories
3275 Walnut Street
Signal Hill, CA 90755-5225

Number of Pages 2
Date Received 03/12/2012
Date Reported 03/20/2012

Telephone: (562)989-4045
Attention: Rachelle Arada

Job Number	Order Date	Client
65052	03/12/2012	ATL

Project ID: 1200860
Project Name: PO# SC07102

Enclosed please find results of analyses of 3 water samples which were analyzed as specified on the attached chain of custody. If there are any questions, please do not hesitate to call.

Checked By: _____

Approved By: _____

Cyrus Razmara, Ph.D.
Laboratory Director



American Environmental Testing Laboratory Inc.

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Tel: (888) 288-AETL • (818) 845-8200 • Fax: (818) 845-8840 • www.aetlab.com

Page: 1 A

Ordered By

Advanced Technology Laboratories
3275 Walnut Street
Signal Hill, CA 90755-5225

Project ID: 1200860
Date Received 03/12/2012
Date Reported 03/20/2012

Telephone: (562)989-4045
Attention: Rachelle Arada

Job Number	Order Date	Client
65052	03/12/2012	ATL

CERTIFICATE OF ANALYSIS CASE NARRATIVE

AETL received 3 samples with the following specification on 03/12/2012.

Lab ID	Sample ID	Sample Date	Matrix	QTY of Containers
65052.01	1200860-01	03/09/2012	Aqueous	1
65052.02	1200860-02	03/09/2012	Aqueous	1
65052.03	1200860-03	03/09/2012	Aqueous	1

The samples were analyzed as specified on the enclosed chain of custody. No analytical non-conformances were encountered.

Checked By: _____

Approved By: _____

Cyrus Razmara, Ph.D.
Laboratory Director



American Environmental Testing Laboratory Inc.

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 Tel: (888) 288-AETL • (818) 845-8200 • Fax: (818) 845-8840 • www.aetlab.com

ANALYTICAL RESULTS

Ordered By

Advanced Technology Laboratories
 3275 Walnut Street
 Signal Hill, CA 90755-5225

Telephone: (562)989-4045

Attn: Rachelle Arada

Page: 2

Project ID: 1200860

Project Name: PO# SC07102

AETL Job Number	Submitted	Client
65052	03/12/2012	ATL

Method: 310.1, Alkalinity, Titrimetric (pH 4.5), (EPA/600/4-79-020)

QC Batch No: 031512-1

Our Lab I.D.		Method Blank	65052.01	65052.02	65052.03	
Client Sample I.D.			1200860-01	1200860-02	1200860-03	
Date Sampled			03/09/2012	03/09/2012	03/09/2012	
Date Prepared		03/15/2012	03/15/2012	03/15/2012	03/15/2012	
Preparation Method		310.1	310.1	310.1	310.1	
Date Analyzed		03/15/2012	03/15/2012	03/15/2012	03/15/2012	
Matrix		Aqueous	Aqueous	Aqueous	Aqueous	
Units		mg/L	mg/L	mg/L	mg/L	
Dilution Factor		1	1	1	1	
Analytes	MDL	PQL	Results	Results	Results	Results
Alkalinity, Bicarbonate	2.0	2.0	ND	227	290	250
Alkalinity, Carbonate	2.0	2.0	ND	ND	ND	ND
Alkalinity, Hydroxide	2.0	2.0	ND	ND	ND	ND
Alkalinity, Total	2.0	2.0	ND	227	290	250

QUALITY CONTROL REPORT

QC Batch No: 031512-1; Dup or Spiked Sample: 65076.01; LCS: Clean Water; QC Prepared: 03/15/2012; QC Analyzed: 03/15/2012;
 Units: mg/L

Analytes	Sample Result	MS Concen	MS Recov	MS % REC	MS DUP Concen	MS DUP Recov	MS DUP % REC	RPD %	MS/MSD % Limit	MS RPD % Limit
Alkalinity, Bicarbonate	330	20.0	350	100	20.0	350	100	<1	80-120	<15
Alkalinity, Total	330	20.0	350	100	20.0	350	100	<1	80-120	<15

QC Batch No: 031512-1; Dup or Spiked Sample: 65076.01; LCS: Clean Water; QC Prepared: 03/15/2012; QC Analyzed: 03/15/2012;
 Units: mg/L

Analytes	SM Result	SM DUP Result	RPD %	SM RPD % Limit	LCS Concen	LCS Recov	LCS % REC	LCS/LCSD % Limit
Alkalinity, Bicarbonate	330	350	5.9	<15	20.0	20.0	100	80-120
Alkalinity, Total	330	350	5.9	<15	20.0	20.0	100	80-120



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Data Qualifiers and Descriptors

Data Qualifier:

- *: In the QC section, sample results have been taken directly from the ICP reading. No preparation factor has been applied.
- B: Analyte was present in the Method Blank.
- D: Result is from a diluted analysis.
- E: Result is beyond calibration limits and is estimated.
- H: Analysis was performed over the allowed holding time due to circumstances which were beyond laboratory control.
- J: Analyte was detected . However, the analyte concentration is an estimated value, which is between the Method Detection Limit (MDL) and the Practical Quantitation Limit (PQL).
- M: Matrix spike recovery is outside control limits due to matrix interference. Laboratory Control Sample recovery was acceptable.
- MCL: Maximum Contaminant Level
- NS: No Standard Available
- S6: Surrogate recovery is outside control limits due to matrix interference.
- S8: The analysis of the sample required a dilution such that the surrogate concentration was diluted below the method acceptance criteria.
- X: Results represent LCS and LCSD data.

Definition:

- %Limi: Percent acceptable limits.
- %REC: Percent recovery.
- Con.L: Acceptable Control Limits
- Conce: Added concentration to the sample.
- LCS: Laboratory Control Sample
- MDL: Method Detection Limit is a statistically derived number which is specific for each instrument, each method, and each compound. It indicates a distinctively detectable quantity with 99% probability.



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Data Qualifiers and Descriptors

MS:	Matrix Spike
MS DU:	Matrix Spike Duplicate
ND:	Analyte was not detected in the sample at or above MDL.
PQL:	Practical Quantitation Limit or ML (Minimum Level as per RWQCB) is the minimum concentration that can be quantified with more than 99% confidence. Taking into account all aspects of the entire analytical instrumentation and practice.
Recov:	Recovered concentration in the sample.
RPD:	Relative Percent Difference


ADVANCED TECHNOLOGY
 LABORATORIES
SUBCONTRACT ORDER

Job # 65052

Work Order: 1200860

SENDING LABORATORY:




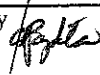
Advanced Technology Laboratories
 3275 Walnut Avenue
 Signal Hill, CA 90755
 Phone: 562.989.4045
 Fax: 562.989.6348
 Project Manager: Rachelle Arada

RECEIVING LABORATORY:

AETL
 2834 North Naomi Street
 Burbank, CA 91504
 Phone : (818) 845-8200
 Fax: (818) 845-8840
 PO#: SC07102 - Standard TAT (RA)

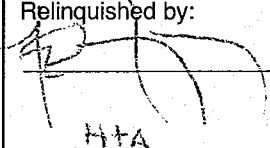
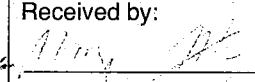
IMPORTANT : Please include Work Order # and PO # in your invoice.

Analysis	Due	Expires	Sampled	Comments/Special Instructions
ATL Lab#: 1200860-01 310.1_2320B_Speciati	/ EW-02 03/16/12 17:00	Groundwater 03/23/12 10:25	03/09/12 10:25	65052-01 Report Hydroxide, Bicarbonate, Carbonate & Total.
ATL Lab#: 1200860-03 310.1_2320B_Speciati	/ MW-21 03/16/12 17:00	Groundwater 03/23/12 09:40	03/09/12 09:40	65052-02 Need Excel EDD.
ATL Lab#: 1200860-04 310.1_2320B_Speciati	/ INF 03/16/12 17:00	Groundwater 03/23/12 08:40	03/09/12 08:40	65052-03

 Released By	3/9/12 Date	_____ Received By	_____ Date
 Released By	3/12/12 1340 Date	 Received By	3/12/12 1340 Date
 Released By	3/12/12 1525 Date	Jean Claude Received By	03/12/12 1525 Date

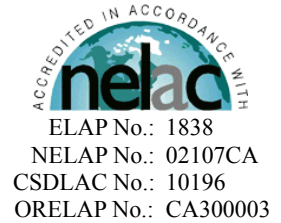
CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST FORM

PROJECT NAME Raytheon Fullerton - Quarterly		PROJECT No./TASK No. 632.15		SAMPLE CONTAINERS		ANALYSIS REQUESTED		ESTIMATED CONCENTRATION RANGE (ppb) FOR VOAs		SPECIAL HANDLING		LABORATORY INFORMATION					
PROJECT MANAGER Chris Ross		Phone No. 950-455-5500		125 ml Poly 250 ml Poly 500 ml Poly 40 ml VOA		Total Se by 30100 Dissolved Se, Fe, Mn, Ca, Mg, by 60100 Alkalinity (Hydroxide, Bicarbonate and Total) by 30100 TDC by 415.1 Anions (Cl, SO4, NO3, NO2, PO4) by 30100 C/D by 410.4 C-10 10-100 100-1000 71000		Lab to filter and acidify Dissolved metals Lab to filter anions		ATL Signal Hill 952-989-4046							
QA MANAGER Steve Netto		Fax No. 950-455-5533															
SAMPLER (SIGNATURE)		SAMPLER (PRINTED) Francis Rodriguez															
LAB ID	SAMPLE ID	SAMPLE COLLECTION		MATRIX		PRESERVATION								REMARKS			
		Date	Time	Soil	Ground water	Surface water	Lab H2O	HCl	HNO 3	NaOH	H2SO 4	Ice					
1200860-01	EH-02	3/9/12	10:25	X				XX	XX								
	- 2 POX	↓	09:10	X				X	XX								
	- 3 MW-21	↓	09:40	X				X	XX								
	- 4 INF	↓	08:40	X				XX	XX								
Total number of Containers per analysis:								43104				Total No. of Containers: 21					

Relinquished by:  HTA		Date 3/9/12	Received by: 	Date 3/9/12	INSTRUCTIONS 1. Fill out form completely except for shaded areas (lab use only); sign only after verified for completeness. 2. Complete in ballpoint pen. Draw one line through errors, initial and date correction. 3. Indicate number of sample containers in analysis request space; indicate choice with √ or x. 4. Note applicable preservatives, special instructions, and deviations from typical environmental samples. 5. Consult project QA documents for specific instructions.	Shipment Method: DELIVER	
Company		Time 11:47	Company	Time 11:47		Send Results to: Steve Netto <input checked="" type="checkbox"/> 9171 TOWNE CENTRE DRIVE, SUITE 375 SAN DIEGO, CA 92122 (858) 455-6500 <input type="checkbox"/> 1640 SOUTH STAPLEY DRIVE, SUITE 124 MESA, AZ 85204 (480) 345-0888 <input type="checkbox"/> 1820 EAST RIVER ROAD, SUITE 220 TUCSON, AZ 85718 (520) 881-7300	
Relinquished by:		Date	Received by:	Date	Sample Receipt: <input type="checkbox"/> No. of containers correct <input type="checkbox"/> received good condition/cold <input type="checkbox"/> custody seals secure <input type="checkbox"/> conforms to COC document	Send invoice to San Diego, CA Attn: Accounts Payable	
Company		Time	Company	Time			

March 20, 2012

Steve Netto
Hargis & Associates, Inc.
9171 Towne Centre Drive, Suite 375
San Diego, CA 92122
Tel: (619) 249-3166
Fax: (858) 455-6533



Re: ATL Work Order Number : 1200869

Client Reference : Raytheon Fullerton-Monthly, 532.15

Enclosed are the results for sample(s) received on March 09, 2012 by Advanced Technology Laboratories. The sample(s) are tested for the parameters as indicated on the enclosed chain of custody in accordance with applicable laboratory certifications. The laboratory results contained in this report specifically pertains to the sample(s) submitted.

Thank you for the opportunity to serve the needs of your company. If you have any questions, please feel free to contact me or your Project Manager.

Sincerely,

A handwritten signature in black ink, appearing to read "E Rodriguez".

Eddie Rodriguez
Laboratory Director

The cover letter and the case narrative are an integral part of this analytical report and its absence renders the report invalid. The report cannot be reproduced without written permission from the client and Advanced Technology Laboratories.



Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : Raytheon Fullerton-Monthly, 532.15

Report To : Steve Netto

Reported : 03/20/2012

SUMMARY OF SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
TB-030912	1200869-01	Lab H2O	3/09/12 8:00	3/09/12 11:48
EW-02	1200869-02	Groundwater	3/09/12 10:25	3/09/12 11:48
PF	1200869-03	Groundwater	3/09/12 9:05	3/09/12 11:48
POX	1200869-04	Groundwater	3/09/12 9:10	3/09/12 11:48
CBT	1200869-05	Groundwater	3/09/12 9:20	3/09/12 11:48
CEFF	1200869-06	Groundwater	3/09/12 9:30	3/09/12 11:48
MW-21	1200869-07	Groundwater	3/09/12 9:40	3/09/12 11:48
INF	1200869-08	Groundwater	3/09/12 8:40	3/09/12 11:48

CASE NARRATIVE

The samples for EPA 317 (Bromate) analysis were subcontracted to Exova, Inc. with ELAP Cert.# 2652.



Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : Raytheon Fullerton-Monthly, 532.15

Report To : Steve Netto

Reported : 03/20/2012

Client Sample ID TB-030912

Lab ID: 1200869-01

Volatile Organic Compounds by EPA 8260

Analyst: DC

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	0.50	NA	1	B2C0282	03/12/2012	03/12/12 18:21	
1,1,1-Trichloroethane	ND	0.50	NA	1	B2C0282	03/12/2012	03/12/12 18:21	
1,1,2,2-Tetrachloroethane	ND	0.50	NA	1	B2C0282	03/12/2012	03/12/12 18:21	
1,1,2-Trichloroethane	ND	0.50	NA	1	B2C0282	03/12/2012	03/12/12 18:21	
1,1-Dichloroethane	ND	0.50	NA	1	B2C0282	03/12/2012	03/12/12 18:21	
1,1-Dichloroethene	ND	0.50	NA	1	B2C0282	03/12/2012	03/12/12 18:21	
1,1-Dichloropropene	ND	0.50	NA	1	B2C0282	03/12/2012	03/12/12 18:21	
1,2,3-Trichloropropane	ND	0.50	NA	1	B2C0282	03/12/2012	03/12/12 18:21	
1,2,3-Trichlorobenzene	ND	0.50	NA	1	B2C0282	03/12/2012	03/12/12 18:21	
1,2,4-Trichlorobenzene	ND	0.50	NA	1	B2C0282	03/12/2012	03/12/12 18:21	
1,2,4-Trimethylbenzene	ND	0.50	NA	1	B2C0282	03/12/2012	03/12/12 18:21	
1,2-Dibromo-3-chloropropane	ND	0.50	NA	1	B2C0282	03/12/2012	03/12/12 18:21	
1,2-Dibromoethane	ND	0.50	NA	1	B2C0282	03/12/2012	03/12/12 18:21	
1,2-Dichlorobenzene	ND	0.50	NA	1	B2C0282	03/12/2012	03/12/12 18:21	
1,2-Dichloroethane	ND	0.50	NA	1	B2C0282	03/12/2012	03/12/12 18:21	
1,2-Dichloropropane	ND	0.50	NA	1	B2C0282	03/12/2012	03/12/12 18:21	
1,3,5-Trimethylbenzene	ND	0.50	NA	1	B2C0282	03/12/2012	03/12/12 18:21	
1,3-Dichlorobenzene	ND	0.50	NA	1	B2C0282	03/12/2012	03/12/12 18:21	
1,3-Dichloropropane	ND	0.50	NA	1	B2C0282	03/12/2012	03/12/12 18:21	
1,4-Dichlorobenzene	ND	0.50	NA	1	B2C0282	03/12/2012	03/12/12 18:21	
2,2-Dichloropropane	ND	0.50	NA	1	B2C0282	03/12/2012	03/12/12 18:21	
2-Chlorotoluene	ND	0.50	NA	1	B2C0282	03/12/2012	03/12/12 18:21	
4-Chlorotoluene	ND	0.50	NA	1	B2C0282	03/12/2012	03/12/12 18:21	
4-Isopropyltoluene	ND	0.50	NA	1	B2C0282	03/12/2012	03/12/12 18:21	
Benzene	ND	0.50	NA	1	B2C0282	03/12/2012	03/12/12 18:21	
Bromobenzene	ND	0.50	NA	1	B2C0282	03/12/2012	03/12/12 18:21	
Bromodichloromethane	ND	0.50	NA	1	B2C0282	03/12/2012	03/12/12 18:21	
Bromoform	ND	0.50	NA	1	B2C0282	03/12/2012	03/12/12 18:21	
Bromomethane	ND	0.50	NA	1	B2C0282	03/12/2012	03/12/12 18:21	
Carbon tetrachloride	ND	0.50	NA	1	B2C0282	03/12/2012	03/12/12 18:21	
Chlorobenzene	ND	0.50	NA	1	B2C0282	03/12/2012	03/12/12 18:21	
Chloroethane	ND	0.50	NA	1	B2C0282	03/12/2012	03/12/12 18:21	
Chloroform	ND	0.50	NA	1	B2C0282	03/12/2012	03/12/12 18:21	
Chloromethane	ND	0.50	NA	1	B2C0282	03/12/2012	03/12/12 18:21	



Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : Raytheon Fullerton-Monthly, 532.15

Report To : Steve Netto

Reported : 03/20/2012

Client Sample ID TB-030912

Lab ID: 1200869-01

Volatile Organic Compounds by EPA 8260

Analyst: DC

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
cis-1,2-Dichloroethene	ND	0.50	NA	1	B2C0282	03/12/2012	03/12/12 18:21	
cis-1,3-Dichloropropene	ND	0.50	NA	1	B2C0282	03/12/2012	03/12/12 18:21	
Dibromochloromethane	ND	0.50	NA	1	B2C0282	03/12/2012	03/12/12 18:21	
Dibromomethane	ND	0.50	NA	1	B2C0282	03/12/2012	03/12/12 18:21	
Dichlorodifluoromethane	ND	0.50	NA	1	B2C0282	03/12/2012	03/12/12 18:21	
Ethylbenzene	ND	0.50	NA	1	B2C0282	03/12/2012	03/12/12 18:21	
Hexachlorobutadiene	ND	0.50	NA	1	B2C0282	03/12/2012	03/12/12 18:21	
Isopropylbenzene	ND	0.50	NA	1	B2C0282	03/12/2012	03/12/12 18:21	
m,p-Xylene	ND	1.0	NA	1	B2C0282	03/12/2012	03/12/12 18:21	
Methylene chloride	ND	1.0	NA	1	B2C0282	03/12/2012	03/12/12 18:21	
n-Butylbenzene	ND	0.50	NA	1	B2C0282	03/12/2012	03/12/12 18:21	
n-Propylbenzene	ND	0.50	NA	1	B2C0282	03/12/2012	03/12/12 18:21	
Naphthalene	ND	0.50	NA	1	B2C0282	03/12/2012	03/12/12 18:21	
o-Xylene	ND	0.50	NA	1	B2C0282	03/12/2012	03/12/12 18:21	
sec-Butylbenzene	ND	0.50	NA	1	B2C0282	03/12/2012	03/12/12 18:21	
Styrene	ND	0.50	NA	1	B2C0282	03/12/2012	03/12/12 18:21	
tert-Butylbenzene	ND	0.50	NA	1	B2C0282	03/12/2012	03/12/12 18:21	
Tetrachloroethene	ND	0.50	NA	1	B2C0282	03/12/2012	03/12/12 18:21	
Toluene	ND	0.50	NA	1	B2C0282	03/12/2012	03/12/12 18:21	
trans-1,2-Dichloroethene	ND	0.50	NA	1	B2C0282	03/12/2012	03/12/12 18:21	
Trichloroethene	ND	0.50	NA	1	B2C0282	03/12/2012	03/12/12 18:21	
Trichlorofluoromethane	ND	0.50	NA	1	B2C0282	03/12/2012	03/12/12 18:21	
Vinyl chloride	ND	0.50	NA	1	B2C0282	03/12/2012	03/12/12 18:21	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>118 %</i>	<i>70 - 130</i>			B2C0282	03/12/2012	<i>03/12/12 18:21</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>90.6 %</i>	<i>70 - 130</i>			B2C0282	03/12/2012	<i>03/12/12 18:21</i>	
<i>Surrogate: Dibromofluoromethane</i>	<i>112 %</i>	<i>70 - 130</i>			B2C0282	03/12/2012	<i>03/12/12 18:21</i>	
<i>Surrogate: Toluene-d8</i>	<i>101 %</i>	<i>70 - 130</i>			B2C0282	03/12/2012	<i>03/12/12 18:21</i>	



Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : Raytheon Fullerton-Monthly, 532.15

Report To : Steve Netto

Reported : 03/20/2012

Client Sample ID EW-02

Lab ID: 1200869-02

Anions by Ion Chromatography EPA 300.0

Analyst: Phali

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Bromide	0.21	0.05	NA	1	B2C0312	03/13/2012	03/13/12 07:53	

Total Dissolved Solids (Residue, Filterable) by SM 2540C

Analyst: AG

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Residue, Dissolved	630	10	NA	1	B2C0442	03/15/2012	03/16/12 07:00	

Total Suspended Solids (Residue, Non-Filtrable) by SM 2540D

Analyst: AG

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Residue, Suspended	ND	10	NA	1	B2C0405	03/13/2012	03/13/12 14:57	

Volatile Organic Compounds by EPA 8260

Analyst: DC

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	0.50	NA	1	B2C0338	03/14/2012	03/14/12 11:51	
1,1,1-Trichloroethane	ND	0.50	NA	1	B2C0338	03/14/2012	03/14/12 11:51	
1,1,2,2-Tetrachloroethane	ND	0.50	NA	1	B2C0338	03/14/2012	03/14/12 11:51	
1,1,2-Trichloroethane	ND	0.50	NA	1	B2C0338	03/14/2012	03/14/12 11:51	
1,1-Dichloroethane	ND	0.50	NA	1	B2C0338	03/14/2012	03/14/12 11:51	
1,1-Dichloroethene	59	0.50	NA	1	B2C0338	03/14/2012	03/14/12 11:51	
1,1-Dichloropropene	ND	0.50	NA	1	B2C0338	03/14/2012	03/14/12 11:51	
1,2,3-Trichloropropane	ND	0.50	NA	1	B2C0338	03/14/2012	03/14/12 11:51	
1,2,3-Trichlorobenzene	ND	0.50	NA	1	B2C0338	03/14/2012	03/14/12 11:51	
1,2,4-Trichlorobenzene	ND	0.50	NA	1	B2C0338	03/14/2012	03/14/12 11:51	
1,2,4-Trimethylbenzene	ND	0.50	NA	1	B2C0338	03/14/2012	03/14/12 11:51	
1,2-Dibromo-3-chloropropane	ND	0.50	NA	1	B2C0338	03/14/2012	03/14/12 11:51	
1,2-Dibromoethane	ND	0.50	NA	1	B2C0338	03/14/2012	03/14/12 11:51	
1,2-Dichlorobenzene	ND	0.50	NA	1	B2C0338	03/14/2012	03/14/12 11:51	
1,2-Dichloroethane	ND	0.50	NA	1	B2C0338	03/14/2012	03/14/12 11:51	
1,2-Dichloropropane	ND	0.50	NA	1	B2C0338	03/14/2012	03/14/12 11:51	
1,3,5-Trimethylbenzene	ND	0.50	NA	1	B2C0338	03/14/2012	03/14/12 11:51	



Hargis & Associates, Inc.

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Project Number : Raytheon Fullerton-Monthly, 532.15

Report To : Steve Netto

Reported : 03/20/2012

Client Sample ID EW-02

Lab ID: 1200869-02

Volatile Organic Compounds by EPA 8260

Analyst: DC

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,3-Dichlorobenzene	ND	0.50	NA	1	B2C0338	03/14/2012	03/14/12 11:51	
1,3-Dichloropropane	ND	0.50	NA	1	B2C0338	03/14/2012	03/14/12 11:51	
1,4-Dichlorobenzene	ND	0.50	NA	1	B2C0338	03/14/2012	03/14/12 11:51	
2,2-Dichloropropane	ND	0.50	NA	1	B2C0338	03/14/2012	03/14/12 11:51	
2-Chlorotoluene	ND	0.50	NA	1	B2C0338	03/14/2012	03/14/12 11:51	
4-Chlorotoluene	ND	0.50	NA	1	B2C0338	03/14/2012	03/14/12 11:51	
4-Isopropyltoluene	ND	0.50	NA	1	B2C0338	03/14/2012	03/14/12 11:51	
Benzene	ND	0.50	NA	1	B2C0338	03/14/2012	03/14/12 11:51	
Bromobenzene	ND	0.50	NA	1	B2C0338	03/14/2012	03/14/12 11:51	
Bromodichloromethane	ND	0.50	NA	1	B2C0338	03/14/2012	03/14/12 11:51	
Bromoform	ND	0.50	NA	1	B2C0338	03/14/2012	03/14/12 11:51	
Bromomethane	ND	0.50	NA	1	B2C0338	03/14/2012	03/14/12 11:51	
Carbon tetrachloride	ND	0.50	NA	1	B2C0338	03/14/2012	03/14/12 11:51	
Chlorobenzene	ND	0.50	NA	1	B2C0338	03/14/2012	03/14/12 11:51	
Chloroethane	ND	0.50	NA	1	B2C0338	03/14/2012	03/14/12 11:51	
Chloroform	ND	0.50	NA	1	B2C0338	03/14/2012	03/14/12 11:51	
Chloromethane	ND	0.50	NA	1	B2C0338	03/14/2012	03/14/12 11:51	
cis-1,2-Dichloroethene	ND	0.50	NA	1	B2C0338	03/14/2012	03/14/12 11:51	
cis-1,3-Dichloropropene	ND	0.50	NA	1	B2C0338	03/14/2012	03/14/12 11:51	
Dibromochloromethane	ND	0.50	NA	1	B2C0338	03/14/2012	03/14/12 11:51	
Dibromomethane	ND	0.50	NA	1	B2C0338	03/14/2012	03/14/12 11:51	
Dichlorodifluoromethane	ND	0.50	NA	1	B2C0338	03/14/2012	03/14/12 11:51	
Ethylbenzene	ND	0.50	NA	1	B2C0338	03/14/2012	03/14/12 11:51	
Hexachlorobutadiene	ND	0.50	NA	1	B2C0338	03/14/2012	03/14/12 11:51	
Isopropylbenzene	ND	0.50	NA	1	B2C0338	03/14/2012	03/14/12 11:51	
m,p-Xylene	ND	1.0	NA	1	B2C0338	03/14/2012	03/14/12 11:51	
Methylene chloride	ND	1.0	NA	1	B2C0338	03/14/2012	03/14/12 11:51	
n-Butylbenzene	ND	0.50	NA	1	B2C0338	03/14/2012	03/14/12 11:51	
n-Propylbenzene	ND	0.50	NA	1	B2C0338	03/14/2012	03/14/12 11:51	
Naphthalene	ND	0.50	NA	1	B2C0338	03/14/2012	03/14/12 11:51	
o-Xylene	ND	0.50	NA	1	B2C0338	03/14/2012	03/14/12 11:51	
sec-Butylbenzene	ND	0.50	NA	1	B2C0338	03/14/2012	03/14/12 11:51	
Styrene	ND	0.50	NA	1	B2C0338	03/14/2012	03/14/12 11:51	
tert-Butylbenzene	ND	0.50	NA	1	B2C0338	03/14/2012	03/14/12 11:51	



Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : Raytheon Fullerton-Monthly, 532.15

Report To : Steve Netto

Reported : 03/20/2012

Client Sample ID EW-02

Lab ID: 1200869-02

Volatile Organic Compounds by EPA 8260

Analyst: DC

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Tetrachloroethene	ND	0.50	NA	1	B2C0338	03/14/2012	03/14/12 11:51	
Toluene	ND	0.50	NA	1	B2C0338	03/14/2012	03/14/12 11:51	
trans-1,2-Dichloroethene	ND	0.50	NA	1	B2C0338	03/14/2012	03/14/12 11:51	
Trichloroethene	ND	0.50	NA	1	B2C0338	03/14/2012	03/14/12 11:51	
Trichlorofluoromethane	ND	0.50	NA	1	B2C0338	03/14/2012	03/14/12 11:51	
Vinyl chloride	ND	0.50	NA	1	B2C0338	03/14/2012	03/14/12 11:51	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>117 %</i>		<i>70 - 130</i>		B2C0338	03/14/2012	<i>03/14/12 11:51</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>89.2 %</i>		<i>70 - 130</i>		B2C0338	03/14/2012	<i>03/14/12 11:51</i>	
<i>Surrogate: Dibromofluoromethane</i>	<i>111 %</i>		<i>70 - 130</i>		B2C0338	03/14/2012	<i>03/14/12 11:51</i>	
<i>Surrogate: Toluene-d8</i>	<i>102 %</i>		<i>70 - 130</i>		B2C0338	03/14/2012	<i>03/14/12 11:51</i>	

1,4-Dioxane by EPA 8270: Isotope Dilution Technique

Analyst: PIL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,4-Dioxane	12	2.0	NA	1	B2C0288	03/12/2012	03/12/12 19:02	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	<i>70.4 %</i>		<i>37 - 93</i>		B2C0288	03/12/2012	<i>03/12/12 19:02</i>	
<i>Surrogate: 2-Fluorobiphenyl</i>	<i>84.3 %</i>		<i>51 - 100</i>		B2C0288	03/12/2012	<i>03/12/12 19:02</i>	
<i>Surrogate: 4-Terphenyl-d14</i>	<i>102 %</i>		<i>58 - 113</i>		B2C0288	03/12/2012	<i>03/12/12 19:02</i>	
<i>Surrogate: Nitrobenzene-d5</i>	<i>67.9 %</i>		<i>39 - 95</i>		B2C0288	03/12/2012	<i>03/12/12 19:02</i>	



Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : Raytheon Fullerton-Monthly, 532.15

Report To : Steve Netto

Reported : 03/20/2012

Client Sample ID PF

Lab ID: 1200869-03

Total Suspended Solids (Residue, Non-Filtrable) by SM 2540D

Analyst: AG

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Residue, Suspended	ND	10	NA	1	B2C0405	03/13/2012	03/13/12 14:59	



Hargis & Associates, Inc.
9171 Towne Centre Drive, Suite 375
San Diego , CA 92122

Project Number : Raytheon Fullerton-Monthly, 532.15
Report To : Steve Netto
Reported : 03/20/2012

Client Sample ID POX
Lab ID: 1200869-04

Anions by Ion Chromatography EPA 300.0

Analyst: Phali

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Bromide	0.44	0.05	NA	1	B2C0312	03/13/2012	03/13/12 08:05	

Total Dissolved Solids (Residue, Filterable) by SM 2540C

Analyst: AG

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Residue, Dissolved	780	10	NA	1	B2C0442	03/15/2012	03/16/12 07:02	

Volatile Organic Compounds by EPA 8260

Analyst: DC

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	0.50	NA	1	B2C0282	03/12/2012	03/12/12 21:50	
1,1,1-Trichloroethane	ND	0.50	NA	1	B2C0282	03/12/2012	03/12/12 21:50	
1,1,2,2-Tetrachloroethane	ND	0.50	NA	1	B2C0282	03/12/2012	03/12/12 21:50	
1,1,2-Trichloroethane	0.58	0.50	NA	1	B2C0282	03/12/2012	03/12/12 21:50	
1,1-Dichloroethane	2.0	0.50	NA	1	B2C0282	03/12/2012	03/12/12 21:50	
1,1-Dichloroethene	ND	0.50	NA	1	B2C0282	03/12/2012	03/12/12 21:50	
1,1-Dichloropropene	ND	0.50	NA	1	B2C0282	03/12/2012	03/12/12 21:50	
1,2,3-Trichloropropane	ND	0.50	NA	1	B2C0282	03/12/2012	03/12/12 21:50	
1,2,3-Trichlorobenzene	ND	0.50	NA	1	B2C0282	03/12/2012	03/12/12 21:50	
1,2,4-Trichlorobenzene	ND	0.50	NA	1	B2C0282	03/12/2012	03/12/12 21:50	
1,2,4-Trimethylbenzene	ND	0.50	NA	1	B2C0282	03/12/2012	03/12/12 21:50	
1,2-Dibromo-3-chloropropane	ND	0.50	NA	1	B2C0282	03/12/2012	03/12/12 21:50	
1,2-Dibromoethane	ND	0.50	NA	1	B2C0282	03/12/2012	03/12/12 21:50	
1,2-Dichlorobenzene	ND	0.50	NA	1	B2C0282	03/12/2012	03/12/12 21:50	
1,2-Dichloroethane	ND	0.50	NA	1	B2C0282	03/12/2012	03/12/12 21:50	
1,2-Dichloropropane	ND	0.50	NA	1	B2C0282	03/12/2012	03/12/12 21:50	
1,3,5-Trimethylbenzene	ND	0.50	NA	1	B2C0282	03/12/2012	03/12/12 21:50	
1,3-Dichlorobenzene	ND	0.50	NA	1	B2C0282	03/12/2012	03/12/12 21:50	
1,3-Dichloropropane	ND	0.50	NA	1	B2C0282	03/12/2012	03/12/12 21:50	
1,4-Dichlorobenzene	ND	0.50	NA	1	B2C0282	03/12/2012	03/12/12 21:50	
2,2-Dichloropropane	ND	0.50	NA	1	B2C0282	03/12/2012	03/12/12 21:50	
2-Chlorotoluene	ND	0.50	NA	1	B2C0282	03/12/2012	03/12/12 21:50	
4-Chlorotoluene	ND	0.50	NA	1	B2C0282	03/12/2012	03/12/12 21:50	



Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : Raytheon Fullerton-Monthly, 532.15

Report To : Steve Netto

Reported : 03/20/2012

Client Sample ID POX

Lab ID: 1200869-04

Volatile Organic Compounds by EPA 8260

Analyst: DC

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
4-Isopropyltoluene	ND	0.50	NA	1	B2C0282	03/12/2012	03/12/12 21:50	
Benzene	ND	0.50	NA	1	B2C0282	03/12/2012	03/12/12 21:50	
Bromobenzene	ND	0.50	NA	1	B2C0282	03/12/2012	03/12/12 21:50	
Bromodichloromethane	ND	0.50	NA	1	B2C0282	03/12/2012	03/12/12 21:50	
Bromoform	ND	0.50	NA	1	B2C0282	03/12/2012	03/12/12 21:50	
Bromomethane	ND	0.50	NA	1	B2C0282	03/12/2012	03/12/12 21:50	
Carbon tetrachloride	ND	0.50	NA	1	B2C0282	03/12/2012	03/12/12 21:50	
Chlorobenzene	ND	0.50	NA	1	B2C0282	03/12/2012	03/12/12 21:50	
Chloroethane	ND	0.50	NA	1	B2C0282	03/12/2012	03/12/12 21:50	
Chloroform	ND	0.50	NA	1	B2C0282	03/12/2012	03/12/12 21:50	
Chloromethane	ND	0.50	NA	1	B2C0282	03/12/2012	03/12/12 21:50	
cis-1,2-Dichloroethene	ND	0.50	NA	1	B2C0282	03/12/2012	03/12/12 21:50	
cis-1,3-Dichloropropene	ND	0.50	NA	1	B2C0282	03/12/2012	03/12/12 21:50	
Dibromochloromethane	ND	0.50	NA	1	B2C0282	03/12/2012	03/12/12 21:50	
Dibromomethane	ND	0.50	NA	1	B2C0282	03/12/2012	03/12/12 21:50	
Dichlorodifluoromethane	ND	0.50	NA	1	B2C0282	03/12/2012	03/12/12 21:50	
Ethylbenzene	ND	0.50	NA	1	B2C0282	03/12/2012	03/12/12 21:50	
Hexachlorobutadiene	ND	0.50	NA	1	B2C0282	03/12/2012	03/12/12 21:50	
Isopropylbenzene	ND	0.50	NA	1	B2C0282	03/12/2012	03/12/12 21:50	
m,p-Xylene	ND	1.0	NA	1	B2C0282	03/12/2012	03/12/12 21:50	
Methylene chloride	ND	1.0	NA	1	B2C0282	03/12/2012	03/12/12 21:50	
n-Butylbenzene	ND	0.50	NA	1	B2C0282	03/12/2012	03/12/12 21:50	
n-Propylbenzene	ND	0.50	NA	1	B2C0282	03/12/2012	03/12/12 21:50	
Naphthalene	ND	0.50	NA	1	B2C0282	03/12/2012	03/12/12 21:50	
o-Xylene	ND	0.50	NA	1	B2C0282	03/12/2012	03/12/12 21:50	
sec-Butylbenzene	ND	0.50	NA	1	B2C0282	03/12/2012	03/12/12 21:50	
Styrene	ND	0.50	NA	1	B2C0282	03/12/2012	03/12/12 21:50	
tert-Butylbenzene	ND	0.50	NA	1	B2C0282	03/12/2012	03/12/12 21:50	
Tetrachloroethene	ND	0.50	NA	1	B2C0282	03/12/2012	03/12/12 21:50	
Toluene	ND	0.50	NA	1	B2C0282	03/12/2012	03/12/12 21:50	
trans-1,2-Dichloroethene	ND	0.50	NA	1	B2C0282	03/12/2012	03/12/12 21:50	
Trichloroethene	ND	0.50	NA	1	B2C0282	03/12/2012	03/12/12 21:50	
Trichlorofluoromethane	ND	0.50	NA	1	B2C0282	03/12/2012	03/12/12 21:50	
Vinyl chloride	ND	0.50	NA	1	B2C0282	03/12/2012	03/12/12 21:50	



Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego, CA 92122

Project Number : Raytheon Fullerton-Monthly, 532.15

Report To : Steve Netto

Reported : 03/20/2012

Client Sample ID POX

Lab ID: 1200869-04

Volatile Organic Compounds by EPA 8260

Analyst: DC

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
<i>Surrogate: 1,2-Dichloroethane-d4</i>	123 %	70 - 130			B2C0282	03/12/2012	03/12/12 21:50	
<i>Surrogate: 4-Bromofluorobenzene</i>	90.0 %	70 - 130			B2C0282	03/12/2012	03/12/12 21:50	
<i>Surrogate: Dibromofluoromethane</i>	116 %	70 - 130			B2C0282	03/12/2012	03/12/12 21:50	
<i>Surrogate: Toluene-d8</i>	102 %	70 - 130			B2C0282	03/12/2012	03/12/12 21:50	

1,4-Dioxane by EPA 8270/SIM: Isotope Dilution Technique

Analyst: PIL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,4-Dioxane	0.85	0.20	NA	1	B2C0344	03/14/2012	03/14/12 16:50	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	76.1 %	36 - 107			B2C0344	03/14/2012	03/14/12 16:50	
<i>Surrogate: 2-Fluorobiphenyl</i>	85.4 %	42 - 120			B2C0344	03/14/2012	03/14/12 16:50	
<i>Surrogate: 4-Terphenyl-d14</i>	102 %	67 - 142			B2C0344	03/14/2012	03/14/12 16:50	
<i>Surrogate: Nitrobenzene-d5</i>	150 %	36 - 130			B2C0344	03/14/2012	03/14/12 16:50	S8



Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : Raytheon Fullerton-Monthly, 532.15

Report To : Steve Netto

Reported : 03/20/2012

Client Sample ID CBT

Lab ID: 1200869-05

Volatile Organic Compounds by EPA 8260

Analyst: DC

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	0.50	NA	1	B2C0282	03/12/2012	03/12/12 22:11	
1,1,1-Trichloroethane	ND	0.50	NA	1	B2C0282	03/12/2012	03/12/12 22:11	
1,1,2,2-Tetrachloroethane	ND	0.50	NA	1	B2C0282	03/12/2012	03/12/12 22:11	
1,1,2-Trichloroethane	ND	0.50	NA	1	B2C0282	03/12/2012	03/12/12 22:11	
1,1-Dichloroethane	2.2	0.50	NA	1	B2C0282	03/12/2012	03/12/12 22:11	
1,1-Dichloroethene	ND	0.50	NA	1	B2C0282	03/12/2012	03/12/12 22:11	
1,1-Dichloropropene	ND	0.50	NA	1	B2C0282	03/12/2012	03/12/12 22:11	
1,2,3-Trichloropropane	ND	0.50	NA	1	B2C0282	03/12/2012	03/12/12 22:11	
1,2,3-Trichlorobenzene	ND	0.50	NA	1	B2C0282	03/12/2012	03/12/12 22:11	
1,2,4-Trichlorobenzene	ND	0.50	NA	1	B2C0282	03/12/2012	03/12/12 22:11	
1,2,4-Trimethylbenzene	ND	0.50	NA	1	B2C0282	03/12/2012	03/12/12 22:11	
1,2-Dibromo-3-chloropropane	ND	0.50	NA	1	B2C0282	03/12/2012	03/12/12 22:11	
1,2-Dibromoethane	ND	0.50	NA	1	B2C0282	03/12/2012	03/12/12 22:11	
1,2-Dichlorobenzene	ND	0.50	NA	1	B2C0282	03/12/2012	03/12/12 22:11	
1,2-Dichloroethane	ND	0.50	NA	1	B2C0282	03/12/2012	03/12/12 22:11	
1,2-Dichloropropane	ND	0.50	NA	1	B2C0282	03/12/2012	03/12/12 22:11	
1,3,5-Trimethylbenzene	ND	0.50	NA	1	B2C0282	03/12/2012	03/12/12 22:11	
1,3-Dichlorobenzene	ND	0.50	NA	1	B2C0282	03/12/2012	03/12/12 22:11	
1,3-Dichloropropane	ND	0.50	NA	1	B2C0282	03/12/2012	03/12/12 22:11	
1,4-Dichlorobenzene	ND	0.50	NA	1	B2C0282	03/12/2012	03/12/12 22:11	
2,2-Dichloropropane	ND	0.50	NA	1	B2C0282	03/12/2012	03/12/12 22:11	
2-Chlorotoluene	ND	0.50	NA	1	B2C0282	03/12/2012	03/12/12 22:11	
4-Chlorotoluene	ND	0.50	NA	1	B2C0282	03/12/2012	03/12/12 22:11	
4-Isopropyltoluene	ND	0.50	NA	1	B2C0282	03/12/2012	03/12/12 22:11	
Benzene	ND	0.50	NA	1	B2C0282	03/12/2012	03/12/12 22:11	
Bromobenzene	ND	0.50	NA	1	B2C0282	03/12/2012	03/12/12 22:11	
Bromodichloromethane	ND	0.50	NA	1	B2C0282	03/12/2012	03/12/12 22:11	
Bromoform	ND	0.50	NA	1	B2C0282	03/12/2012	03/12/12 22:11	
Bromomethane	ND	0.50	NA	1	B2C0282	03/12/2012	03/12/12 22:11	
Carbon tetrachloride	ND	0.50	NA	1	B2C0282	03/12/2012	03/12/12 22:11	
Chlorobenzene	ND	0.50	NA	1	B2C0282	03/12/2012	03/12/12 22:11	
Chloroethane	ND	0.50	NA	1	B2C0282	03/12/2012	03/12/12 22:11	
Chloroform	ND	0.50	NA	1	B2C0282	03/12/2012	03/12/12 22:11	
Chloromethane	ND	0.50	NA	1	B2C0282	03/12/2012	03/12/12 22:11	



Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : Raytheon Fullerton-Monthly, 532.15

Report To : Steve Netto

Reported : 03/20/2012

Client Sample ID CBT

Lab ID: 1200869-05

Volatile Organic Compounds by EPA 8260

Analyst: DC

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
cis-1,2-Dichloroethene	ND	0.50	NA	1	B2C0282	03/12/2012	03/12/12 22:11	
cis-1,3-Dichloropropene	ND	0.50	NA	1	B2C0282	03/12/2012	03/12/12 22:11	
Dibromochloromethane	ND	0.50	NA	1	B2C0282	03/12/2012	03/12/12 22:11	
Dibromomethane	ND	0.50	NA	1	B2C0282	03/12/2012	03/12/12 22:11	
Dichlorodifluoromethane	ND	0.50	NA	1	B2C0282	03/12/2012	03/12/12 22:11	
Ethylbenzene	ND	0.50	NA	1	B2C0282	03/12/2012	03/12/12 22:11	
Hexachlorobutadiene	ND	0.50	NA	1	B2C0282	03/12/2012	03/12/12 22:11	
Isopropylbenzene	ND	0.50	NA	1	B2C0282	03/12/2012	03/12/12 22:11	
m,p-Xylene	ND	1.0	NA	1	B2C0282	03/12/2012	03/12/12 22:11	
Methylene chloride	ND	1.0	NA	1	B2C0282	03/12/2012	03/12/12 22:11	
n-Butylbenzene	ND	0.50	NA	1	B2C0282	03/12/2012	03/12/12 22:11	
n-Propylbenzene	ND	0.50	NA	1	B2C0282	03/12/2012	03/12/12 22:11	
Naphthalene	ND	0.50	NA	1	B2C0282	03/12/2012	03/12/12 22:11	
o-Xylene	ND	0.50	NA	1	B2C0282	03/12/2012	03/12/12 22:11	
sec-Butylbenzene	ND	0.50	NA	1	B2C0282	03/12/2012	03/12/12 22:11	
Styrene	ND	0.50	NA	1	B2C0282	03/12/2012	03/12/12 22:11	
tert-Butylbenzene	ND	0.50	NA	1	B2C0282	03/12/2012	03/12/12 22:11	
Tetrachloroethene	ND	0.50	NA	1	B2C0282	03/12/2012	03/12/12 22:11	
Toluene	ND	0.50	NA	1	B2C0282	03/12/2012	03/12/12 22:11	
trans-1,2-Dichloroethene	ND	0.50	NA	1	B2C0282	03/12/2012	03/12/12 22:11	
Trichloroethene	ND	0.50	NA	1	B2C0282	03/12/2012	03/12/12 22:11	
Trichlorofluoromethane	ND	0.50	NA	1	B2C0282	03/12/2012	03/12/12 22:11	
Vinyl chloride	ND	0.50	NA	1	B2C0282	03/12/2012	03/12/12 22:11	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>106 %</i>		<i>70 - 130</i>		B2C0282	03/12/2012	<i>03/12/12 22:11</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>77.1 %</i>		<i>70 - 130</i>		B2C0282	03/12/2012	<i>03/12/12 22:11</i>	
<i>Surrogate: Dibromofluoromethane</i>	<i>101 %</i>		<i>70 - 130</i>		B2C0282	03/12/2012	<i>03/12/12 22:11</i>	
<i>Surrogate: Toluene-d8</i>	<i>88.1 %</i>		<i>70 - 130</i>		B2C0282	03/12/2012	<i>03/12/12 22:11</i>	



Hargis & Associates, Inc.
9171 Towne Centre Drive, Suite 375
San Diego , CA 92122

Project Number : Raytheon Fullerton-Monthly, 532.15
Report To : Steve Netto
Reported : 03/20/2012

Client Sample ID CEFF
Lab ID: 1200869-06

Anions by Ion Chromatography EPA 300.0

Analyst: Phali

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Bromide	0.44	0.05	NA	1	B2C0312	03/13/2012	03/13/12 08:16	

Total Dissolved Solids (Residue, Filterable) by SM 2540C

Analyst: AG

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Residue, Dissolved	830	10	NA	1	B2C0442	03/15/2012	03/16/12 07:04	

Volatile Organic Compounds by EPA 8260

Analyst: DC

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	0.50	NA	1	B2C0282	03/12/2012	03/12/12 22:32	
1,1,1-Trichloroethane	ND	0.50	NA	1	B2C0282	03/12/2012	03/12/12 22:32	
1,1,2,2-Tetrachloroethane	ND	0.50	NA	1	B2C0282	03/12/2012	03/12/12 22:32	
1,1,2-Trichloroethane	ND	0.50	NA	1	B2C0282	03/12/2012	03/12/12 22:32	
1,1-Dichloroethane	2.3	0.50	NA	1	B2C0282	03/12/2012	03/12/12 22:32	
1,1-Dichloroethene	ND	0.50	NA	1	B2C0282	03/12/2012	03/12/12 22:32	
1,1-Dichloropropene	ND	0.50	NA	1	B2C0282	03/12/2012	03/12/12 22:32	
1,2,3-Trichloropropane	ND	0.50	NA	1	B2C0282	03/12/2012	03/12/12 22:32	
1,2,3-Trichlorobenzene	ND	0.50	NA	1	B2C0282	03/12/2012	03/12/12 22:32	
1,2,4-Trichlorobenzene	ND	0.50	NA	1	B2C0282	03/12/2012	03/12/12 22:32	
1,2,4-Trimethylbenzene	ND	0.50	NA	1	B2C0282	03/12/2012	03/12/12 22:32	
1,2-Dibromo-3-chloropropane	ND	0.50	NA	1	B2C0282	03/12/2012	03/12/12 22:32	
1,2-Dibromoethane	ND	0.50	NA	1	B2C0282	03/12/2012	03/12/12 22:32	
1,2-Dichlorobenzene	ND	0.50	NA	1	B2C0282	03/12/2012	03/12/12 22:32	
1,2-Dichloroethane	ND	0.50	NA	1	B2C0282	03/12/2012	03/12/12 22:32	
1,2-Dichloropropane	ND	0.50	NA	1	B2C0282	03/12/2012	03/12/12 22:32	
1,3,5-Trimethylbenzene	ND	0.50	NA	1	B2C0282	03/12/2012	03/12/12 22:32	
1,3-Dichlorobenzene	ND	0.50	NA	1	B2C0282	03/12/2012	03/12/12 22:32	
1,3-Dichloropropane	ND	0.50	NA	1	B2C0282	03/12/2012	03/12/12 22:32	
1,4-Dichlorobenzene	ND	0.50	NA	1	B2C0282	03/12/2012	03/12/12 22:32	
2,2-Dichloropropane	ND	0.50	NA	1	B2C0282	03/12/2012	03/12/12 22:32	
2-Chlorotoluene	ND	0.50	NA	1	B2C0282	03/12/2012	03/12/12 22:32	
4-Chlorotoluene	ND	0.50	NA	1	B2C0282	03/12/2012	03/12/12 22:32	



Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : Raytheon Fullerton-Monthly, 532.15

Report To : Steve Netto

Reported : 03/20/2012

Client Sample ID CEFF

Lab ID: 1200869-06

Volatile Organic Compounds by EPA 8260

Analyst: DC

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
4-Isopropyltoluene	ND	0.50	NA	1	B2C0282	03/12/2012	03/12/12 22:32	
Benzene	ND	0.50	NA	1	B2C0282	03/12/2012	03/12/12 22:32	
Bromobenzene	ND	0.50	NA	1	B2C0282	03/12/2012	03/12/12 22:32	
Bromodichloromethane	ND	0.50	NA	1	B2C0282	03/12/2012	03/12/12 22:32	
Bromoform	ND	0.50	NA	1	B2C0282	03/12/2012	03/12/12 22:32	
Bromomethane	ND	0.50	NA	1	B2C0282	03/12/2012	03/12/12 22:32	
Carbon tetrachloride	ND	0.50	NA	1	B2C0282	03/12/2012	03/12/12 22:32	
Chlorobenzene	ND	0.50	NA	1	B2C0282	03/12/2012	03/12/12 22:32	
Chloroethane	ND	0.50	NA	1	B2C0282	03/12/2012	03/12/12 22:32	
Chloroform	ND	0.50	NA	1	B2C0282	03/12/2012	03/12/12 22:32	
Chloromethane	ND	0.50	NA	1	B2C0282	03/12/2012	03/12/12 22:32	
cis-1,2-Dichloroethene	ND	0.50	NA	1	B2C0282	03/12/2012	03/12/12 22:32	
cis-1,3-Dichloropropene	ND	0.50	NA	1	B2C0282	03/12/2012	03/12/12 22:32	
Dibromochloromethane	ND	0.50	NA	1	B2C0282	03/12/2012	03/12/12 22:32	
Dibromomethane	ND	0.50	NA	1	B2C0282	03/12/2012	03/12/12 22:32	
Dichlorodifluoromethane	ND	0.50	NA	1	B2C0282	03/12/2012	03/12/12 22:32	
Ethylbenzene	ND	0.50	NA	1	B2C0282	03/12/2012	03/12/12 22:32	
Hexachlorobutadiene	ND	0.50	NA	1	B2C0282	03/12/2012	03/12/12 22:32	
Isopropylbenzene	ND	0.50	NA	1	B2C0282	03/12/2012	03/12/12 22:32	
m,p-Xylene	ND	1.0	NA	1	B2C0282	03/12/2012	03/12/12 22:32	
Methylene chloride	ND	1.0	NA	1	B2C0282	03/12/2012	03/12/12 22:32	
n-Butylbenzene	ND	0.50	NA	1	B2C0282	03/12/2012	03/12/12 22:32	
n-Propylbenzene	ND	0.50	NA	1	B2C0282	03/12/2012	03/12/12 22:32	
Naphthalene	ND	0.50	NA	1	B2C0282	03/12/2012	03/12/12 22:32	
o-Xylene	ND	0.50	NA	1	B2C0282	03/12/2012	03/12/12 22:32	
sec-Butylbenzene	ND	0.50	NA	1	B2C0282	03/12/2012	03/12/12 22:32	
Styrene	ND	0.50	NA	1	B2C0282	03/12/2012	03/12/12 22:32	
tert-Butylbenzene	ND	0.50	NA	1	B2C0282	03/12/2012	03/12/12 22:32	
Tetrachloroethene	ND	0.50	NA	1	B2C0282	03/12/2012	03/12/12 22:32	
Toluene	ND	0.50	NA	1	B2C0282	03/12/2012	03/12/12 22:32	
trans-1,2-Dichloroethene	ND	0.50	NA	1	B2C0282	03/12/2012	03/12/12 22:32	
Trichloroethene	ND	0.50	NA	1	B2C0282	03/12/2012	03/12/12 22:32	
Trichlorofluoromethane	ND	0.50	NA	1	B2C0282	03/12/2012	03/12/12 22:32	
Vinyl chloride	ND	0.50	NA	1	B2C0282	03/12/2012	03/12/12 22:32	



Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : Raytheon Fullerton-Monthly, 532.15

Report To : Steve Netto

Reported : 03/20/2012

Client Sample ID CEFF

Lab ID: 1200869-06

Volatile Organic Compounds by EPA 8260

Analyst: DC

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
<i>Surrogate: 1,2-Dichloroethane-d4</i>	121 %	70 - 130			B2C0282	03/12/2012	03/12/12 22:32	
<i>Surrogate: 4-Bromofluorobenzene</i>	89.8 %	70 - 130			B2C0282	03/12/2012	03/12/12 22:32	
<i>Surrogate: Dibromofluoromethane</i>	116 %	70 - 130			B2C0282	03/12/2012	03/12/12 22:32	
<i>Surrogate: Toluene-d8</i>	104 %	70 - 130			B2C0282	03/12/2012	03/12/12 22:32	



Hargis & Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122

Project Number : Raytheon Fullerton-Monthly, 532.15
 Report To : Steve Netto
 Reported : 03/20/2012

Client Sample ID MW-21
Lab ID: 1200869-07

Anions by Ion Chromatography EPA 300.0

Analyst: Phali

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Bromide	1.2	0.10	NA	2	B2C0312	03/13/2012	03/13/12 08:27	

Total Dissolved Solids (Residue, Filterable) by SM 2540C

Analyst: AG

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Residue, Dissolved	1400	14	NA	1	B2C0442	03/15/2012	03/16/12 07:06	

Total Suspended Solids (Residue, Non-Filtrable) by SM 2540D

Analyst: AG

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Residue, Suspended	ND	10	NA	1	B2C0405	03/13/2012	03/13/12 15:01	

Volatile Organic Compounds by EPA 8260

Analyst: DC

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	4.0	NA	8	B2C0338	03/14/2012	03/14/12 12:12	
1,1,1-Trichloroethane	ND	4.0	NA	8	B2C0338	03/14/2012	03/14/12 12:12	
1,1,2,2-Tetrachloroethane	ND	4.0	NA	8	B2C0338	03/14/2012	03/14/12 12:12	
1,1,2-Trichloroethane	ND	4.0	NA	8	B2C0338	03/14/2012	03/14/12 12:12	
1,1-Dichloroethane	8.6	4.0	NA	8	B2C0338	03/14/2012	03/14/12 12:12	
1,1-Dichloroethene	860	10	NA	20	B2C0300	03/13/2012	03/13/12 17:12	
1,1-Dichloropropene	ND	4.0	NA	8	B2C0338	03/14/2012	03/14/12 12:12	
1,2,3-Trichloropropane	ND	4.0	NA	8	B2C0338	03/14/2012	03/14/12 12:12	
1,2,3-Trichlorobenzene	ND	4.0	NA	8	B2C0338	03/14/2012	03/14/12 12:12	
1,2,4-Trichlorobenzene	ND	4.0	NA	8	B2C0338	03/14/2012	03/14/12 12:12	
1,2,4-Trimethylbenzene	ND	4.0	NA	8	B2C0338	03/14/2012	03/14/12 12:12	
1,2-Dibromo-3-chloropropane	ND	4.0	NA	8	B2C0338	03/14/2012	03/14/12 12:12	
1,2-Dibromoethane	ND	4.0	NA	8	B2C0338	03/14/2012	03/14/12 12:12	
1,2-Dichlorobenzene	ND	4.0	NA	8	B2C0338	03/14/2012	03/14/12 12:12	
1,2-Dichloroethane	ND	4.0	NA	8	B2C0338	03/14/2012	03/14/12 12:12	
1,2-Dichloropropane	ND	4.0	NA	8	B2C0338	03/14/2012	03/14/12 12:12	
1,3,5-Trimethylbenzene	ND	4.0	NA	8	B2C0338	03/14/2012	03/14/12 12:12	



Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : Raytheon Fullerton-Monthly, 532.15

Report To : Steve Netto

Reported : 03/20/2012

Client Sample ID MW-21

Lab ID: 1200869-07

Volatile Organic Compounds by EPA 8260

Analyst: DC

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,3-Dichlorobenzene	ND	4.0	NA	8	B2C0338	03/14/2012	03/14/12 12:12	
1,3-Dichloropropane	ND	4.0	NA	8	B2C0338	03/14/2012	03/14/12 12:12	
1,4-Dichlorobenzene	ND	4.0	NA	8	B2C0338	03/14/2012	03/14/12 12:12	
2,2-Dichloropropane	ND	4.0	NA	8	B2C0338	03/14/2012	03/14/12 12:12	
2-Chlorotoluene	ND	4.0	NA	8	B2C0338	03/14/2012	03/14/12 12:12	
4-Chlorotoluene	ND	4.0	NA	8	B2C0338	03/14/2012	03/14/12 12:12	
4-Isopropyltoluene	ND	4.0	NA	8	B2C0338	03/14/2012	03/14/12 12:12	
Benzene	ND	4.0	NA	8	B2C0338	03/14/2012	03/14/12 12:12	
Bromobenzene	ND	4.0	NA	8	B2C0338	03/14/2012	03/14/12 12:12	
Bromodichloromethane	ND	4.0	NA	8	B2C0338	03/14/2012	03/14/12 12:12	
Bromoform	ND	4.0	NA	8	B2C0338	03/14/2012	03/14/12 12:12	
Bromomethane	ND	4.0	NA	8	B2C0338	03/14/2012	03/14/12 12:12	
Carbon tetrachloride	ND	4.0	NA	8	B2C0338	03/14/2012	03/14/12 12:12	
Chlorobenzene	ND	4.0	NA	8	B2C0338	03/14/2012	03/14/12 12:12	
Chloroethane	ND	4.0	NA	8	B2C0338	03/14/2012	03/14/12 12:12	
Chloroform	ND	4.0	NA	8	B2C0338	03/14/2012	03/14/12 12:12	
Chloromethane	ND	4.0	NA	8	B2C0338	03/14/2012	03/14/12 12:12	
cis-1,2-Dichloroethene	ND	4.0	NA	8	B2C0338	03/14/2012	03/14/12 12:12	
cis-1,3-Dichloropropene	ND	4.0	NA	8	B2C0338	03/14/2012	03/14/12 12:12	
Dibromochloromethane	ND	4.0	NA	8	B2C0338	03/14/2012	03/14/12 12:12	
Dibromomethane	ND	4.0	NA	8	B2C0338	03/14/2012	03/14/12 12:12	
Dichlorodifluoromethane	ND	4.0	NA	8	B2C0338	03/14/2012	03/14/12 12:12	
Ethylbenzene	ND	4.0	NA	8	B2C0338	03/14/2012	03/14/12 12:12	
Hexachlorobutadiene	ND	4.0	NA	8	B2C0338	03/14/2012	03/14/12 12:12	
Isopropylbenzene	ND	4.0	NA	8	B2C0338	03/14/2012	03/14/12 12:12	
m,p-Xylene	ND	8.0	NA	8	B2C0338	03/14/2012	03/14/12 12:12	
Methylene chloride	ND	8.0	NA	8	B2C0338	03/14/2012	03/14/12 12:12	
n-Butylbenzene	ND	4.0	NA	8	B2C0338	03/14/2012	03/14/12 12:12	
n-Propylbenzene	ND	4.0	NA	8	B2C0338	03/14/2012	03/14/12 12:12	
Naphthalene	ND	4.0	NA	8	B2C0338	03/14/2012	03/14/12 12:12	
o-Xylene	ND	4.0	NA	8	B2C0338	03/14/2012	03/14/12 12:12	
sec-Butylbenzene	ND	4.0	NA	8	B2C0338	03/14/2012	03/14/12 12:12	
Styrene	ND	4.0	NA	8	B2C0338	03/14/2012	03/14/12 12:12	
tert-Butylbenzene	ND	4.0	NA	8	B2C0338	03/14/2012	03/14/12 12:12	



Hargis & Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego , CA 92122

Project Number : Raytheon Fullerton-Monthly, 532.15
 Report To : Steve Netto
 Reported : 03/20/2012

Client Sample ID MW-21
Lab ID: 1200869-07

Volatile Organic Compounds by EPA 8260

Analyst: DC

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Tetrachloroethene	ND	4.0	NA	8	B2C0338	03/14/2012	03/14/12 12:12	
Toluene	ND	4.0	NA	8	B2C0338	03/14/2012	03/14/12 12:12	
trans-1,2-Dichloroethene	ND	4.0	NA	8	B2C0338	03/14/2012	03/14/12 12:12	
Trichloroethene	14	4.0	NA	8	B2C0338	03/14/2012	03/14/12 12:12	
Trichlorofluoromethane	ND	4.0	NA	8	B2C0338	03/14/2012	03/14/12 12:12	
Vinyl chloride	ND	4.0	NA	8	B2C0338	03/14/2012	03/14/12 12:12	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>107 %</i>		<i>70 - 130</i>		B2C0338	03/14/2012	<i>03/14/12 12:12</i>	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>113 %</i>		<i>70 - 130</i>		B2C0300	03/13/2012	<i>03/13/12 17:12</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>78.6 %</i>		<i>70 - 130</i>		B2C0338	03/14/2012	<i>03/14/12 12:12</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>88.6 %</i>		<i>70 - 130</i>		B2C0300	03/13/2012	<i>03/13/12 17:12</i>	
<i>Surrogate: Dibromofluoromethane</i>	<i>108 %</i>		<i>70 - 130</i>		B2C0300	03/13/2012	<i>03/13/12 17:12</i>	
<i>Surrogate: Dibromofluoromethane</i>	<i>99.9 %</i>		<i>70 - 130</i>		B2C0338	03/14/2012	<i>03/14/12 12:12</i>	
<i>Surrogate: Toluene-d8</i>	<i>90.5 %</i>		<i>70 - 130</i>		B2C0338	03/14/2012	<i>03/14/12 12:12</i>	
<i>Surrogate: Toluene-d8</i>	<i>101 %</i>		<i>70 - 130</i>		B2C0300	03/13/2012	<i>03/13/12 17:12</i>	

1,4-Dioxane by EPA 8270: Isotope Dilution Technique

Analyst: PIL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,4-Dioxane	61	2.0	NA	1	B2C0288	03/12/2012	03/12/12 19:31	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	<i>60.9 %</i>		<i>37 - 93</i>		B2C0288	03/12/2012	<i>03/12/12 19:31</i>	
<i>Surrogate: 2-Fluorobiphenyl</i>	<i>70.2 %</i>		<i>51 - 100</i>		B2C0288	03/12/2012	<i>03/12/12 19:31</i>	
<i>Surrogate: 4-Terphenyl-d14</i>	<i>99.8 %</i>		<i>58 - 113</i>		B2C0288	03/12/2012	<i>03/12/12 19:31</i>	
<i>Surrogate: Nitrobenzene-d5</i>	<i>58.3 %</i>		<i>39 - 95</i>		B2C0288	03/12/2012	<i>03/12/12 19:31</i>	



Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego, CA 92122

Project Number : Raytheon Fullerton-Monthly, 532.15

Report To : Steve Netto

Reported : 03/20/2012

Client Sample ID INF

Lab ID: 1200869-08

Anions by Ion Chromatography EPA 300.0

Analyst: Phali

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Bromide	0.44	0.05	NA	1	B2C0312	03/13/2012	03/13/12 08:39	

Total Dissolved Solids (Residue, Filterable) by SM 2540C

Analyst: AG

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Residue, Dissolved	800	10	NA	1	B2C0442	03/15/2012	03/16/12 07:08	

Total Suspended Solids (Residue, Non-Filtrable) by SM 2540D

Analyst: AG

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Residue, Suspended	ND	10	NA	1	B2C0405	03/13/2012	03/13/12 15:03	

Volatile Organic Compounds by EPA 8260

Analyst: DC

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	1.0	NA	2	B2C0338	03/14/2012	03/14/12 12:33	
1,1,1-Trichloroethane	ND	1.0	NA	2	B2C0338	03/14/2012	03/14/12 12:33	
1,1,2,2-Tetrachloroethane	ND	1.0	NA	2	B2C0338	03/14/2012	03/14/12 12:33	
1,1,2-Trichloroethane	ND	1.0	NA	2	B2C0338	03/14/2012	03/14/12 12:33	
1,1-Dichloroethane	2.5	1.0	NA	2	B2C0338	03/14/2012	03/14/12 12:33	
1,1-Dichloroethene	210	2.0	NA	4	B2C0300	03/13/2012	03/13/12 16:52	
1,1-Dichloropropene	ND	1.0	NA	2	B2C0338	03/14/2012	03/14/12 12:33	
1,2,3-Trichloropropane	ND	1.0	NA	2	B2C0338	03/14/2012	03/14/12 12:33	
1,2,3-Trichlorobenzene	ND	1.0	NA	2	B2C0338	03/14/2012	03/14/12 12:33	
1,2,4-Trichlorobenzene	ND	1.0	NA	2	B2C0338	03/14/2012	03/14/12 12:33	
1,2,4-Trimethylbenzene	ND	1.0	NA	2	B2C0338	03/14/2012	03/14/12 12:33	
1,2-Dibromo-3-chloropropane	ND	1.0	NA	2	B2C0338	03/14/2012	03/14/12 12:33	
1,2-Dibromoethane	ND	1.0	NA	2	B2C0338	03/14/2012	03/14/12 12:33	
1,2-Dichlorobenzene	ND	1.0	NA	2	B2C0338	03/14/2012	03/14/12 12:33	
1,2-Dichloroethane	ND	1.0	NA	2	B2C0338	03/14/2012	03/14/12 12:33	
1,2-Dichloropropane	ND	1.0	NA	2	B2C0338	03/14/2012	03/14/12 12:33	
1,3,5-Trimethylbenzene	ND	1.0	NA	2	B2C0338	03/14/2012	03/14/12 12:33	



Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : Raytheon Fullerton-Monthly, 532.15

Report To : Steve Netto

Reported : 03/20/2012

Client Sample ID INF

Lab ID: 1200869-08

Volatile Organic Compounds by EPA 8260

Analyst: DC

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,3-Dichlorobenzene	ND	1.0	NA	2	B2C0338	03/14/2012	03/14/12 12:33	
1,3-Dichloropropane	ND	1.0	NA	2	B2C0338	03/14/2012	03/14/12 12:33	
1,4-Dichlorobenzene	ND	1.0	NA	2	B2C0338	03/14/2012	03/14/12 12:33	
2,2-Dichloropropane	ND	1.0	NA	2	B2C0338	03/14/2012	03/14/12 12:33	
2-Chlorotoluene	ND	1.0	NA	2	B2C0338	03/14/2012	03/14/12 12:33	
4-Chlorotoluene	ND	1.0	NA	2	B2C0338	03/14/2012	03/14/12 12:33	
4-Isopropyltoluene	ND	1.0	NA	2	B2C0338	03/14/2012	03/14/12 12:33	
Benzene	ND	1.0	NA	2	B2C0338	03/14/2012	03/14/12 12:33	
Bromobenzene	ND	1.0	NA	2	B2C0338	03/14/2012	03/14/12 12:33	
Bromodichloromethane	ND	1.0	NA	2	B2C0338	03/14/2012	03/14/12 12:33	
Bromoform	ND	1.0	NA	2	B2C0338	03/14/2012	03/14/12 12:33	
Bromomethane	ND	1.0	NA	2	B2C0338	03/14/2012	03/14/12 12:33	
Carbon tetrachloride	ND	1.0	NA	2	B2C0338	03/14/2012	03/14/12 12:33	
Chlorobenzene	ND	1.0	NA	2	B2C0338	03/14/2012	03/14/12 12:33	
Chloroethane	ND	1.0	NA	2	B2C0338	03/14/2012	03/14/12 12:33	
Chloroform	ND	1.0	NA	2	B2C0338	03/14/2012	03/14/12 12:33	
Chloromethane	ND	1.0	NA	2	B2C0338	03/14/2012	03/14/12 12:33	
cis-1,2-Dichloroethene	ND	1.0	NA	2	B2C0338	03/14/2012	03/14/12 12:33	
cis-1,3-Dichloropropene	ND	1.0	NA	2	B2C0338	03/14/2012	03/14/12 12:33	
Dibromochloromethane	ND	1.0	NA	2	B2C0338	03/14/2012	03/14/12 12:33	
Dibromomethane	ND	1.0	NA	2	B2C0338	03/14/2012	03/14/12 12:33	
Dichlorodifluoromethane	ND	1.0	NA	2	B2C0338	03/14/2012	03/14/12 12:33	
Ethylbenzene	ND	1.0	NA	2	B2C0338	03/14/2012	03/14/12 12:33	
Hexachlorobutadiene	ND	1.0	NA	2	B2C0338	03/14/2012	03/14/12 12:33	
Isopropylbenzene	ND	1.0	NA	2	B2C0338	03/14/2012	03/14/12 12:33	
m,p-Xylene	ND	2.0	NA	2	B2C0338	03/14/2012	03/14/12 12:33	
Methylene chloride	ND	2.0	NA	2	B2C0338	03/14/2012	03/14/12 12:33	
n-Butylbenzene	ND	1.0	NA	2	B2C0338	03/14/2012	03/14/12 12:33	
n-Propylbenzene	ND	1.0	NA	2	B2C0338	03/14/2012	03/14/12 12:33	
Naphthalene	ND	1.0	NA	2	B2C0338	03/14/2012	03/14/12 12:33	
o-Xylene	ND	1.0	NA	2	B2C0338	03/14/2012	03/14/12 12:33	
sec-Butylbenzene	ND	1.0	NA	2	B2C0338	03/14/2012	03/14/12 12:33	
Styrene	ND	1.0	NA	2	B2C0338	03/14/2012	03/14/12 12:33	
tert-Butylbenzene	ND	1.0	NA	2	B2C0338	03/14/2012	03/14/12 12:33	



Hargis & Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122

Project Number : Raytheon Fullerton-Monthly, 532.15

Report To : Steve Netto

Reported : 03/20/2012

Client Sample ID INF

Lab ID: 1200869-08

Volatile Organic Compounds by EPA 8260

Analyst: DC

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Tetrachloroethene	ND	1.0	NA	2	B2C0338	03/14/2012	03/14/12 12:33	
Toluene	ND	1.0	NA	2	B2C0338	03/14/2012	03/14/12 12:33	
trans-1,2-Dichloroethene	ND	1.0	NA	2	B2C0338	03/14/2012	03/14/12 12:33	
Trichloroethene	3.8	1.0	NA	2	B2C0338	03/14/2012	03/14/12 12:33	
Trichlorofluoromethane	ND	1.0	NA	2	B2C0338	03/14/2012	03/14/12 12:33	
Vinyl chloride	ND	1.0	NA	2	B2C0338	03/14/2012	03/14/12 12:33	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>104 %</i>		<i>70 - 130</i>		B2C0300	03/13/2012	<i>03/13/12 16:52</i>	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>110 %</i>		<i>70 - 130</i>		B2C0338	03/14/2012	<i>03/14/12 12:33</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>80.0 %</i>		<i>70 - 130</i>		B2C0300	03/13/2012	<i>03/13/12 16:52</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>79.2 %</i>		<i>70 - 130</i>		B2C0338	03/14/2012	<i>03/14/12 12:33</i>	
<i>Surrogate: Dibromofluoromethane</i>	<i>100 %</i>		<i>70 - 130</i>		B2C0338	03/14/2012	<i>03/14/12 12:33</i>	
<i>Surrogate: Dibromofluoromethane</i>	<i>98.8 %</i>		<i>70 - 130</i>		B2C0300	03/13/2012	<i>03/13/12 16:52</i>	
<i>Surrogate: Toluene-d8</i>	<i>88.6 %</i>		<i>70 - 130</i>		B2C0338	03/14/2012	<i>03/14/12 12:33</i>	
<i>Surrogate: Toluene-d8</i>	<i>91.3 %</i>		<i>70 - 130</i>		B2C0300	03/13/2012	<i>03/13/12 16:52</i>	

1,4-Dioxane by EPA 8270: Isotope Dilution Technique

Analyst: PIL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,4-Dioxane	25	2.0	NA	1	B2C0288	03/12/2012	03/12/12 19:59	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	<i>63.5 %</i>		<i>37 - 93</i>		B2C0288	03/12/2012	<i>03/12/12 19:59</i>	
<i>Surrogate: 2-Fluorobiphenyl</i>	<i>76.1 %</i>		<i>51 - 100</i>		B2C0288	03/12/2012	<i>03/12/12 19:59</i>	
<i>Surrogate: 4-Terphenyl-d14</i>	<i>101 %</i>		<i>58 - 113</i>		B2C0288	03/12/2012	<i>03/12/12 19:59</i>	
<i>Surrogate: Nitrobenzene-d5</i>	<i>62.3 %</i>		<i>39 - 95</i>		B2C0288	03/12/2012	<i>03/12/12 19:59</i>	



Hargis & Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego , CA 92122

Project Number : Raytheon Fullerton-Monthly, 532.15
 Report To : Steve Netto
 Reported : 03/20/2012

QUALITY CONTROL SECTION

Anions by Ion Chromatography EPA 300.0 - Quality Control

Analyte	Result (mg/L)	PQL (mg/L)	Spike Level	Source Result	% Rec % Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B2C0312 - No_Prep_IC_1									
Blank (B2C0312-BLK1)				Prepared: 3/13/2012 Analyzed: 3/13/2012					
Bromide	ND	0.05			NR				
LCS (B2C0312-BS1)				Prepared: 3/13/2012 Analyzed: 3/13/2012					
Bromide	0.92	0.05	1.00		92	90 - 110			
Duplicate (B2C0312-DUP1)		Source: 1200875-02		Prepared: 3/13/2012 Analyzed: 3/13/2012					
Bromide	ND	0.05		ND	NR			20	
Matrix Spike (B2C0312-MS1)		Source: 1200875-02		Prepared: 3/13/2012 Analyzed: 3/13/2012					
Bromide	2.7	0.05	2.50	ND	108	80 - 120			
Matrix Spike Dup (B2C0312-MSD1)		Source: 1200875-02		Prepared: 3/13/2012 Analyzed: 3/13/2012					
Bromide	2.7	0.05	2.50	ND	108	80 - 120	0.07	20	



Hargis & Associates, Inc.
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 San Diego , CA 92122

Project Number : Raytheon Fullerton-Monthly, 532.15
 Report To : Steve Netto
 Reported : 03/20/2012

Total Dissolved Solids (Residue, Filterable) by SM 2540C - Quality Control

Analyte	Result (mg/L)	PQL (mg/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B2C0442 - No_Prep_WC_1

Blank (B2C0442-BLK1)

Prepared: 3/15/2012 Analyzed: 3/16/2012

Residue, Dissolved

ND

10

NR

LCS (B2C0442-BS1)

Prepared: 3/15/2012 Analyzed: 3/16/2012

Residue, Dissolved

980

10

970

101

80 - 120

Duplicate (B2C0442-DUP1)

Source: 1200869-08

Prepared: 3/15/2012 Analyzed: 3/16/2012

Residue, Dissolved

850

10

800

NR

6

10



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 San Diego , CA 92122

Project Number : Raytheon Fullerton-Monthly, 532.15
 Report To : Steve Netto
 Reported : 03/20/2012

Total Suspended Solids (Residue, Non-Filtrable) by SM 2540D - Quality Control

Analyte	Result (mg/L)	PQL (mg/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B2C0405 - No_Prep_WC_1

Blank (B2C0405-BLK1)

Prepared: 3/13/2012 Analyzed: 3/13/2012

Residue, Suspended

ND

10

NR

LCS (B2C0405-BS1)

Prepared: 3/13/2012 Analyzed: 3/13/2012

Residue, Suspended

94

10

96.6

97

80 - 120

Duplicate (B2C0405-DUP1)

Source: 1200841-06

Prepared: 3/13/2012 Analyzed: 3/13/2012

Residue, Suspended

1000

10

1000

NR

2

10



Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : Raytheon Fullerton-Monthly, 532.15

Report To : Steve Netto

Reported : 03/20/2012

Volatile Organic Compounds by EPA 8260 - Quality Control

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec % Rec	% Rec Limits	RPD RPD	RPD Limit	Notes
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Batch B2C0282 - MSVOAW_LL

Blank (B2C0282-BLK1)

Prepared: 3/12/2012 Analyzed: 3/12/2012

1,1,1,2-Tetrachloroethane	ND	0.50			NR
1,1,1-Trichloroethane	ND	0.50			NR
1,1,2,2-Tetrachloroethane	ND	0.50			NR
1,1,2-Trichloroethane	ND	0.50			NR
1,1-Dichloroethane	ND	0.50			NR
1,1-Dichloroethene	ND	0.50			NR
1,1-Dichloropropene	ND	0.50			NR
1,2,3-Trichloropropane	ND	0.50			NR
1,2,3-Trichlorobenzene	ND	0.50			NR
1,2,4-Trichlorobenzene	ND	0.50			NR
1,2,4-Trimethylbenzene	ND	0.50			NR
1,2-Dibromo-3-chloropropane	ND	0.50			NR
1,2-Dibromoethane	ND	0.50			NR
1,2-Dichlorobenzene	ND	0.50			NR
1,2-Dichloroethane	ND	0.50			NR
1,2-Dichloropropane	ND	0.50			NR
1,3,5-Trimethylbenzene	ND	0.50			NR
1,3-Dichlorobenzene	ND	0.50			NR
1,3-Dichloropropane	ND	0.50			NR
1,4-Dichlorobenzene	ND	0.50			NR
2,2-Dichloropropane	ND	0.50			NR
2-Chlorotoluene	ND	0.50			NR
4-Chlorotoluene	ND	0.50			NR
4-Isopropyltoluene	ND	0.50			NR
Benzene	ND	0.50			NR
Bromobenzene	ND	0.50			NR
Bromodichloromethane	ND	0.50			NR
Bromoform	ND	0.50			NR
Bromomethane	ND	0.50			NR
Carbon tetrachloride	ND	0.50			NR
Chlorobenzene	ND	0.50			NR
Chloroethane	ND	0.50			NR
Chloroform	ND	0.50			NR
Chloromethane	ND	0.50			NR
cis-1,2-Dichloroethene	ND	0.50			NR
cis-1,3-Dichloropropene	ND	0.50			NR
Dibromochloromethane	ND	0.50			NR
Dibromomethane	ND	0.50			NR
Dichlorodifluoromethane	ND	0.50			NR
Ethylbenzene	ND	0.50			NR
Hexachlorobutadiene	ND	0.50			NR



Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : Raytheon Fullerton-Monthly, 532.15

Report To : Steve Netto

Reported : 03/20/2012

Volatile Organic Compounds by EPA 8260 - Quality Control (cont'd)

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec % Rec	% Rec Limits	RPD RPD	RPD Limit	Notes
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Batch B2C0282 - MSVOAW_LL (continued)

Blank (B2C0282-BLK1) - Continued

Prepared: 3/12/2012 Analyzed: 3/12/2012

Isopropylbenzene	ND	0.50						NR	
m,p-Xylene	ND	1.0						NR	
Methylene chloride	ND	1.0						NR	
n-Butylbenzene	ND	0.50						NR	
n-Propylbenzene	ND	0.50						NR	
Naphthalene	ND	0.50						NR	
o-Xylene	ND	0.50						NR	
sec-Butylbenzene	ND	0.50						NR	
Styrene	ND	0.50						NR	
tert-Butylbenzene	ND	0.50						NR	
Tetrachloroethene	ND	0.50						NR	
Toluene	ND	0.50						NR	
trans-1,2-Dichloroethene	ND	0.50						NR	
Trichloroethene	ND	0.50						NR	
Trichlorofluoromethane	ND	0.50						NR	
Vinyl chloride	ND	0.50						NR	

<i>Surrogate: 1,2-Dichloroethane-d4</i>	29		25.0		115	70 - 130			
<i>Surrogate: 4-Bromofluorobenzene</i>	22		25.0		88.6	70 - 130			
<i>Surrogate: Dibromofluoromethane</i>	28		25.0		111	70 - 130			
<i>Surrogate: Toluene-d8</i>	26		25.0		103	70 - 130			

LCS (B2C0282-BS1)

Prepared: 3/12/2012 Analyzed: 3/12/2012

1,1-Dichloroethene	21	0.50	20.0		107	70 - 130			
Benzene	42	0.50	40.0		104	70 - 130			
Chlorobenzene	21	0.50	20.0		103	70 - 130			
MTBE	21	0.50	20.0		106	70 - 130			
Toluene	41	0.50	40.0		103	70 - 130			
Trichloroethene	20	0.50	20.0		102	70 - 130			

<i>Surrogate: 1,2-Dichloroethane-d4</i>	27		25.0		109	70 - 130			
<i>Surrogate: 4-Bromofluorobenzene</i>	21		25.0		84.4	70 - 130			
<i>Surrogate: Dibromofluoromethane</i>	25		25.0		99.8	70 - 130			
<i>Surrogate: Toluene-d8</i>	24		25.0		95.1	70 - 130			

LCS (B2C0282-BS2)

Prepared: 3/12/2012 Analyzed: 3/12/2012

1,1-Dichloroethene	20	0.50	20.0		100	70 - 130			
Benzene	41	0.50	40.0		103	70 - 130			
Chlorobenzene	21	0.50	20.0		103	70 - 130			
MTBE	21	0.50	20.0		106	70 - 130			
Toluene	41	0.50	40.0		103	70 - 130			
Trichloroethene	21	0.50	20.0		103	70 - 130			

<i>Surrogate: 1,2-Dichloroethane-d4</i>	29		25.0		115	70 - 130			
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Volatile Organic Compounds by EPA 8260 - Quality Control (cont'd)

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec % Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B2C0282 - MSVOAW_LL (continued)

LCS (B2C0282-BS2) - Continued

Prepared: 3/12/2012 Analyzed: 3/12/2012

Surrogate: 4-Bromofluorobenzene	23		25.0		92.7	70 - 130			
Surrogate: Dibromofluoromethane	27		25.0		109	70 - 130			
Surrogate: Toluene-d8	26		25.0		103	70 - 130			

LCS Dup (B2C0282-BSD1)

Prepared: 3/12/2012 Analyzed: 3/12/2012

1,1-Dichloroethene	21	0.50	20.0		105	70 - 130	1.09	20	
Benzene	41	0.50	40.0		103	70 - 130	0.627	20	
Chlorobenzene	21	0.50	20.0		105	70 - 130	1.93	20	
MTBE	21	0.50	20.0		107	70 - 130	1.18	20	
Toluene	41	0.50	40.0		101	70 - 130	1.88	20	
Trichloroethene	21	0.50	20.0		103	70 - 130	0.880	20	

Surrogate: 1,2-Dichloroethane-d4	28		25.0		114	70 - 130			
Surrogate: 4-Bromofluorobenzene	23		25.0		93.4	70 - 130			
Surrogate: Dibromofluoromethane	26		25.0		105	70 - 130			
Surrogate: Toluene-d8	25		25.0		102	70 - 130			

LCS Dup (B2C0282-BSD2)

Prepared: 3/12/2012 Analyzed: 3/12/2012

1,1-Dichloroethene	19	0.50	20.0		97.0	70 - 130	3.54		
Benzene	41	0.50	40.0		102	70 - 130	1.39		
Chlorobenzene	20	0.50	20.0		102	70 - 130	1.07		
MTBE	21	0.50	20.0		107	70 - 130	0.516		
Toluene	41	0.50	40.0		102	70 - 130	1.00		
Trichloroethene	20	0.50	20.0		102	70 - 130	0.929		

Surrogate: 1,2-Dichloroethane-d4	26		25.0		106	70 - 130			
Surrogate: 4-Bromofluorobenzene	21		25.0		82.9	70 - 130			
Surrogate: Dibromofluoromethane	24		25.0		97.8	70 - 130			
Surrogate: Toluene-d8	23		25.0		92.8	70 - 130			

Batch B2C0300 - MSVOAW_LL

Blank (B2C0300-BLK1)

Prepared: 3/13/2012 Analyzed: 3/13/2012

1,1,1,2-Tetrachloroethane	ND	0.50			NR				
1,1,1-Trichloroethane	ND	0.50			NR				
1,1,2,2-Tetrachloroethane	ND	0.50			NR				
1,1,2-Trichloroethane	ND	0.50			NR				
1,1-Dichloroethane	ND	0.50			NR				
1,1-Dichloroethene	ND	0.50			NR				
1,1-Dichloropropene	ND	0.50			NR				
1,2,3-Trichloropropane	ND	0.50			NR				
1,2,3-Trichlorobenzene	ND	0.50			NR				
1,2,4-Trichlorobenzene	ND	0.50			NR				



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Volatile Organic Compounds by EPA 8260 - Quality Control (cont'd)

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec % Rec	% Rec Limits	RPD RPD	RPD Limit	Notes
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Batch B2C0300 - MSVOAW_LL (continued)

Blank (B2C0300-BLK1) - Continued

Prepared: 3/13/2012 Analyzed: 3/13/2012

1,2,4-Trimethylbenzene	ND	0.50			NR
1,2-Dibromo-3-chloropropane	ND	0.50			NR
1,2-Dibromoethane	ND	0.50			NR
1,2-Dichlorobenzene	ND	0.50			NR
1,2-Dichloroethane	ND	0.50			NR
1,2-Dichloropropane	ND	0.50			NR
1,3,5-Trimethylbenzene	ND	0.50			NR
1,3-Dichlorobenzene	ND	0.50			NR
1,3-Dichloropropane	ND	0.50			NR
1,4-Dichlorobenzene	ND	0.50			NR
2,2-Dichloropropane	ND	0.50			NR
2-Chlorotoluene	ND	0.50			NR
4-Chlorotoluene	ND	0.50			NR
4-Isopropyltoluene	ND	0.50			NR
Benzene	ND	0.50			NR
Bromobenzene	ND	0.50			NR
Bromodichloromethane	ND	0.50			NR
Bromoform	ND	0.50			NR
Bromomethane	ND	0.50			NR
Carbon tetrachloride	ND	0.50			NR
Chlorobenzene	ND	0.50			NR
Chloroethane	ND	0.50			NR
Chloroform	ND	0.50			NR
Chloromethane	ND	0.50			NR
cis-1,2-Dichloroethene	ND	0.50			NR
cis-1,3-Dichloropropene	ND	0.50			NR
Dibromochloromethane	ND	0.50			NR
Dibromomethane	ND	0.50			NR
Dichlorodifluoromethane	ND	0.50			NR
Ethylbenzene	ND	0.50			NR
Hexachlorobutadiene	ND	0.50			NR
Isopropylbenzene	ND	0.50			NR
m,p-Xylene	ND	1.0			NR
Methylene chloride	ND	1.0			NR
n-Butylbenzene	ND	0.50			NR
n-Propylbenzene	ND	0.50			NR
Naphthalene	ND	0.50			NR
o-Xylene	ND	0.50			NR
sec-Butylbenzene	ND	0.50			NR
Styrene	ND	0.50			NR
tert-Butylbenzene	ND	0.50			NR
Tetrachloroethene	ND	0.50			NR



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Volatile Organic Compounds by EPA 8260 - Quality Control (cont'd)

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec % Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B2C0300 - MSVOAW_LL (continued)

Blank (B2C0300-BLK1) - Continued

Prepared: 3/13/2012 Analyzed: 3/13/2012

Toluene	ND	0.50			NR				
trans-1,2-Dichloroethene	ND	0.50			NR				
Trichloroethene	ND	0.50			NR				
Trichlorofluoromethane	ND	0.50			NR				
Vinyl chloride	ND	0.50			NR				
<i>Surrogate: 1,2-Dichloroethane-d4</i>	25		25.0		101	70 - 130			
<i>Surrogate: 4-Bromofluorobenzene</i>	21		25.0		82.6	70 - 130			
<i>Surrogate: Dibromofluoromethane</i>	25		25.0		98.6	70 - 130			
<i>Surrogate: Toluene-d8</i>	23		25.0		92.7	70 - 130			

LCS (B2C0300-BS1)

Prepared: 3/13/2012 Analyzed: 3/13/2012

1,1-Dichloroethene	20	0.50	20.0		101	70 - 130			
Benzene	40	0.50	40.0		98.8	70 - 130			
Chlorobenzene	20	0.50	20.0		102	70 - 130			
MTBE	20	0.50	20.0		100	70 - 130			
Toluene	39	0.50	40.0		98.4	70 - 130			
Trichloroethene	20	0.50	20.0		100	70 - 130			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	27		25.0		108	70 - 130			
<i>Surrogate: 4-Bromofluorobenzene</i>	23		25.0		91.3	70 - 130			
<i>Surrogate: Dibromofluoromethane</i>	26		25.0		102	70 - 130			
<i>Surrogate: Toluene-d8</i>	25		25.0		101	70 - 130			

LCS (B2C0300-BS2)

Prepared: 3/13/2012 Analyzed: 3/13/2012

1,1-Dichloroethene	21	0.50	20.0		106	70 - 130			
Benzene	41	0.50	40.0		101	70 - 130			
Chlorobenzene	21	0.50	20.0		103	70 - 130			
MTBE	20	0.50	20.0		98.0	70 - 130			
Toluene	40	0.50	40.0		101	70 - 130			
Trichloroethene	21	0.50	20.0		103	70 - 130			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	27		25.0		106	70 - 130			
<i>Surrogate: 4-Bromofluorobenzene</i>	23		25.0		93.0	70 - 130			
<i>Surrogate: Dibromofluoromethane</i>	25		25.0		102	70 - 130			
<i>Surrogate: Toluene-d8</i>	25		25.0		101	70 - 130			

LCS Dup (B2C0300-BSD1)

Prepared: 3/13/2012 Analyzed: 3/13/2012

1,1-Dichloroethene	21	0.50	20.0		105	70 - 130	4.08	20	
Benzene	41	0.50	40.0		102	70 - 130	3.02	20	
Chlorobenzene	21	0.50	20.0		104	70 - 130	1.60	20	
MTBE	21	0.50	20.0		106	70 - 130	5.24	20	
Toluene	41	0.50	40.0		103	70 - 130	4.18	20	
Trichloroethene	21	0.50	20.0		103	70 - 130	2.89	20	



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Volatile Organic Compounds by EPA 8260 - Quality Control (cont'd)

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec % Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B2C0300 - MSVOAW_LL (continued)

LCS Dup (B2C0300-BSD1) - Continued

Prepared: 3/13/2012 Analyzed: 3/13/2012

Surrogate: 1,2-Dichloroethane-d4	25		25.0		102	70 - 130			
Surrogate: 4-Bromofluorobenzene	21		25.0		84.9	70 - 130			
Surrogate: Dibromofluoromethane	24		25.0		96.7	70 - 130			
Surrogate: Toluene-d8	24		25.0		94.8	70 - 130			

LCS Dup (B2C0300-BSD2)

Prepared: 3/13/2012 Analyzed: 3/13/2012

1,1-Dichloroethene	20	0.50	20.0		102	70 - 130	4.19		
Benzene	41	0.50	40.0		102	70 - 130	0.590		
Chlorobenzene	21	0.50	20.0		103	70 - 130	0.0485		
MTBE	22	0.50	20.0		109	70 - 130	10.3		
Toluene	41	0.50	40.0		102	70 - 130	1.87		
Trichloroethene	20	0.50	20.0		102	70 - 130	1.56		
Surrogate: 1,2-Dichloroethane-d4	26		25.0		104	70 - 130			
Surrogate: 4-Bromofluorobenzene	21		25.0		84.6	70 - 130			
Surrogate: Dibromofluoromethane	25		25.0		98.5	70 - 130			
Surrogate: Toluene-d8	24		25.0		94.2	70 - 130			

Batch B2C0338 - MSVOAW_LL

Blank (B2C0338-BLK1)

Prepared: 3/14/2012 Analyzed: 3/14/2012

1,1,1,2-Tetrachloroethane	ND	0.50			NR				
1,1,1-Trichloroethane	ND	0.50			NR				
1,1,2,2-Tetrachloroethane	ND	0.50			NR				
1,1,2-Trichloroethane	ND	0.50			NR				
1,1-Dichloroethane	ND	0.50			NR				
1,1-Dichloroethene	ND	0.50			NR				
1,1-Dichloropropene	ND	0.50			NR				
1,2,3-Trichloropropane	ND	0.50			NR				
1,2,3-Trichlorobenzene	ND	0.50			NR				
1,2,4-Trichlorobenzene	ND	0.50			NR				
1,2,4-Trimethylbenzene	ND	0.50			NR				
1,2-Dibromo-3-chloropropane	ND	0.50			NR				
1,2-Dibromoethane	ND	0.50			NR				
1,2-Dichlorobenzene	ND	0.50			NR				
1,2-Dichloroethane	ND	0.50			NR				
1,2-Dichloropropane	ND	0.50			NR				
1,3,5-Trimethylbenzene	ND	0.50			NR				
1,3-Dichlorobenzene	ND	0.50			NR				
1,3-Dichloropropane	ND	0.50			NR				
1,4-Dichlorobenzene	ND	0.50			NR				
2,2-Dichloropropane	ND	0.50			NR				



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Volatile Organic Compounds by EPA 8260 - Quality Control (cont'd)

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B2C0338 - MSVOAW_LL (continued)

Blank (B2C0338-BLK1) - Continued

Prepared: 3/14/2012 Analyzed: 3/14/2012

2-Chlorotoluene	ND	0.50				NR			
4-Chlorotoluene	ND	0.50				NR			
4-Isopropyltoluene	ND	0.50				NR			
Benzene	ND	0.50				NR			
Bromobenzene	ND	0.50				NR			
Bromodichloromethane	ND	0.50				NR			
Bromoform	ND	0.50				NR			
Bromomethane	ND	0.50				NR			
Carbon tetrachloride	ND	0.50				NR			
Chlorobenzene	ND	0.50				NR			
Chloroethane	ND	0.50				NR			
Chloroform	ND	0.50				NR			
Chloromethane	ND	0.50				NR			
cis-1,2-Dichloroethene	ND	0.50				NR			
cis-1,3-Dichloropropene	ND	0.50				NR			
Dibromochloromethane	ND	0.50				NR			
Dibromomethane	ND	0.50				NR			
Dichlorodifluoromethane	ND	0.50				NR			
Ethylbenzene	ND	0.50				NR			
Hexachlorobutadiene	ND	0.50				NR			
Isopropylbenzene	ND	0.50				NR			
m,p-Xylene	ND	1.0				NR			
Methylene chloride	ND	1.0				NR			
n-Butylbenzene	ND	0.50				NR			
n-Propylbenzene	ND	0.50				NR			
Naphthalene	ND	0.50				NR			
o-Xylene	ND	0.50				NR			
sec-Butylbenzene	ND	0.50				NR			
Styrene	ND	0.50				NR			
tert-Butylbenzene	ND	0.50				NR			
Tetrachloroethene	ND	0.50				NR			
Toluene	ND	0.50				NR			
trans-1,2-Dichloroethene	ND	0.50				NR			
Trichloroethene	ND	0.50				NR			
Trichlorofluoromethane	ND	0.50				NR			
Vinyl chloride	ND	0.50				NR			

Surrogate: 1,2-Dichloroethane-d4	26		25.0		104	70 - 130			
Surrogate: 4-Bromofluorobenzene	20		25.0		80.9	70 - 130			
Surrogate: Dibromofluoromethane	25		25.0		98.6	70 - 130			
Surrogate: Toluene-d8	23		25.0		92.0	70 - 130			

LCS (B2C0338-BS1)

Prepared: 3/14/2012 Analyzed: 3/14/2012



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Volatile Organic Compounds by EPA 8260 - Quality Control (cont'd)

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec % Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B2C0338 - MSVOAW_LL (continued)									
1,1-Dichloroethene	23	0.50	20.0		113	70 - 130			
Benzene	41	0.50	40.0		103	70 - 130			
Chlorobenzene	21	0.50	20.0		103	70 - 130			
MTBE	19	0.50	20.0		94.0	70 - 130			
Toluene	40	0.50	40.0		101	70 - 130			
Trichloroethene	20	0.50	20.0		102	70 - 130			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	26		25.0		105	70 - 130			
<i>Surrogate: 4-Bromofluorobenzene</i>	21		25.0		85.9	70 - 130			
<i>Surrogate: Dibromofluoromethane</i>	25		25.0		99.3	70 - 130			
<i>Surrogate: Toluene-d8</i>	23		25.0		93.0	70 - 130			
LCS (B2C0338-BS2) Prepared: 3/14/2012 Analyzed: 3/14/2012									
1,1-Dichloroethene	20	0.50	20.0		98.9	70 - 130			
Benzene	40	0.50	40.0		99.6	70 - 130			
Chlorobenzene	20	0.50	20.0		100	70 - 130			
MTBE	19	0.50	20.0		97.4	70 - 130			
Toluene	39	0.50	40.0		98.7	70 - 130			
Trichloroethene	20	0.50	20.0		98.4	70 - 130			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	25		25.0		101	70 - 130			
<i>Surrogate: 4-Bromofluorobenzene</i>	20		25.0		81.9	70 - 130			
<i>Surrogate: Dibromofluoromethane</i>	24		25.0		95.5	70 - 130			
<i>Surrogate: Toluene-d8</i>	23		25.0		90.2	70 - 130			
LCS Dup (B2C0338-BSD1) Prepared: 3/14/2012 Analyzed: 3/14/2012									
1,1-Dichloroethene	21	0.50	20.0		107	70 - 130	5.48	20	
Benzene	41	0.50	40.0		103	70 - 130	0.291	20	
Chlorobenzene	21	0.50	20.0		103	70 - 130	0.437	20	
MTBE	20	0.50	20.0		98.3	70 - 130	4.47	20	
Toluene	41	0.50	40.0		103	70 - 130	1.91	20	
Trichloroethene	20	0.50	20.0		102	70 - 130	0.588	20	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	26		25.0		103	70 - 130			
<i>Surrogate: 4-Bromofluorobenzene</i>	21		25.0		83.6	70 - 130			
<i>Surrogate: Dibromofluoromethane</i>	24		25.0		97.2	70 - 130			
<i>Surrogate: Toluene-d8</i>	23		25.0		93.4	70 - 130			
LCS Dup (B2C0338-BSD2) Prepared: 3/14/2012 Analyzed: 3/14/2012									
1,1-Dichloroethene	21	0.50	20.0		103	70 - 130	3.72		
Benzene	41	0.50	40.0		103	70 - 130	3.11		
Chlorobenzene	20	0.50	20.0		101	70 - 130	1.19		
MTBE	20	0.50	20.0		100	70 - 130	2.83		
Toluene	41	0.50	40.0		102	70 - 130	2.94		
Trichloroethene	20	0.50	20.0		101	70 - 130	2.85		
<i>Surrogate: 1,2-Dichloroethane-d4</i>	27		25.0		108	70 - 130			



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Volatile Organic Compounds by EPA 8260 - Quality Control (cont'd)

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B2C0338 - MSVOAW_LL (continued)

LCS Dup (B2C0338-BSD2) - Continued

Prepared: 3/14/2012 Analyzed: 3/14/2012

<i>Surrogate: 4-Bromofluorobenzene</i>	22		25.0		89.2	70 - 130			
<i>Surrogate: Dibromofluoromethane</i>	26		25.0		103	70 - 130			
<i>Surrogate: Toluene-d8</i>	25		25.0		98.3	70 - 130			



Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego, CA 92122

Project Number : Raytheon Fullerton-Monthly, 532.15

Report To : Steve Netto

Reported : 03/20/2012

1,4-Dioxane by EPA 8270: Isotope Dilution Technique - Quality Control

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec % Rec	% Rec Limits	RPD RPD	RPD Limit	Notes
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Batch B2C0288 - MSSEMI_ISOTOPEDILN

Blank (B2C0288-BLK1)

Prepared: 3/12/2012 Analyzed: 3/12/2012

1,4-Dioxane	ND	2.0			NR				
Surrogate: 1,2-Dichlorobenzene-d4	75		100		74.6	37 - 93			
Surrogate: 2-Fluorobiphenyl	87		100		87.0	51 - 100			
Surrogate: 4-Terphenyl-d14	100		100		105	58 - 113			
Surrogate: Nitrobenzene-d5	70		100		70.2	39 - 95			



Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : Raytheon Fullerton-Monthly, 532.15

Report To : Steve Netto

Reported : 03/20/2012

1,4-Dioxane by EPA 8270: Isotope Dilution Technique - Quality Control (cont'd)

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B2C0288 - MSSEMI_ISOTOPEDILN (continued)

LCS (B2C0288-BS1)

Prepared: 3/12/2012 Analyzed: 3/12/2012

1,4-Dioxane	97	2.0	100		97.4	70 - 130			
Surrogate: 1,2-Dichlorobenzene-d4	72		100		72.0	37 - 93			
Surrogate: 2-Fluorobiphenyl	87		100		86.9	51 - 100			
Surrogate: 4-Terphenyl-d14	100		100		102	58 - 113			
Surrogate: Nitrobenzene-d5	77		100		77.1	39 - 95			



Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : Raytheon Fullerton-Monthly, 532.15

Report To : Steve Netto

Reported : 03/20/2012

1,4-Dioxane by EPA 8270: Isotope Dilution Technique - Quality Control (cont'd)

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B2C0288 - MSSEMI_ISOTOPEDILN (continued)

LCS Dup (B2C0288-bsd1)

Prepared: 3/12/2012 Analyzed: 3/12/2012

1,4-Dioxane	98	2.0	100		97.6	70 - 130	0.164	20	
Surrogate: 1,2-Dichlorobenzene-d4	70		100		69.8	37 - 93			
Surrogate: 2-Fluorobiphenyl	81		100		81.4	51 - 100			
Surrogate: 4-Terphenyl-d14	94		100		94.4	58 - 113			
Surrogate: Nitrobenzene-d5	72		100		72.4	39 - 95			



Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : Raytheon Fullerton-Monthly, 532.15

Report To : Steve Netto

Reported : 03/20/2012

1,4-Dioxane by EPA 8270/SIM: Isotope Dilution Technique - Quality Control

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B2C0344 - MSSEMI_ISOTOPEDILN

Blank (B2C0344-BLK1)

Prepared: 3/14/2012 Analyzed: 3/14/2012

1,4-Dioxane	ND	0.20				NR			
Surrogate: 1,2-Dichlorobenzene-d4	0.67		1.00		67.1	36 - 107			
Surrogate: 2-Fluorobiphenyl	0.76		1.00		75.7	42 - 120			
Surrogate: 4-Terphenyl-d14	1.1		1.00		110	67 - 142			
Surrogate: Nitrobenzene-d5	1.2		1.00		121	36 - 130			



Hargis & Associates, Inc.

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San Diego , CA 92122

Project Number : Raytheon Fullerton-Monthly, 532.15

Report To : Steve Netto

Reported : 03/20/2012

1,4-Dioxane by EPA 8270/SIM: Isotope Dilution Technique - Quality Control (cont'd)

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B2C0344 - MSSEMI_ISOTOPEDILN (continued)

LCS (B2C0344-BS1)

Prepared: 3/14/2012 Analyzed: 3/14/2012

1,4-Dioxane	1.2	0.20	1.00		125	70 - 130			
Surrogate: 1,2-Dichlorobenzene-d4	0.70		1.00		70.0	36 - 107			
Surrogate: 2-Fluorobiphenyl	0.79		1.00		78.5	42 - 120			
Surrogate: 4-Terphenyl-d14	0.98		1.00		97.7	67 - 142			
Surrogate: Nitrobenzene-d5	1.2		1.00		120	36 - 130			



Hargis & Associates, Inc.

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San Diego , CA 92122

Project Number : Raytheon Fullerton-Monthly, 532.15

Report To : Steve Netto

Reported : 03/20/2012

1,4-Dioxane by EPA 8270/SIM: Isotope Dilution Technique - Quality Control (cont'd)

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B2C0344 - MSSEMI_ISOTOPEDILN (continued)

LCS Dup (B2C0344-bsd1)

Prepared: 3/14/2012 Analyzed: 3/14/2012

1,4-Dioxane	1.2	0.20	1.00		124	70 - 130	0.0546	20	
Surrogate: 1,2-Dichlorobenzene-d4	0.70		1.00		70.0	36 - 107			
Surrogate: 2-Fluorobiphenyl	0.77		1.00		76.6	42 - 120			
Surrogate: 4-Terphenyl-d14	0.98		1.00		97.8	67 - 142			
Surrogate: Nitrobenzene-d5	1.3		1.00		125	36 - 130			



Hargis & Associates, Inc.

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Project Number : Raytheon Fullerton-Monthly, 532.15

Report To : Steve Netto

Reported : 03/20/2012

Notes and Definitions

S8	Surrogate recovery was above laboratory acceptance limit. See CAR for details.
ND	Analyte not detected at or above reporting limit
PQL	Practical Quantitation Limit
MDL	Method Detection Limit
NR	Not Reported
RPD	Relative Percent Difference
CA1	CA-NELAP (CDPH)
CA2	CA-ELAP (CDPH)
OR1	OR-NELAP (OSPHL)
TX1	TX-NELAP (TCEQ)

Bromate by EPA 317
 Ion Chromatography with Post-Column Derivatization-Visible Absorption

Column: Dionex AS9-HC/AG9-HSC
 Eluent: 30 mM Na₂CO₃
 Flow: 1.0 mL/min
 Injection: 250 µL
 Detection: Post-column derivatization, Visible detection, 450 nm

Sample preparation: The undiluted samples were treated with a Dionex OnGuard II H cartridge to remove excess basic cations. One sample required dilution with water due to an interfering peak. The detection limit is adjusted for the dilution necessary for analysis.

Parts Per Billion (µg/L)

Sample ID	Result	Detection Limit
1200869-02 / EW-02	ND	0.5
1200869-04 / POX	12	5
1200869-06 / CEFF	12.1	0.5
1200869-06 / CEFF Duplicate	12.4	0.5
1200869-07 / MW-21	ND	0.5
1200869-08 / INF	ND	0.5
Method Blank	ND	0.5

Date Analyzed: 03-15-12

Quality Control Summary

Sample ID: 1200869-06 / CEFF

Analyte	Sample Result	Duplicate Result	Sample RPD	Spike Conc	Spike Result	Spike % Rec
Bromate	12.1	12.4	2	20.0	30.8	93
QC Guidelines			NMT 10			75 - 125

Sample ID: 1200869-07 / MW-21

Analyte	Sample Result	Spike Conc	Spike Result	Spike % Rec
Bromate	ND	10.0	9.2	92
QC Guidelines				75 - 125

ADVANCED TECHNOLOGY
LABORATORIES

SUBCONTRACT ORDER

Work Order: 1200869

SENDING LABORATORY:


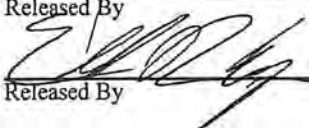
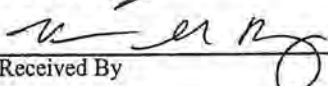
Advanced Technology Laboratories
3275 Walnut Avenue
Signal Hill, CA 90755
Phone: 562.989.4045
Fax: 562.989.6348
Project Manager: Rachele Arada

RECEIVING LABORATORY:

Exova Inc.
9240 Santa Fe Springs Road
Santa Fe Springs, CA 90670
Phone : (562) 948-2225
Fax: (562) 948-5850
PO#: SC07103 - Standard TAT RA

IMPORTANT : Please include Work Order # and PO # in your invoice.

Analysis	Due	Expires	Sampled	Comments / Special Instructions
ATL Lab#: 1200869-02 317.0	/ EW-02 03/16/12 17:00	Groundwater 03/10/12 10:25	03/09/12 10:25	Report Bromate. Need Excel EDD.
ATL Lab#: 1200869-04 317.0	/ POX 03/16/12 17:00	Groundwater 03/10/12 09:10	03/09/12 09:10	
ATL Lab#: 1200869-06 317.0	/ CEFF 03/16/12 17:00	Groundwater 03/10/12 09:30	03/09/12 09:30	
ATL Lab#: 1200869-07 317.0	/ MW-21 03/16/12 17:00	Groundwater 03/10/12 09:40	03/09/12 09:40	
ATL Lab#: 1200869-08 317.0	/ INF 03/16/12 17:00	Groundwater 03/10/12 08:40	03/09/12 08:40	

	3/7/12 Date		3/12/12 9:20 Date
	3/12/12 10:25 Date		03-12-12 10:25 Date

CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST FORM

PROJECT NAME Daytheon Rullenton-Montaly		PROJECT No./TASK No. 532.15				SAMPLE CONTAINERS		ANALYSIS REQUESTED				ESTIMATED CONCENTRATION RANGE (ppb) FOR VOAS		SPECIAL HANDLING		LABORATORY INFORMATION			
PROJECT MANAGER Chris Ross		Phone No. 352-455-6500														ALT			
QA MANAGER Steve Netto		Fax No. 352-455-6533														2700 Rockville Avada			
SAMPLER (SIGNATURE) 		SAMPLER (PRINTED) Marcos Rodriguez														3275 Walnut Ave.			
																Signal Hill, CA			
																90887			
																562-909-4045			
LAB ID	SAMPLE ID	SAMPLE COLLECTION		MATRIX		PRESERVATION				ESTIMATED CONCENTRATION RANGE (ppb) FOR VOAS		SPECIAL HANDLING		LABORATORY INFORMATION					
		Date	Time	Soil	Ground water	Surface water	Lab H2O	HCl	HNO 3							NaOH	H2SO 4	Ice	
1200869-61	TE-030412	3/9/12	08:00			X	X					X				Please include			
- 2	ZL-02		10:25	X			X					3	2	2	1	X	erodriguez@hargis.com		
- 3	PF		09:05	X									1				In lab report		
- 4	POX		09:10	X			X					3	2	1	1	X	distribution list		
- 5	CBT		09:20	X			X					3					set 1,4-Dioxane		
- 6	CEFF		09:30	X			X					3	2	1	1	X	MEL to 1.0 pps		
- 7	MW-21		09:40	X			X					3	2	2	1	X			
- 8	INF		08:40	X			X					3	2	2	1	X			
Total number of Containers per analysis:					20 15 9					4					Total No. of Containers: 43				

Relinquished by: 	Date 3/9/12	Received by: 	Date 3/9/12
Company H+A	Time 11:47	Company ATL	Time 11:45
Relinquished by:	Date	Received by:	Date
Company		Company	

INSTRUCTIONS

- Fill out form completely except for shaded areas (lab use only); sign only after verified for completeness.
- Complete in ballpoint pen. Draw one line through errors, initial and date correction.
- Indicate number of sample containers in analysis request space; indicate choice with √ or x.
- Note applicable preservatives, special instructions, and deviations from typical environmental samples.
- Consult project QA documents for specific instructions.

Sample Receipt:

No. of containers correct received good condition/cold

custody seals secure conforms to COC document

Shipment Method: DELIVER

Send Results to: Steve Netto

9171 TOWNE CENTRE DRIVE, SUITE 375
SAN DIEGO, CA 92122 (858) 455-6500

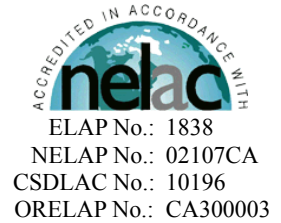
1640 SOUTH STAPLEY DRIVE, SUITE 124
MESA, AZ 85204 (480) 345-0888

1820 EAST RIVER ROAD, SUITE 220
TUCSON, AZ 85718 (520) 881-7300

Send invoice to San Diego, CA
Attn: Accounts Payable

March 20, 2012

Steve Netto
Hargis & Associates, Inc.
9171 Towne Centre Drive, Suite 375
San Diego, CA 92122
Tel: (619) 249-3166
Fax: (858) 455-6533



Re: ATL Work Order Number : 1200871

Client Reference : RAYTHEON FULLERTON - QUARTERLY, 532.15

Enclosed are the results for sample(s) received on March 09, 2012 by Advanced Technology Laboratories. The sample(s) are tested for the parameters as indicated on the enclosed chain of custody in accordance with applicable laboratory certifications. The laboratory results contained in this report specifically pertains to the sample(s) submitted.

Thank you for the opportunity to serve the needs of your company. If you have any questions, please feel free to contact me or your Project Manager.

Sincerely,

A handwritten signature in black ink, appearing to read "E Rodriguez".

Eddie Rodriguez
Laboratory Director

The cover letter and the case narrative are an integral part of this analytical report and its absence renders the report invalid. The report cannot be reproduced without written permission from the client and Advanced Technology Laboratories.



Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : RAYTHEON FULLERTON - QUARTER

Report To : Steve Netto

Reported : 03/20/2012

SUMMARY OF SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
TB-030912	1200871-01	Lab H2O	3/09/12 8:00	3/09/12 11:48
CEFF	1200871-02	Groundwater	3/09/12 8:05	3/09/12 11:48



Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : RAYTHEON FULLERTON - QUARTER

Report To : Steve Netto

Reported : 03/20/2012

Client Sample ID TB-030912

Lab ID: 1200871-01

Volatile Organic Compounds by EPA 624

Analyst: DC

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1-Trichloroethane	ND	5.0	NA	1	B2C0338	03/14/2012	03/14/12 10:28	
1,1,2,2-Tetrachloroethane	ND	5.0	NA	1	B2C0338	03/14/2012	03/14/12 10:28	
1,1,2-Trichloroethane	ND	5.0	NA	1	B2C0338	03/14/2012	03/14/12 10:28	
1,1-Dichloroethane	ND	5.0	NA	1	B2C0338	03/14/2012	03/14/12 10:28	
1,1-Dichloroethene	ND	5.0	NA	1	B2C0338	03/14/2012	03/14/12 10:28	
1,2-Dichlorobenzene	ND	5.0	NA	1	B2C0338	03/14/2012	03/14/12 10:28	
1,2-Dichloroethane	ND	5.0	NA	1	B2C0338	03/14/2012	03/14/12 10:28	
1,2-Dichloropropane	ND	5.0	NA	1	B2C0338	03/14/2012	03/14/12 10:28	
1,3-Dichlorobenzene	ND	5.0	NA	1	B2C0338	03/14/2012	03/14/12 10:28	
1,4-Dichlorobenzene	ND	5.0	NA	1	B2C0338	03/14/2012	03/14/12 10:28	
2-Chloroethyl vinyl ether	ND	5.0	NA	1	B2C0338	03/14/2012	03/14/12 10:28	
Acrolein	ND	50	NA	1	B2C0338	03/14/2012	03/14/12 10:28	
Acrylonitrile	ND	50	NA	1	B2C0338	03/14/2012	03/14/12 10:28	
Benzene	ND	5.0	NA	1	B2C0338	03/14/2012	03/14/12 10:28	
Bromodichloromethane	ND	5.0	NA	1	B2C0338	03/14/2012	03/14/12 10:28	
Bromoform	ND	5.0	NA	1	B2C0338	03/14/2012	03/14/12 10:28	
Bromomethane	ND	5.0	NA	1	B2C0338	03/14/2012	03/14/12 10:28	
Carbon tetrachloride	ND	5.0	NA	1	B2C0338	03/14/2012	03/14/12 10:28	
Chlorobenzene	ND	5.0	NA	1	B2C0338	03/14/2012	03/14/12 10:28	
Chloroethane	ND	5.0	NA	1	B2C0338	03/14/2012	03/14/12 10:28	
Chloroform	ND	5.0	NA	1	B2C0338	03/14/2012	03/14/12 10:28	
Chloromethane	ND	5.0	NA	1	B2C0338	03/14/2012	03/14/12 10:28	
cis-1,3-Dichloropropene	ND	5.0	NA	1	B2C0338	03/14/2012	03/14/12 10:28	
Dibromochloromethane	ND	5.0	NA	1	B2C0338	03/14/2012	03/14/12 10:28	
Ethylbenzene	ND	5.0	NA	1	B2C0338	03/14/2012	03/14/12 10:28	
m,p-Xylene	ND	10	NA	1	B2C0338	03/14/2012	03/14/12 10:28	
Methylene chloride	ND	5.0	NA	1	B2C0338	03/14/2012	03/14/12 10:28	
o-Xylene	ND	5.0	NA	1	B2C0338	03/14/2012	03/14/12 10:28	
Tetrachloroethene	ND	5.0	NA	1	B2C0338	03/14/2012	03/14/12 10:28	
Toluene	ND	5.0	NA	1	B2C0338	03/14/2012	03/14/12 10:28	
trans-1,2-Dichloroethene	ND	5.0	NA	1	B2C0338	03/14/2012	03/14/12 10:28	
trans-1,3-Dichloropropene	ND	50	NA	1	B2C0338	03/14/2012	03/14/12 10:28	
Trichloroethene	ND	5.0	NA	1	B2C0338	03/14/2012	03/14/12 10:28	
Trichlorofluoromethane	ND	5.0	NA	1	B2C0338	03/14/2012	03/14/12 10:28	



Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : RAYTHEON FULLERTON - QUARTER

Report To : Steve Netto

Reported : 03/20/2012

Client Sample ID TB-030912

Lab ID: 1200871-01

Volatile Organic Compounds by EPA 624

Analyst: DC

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Vinyl chloride	ND	5.0	NA	1	B2C0338	03/14/2012	03/14/12 10:28	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>114 %</i>		<i>70 - 130</i>		B2C0338	03/14/2012	<i>03/14/12 10:28</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>86.2 %</i>		<i>70 - 130</i>		B2C0338	03/14/2012	<i>03/14/12 10:28</i>	
<i>Surrogate: Dibromofluoromethane</i>	<i>108 %</i>		<i>70 - 130</i>		B2C0338	03/14/2012	<i>03/14/12 10:28</i>	
<i>Surrogate: Toluene-d8</i>	<i>99.1 %</i>		<i>70 - 130</i>		B2C0338	03/14/2012	<i>03/14/12 10:28</i>	



Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : RAYTHEON FULLERTON - QUARTER

Report To : Steve Netto

Reported : 03/20/2012

Client Sample ID CEFF

Lab ID: 1200871-02

Volatile Organic Compounds by EPA 624

Analyst: DC

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1-Trichloroethane	ND	5.0	NA	1	B2C0282	03/12/2012	03/12/12 21:29	
1,1,2,2-Tetrachloroethane	ND	5.0	NA	1	B2C0282	03/12/2012	03/12/12 21:29	
1,1,2-Trichloroethane	ND	5.0	NA	1	B2C0282	03/12/2012	03/12/12 21:29	
1,1-Dichloroethane	ND	5.0	NA	1	B2C0282	03/12/2012	03/12/12 21:29	
1,1-Dichloroethene	ND	5.0	NA	1	B2C0282	03/12/2012	03/12/12 21:29	
1,2-Dichlorobenzene	ND	5.0	NA	1	B2C0282	03/12/2012	03/12/12 21:29	
1,2-Dichloroethane	ND	5.0	NA	1	B2C0282	03/12/2012	03/12/12 21:29	
1,2-Dichloropropane	ND	5.0	NA	1	B2C0282	03/12/2012	03/12/12 21:29	
1,3-Dichlorobenzene	ND	5.0	NA	1	B2C0282	03/12/2012	03/12/12 21:29	
1,4-Dichlorobenzene	ND	5.0	NA	1	B2C0282	03/12/2012	03/12/12 21:29	
2-Chloroethyl vinyl ether	ND	5.0	NA	1	B2C0282	03/12/2012	03/12/12 21:29	
Acrolein	ND	50	NA	1	B2C0282	03/12/2012	03/12/12 21:29	
Acrylonitrile	ND	50	NA	1	B2C0282	03/12/2012	03/12/12 21:29	
Benzene	ND	5.0	NA	1	B2C0282	03/12/2012	03/12/12 21:29	
Bromodichloromethane	ND	5.0	NA	1	B2C0282	03/12/2012	03/12/12 21:29	
Bromoform	ND	5.0	NA	1	B2C0282	03/12/2012	03/12/12 21:29	
Bromomethane	ND	5.0	NA	1	B2C0282	03/12/2012	03/12/12 21:29	
Carbon tetrachloride	ND	5.0	NA	1	B2C0282	03/12/2012	03/12/12 21:29	
Chlorobenzene	ND	5.0	NA	1	B2C0282	03/12/2012	03/12/12 21:29	
Chloroethane	ND	5.0	NA	1	B2C0282	03/12/2012	03/12/12 21:29	
Chloroform	ND	5.0	NA	1	B2C0282	03/12/2012	03/12/12 21:29	
Chloromethane	ND	5.0	NA	1	B2C0282	03/12/2012	03/12/12 21:29	
cis-1,3-Dichloropropene	ND	5.0	NA	1	B2C0282	03/12/2012	03/12/12 21:29	
Dibromochloromethane	ND	5.0	NA	1	B2C0282	03/12/2012	03/12/12 21:29	
Ethylbenzene	ND	5.0	NA	1	B2C0282	03/12/2012	03/12/12 21:29	
m,p-Xylene	ND	10	NA	1	B2C0282	03/12/2012	03/12/12 21:29	
Methylene chloride	ND	5.0	NA	1	B2C0282	03/12/2012	03/12/12 21:29	
o-Xylene	ND	5.0	NA	1	B2C0282	03/12/2012	03/12/12 21:29	
Tetrachloroethene	ND	5.0	NA	1	B2C0282	03/12/2012	03/12/12 21:29	
Toluene	ND	5.0	NA	1	B2C0282	03/12/2012	03/12/12 21:29	
trans-1,2-Dichloroethene	ND	5.0	NA	1	B2C0282	03/12/2012	03/12/12 21:29	
trans-1,3-Dichloropropene	ND	50	NA	1	B2C0282	03/12/2012	03/12/12 21:29	
Trichloroethene	ND	5.0	NA	1	B2C0282	03/12/2012	03/12/12 21:29	
Trichlorofluoromethane	ND	5.0	NA	1	B2C0282	03/12/2012	03/12/12 21:29	



Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : RAYTHEON FULLERTON - QUARTER

Report To : Steve Netto

Reported : 03/20/2012

Client Sample ID CEFF

Lab ID: 1200871-02

Volatile Organic Compounds by EPA 624

Analyst: DC

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Vinyl chloride	ND	5.0	NA	1	B2C0282	03/12/2012	03/12/12 21:29	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>113 %</i>		<i>70 - 130</i>		B2C0282	03/12/2012	<i>03/12/12 21:29</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>82.9 %</i>		<i>70 - 130</i>		B2C0282	03/12/2012	<i>03/12/12 21:29</i>	
<i>Surrogate: Dibromofluoromethane</i>	<i>106 %</i>		<i>70 - 130</i>		B2C0282	03/12/2012	<i>03/12/12 21:29</i>	
<i>Surrogate: Toluene-d8</i>	<i>94.4 %</i>		<i>70 - 130</i>		B2C0282	03/12/2012	<i>03/12/12 21:29</i>	

1,4-Dioxane by EPA 8270/SIM: Isotope Dilution Technique

Analyst: PIL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,4-Dioxane	0.84	0.20	NA	1	B2C0344	03/14/2012	03/14/12 17:19	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	<i>78.0 %</i>		<i>36 - 107</i>		B2C0344	03/14/2012	<i>03/14/12 17:19</i>	
<i>Surrogate: 2-Fluorobiphenyl</i>	<i>89.1 %</i>		<i>42 - 120</i>		B2C0344	03/14/2012	<i>03/14/12 17:19</i>	
<i>Surrogate: 4-Terphenyl-d14</i>	<i>116 %</i>		<i>67 - 142</i>		B2C0344	03/14/2012	<i>03/14/12 17:19</i>	
<i>Surrogate: Nitrobenzene-d5</i>	<i>156 %</i>		<i>36 - 130</i>		B2C0344	03/14/2012	<i>03/14/12 17:19</i>	S8



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Project Number : RAYTHEON FULLERTON - QUARTER

Report To : Steve Netto

Reported : 03/20/2012

QUALITY CONTROL SECTION

Volatile Organic Compounds by EPA 624 - Quality Control

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B2C0282 - MSVOAW_LL

Blank (B2C0282-BLK1)

Prepared: 3/12/2012 Analyzed: 3/12/2012

1,1,1-Trichloroethane	ND	5.0				NR			
1,1,2,2-Tetrachloroethane	ND	5.0				NR			
1,1,2-Trichloroethane	ND	5.0				NR			
1,1-Dichloroethane	ND	5.0				NR			
1,1-Dichloroethene	ND	5.0				NR			
1,2-Dichlorobenzene	ND	5.0				NR			
1,2-Dichloroethane	ND	5.0				NR			
1,2-Dichloropropane	ND	5.0				NR			
1,3-Dichlorobenzene	ND	5.0				NR			
1,4-Dichlorobenzene	ND	5.0				NR			
2-Chloroethyl vinyl ether	ND	5.0				NR			
Acrolein	ND	50				NR			
Acrylonitrile	ND	50				NR			
Benzene	ND	5.0				NR			
Bromodichloromethane	ND	5.0				NR			
Bromoform	ND	5.0				NR			
Bromomethane	ND	5.0				NR			
Carbon tetrachloride	ND	5.0				NR			
Chlorobenzene	ND	5.0				NR			
Chloroethane	ND	5.0				NR			
Chloroform	ND	5.0				NR			
Chloromethane	ND	5.0				NR			
cis-1,3-Dichloropropene	ND	5.0				NR			
Dibromochloromethane	ND	5.0				NR			
Ethylbenzene	ND	5.0				NR			
m,p-Xylene	ND	10				NR			
Methylene chloride	ND	5.0				NR			
o-Xylene	ND	5.0				NR			
Tetrachloroethene	ND	5.0				NR			
Toluene	ND	5.0				NR			
trans-1,2-Dichloroethene	ND	5.0				NR			
trans-1,3-Dichloropropene	ND	50				NR			
Trichloroethene	ND	5.0				NR			
Trichlorofluoromethane	ND	5.0				NR			
Vinyl chloride	ND	5.0				NR			
Surrogate: 1,2-Dichloroethane-d4	29		25.0		115	70 - 130			
Surrogate: 4-Bromofluorobenzene	22		25.0		88.6	70 - 130			
Surrogate: Dibromofluoromethane	28		25.0		111	70 - 130			
Surrogate: Toluene-d8	26		25.0		103	70 - 130			



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San Diego, CA 92122

Project Number : RAYTHEON FULLERTON - QUARTER

Report To : Steve Netto

Reported : 03/20/2012

Volatile Organic Compounds by EPA 624 - Quality Control (cont'd)

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec % Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B2C0282 - MSVOAW_LL (continued)

LCS (B2C0282-BS1)

Prepared: 3/12/2012 Analyzed: 3/12/2012

1,1-Dichloroethene	21	5.0	20.0		107	70 - 130			
Benzene	42	5.0	40.0		104	70 - 130			
Chlorobenzene	21	5.0	20.0		103	70 - 130			
Toluene	41	5.0	40.0		103	70 - 130			
Trichloroethene	20	5.0	20.0		102	70 - 130			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	27		25.0		109	70 - 130			
<i>Surrogate: 4-Bromofluorobenzene</i>	21		25.0		84.4	70 - 130			
<i>Surrogate: Dibromofluoromethane</i>	25		25.0		99.8	70 - 130			
<i>Surrogate: Toluene-d8</i>	24		25.0		95.1	70 - 130			

LCS (B2C0282-BS2)

Prepared: 3/12/2012 Analyzed: 3/12/2012

1,1-Dichloroethene	20	5.0	20.0		100	70 - 130			
Benzene	41	5.0	40.0		103	70 - 130			
Chlorobenzene	21	5.0	20.0		103	70 - 130			
Toluene	41	5.0	40.0		103	70 - 130			
Trichloroethene	21	5.0	20.0		103	70 - 130			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	29		25.0		115	70 - 130			
<i>Surrogate: 4-Bromofluorobenzene</i>	23		25.0		92.7	70 - 130			
<i>Surrogate: Dibromofluoromethane</i>	27		25.0		109	70 - 130			
<i>Surrogate: Toluene-d8</i>	26		25.0		103	70 - 130			

LCS Dup (B2C0282-BSD1)

Prepared: 3/12/2012 Analyzed: 3/12/2012

1,1-Dichloroethene	21	5.0	20.0		105	70 - 130	1.09	20	
Benzene	41	5.0	40.0		103	70 - 130	0.627	20	
Chlorobenzene	21	5.0	20.0		105	70 - 130	1.93	20	
Toluene	41	5.0	40.0		101	70 - 130	1.88	20	
Trichloroethene	21	5.0	20.0		103	70 - 130	0.880	20	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	28		25.0		114	70 - 130			
<i>Surrogate: 4-Bromofluorobenzene</i>	23		25.0		93.4	70 - 130			
<i>Surrogate: Dibromofluoromethane</i>	26		25.0		105	70 - 130			
<i>Surrogate: Toluene-d8</i>	25		25.0		102	70 - 130			

LCS Dup (B2C0282-BSD2)

Prepared: 3/12/2012 Analyzed: 3/12/2012

1,1-Dichloroethene	19	5.0	20.0		97.0	70 - 130	3.54		
Benzene	41	5.0	40.0		102	70 - 130	1.39		
Chlorobenzene	20	5.0	20.0		102	70 - 130	1.07		
Toluene	41	5.0	40.0		102	70 - 130	1.00		
Trichloroethene	20	5.0	20.0		102	70 - 130	0.929		
<i>Surrogate: 1,2-Dichloroethane-d4</i>	26		25.0		106	70 - 130			
<i>Surrogate: 4-Bromofluorobenzene</i>	21		25.0		82.9	70 - 130			
<i>Surrogate: Dibromofluoromethane</i>	24		25.0		97.8	70 - 130			
<i>Surrogate: Toluene-d8</i>	23		25.0		92.8	70 - 130			



Hargis & Associates, Inc.

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Project Number : RAYTHEON FULLERTON - QUARTER

Report To : Steve Netto

Reported : 03/20/2012

Volatile Organic Compounds by EPA 624 - Quality Control (cont'd)

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec % Rec	% Rec Limits	RPD RPD	RPD Limit	Notes
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Batch B2C0282 - MSVOAW_LL (continued)

LCS Dup (B2C0282-BSD2) - Continued

Prepared: 3/12/2012 Analyzed: 3/12/2012

Batch B2C0338 - MSVOAW_LL

Blank (B2C0338-BLK1)

Prepared: 3/14/2012 Analyzed: 3/14/2012

1,1,1-Trichloroethane	ND	5.0			NR				
1,1,2,2-Tetrachloroethane	ND	5.0			NR				
1,1,2-Trichloroethane	ND	5.0			NR				
1,1-Dichloroethane	ND	5.0			NR				
1,1-Dichloroethene	ND	5.0			NR				
1,2-Dichlorobenzene	ND	5.0			NR				
1,2-Dichloroethane	ND	5.0			NR				
1,2-Dichloropropane	ND	5.0			NR				
1,3-Dichlorobenzene	ND	5.0			NR				
1,4-Dichlorobenzene	ND	5.0			NR				
2-Chloroethyl vinyl ether	ND	5.0			NR				
Acrolein	ND	50			NR				
Acrylonitrile	ND	50			NR				
Benzene	ND	5.0			NR				
Bromodichloromethane	ND	5.0			NR				
Bromoform	ND	5.0			NR				
Bromomethane	ND	5.0			NR				
Carbon tetrachloride	ND	5.0			NR				
Chlorobenzene	ND	5.0			NR				
Chloroethane	ND	5.0			NR				
Chloroform	ND	5.0			NR				
Chloromethane	ND	5.0			NR				
cis-1,3-Dichloropropene	ND	5.0			NR				
Dibromochloromethane	ND	5.0			NR				
Ethylbenzene	ND	5.0			NR				
m,p-Xylene	ND	10			NR				
Methylene chloride	ND	5.0			NR				
o-Xylene	ND	5.0			NR				
Tetrachloroethene	ND	5.0			NR				
Toluene	ND	5.0			NR				
trans-1,2-Dichloroethene	ND	5.0			NR				
trans-1,3-Dichloropropene	ND	50			NR				
Trichloroethene	ND	5.0			NR				
Trichlorofluoromethane	ND	5.0			NR				
Vinyl chloride	ND	5.0			NR				
Surrogate: 1,2-Dichloroethane-d4	26		25.0		104	70 - 130			
Surrogate: 4-Bromofluorobenzene	20		25.0		80.9	70 - 130			



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Project Number : RAYTHEON FULLERTON - QUARTER

Report To : Steve Netto

Reported : 03/20/2012

Volatile Organic Compounds by EPA 624 - Quality Control (cont'd)

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec % Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B2C0338 - MSVOAW_LL (continued)

Blank (B2C0338-BLK1) - Continued

Prepared: 3/14/2012 Analyzed: 3/14/2012

<i>Surrogate: Dibromofluoromethane</i>	25		25.0		98.6	70 - 130			
<i>Surrogate: Toluene-d8</i>	23		25.0		92.0	70 - 130			

LCS (B2C0338-BS1)

Prepared: 3/14/2012 Analyzed: 3/14/2012

1,1-Dichloroethene	23	5.0	20.0		113	70 - 130			
Benzene	41	5.0	40.0		103	70 - 130			
Chlorobenzene	21	5.0	20.0		103	70 - 130			
Toluene	40	5.0	40.0		101	70 - 130			
Trichloroethene	20	5.0	20.0		102	70 - 130			

<i>Surrogate: 1,2-Dichloroethane-d4</i>	26		25.0		105	70 - 130			
<i>Surrogate: 4-Bromofluorobenzene</i>	21		25.0		85.9	70 - 130			
<i>Surrogate: Dibromofluoromethane</i>	25		25.0		99.3	70 - 130			
<i>Surrogate: Toluene-d8</i>	23		25.0		93.0	70 - 130			

LCS (B2C0338-BS2)

Prepared: 3/14/2012 Analyzed: 3/14/2012

1,1-Dichloroethene	20	5.0	20.0		98.9	70 - 130			
Benzene	40	5.0	40.0		99.6	70 - 130			
Chlorobenzene	20	5.0	20.0		100	70 - 130			
Toluene	39	5.0	40.0		98.7	70 - 130			
Trichloroethene	20	5.0	20.0		98.4	70 - 130			

<i>Surrogate: 1,2-Dichloroethane-d4</i>	25		25.0		101	70 - 130			
<i>Surrogate: 4-Bromofluorobenzene</i>	20		25.0		81.9	70 - 130			
<i>Surrogate: Dibromofluoromethane</i>	24		25.0		95.5	70 - 130			
<i>Surrogate: Toluene-d8</i>	23		25.0		90.2	70 - 130			

LCS Dup (B2C0338-BSD1)

Prepared: 3/14/2012 Analyzed: 3/14/2012

1,1-Dichloroethene	21	5.0	20.0		107	70 - 130	5.48	20	
Benzene	41	5.0	40.0		103	70 - 130	0.291	20	
Chlorobenzene	21	5.0	20.0		103	70 - 130	0.437	20	
Toluene	41	5.0	40.0		103	70 - 130	1.91	20	
Trichloroethene	20	5.0	20.0		102	70 - 130	0.588	20	

<i>Surrogate: 1,2-Dichloroethane-d4</i>	26		25.0		103	70 - 130			
<i>Surrogate: 4-Bromofluorobenzene</i>	21		25.0		83.6	70 - 130			
<i>Surrogate: Dibromofluoromethane</i>	24		25.0		97.2	70 - 130			
<i>Surrogate: Toluene-d8</i>	23		25.0		93.4	70 - 130			

LCS Dup (B2C0338-BSD2)

Prepared: 3/14/2012 Analyzed: 3/14/2012

1,1-Dichloroethene	21	5.0	20.0		103	70 - 130	3.72		
Benzene	41	5.0	40.0		103	70 - 130	3.11		
Chlorobenzene	20	5.0	20.0		101	70 - 130	1.19		
Toluene	41	5.0	40.0		102	70 - 130	2.94		



Hargis & Associates, Inc.

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Project Number : RAYTHEON FULLERTON - QUARTER

Report To : Steve Netto

Reported : 03/20/2012

Volatile Organic Compounds by EPA 624 - Quality Control (cont'd)

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B2C0338 - MSVOAW_LL (continued)

LCS Dup (B2C0338-BSD2) - Continued

Prepared: 3/14/2012 Analyzed: 3/14/2012

Trichloroethene	20	5.0	20.0		101	70 - 130	2.85		
Surrogate: 1,2-Dichloroethane-d4	27		25.0		108	70 - 130			
Surrogate: 4-Bromofluorobenzene	22		25.0		89.2	70 - 130			
Surrogate: Dibromofluoromethane	26		25.0		103	70 - 130			
Surrogate: Toluene-d8	25		25.0		98.3	70 - 130			



Hargis & Associates, Inc.

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Project Number : RAYTHEON FULLERTON - QUARTER

Report To : Steve Netto

Reported : 03/20/2012

1,4-Dioxane by EPA 8270/SIM: Isotope Dilution Technique - Quality Control

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec % Rec	% Rec Limits	RPD RPD	RPD Limit	Notes
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Batch B2C0344 - MSEMI_ISOTOPEDILN

Blank (B2C0344-BLK1)

Prepared: 3/14/2012 Analyzed: 3/14/2012

1,4-Dioxane	ND	0.20			NR				
Surrogate: 1,2-Dichlorobenzene-d4	0.67		1.00		67.1	36 - 107			
Surrogate: 2-Fluorobiphenyl	0.76		1.00		75.7	42 - 120			
Surrogate: 4-Terphenyl-d14	1.1		1.00		110	67 - 142			
Surrogate: Nitrobenzene-d5	1.2		1.00		121	36 - 130			

LCS (B2C0344-BS1)

Prepared: 3/14/2012 Analyzed: 3/14/2012

1,4-Dioxane	1.2	0.20	1.00		125	70 - 130			
Surrogate: 1,2-Dichlorobenzene-d4	0.70		1.00		70.0	36 - 107			
Surrogate: 2-Fluorobiphenyl	0.79		1.00		78.5	42 - 120			
Surrogate: 4-Terphenyl-d14	0.98		1.00		97.7	67 - 142			
Surrogate: Nitrobenzene-d5	1.2		1.00		120	36 - 130			

LCS Dup (B2C0344-BSD1)

Prepared: 3/14/2012 Analyzed: 3/14/2012

1,4-Dioxane	1.2	0.20	1.00		124	70 - 130	0.0546	20	
Surrogate: 1,2-Dichlorobenzene-d4	0.70		1.00		70.0	36 - 107			
Surrogate: 2-Fluorobiphenyl	0.77		1.00		76.6	42 - 120			
Surrogate: 4-Terphenyl-d14	0.98		1.00		97.8	67 - 142			
Surrogate: Nitrobenzene-d5	1.3		1.00		125	36 - 130			



Hargis & Associates, Inc.

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San Diego , CA 92122

Project Number : RAYTHEON FULLERTON - QUARTER

Report To : Steve Netto

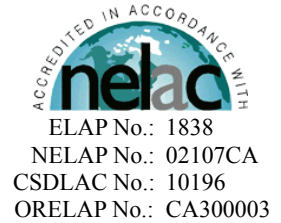
Reported : 03/20/2012

Notes and Definitions

S8	Surrogate recovery was above laboratory acceptance limit. See CAR for details.
ND	Analyte not detected at or above reporting limit
PQL	Practical Quantitation Limit
MDL	Method Detection Limit
NR	Not Reported
RPD	Relative Percent Difference
CA1	CA-NELAP (CDPH)
CA2	CA-ELAP (CDPH)
OR1	OR-NELAP (OSPHL)
TX1	TX-NELAP (TCEQ)

May 01, 2012

Steve Netto
Hargis & Associates, Inc.
9171 Towne Centre Drive, Suite 375
San Diego, CA 92122
Tel: (619) 249-3166
Fax: (858) 455-6533



Re: ATL Work Order Number : 1201389
Client Reference : RAYTHEON FULLERTON-MONTHLY, 532.15

Enclosed are the results for sample(s) received on April 16, 2012 by Advanced Technology Laboratories. The sample(s) are tested for the parameters as indicated on the enclosed chain of custody in accordance with applicable laboratory certifications. The laboratory results contained in this report specifically pertains to the sample(s) submitted.

Thank you for the opportunity to serve the needs of your company. If you have any questions, please feel free to contact me or your Project Manager.

Sincerely,

A handwritten signature in black ink, appearing to read "E. Rodriguez".

Eddie Rodriguez
Laboratory Director

The cover letter and the case narrative are an integral part of this analytical report and its absence renders the report invalid. The report cannot be reproduced without written permission from the client and Advanced Technology Laboratories.



Hargis & Associates, Inc.
9171 Towne Centre Drive, Suite 375
San Diego , CA 92122

Project Number : RAYTHEON FULLERTON-MONTHLY,
Report To : Steve Netto
Reported : 05/01/2012

SUMMARY OF SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
TB-041612	1201389-01	Lab H2O	4/16/12 8:00	4/16/12 12:24
EW-02	1201389-02	Groundwater	4/16/12 10:12	4/16/12 12:24
PF	1201389-03	Groundwater	4/16/12 9:00	4/16/12 12:24
POX	1201389-04	Groundwater	4/16/12 9:10	4/16/12 12:24
CBT	1201389-05	Groundwater	4/16/12 9:27	4/16/12 12:24
CEFF	1201389-06	Groundwater	4/16/12 9:37	4/16/12 12:24

CASE NARRATIVE

The samples for EPA 317 (Bromate) analysis were subcontracted to Exova, Inc. with ELAP Cert.# 2652.



Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : RAYTHEON FULLERTON-MONTHLY,

Report To : Steve Netto

Reported : 05/01/2012

Client Sample ID TB-041612

Lab ID: 1201389-01

Volatile Organic Compounds by EPA 8260

Analyst: DC

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	0.50	NA	1	B2D0584	04/17/2012	04/17/12 11:32	
1,1,1-Trichloroethane	ND	0.50	NA	1	B2D0584	04/17/2012	04/17/12 11:32	
1,1,2,2-Tetrachloroethane	ND	0.50	NA	1	B2D0584	04/17/2012	04/17/12 11:32	
1,1,2-Trichloroethane	ND	0.50	NA	1	B2D0584	04/17/2012	04/17/12 11:32	
1,1-Dichloroethane	ND	0.50	NA	1	B2D0584	04/17/2012	04/17/12 11:32	
1,1-Dichloroethene	ND	0.50	NA	1	B2D0584	04/17/2012	04/17/12 11:32	
1,1-Dichloropropene	ND	0.50	NA	1	B2D0584	04/17/2012	04/17/12 11:32	
1,2,3-Trichloropropane	ND	0.50	NA	1	B2D0584	04/17/2012	04/17/12 11:32	
1,2,3-Trichlorobenzene	ND	0.50	NA	1	B2D0584	04/17/2012	04/17/12 11:32	
1,2,4-Trichlorobenzene	ND	0.50	NA	1	B2D0584	04/17/2012	04/17/12 11:32	
1,2,4-Trimethylbenzene	ND	0.50	NA	1	B2D0584	04/17/2012	04/17/12 11:32	
1,2-Dibromo-3-chloropropane	ND	0.50	NA	1	B2D0584	04/17/2012	04/17/12 11:32	
1,2-Dibromoethane	ND	0.50	NA	1	B2D0584	04/17/2012	04/17/12 11:32	
1,2-Dichlorobenzene	ND	0.50	NA	1	B2D0584	04/17/2012	04/17/12 11:32	
1,2-Dichloroethane	ND	0.50	NA	1	B2D0584	04/17/2012	04/17/12 11:32	
1,2-Dichloropropane	ND	0.50	NA	1	B2D0584	04/17/2012	04/17/12 11:32	
1,3,5-Trimethylbenzene	ND	0.50	NA	1	B2D0584	04/17/2012	04/17/12 11:32	
1,3-Dichlorobenzene	ND	0.50	NA	1	B2D0584	04/17/2012	04/17/12 11:32	
1,3-Dichloropropane	ND	0.50	NA	1	B2D0584	04/17/2012	04/17/12 11:32	
1,4-Dichlorobenzene	ND	0.50	NA	1	B2D0584	04/17/2012	04/17/12 11:32	
2,2-Dichloropropane	ND	0.50	NA	1	B2D0584	04/17/2012	04/17/12 11:32	
2-Chlorotoluene	ND	0.50	NA	1	B2D0584	04/17/2012	04/17/12 11:32	
4-Chlorotoluene	ND	0.50	NA	1	B2D0584	04/17/2012	04/17/12 11:32	
4-Isopropyltoluene	ND	0.50	NA	1	B2D0584	04/17/2012	04/17/12 11:32	
Benzene	ND	0.50	NA	1	B2D0584	04/17/2012	04/17/12 11:32	
Bromobenzene	ND	0.50	NA	1	B2D0584	04/17/2012	04/17/12 11:32	
Bromodichloromethane	ND	0.50	NA	1	B2D0584	04/17/2012	04/17/12 11:32	
Bromoform	ND	0.50	NA	1	B2D0584	04/17/2012	04/17/12 11:32	
Bromomethane	ND	0.50	NA	1	B2D0584	04/17/2012	04/17/12 11:32	
Carbon tetrachloride	ND	0.50	NA	1	B2D0584	04/17/2012	04/17/12 11:32	
Chlorobenzene	ND	0.50	NA	1	B2D0584	04/17/2012	04/17/12 11:32	
Chloroethane	ND	0.50	NA	1	B2D0584	04/17/2012	04/17/12 11:32	
Chloroform	ND	0.50	NA	1	B2D0584	04/17/2012	04/17/12 11:32	
Chloromethane	ND	0.50	NA	1	B2D0584	04/17/2012	04/17/12 11:32	



Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : RAYTHEON FULLERTON-MONTHLY,

Report To : Steve Netto

Reported : 05/01/2012

Client Sample ID TB-041612

Lab ID: 1201389-01

Volatile Organic Compounds by EPA 8260

Analyst: DC

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
cis-1,2-Dichloroethene	ND	0.50	NA	1	B2D0584	04/17/2012	04/17/12 11:32	
cis-1,3-Dichloropropene	ND	0.50	NA	1	B2D0584	04/17/2012	04/17/12 11:32	
Dibromochloromethane	ND	0.50	NA	1	B2D0584	04/17/2012	04/17/12 11:32	
Dibromomethane	ND	0.50	NA	1	B2D0584	04/17/2012	04/17/12 11:32	
Dichlorodifluoromethane	ND	0.50	NA	1	B2D0584	04/17/2012	04/17/12 11:32	
Ethylbenzene	ND	0.50	NA	1	B2D0584	04/17/2012	04/17/12 11:32	
Hexachlorobutadiene	ND	0.50	NA	1	B2D0584	04/17/2012	04/17/12 11:32	
Isopropylbenzene	ND	0.50	NA	1	B2D0584	04/17/2012	04/17/12 11:32	
m,p-Xylene	ND	1.0	NA	1	B2D0584	04/17/2012	04/17/12 11:32	
Methylene chloride	ND	1.0	NA	1	B2D0584	04/17/2012	04/17/12 11:32	
n-Butylbenzene	ND	0.50	NA	1	B2D0584	04/17/2012	04/17/12 11:32	
n-Propylbenzene	ND	0.50	NA	1	B2D0584	04/17/2012	04/17/12 11:32	
Naphthalene	ND	0.50	NA	1	B2D0584	04/17/2012	04/17/12 11:32	
o-Xylene	ND	0.50	NA	1	B2D0584	04/17/2012	04/17/12 11:32	
sec-Butylbenzene	ND	0.50	NA	1	B2D0584	04/17/2012	04/17/12 11:32	
Styrene	ND	0.50	NA	1	B2D0584	04/17/2012	04/17/12 11:32	
tert-Butylbenzene	ND	0.50	NA	1	B2D0584	04/17/2012	04/17/12 11:32	
Tetrachloroethene	ND	0.50	NA	1	B2D0584	04/17/2012	04/17/12 11:32	
Toluene	ND	0.50	NA	1	B2D0584	04/17/2012	04/17/12 11:32	
trans-1,2-Dichloroethene	ND	0.50	NA	1	B2D0584	04/17/2012	04/17/12 11:32	
Trichloroethene	ND	0.50	NA	1	B2D0584	04/17/2012	04/17/12 11:32	
Trichlorofluoromethane	ND	0.50	NA	1	B2D0584	04/17/2012	04/17/12 11:32	
Vinyl chloride	ND	0.50	NA	1	B2D0584	04/17/2012	04/17/12 11:32	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>91.9 %</i>		<i>70 - 130</i>		B2D0584	04/17/2012	<i>04/17/12 11:32</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>93.4 %</i>		<i>70 - 130</i>		B2D0584	04/17/2012	<i>04/17/12 11:32</i>	
<i>Surrogate: Dibromofluoromethane</i>	<i>93.6 %</i>		<i>70 - 130</i>		B2D0584	04/17/2012	<i>04/17/12 11:32</i>	
<i>Surrogate: Toluene-d8</i>	<i>97.3 %</i>		<i>70 - 130</i>		B2D0584	04/17/2012	<i>04/17/12 11:32</i>	



Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : RAYTHEON FULLERTON-MONTHLY,

Report To : Steve Netto

Reported : 05/01/2012

Client Sample ID EW-02

Lab ID: 1201389-02

Anions by Ion Chromatography EPA 300.0

Analyst: Phali

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Bromide	0.19	0.05	NA	1	B2D0667	04/18/2012	04/18/12 09:36	

Total Dissolved Solids (Residue, Filterable) by SM 2540C

Analyst: AG

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Residue, Dissolved	620	10	NA	1	B2D0680	04/17/2012	04/18/12 07:04	

Total Suspended Solids (Residue, Non-Filtrable) by SM 2540D

Analyst: PT

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Residue, Suspended	ND	10	NA	1	B2D0653	04/17/2012	04/18/12 07:00	

Volatile Organic Compounds by EPA 8260

Analyst: DC

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	0.50	NA	1	B2D0584	04/17/2012	04/17/12 15:28	
1,1,1-Trichloroethane	ND	0.50	NA	1	B2D0584	04/17/2012	04/17/12 15:28	
1,1,2,2-Tetrachloroethane	ND	0.50	NA	1	B2D0584	04/17/2012	04/17/12 15:28	
1,1,2-Trichloroethane	ND	0.50	NA	1	B2D0584	04/17/2012	04/17/12 15:28	
1,1-Dichloroethane	ND	0.50	NA	1	B2D0584	04/17/2012	04/17/12 15:28	
1,1-Dichloroethene	45	0.50	NA	1	B2D0584	04/17/2012	04/17/12 15:28	
1,1-Dichloropropene	ND	0.50	NA	1	B2D0584	04/17/2012	04/17/12 15:28	
1,2,3-Trichloropropane	ND	0.50	NA	1	B2D0584	04/17/2012	04/17/12 15:28	
1,2,3-Trichlorobenzene	ND	0.50	NA	1	B2D0584	04/17/2012	04/17/12 15:28	
1,2,4-Trichlorobenzene	ND	0.50	NA	1	B2D0584	04/17/2012	04/17/12 15:28	
1,2,4-Trimethylbenzene	ND	0.50	NA	1	B2D0584	04/17/2012	04/17/12 15:28	
1,2-Dibromo-3-chloropropane	ND	0.50	NA	1	B2D0584	04/17/2012	04/17/12 15:28	
1,2-Dibromoethane	ND	0.50	NA	1	B2D0584	04/17/2012	04/17/12 15:28	
1,2-Dichlorobenzene	ND	0.50	NA	1	B2D0584	04/17/2012	04/17/12 15:28	
1,2-Dichloroethane	ND	0.50	NA	1	B2D0584	04/17/2012	04/17/12 15:28	
1,2-Dichloropropane	ND	0.50	NA	1	B2D0584	04/17/2012	04/17/12 15:28	
1,3,5-Trimethylbenzene	ND	0.50	NA	1	B2D0584	04/17/2012	04/17/12 15:28	



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9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : RAYTHEON FULLERTON-MONTHLY,

Report To : Steve Netto

Reported : 05/01/2012

Client Sample ID EW-02

Lab ID: 1201389-02

Volatile Organic Compounds by EPA 8260

Analyst: DC

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,3-Dichlorobenzene	ND	0.50	NA	1	B2D0584	04/17/2012	04/17/12 15:28	
1,3-Dichloropropane	ND	0.50	NA	1	B2D0584	04/17/2012	04/17/12 15:28	
1,4-Dichlorobenzene	ND	0.50	NA	1	B2D0584	04/17/2012	04/17/12 15:28	
2,2-Dichloropropane	ND	0.50	NA	1	B2D0584	04/17/2012	04/17/12 15:28	
2-Chlorotoluene	ND	0.50	NA	1	B2D0584	04/17/2012	04/17/12 15:28	
4-Chlorotoluene	ND	0.50	NA	1	B2D0584	04/17/2012	04/17/12 15:28	
4-Isopropyltoluene	ND	0.50	NA	1	B2D0584	04/17/2012	04/17/12 15:28	
Benzene	ND	0.50	NA	1	B2D0584	04/17/2012	04/17/12 15:28	
Bromobenzene	ND	0.50	NA	1	B2D0584	04/17/2012	04/17/12 15:28	
Bromodichloromethane	ND	0.50	NA	1	B2D0584	04/17/2012	04/17/12 15:28	
Bromoform	ND	0.50	NA	1	B2D0584	04/17/2012	04/17/12 15:28	
Bromomethane	ND	0.50	NA	1	B2D0584	04/17/2012	04/17/12 15:28	
Carbon tetrachloride	ND	0.50	NA	1	B2D0584	04/17/2012	04/17/12 15:28	
Chlorobenzene	ND	0.50	NA	1	B2D0584	04/17/2012	04/17/12 15:28	
Chloroethane	ND	0.50	NA	1	B2D0584	04/17/2012	04/17/12 15:28	
Chloroform	ND	0.50	NA	1	B2D0584	04/17/2012	04/17/12 15:28	
Chloromethane	ND	0.50	NA	1	B2D0584	04/17/2012	04/17/12 15:28	
cis-1,2-Dichloroethene	ND	0.50	NA	1	B2D0584	04/17/2012	04/17/12 15:28	
cis-1,3-Dichloropropene	ND	0.50	NA	1	B2D0584	04/17/2012	04/17/12 15:28	
Dibromochloromethane	ND	0.50	NA	1	B2D0584	04/17/2012	04/17/12 15:28	
Dibromomethane	ND	0.50	NA	1	B2D0584	04/17/2012	04/17/12 15:28	
Dichlorodifluoromethane	ND	0.50	NA	1	B2D0584	04/17/2012	04/17/12 15:28	
Ethylbenzene	ND	0.50	NA	1	B2D0584	04/17/2012	04/17/12 15:28	
Hexachlorobutadiene	ND	0.50	NA	1	B2D0584	04/17/2012	04/17/12 15:28	
Isopropylbenzene	ND	0.50	NA	1	B2D0584	04/17/2012	04/17/12 15:28	
m,p-Xylene	ND	1.0	NA	1	B2D0584	04/17/2012	04/17/12 15:28	
Methylene chloride	ND	1.0	NA	1	B2D0584	04/17/2012	04/17/12 15:28	
n-Butylbenzene	ND	0.50	NA	1	B2D0584	04/17/2012	04/17/12 15:28	
n-Propylbenzene	ND	0.50	NA	1	B2D0584	04/17/2012	04/17/12 15:28	
Naphthalene	ND	0.50	NA	1	B2D0584	04/17/2012	04/17/12 15:28	
o-Xylene	ND	0.50	NA	1	B2D0584	04/17/2012	04/17/12 15:28	
sec-Butylbenzene	ND	0.50	NA	1	B2D0584	04/17/2012	04/17/12 15:28	
Styrene	ND	0.50	NA	1	B2D0584	04/17/2012	04/17/12 15:28	
tert-Butylbenzene	ND	0.50	NA	1	B2D0584	04/17/2012	04/17/12 15:28	



Hargis & Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego , CA 92122

Project Number : RAYTHEON FULLERTON-MONTHLY,
 Report To : Steve Netto
 Reported : 05/01/2012

Client Sample ID EW-02
Lab ID: 1201389-02

Volatile Organic Compounds by EPA 8260

Analyst: DC

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Tetrachloroethene	ND	0.50	NA	1	B2D0584	04/17/2012	04/17/12 15:28	
Toluene	ND	0.50	NA	1	B2D0584	04/17/2012	04/17/12 15:28	
trans-1,2-Dichloroethene	ND	0.50	NA	1	B2D0584	04/17/2012	04/17/12 15:28	
Trichloroethene	ND	0.50	NA	1	B2D0584	04/17/2012	04/17/12 15:28	
Trichlorofluoromethane	ND	0.50	NA	1	B2D0584	04/17/2012	04/17/12 15:28	
Vinyl chloride	ND	0.50	NA	1	B2D0584	04/17/2012	04/17/12 15:28	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>98.7 %</i>		<i>70 - 130</i>		B2D0584	04/17/2012	<i>04/17/12 15:28</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>94.2 %</i>		<i>70 - 130</i>		B2D0584	04/17/2012	<i>04/17/12 15:28</i>	
<i>Surrogate: Dibromofluoromethane</i>	<i>99.0 %</i>		<i>70 - 130</i>		B2D0584	04/17/2012	<i>04/17/12 15:28</i>	
<i>Surrogate: Toluene-d8</i>	<i>100 %</i>		<i>70 - 130</i>		B2D0584	04/17/2012	<i>04/17/12 15:28</i>	

1,4-Dioxane by EPA 8270: Isotope Dilution Technique

Analyst: PIL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,4-Dioxane	14	2.0	NA	1	B2D0636	04/18/2012	04/18/12 23:12	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	<i>88.1 %</i>		<i>37 - 93</i>		B2D0636	04/18/2012	<i>04/18/12 23:12</i>	
<i>Surrogate: 2-Fluorobiphenyl</i>	<i>96.2 %</i>		<i>51 - 100</i>		B2D0636	04/18/2012	<i>04/18/12 23:12</i>	
<i>Surrogate: 4-Terphenyl-d14</i>	<i>128 %</i>		<i>58 - 113</i>		B2D0636	04/18/2012	<i>04/18/12 23:12</i>	S8
<i>Surrogate: Nitrobenzene-d5</i>	<i>84.5 %</i>		<i>39 - 95</i>		B2D0636	04/18/2012	<i>04/18/12 23:12</i>	



Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : RAYTHEON FULLERTON-MONTHLY,

Report To : Steve Netto

Reported : 05/01/2012

Client Sample ID PF

Lab ID: 1201389-03

Total Suspended Solids (Residue, Non-Filtrable) by SM 2540D

Analyst: PT

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Residue, Suspended	ND	10	NA	1	B2D0653	04/17/2012	04/18/12 07:00	



Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : RAYTHEON FULLERTON-MONTHLY,

Report To : Steve Netto

Reported : 05/01/2012

Client Sample ID POX

Lab ID: 1201389-04

Anions by Ion Chromatography EPA 300.0

Analyst: Phali

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Bromide	0.19	0.05	NA	1	B2D0667	04/18/2012	04/18/12 09:48	

Total Dissolved Solids (Residue, Filterable) by SM 2540C

Analyst: AG

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Residue, Dissolved	630	10	NA	1	B2D0680	04/17/2012	04/18/12 07:06	

Volatile Organic Compounds by EPA 8260

Analyst: DC

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	0.50	NA	1	B2D0584	04/17/2012	04/17/12 14:28	
1,1,1-Trichloroethane	ND	0.50	NA	1	B2D0584	04/17/2012	04/17/12 14:28	
1,1,2,2-Tetrachloroethane	ND	0.50	NA	1	B2D0584	04/17/2012	04/17/12 14:28	
1,1,2-Trichloroethane	ND	0.50	NA	1	B2D0584	04/17/2012	04/17/12 14:28	
1,1-Dichloroethane	ND	0.50	NA	1	B2D0584	04/17/2012	04/17/12 14:28	
1,1-Dichloroethene	ND	0.50	NA	1	B2D0584	04/17/2012	04/17/12 14:28	
1,1-Dichloropropene	ND	0.50	NA	1	B2D0584	04/17/2012	04/17/12 14:28	
1,2,3-Trichloropropane	ND	0.50	NA	1	B2D0584	04/17/2012	04/17/12 14:28	
1,2,3-Trichlorobenzene	ND	0.50	NA	1	B2D0584	04/17/2012	04/17/12 14:28	
1,2,4-Trichlorobenzene	ND	0.50	NA	1	B2D0584	04/17/2012	04/17/12 14:28	
1,2,4-Trimethylbenzene	ND	0.50	NA	1	B2D0584	04/17/2012	04/17/12 14:28	
1,2-Dibromo-3-chloropropane	ND	0.50	NA	1	B2D0584	04/17/2012	04/17/12 14:28	
1,2-Dibromoethane	ND	0.50	NA	1	B2D0584	04/17/2012	04/17/12 14:28	
1,2-Dichlorobenzene	ND	0.50	NA	1	B2D0584	04/17/2012	04/17/12 14:28	
1,2-Dichloroethane	ND	0.50	NA	1	B2D0584	04/17/2012	04/17/12 14:28	
1,2-Dichloropropane	ND	0.50	NA	1	B2D0584	04/17/2012	04/17/12 14:28	
1,3,5-Trimethylbenzene	ND	0.50	NA	1	B2D0584	04/17/2012	04/17/12 14:28	
1,3-Dichlorobenzene	ND	0.50	NA	1	B2D0584	04/17/2012	04/17/12 14:28	
1,3-Dichloropropane	ND	0.50	NA	1	B2D0584	04/17/2012	04/17/12 14:28	
1,4-Dichlorobenzene	ND	0.50	NA	1	B2D0584	04/17/2012	04/17/12 14:28	
2,2-Dichloropropane	ND	0.50	NA	1	B2D0584	04/17/2012	04/17/12 14:28	
2-Chlorotoluene	ND	0.50	NA	1	B2D0584	04/17/2012	04/17/12 14:28	
4-Chlorotoluene	ND	0.50	NA	1	B2D0584	04/17/2012	04/17/12 14:28	



Hargis & Associates, Inc.
9171 Towne Centre Drive, Suite 375
San Diego , CA 92122

Project Number : RAYTHEON FULLERTON-MONTHLY,
Report To : Steve Netto
Reported : 05/01/2012

Client Sample ID POX
Lab ID: 1201389-04

Volatile Organic Compounds by EPA 8260

Analyst: DC

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
4-Isopropyltoluene	ND	0.50	NA	1	B2D0584	04/17/2012	04/17/12 14:28	
Benzene	ND	0.50	NA	1	B2D0584	04/17/2012	04/17/12 14:28	
Bromobenzene	ND	0.50	NA	1	B2D0584	04/17/2012	04/17/12 14:28	
Bromodichloromethane	ND	0.50	NA	1	B2D0584	04/17/2012	04/17/12 14:28	
Bromoform	ND	0.50	NA	1	B2D0584	04/17/2012	04/17/12 14:28	
Bromomethane	ND	0.50	NA	1	B2D0584	04/17/2012	04/17/12 14:28	
Carbon tetrachloride	ND	0.50	NA	1	B2D0584	04/17/2012	04/17/12 14:28	
Chlorobenzene	ND	0.50	NA	1	B2D0584	04/17/2012	04/17/12 14:28	
Chloroethane	ND	0.50	NA	1	B2D0584	04/17/2012	04/17/12 14:28	
Chloroform	ND	0.50	NA	1	B2D0584	04/17/2012	04/17/12 14:28	
Chloromethane	ND	0.50	NA	1	B2D0584	04/17/2012	04/17/12 14:28	
cis-1,2-Dichloroethene	ND	0.50	NA	1	B2D0584	04/17/2012	04/17/12 14:28	
cis-1,3-Dichloropropene	ND	0.50	NA	1	B2D0584	04/17/2012	04/17/12 14:28	
Dibromochloromethane	ND	0.50	NA	1	B2D0584	04/17/2012	04/17/12 14:28	
Dibromomethane	ND	0.50	NA	1	B2D0584	04/17/2012	04/17/12 14:28	
Dichlorodifluoromethane	ND	0.50	NA	1	B2D0584	04/17/2012	04/17/12 14:28	
Ethylbenzene	ND	0.50	NA	1	B2D0584	04/17/2012	04/17/12 14:28	
Hexachlorobutadiene	ND	0.50	NA	1	B2D0584	04/17/2012	04/17/12 14:28	
Isopropylbenzene	ND	0.50	NA	1	B2D0584	04/17/2012	04/17/12 14:28	
m,p-Xylene	ND	1.0	NA	1	B2D0584	04/17/2012	04/17/12 14:28	
Methylene chloride	ND	1.0	NA	1	B2D0584	04/17/2012	04/17/12 14:28	
n-Butylbenzene	ND	0.50	NA	1	B2D0584	04/17/2012	04/17/12 14:28	
n-Propylbenzene	ND	0.50	NA	1	B2D0584	04/17/2012	04/17/12 14:28	
Naphthalene	ND	0.50	NA	1	B2D0584	04/17/2012	04/17/12 14:28	
o-Xylene	ND	0.50	NA	1	B2D0584	04/17/2012	04/17/12 14:28	
sec-Butylbenzene	ND	0.50	NA	1	B2D0584	04/17/2012	04/17/12 14:28	
Styrene	ND	0.50	NA	1	B2D0584	04/17/2012	04/17/12 14:28	
tert-Butylbenzene	ND	0.50	NA	1	B2D0584	04/17/2012	04/17/12 14:28	
Tetrachloroethene	ND	0.50	NA	1	B2D0584	04/17/2012	04/17/12 14:28	
Toluene	ND	0.50	NA	1	B2D0584	04/17/2012	04/17/12 14:28	
trans-1,2-Dichloroethene	ND	0.50	NA	1	B2D0584	04/17/2012	04/17/12 14:28	
Trichloroethene	ND	0.50	NA	1	B2D0584	04/17/2012	04/17/12 14:28	
Trichlorofluoromethane	ND	0.50	NA	1	B2D0584	04/17/2012	04/17/12 14:28	
Vinyl chloride	ND	0.50	NA	1	B2D0584	04/17/2012	04/17/12 14:28	



Hargis & Associates, Inc.
9171 Towne Centre Drive, Suite 375
San Diego , CA 92122

Project Number : RAYTHEON FULLERTON-MONTHLY,
Report To : Steve Netto
Reported : 05/01/2012

Client Sample ID POX
Lab ID: 1201389-04

Volatile Organic Compounds by EPA 8260

Analyst: DC

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
<i>Surrogate: 1,2-Dichloroethane-d4</i>	98.5 %	70 - 130			B2D0584	04/17/2012	04/17/12 14:28	
<i>Surrogate: 4-Bromofluorobenzene</i>	98.2 %	70 - 130			B2D0584	04/17/2012	04/17/12 14:28	
<i>Surrogate: Dibromofluoromethane</i>	101 %	70 - 130			B2D0584	04/17/2012	04/17/12 14:28	
<i>Surrogate: Toluene-d8</i>	104 %	70 - 130			B2D0584	04/17/2012	04/17/12 14:28	

1,4-Dioxane by EPA 8270/SIM: Isotope Dilution Technique

Analyst: MR

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,4-Dioxane	0.27	0.20	NA	1	B2D0744	04/20/2012	04/20/12 20:44	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	95.4 %	36 - 107			B2D0744	04/20/2012	04/20/12 20:44	
<i>Surrogate: 2-Fluorobiphenyl</i>	89.8 %	42 - 120			B2D0744	04/20/2012	04/20/12 20:44	
<i>Surrogate: 4-Terphenyl-d14</i>	99.8 %	67 - 142			B2D0744	04/20/2012	04/20/12 20:44	
<i>Surrogate: Nitrobenzene-d5</i>	100 %	36 - 130			B2D0744	04/20/2012	04/20/12 20:44	



Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : RAYTHEON FULLERTON-MONTHLY,

Report To : Steve Netto

Reported : 05/01/2012

Client Sample ID CBT

Lab ID: 1201389-05

Volatile Organic Compounds by EPA 8260

Analyst: DC

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	0.50	NA	1	B2D0584	04/17/2012	04/17/12 14:48	
1,1,1-Trichloroethane	ND	0.50	NA	1	B2D0584	04/17/2012	04/17/12 14:48	
1,1,2,2-Tetrachloroethane	ND	0.50	NA	1	B2D0584	04/17/2012	04/17/12 14:48	
1,1,2-Trichloroethane	ND	0.50	NA	1	B2D0584	04/17/2012	04/17/12 14:48	
1,1-Dichloroethane	0.73	0.50	NA	1	B2D0584	04/17/2012	04/17/12 14:48	
1,1-Dichloroethene	ND	0.50	NA	1	B2D0584	04/17/2012	04/17/12 14:48	
1,1-Dichloropropene	ND	0.50	NA	1	B2D0584	04/17/2012	04/17/12 14:48	
1,2,3-Trichloropropane	ND	0.50	NA	1	B2D0584	04/17/2012	04/17/12 14:48	
1,2,3-Trichlorobenzene	ND	0.50	NA	1	B2D0584	04/17/2012	04/17/12 14:48	
1,2,4-Trichlorobenzene	ND	0.50	NA	1	B2D0584	04/17/2012	04/17/12 14:48	
1,2,4-Trimethylbenzene	ND	0.50	NA	1	B2D0584	04/17/2012	04/17/12 14:48	
1,2-Dibromo-3-chloropropane	ND	0.50	NA	1	B2D0584	04/17/2012	04/17/12 14:48	
1,2-Dibromoethane	ND	0.50	NA	1	B2D0584	04/17/2012	04/17/12 14:48	
1,2-Dichlorobenzene	ND	0.50	NA	1	B2D0584	04/17/2012	04/17/12 14:48	
1,2-Dichloroethane	ND	0.50	NA	1	B2D0584	04/17/2012	04/17/12 14:48	
1,2-Dichloropropane	ND	0.50	NA	1	B2D0584	04/17/2012	04/17/12 14:48	
1,3,5-Trimethylbenzene	ND	0.50	NA	1	B2D0584	04/17/2012	04/17/12 14:48	
1,3-Dichlorobenzene	ND	0.50	NA	1	B2D0584	04/17/2012	04/17/12 14:48	
1,3-Dichloropropane	ND	0.50	NA	1	B2D0584	04/17/2012	04/17/12 14:48	
1,4-Dichlorobenzene	ND	0.50	NA	1	B2D0584	04/17/2012	04/17/12 14:48	
2,2-Dichloropropane	ND	0.50	NA	1	B2D0584	04/17/2012	04/17/12 14:48	
2-Chlorotoluene	ND	0.50	NA	1	B2D0584	04/17/2012	04/17/12 14:48	
4-Chlorotoluene	ND	0.50	NA	1	B2D0584	04/17/2012	04/17/12 14:48	
4-Isopropyltoluene	ND	0.50	NA	1	B2D0584	04/17/2012	04/17/12 14:48	
Benzene	ND	0.50	NA	1	B2D0584	04/17/2012	04/17/12 14:48	
Bromobenzene	ND	0.50	NA	1	B2D0584	04/17/2012	04/17/12 14:48	
Bromodichloromethane	ND	0.50	NA	1	B2D0584	04/17/2012	04/17/12 14:48	
Bromoform	ND	0.50	NA	1	B2D0584	04/17/2012	04/17/12 14:48	
Bromomethane	ND	0.50	NA	1	B2D0584	04/17/2012	04/17/12 14:48	
Carbon tetrachloride	ND	0.50	NA	1	B2D0584	04/17/2012	04/17/12 14:48	
Chlorobenzene	ND	0.50	NA	1	B2D0584	04/17/2012	04/17/12 14:48	
Chloroethane	ND	0.50	NA	1	B2D0584	04/17/2012	04/17/12 14:48	
Chloroform	ND	0.50	NA	1	B2D0584	04/17/2012	04/17/12 14:48	
Chloromethane	ND	0.50	NA	1	B2D0584	04/17/2012	04/17/12 14:48	



Hargis & Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego , CA 92122

Project Number : RAYTHEON FULLERTON-MONTHLY,
 Report To : Steve Netto
 Reported : 05/01/2012

Client Sample ID CBT
Lab ID: 1201389-05

Volatile Organic Compounds by EPA 8260

Analyst: DC

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
cis-1,2-Dichloroethene	ND	0.50	NA	1	B2D0584	04/17/2012	04/17/12 14:48	
cis-1,3-Dichloropropene	ND	0.50	NA	1	B2D0584	04/17/2012	04/17/12 14:48	
Dibromochloromethane	ND	0.50	NA	1	B2D0584	04/17/2012	04/17/12 14:48	
Dibromomethane	ND	0.50	NA	1	B2D0584	04/17/2012	04/17/12 14:48	
Dichlorodifluoromethane	ND	0.50	NA	1	B2D0584	04/17/2012	04/17/12 14:48	
Ethylbenzene	ND	0.50	NA	1	B2D0584	04/17/2012	04/17/12 14:48	
Hexachlorobutadiene	ND	0.50	NA	1	B2D0584	04/17/2012	04/17/12 14:48	
Isopropylbenzene	ND	0.50	NA	1	B2D0584	04/17/2012	04/17/12 14:48	
m,p-Xylene	ND	1.0	NA	1	B2D0584	04/17/2012	04/17/12 14:48	
Methylene chloride	ND	1.0	NA	1	B2D0584	04/17/2012	04/17/12 14:48	
n-Butylbenzene	ND	0.50	NA	1	B2D0584	04/17/2012	04/17/12 14:48	
n-Propylbenzene	ND	0.50	NA	1	B2D0584	04/17/2012	04/17/12 14:48	
Naphthalene	ND	0.50	NA	1	B2D0584	04/17/2012	04/17/12 14:48	
o-Xylene	ND	0.50	NA	1	B2D0584	04/17/2012	04/17/12 14:48	
sec-Butylbenzene	ND	0.50	NA	1	B2D0584	04/17/2012	04/17/12 14:48	
Styrene	ND	0.50	NA	1	B2D0584	04/17/2012	04/17/12 14:48	
tert-Butylbenzene	ND	0.50	NA	1	B2D0584	04/17/2012	04/17/12 14:48	
Tetrachloroethene	ND	0.50	NA	1	B2D0584	04/17/2012	04/17/12 14:48	
Toluene	ND	0.50	NA	1	B2D0584	04/17/2012	04/17/12 14:48	
trans-1,2-Dichloroethene	ND	0.50	NA	1	B2D0584	04/17/2012	04/17/12 14:48	
Trichloroethene	ND	0.50	NA	1	B2D0584	04/17/2012	04/17/12 14:48	
Trichlorofluoromethane	ND	0.50	NA	1	B2D0584	04/17/2012	04/17/12 14:48	
Vinyl chloride	ND	0.50	NA	1	B2D0584	04/17/2012	04/17/12 14:48	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>100 %</i>	<i>70 - 130</i>			B2D0584	04/17/2012	<i>04/17/12 14:48</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>100 %</i>	<i>70 - 130</i>			B2D0584	04/17/2012	<i>04/17/12 14:48</i>	
<i>Surrogate: Dibromofluoromethane</i>	<i>103 %</i>	<i>70 - 130</i>			B2D0584	04/17/2012	<i>04/17/12 14:48</i>	
<i>Surrogate: Toluene-d8</i>	<i>106 %</i>	<i>70 - 130</i>			B2D0584	04/17/2012	<i>04/17/12 14:48</i>	



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 9171 Towne Centre Drive, Suite 375
 San Diego , CA 92122

Project Number : RAYTHEON FULLERTON-MONTHLY,
 Report To : Steve Netto
 Reported : 05/01/2012

Client Sample ID CEFF
Lab ID: 1201389-06

Anions by Ion Chromatography EPA 300.0

Analyst: Phali

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Bromide	0.21	0.05	NA	1	B2D0667	04/18/2012	04/18/12 09:59	

Total Dissolved Solids (Residue, Filterable) by SM 2540C

Analyst: AG

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Residue, Dissolved	660	10	NA	1	B2D0680	04/17/2012	04/18/12 07:08	

Volatile Organic Compounds by EPA 8260

Analyst: DC

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	0.50	NA	1	B2D0584	04/17/2012	04/17/12 15:08	
1,1,1-Trichloroethane	ND	0.50	NA	1	B2D0584	04/17/2012	04/17/12 15:08	
1,1,2,2-Tetrachloroethane	ND	0.50	NA	1	B2D0584	04/17/2012	04/17/12 15:08	
1,1,2-Trichloroethane	ND	0.50	NA	1	B2D0584	04/17/2012	04/17/12 15:08	
1,1-Dichloroethane	1.2	0.50	NA	1	B2D0584	04/17/2012	04/17/12 15:08	
1,1-Dichloroethene	ND	0.50	NA	1	B2D0584	04/17/2012	04/17/12 15:08	
1,1-Dichloropropene	ND	0.50	NA	1	B2D0584	04/17/2012	04/17/12 15:08	
1,2,3-Trichloropropane	ND	0.50	NA	1	B2D0584	04/17/2012	04/17/12 15:08	
1,2,3-Trichlorobenzene	ND	0.50	NA	1	B2D0584	04/17/2012	04/17/12 15:08	
1,2,4-Trichlorobenzene	ND	0.50	NA	1	B2D0584	04/17/2012	04/17/12 15:08	
1,2,4-Trimethylbenzene	ND	0.50	NA	1	B2D0584	04/17/2012	04/17/12 15:08	
1,2-Dibromo-3-chloropropane	ND	0.50	NA	1	B2D0584	04/17/2012	04/17/12 15:08	
1,2-Dibromoethane	ND	0.50	NA	1	B2D0584	04/17/2012	04/17/12 15:08	
1,2-Dichlorobenzene	ND	0.50	NA	1	B2D0584	04/17/2012	04/17/12 15:08	
1,2-Dichloroethane	ND	0.50	NA	1	B2D0584	04/17/2012	04/17/12 15:08	
1,2-Dichloropropane	ND	0.50	NA	1	B2D0584	04/17/2012	04/17/12 15:08	
1,3,5-Trimethylbenzene	ND	0.50	NA	1	B2D0584	04/17/2012	04/17/12 15:08	
1,3-Dichlorobenzene	ND	0.50	NA	1	B2D0584	04/17/2012	04/17/12 15:08	
1,3-Dichloropropane	ND	0.50	NA	1	B2D0584	04/17/2012	04/17/12 15:08	
1,4-Dichlorobenzene	ND	0.50	NA	1	B2D0584	04/17/2012	04/17/12 15:08	
2,2-Dichloropropane	ND	0.50	NA	1	B2D0584	04/17/2012	04/17/12 15:08	
2-Chlorotoluene	ND	0.50	NA	1	B2D0584	04/17/2012	04/17/12 15:08	
4-Chlorotoluene	ND	0.50	NA	1	B2D0584	04/17/2012	04/17/12 15:08	



Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : RAYTHEON FULLERTON-MONTHLY,

Report To : Steve Netto

Reported : 05/01/2012

Client Sample ID CEFF

Lab ID: 1201389-06

Volatile Organic Compounds by EPA 8260

Analyst: DC

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
4-Isopropyltoluene	ND	0.50	NA	1	B2D0584	04/17/2012	04/17/12 15:08	
Benzene	ND	0.50	NA	1	B2D0584	04/17/2012	04/17/12 15:08	
Bromobenzene	ND	0.50	NA	1	B2D0584	04/17/2012	04/17/12 15:08	
Bromodichloromethane	ND	0.50	NA	1	B2D0584	04/17/2012	04/17/12 15:08	
Bromoform	ND	0.50	NA	1	B2D0584	04/17/2012	04/17/12 15:08	
Bromomethane	ND	0.50	NA	1	B2D0584	04/17/2012	04/17/12 15:08	
Carbon tetrachloride	ND	0.50	NA	1	B2D0584	04/17/2012	04/17/12 15:08	
Chlorobenzene	ND	0.50	NA	1	B2D0584	04/17/2012	04/17/12 15:08	
Chloroethane	ND	0.50	NA	1	B2D0584	04/17/2012	04/17/12 15:08	
Chloroform	ND	0.50	NA	1	B2D0584	04/17/2012	04/17/12 15:08	
Chloromethane	ND	0.50	NA	1	B2D0584	04/17/2012	04/17/12 15:08	
cis-1,2-Dichloroethene	ND	0.50	NA	1	B2D0584	04/17/2012	04/17/12 15:08	
cis-1,3-Dichloropropene	ND	0.50	NA	1	B2D0584	04/17/2012	04/17/12 15:08	
Dibromochloromethane	ND	0.50	NA	1	B2D0584	04/17/2012	04/17/12 15:08	
Dibromomethane	ND	0.50	NA	1	B2D0584	04/17/2012	04/17/12 15:08	
Dichlorodifluoromethane	ND	0.50	NA	1	B2D0584	04/17/2012	04/17/12 15:08	
Ethylbenzene	ND	0.50	NA	1	B2D0584	04/17/2012	04/17/12 15:08	
Hexachlorobutadiene	ND	0.50	NA	1	B2D0584	04/17/2012	04/17/12 15:08	
Isopropylbenzene	ND	0.50	NA	1	B2D0584	04/17/2012	04/17/12 15:08	
m,p-Xylene	ND	1.0	NA	1	B2D0584	04/17/2012	04/17/12 15:08	
Methylene chloride	ND	1.0	NA	1	B2D0584	04/17/2012	04/17/12 15:08	
n-Butylbenzene	ND	0.50	NA	1	B2D0584	04/17/2012	04/17/12 15:08	
n-Propylbenzene	ND	0.50	NA	1	B2D0584	04/17/2012	04/17/12 15:08	
Naphthalene	ND	0.50	NA	1	B2D0584	04/17/2012	04/17/12 15:08	
o-Xylene	ND	0.50	NA	1	B2D0584	04/17/2012	04/17/12 15:08	
sec-Butylbenzene	ND	0.50	NA	1	B2D0584	04/17/2012	04/17/12 15:08	
Styrene	ND	0.50	NA	1	B2D0584	04/17/2012	04/17/12 15:08	
tert-Butylbenzene	ND	0.50	NA	1	B2D0584	04/17/2012	04/17/12 15:08	
Tetrachloroethene	ND	0.50	NA	1	B2D0584	04/17/2012	04/17/12 15:08	
Toluene	ND	0.50	NA	1	B2D0584	04/17/2012	04/17/12 15:08	
trans-1,2-Dichloroethene	ND	0.50	NA	1	B2D0584	04/17/2012	04/17/12 15:08	
Trichloroethene	ND	0.50	NA	1	B2D0584	04/17/2012	04/17/12 15:08	
Trichlorofluoromethane	ND	0.50	NA	1	B2D0584	04/17/2012	04/17/12 15:08	
Vinyl chloride	ND	0.50	NA	1	B2D0584	04/17/2012	04/17/12 15:08	



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San Diego , CA 92122

Project Number : RAYTHEON FULLERTON-MONTHLY,
Report To : Steve Netto
Reported : 05/01/2012

Client Sample ID CEFF
Lab ID: 1201389-06

Volatile Organic Compounds by EPA 8260

Analyst: DC

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
<i>Surrogate: 1,2-Dichloroethane-d4</i>	97.0 %	70 - 130			B2D0584	04/17/2012	04/17/12 15:08	
<i>Surrogate: 4-Bromofluorobenzene</i>	92.5 %	70 - 130			B2D0584	04/17/2012	04/17/12 15:08	
<i>Surrogate: Dibromofluoromethane</i>	99.6 %	70 - 130			B2D0584	04/17/2012	04/17/12 15:08	
<i>Surrogate: Toluene-d8</i>	101 %	70 - 130			B2D0584	04/17/2012	04/17/12 15:08	



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Project Number : RAYTHEON FULLERTON-MONTHLY,
 Report To : Steve Netto
 Reported : 05/01/2012

QUALITY CONTROL SECTION

Anions by Ion Chromatography EPA 300.0 - Quality Control

Analyte	Result (mg/L)	PQL (mg/L)	Spike Level	Source Result	% Rec % Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B2D0667 - No_Prep_IC_1

Blank (B2D0667-BLK1)							Prepared: 4/18/2012 Analyzed: 4/18/2012		
Bromide	ND	0.05				NR			
LCS (B2D0667-BS1)							Prepared: 4/18/2012 Analyzed: 4/18/2012		
Bromide	0.95	0.05	1.00		95	90 - 110			
Matrix Spike (B2D0667-MS1)		Source: 1201391-01					Prepared: 4/18/2012 Analyzed: 4/18/2012		
Bromide	2.6		2.50	ND	105	80 - 120			
Matrix Spike (B2D0667-MS2)		Source: 1201423-01					Prepared: 4/18/2012 Analyzed: 4/18/2012		
Bromide	2.6		2.50	0.01	102	80 - 120			
Matrix Spike Dup (B2D0667-MSD1)		Source: 1201391-01					Prepared: 4/18/2012 Analyzed: 4/18/2012		
Bromide	2.6		2.50	ND	102	80 - 120	2	20	
Matrix Spike Dup (B2D0667-MSD2)		Source: 1201423-01					Prepared: 4/18/2012 Analyzed: 4/18/2012		
Bromide	2.6		2.50	0.01	103	80 - 120	0.6	20	



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 San Diego , CA 92122

Project Number : RAYTHEON FULLERTON-MONTHLY,
 Report To : Steve Netto
 Reported : 05/01/2012

Total Dissolved Solids (Residue, Filterable) by SM 2540C - Quality Control

Analyte	Result (mg/L)	PQL (mg/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B2D0680 - No_Prep_WC_1

Blank (B2D0680-BLK1)

Prepared: 4/17/2012 Analyzed: 4/18/2012

Residue, Dissolved

ND

10

NR

LCS (B2D0680-BS1)

Prepared: 4/17/2012 Analyzed: 4/18/2012

Residue, Dissolved

1000

10

970

104

80 - 120

Duplicate (B2D0680-DUP1)

Source: 1201334-01

Prepared: 4/17/2012 Analyzed: 4/18/2012

Residue, Dissolved

500

10

510

NR

2

10



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Project Number : RAYTHEON FULLERTON-MONTHLY,

Report To : Steve Netto

Reported : 05/01/2012

Total Suspended Solids (Residue, Non-Filtrable) by SM 2540D - Quality Control

Analyte	Result (mg/L)	PQL (mg/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B2D0653 - No_Prep_WC_1

Blank (B2D0653-BLK1)

Prepared: 4/17/2012 Analyzed: 4/18/2012

Residue, Suspended

ND

10

NR

LCS (B2D0653-BS1)

Prepared: 4/17/2012 Analyzed: 4/18/2012

Residue, Suspended

88

10

96.6

91

80 - 120

Duplicate (B2D0653-DUP1)

Source: 1201355-01

Prepared: 4/17/2012 Analyzed: 4/18/2012

Residue, Suspended

230

10

240

NR

3

10



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San Diego , CA 92122

Project Number : RAYTHEON FULLERTON-MONTHLY,

Report To : Steve Netto

Reported : 05/01/2012

Volatile Organic Compounds by EPA 8260 - Quality Control

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec % Rec	% Rec Limits	RPD RPD	RPD Limit	Notes
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Batch B2D0584 - MSVOAW_LL

Blank (B2D0584-BLK1)

Prepared: 4/17/2012 Analyzed: 4/17/2012

1,1,1,2-Tetrachloroethane	ND	0.50			NR				
1,1,1-Trichloroethane	ND	0.50			NR				
1,1,2,2-Tetrachloroethane	ND	0.50			NR				
1,1,2-Trichloroethane	ND	0.50			NR				
1,1-Dichloroethane	ND	0.50			NR				
1,1-Dichloroethene	ND	0.50			NR				
1,1-Dichloropropene	ND	0.50			NR				
1,2,3-Trichloropropane	ND	0.50			NR				
1,2,3-Trichlorobenzene	ND	0.50			NR				
1,2,4-Trichlorobenzene	ND	0.50			NR				
1,2,4-Trimethylbenzene	ND	0.50			NR				
1,2-Dibromo-3-chloropropane	ND	0.50			NR				
1,2-Dibromoethane	ND	0.50			NR				
1,2-Dichlorobenzene	ND	0.50			NR				
1,2-Dichloroethane	ND	0.50			NR				
1,2-Dichloropropane	ND	0.50			NR				
1,3,5-Trimethylbenzene	ND	0.50			NR				
1,3-Dichlorobenzene	ND	0.50			NR				
1,3-Dichloropropane	ND	0.50			NR				
1,4-Dichlorobenzene	ND	0.50			NR				
2,2-Dichloropropane	ND	0.50			NR				
2-Chlorotoluene	ND	0.50			NR				
4-Chlorotoluene	ND	0.50			NR				
4-Isopropyltoluene	ND	0.50			NR				
Benzene	ND	0.50			NR				
Bromobenzene	ND	0.50			NR				
Bromodichloromethane	ND	0.50			NR				
Bromoform	ND	0.50			NR				
Bromomethane	ND	0.50			NR				
Carbon tetrachloride	ND	0.50			NR				
Chlorobenzene	ND	0.50			NR				
Chloroethane	ND	0.50			NR				
Chloroform	ND	0.50			NR				
Chloromethane	ND	0.50			NR				
cis-1,2-Dichloroethene	ND	0.50			NR				
cis-1,3-Dichloropropene	ND	0.50			NR				
Dibromochloromethane	ND	0.50			NR				
Dibromomethane	ND	0.50			NR				
Dichlorodifluoromethane	ND	0.50			NR				
Ethylbenzene	ND	0.50			NR				
Hexachlorobutadiene	ND	0.50			NR				



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San Diego , CA 92122

Project Number : RAYTHEON FULLERTON-MONTHLY,

Report To : Steve Netto

Reported : 05/01/2012

Volatile Organic Compounds by EPA 8260 - Quality Control (cont'd)

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec % Rec	% Rec Limits	RPD RPD	RPD Limit	Notes
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Batch B2D0584 - MSVOAW_LL (continued)

Blank (B2D0584-BLK1) - Continued

Prepared: 4/17/2012 Analyzed: 4/17/2012

Isopropylbenzene	ND	0.50				NR			
m,p-Xylene	ND	1.0				NR			
Methylene chloride	ND	1.0				NR			
n-Butylbenzene	ND	0.50				NR			
n-Propylbenzene	ND	0.50				NR			
Naphthalene	ND	0.50				NR			
o-Xylene	ND	0.50				NR			
sec-Butylbenzene	ND	0.50				NR			
Styrene	ND	0.50				NR			
tert-Butylbenzene	ND	0.50				NR			
Tetrachloroethene	ND	0.50				NR			
Toluene	ND	0.50				NR			
trans-1,2-Dichloroethene	ND	0.50				NR			
Trichloroethene	ND	0.50				NR			
Trichlorofluoromethane	ND	0.50				NR			
Vinyl chloride	ND	0.50				NR			

<i>Surrogate: 1,2-Dichloroethane-d4</i>	25		25.0		100	70 - 130			
<i>Surrogate: 4-Bromofluorobenzene</i>	26		25.0		105	70 - 130			
<i>Surrogate: Dibromofluoromethane</i>	26		25.0		104	70 - 130			
<i>Surrogate: Toluene-d8</i>	27		25.0		109	70 - 130			

LCS (B2D0584-BS1)

Prepared: 4/17/2012 Analyzed: 4/17/2012

1,1-Dichloroethene	17	0.50	20.0		85.0	70 - 130			
Benzene	34	0.50	40.0		85.8	70 - 130			
Chlorobenzene	20	0.50	20.0		101	70 - 130			
MTBE	19	0.50	20.0		96.7	70 - 130			
Toluene	39	0.50	40.0		97.0	70 - 130			
Trichloroethene	19	0.50	20.0		94.2	70 - 130			

<i>Surrogate: 1,2-Dichloroethane-d4</i>	22		25.0		87.9	70 - 130			
<i>Surrogate: 4-Bromofluorobenzene</i>	23		25.0		90.2	70 - 130			
<i>Surrogate: Dibromofluoromethane</i>	22		25.0		87.2	70 - 130			
<i>Surrogate: Toluene-d8</i>	22		25.0		89.4	70 - 130			

LCS Dup (B2D0584-BSD1)

Prepared: 4/17/2012 Analyzed: 4/17/2012

1,1-Dichloroethene	17	0.50	20.0		83.8	70 - 130	1.42	20	
Benzene	35	0.50	40.0		86.9	70 - 130	1.27	20	
Chlorobenzene	20	0.50	20.0		101	70 - 130	0.198	20	
MTBE	20	0.50	20.0		100	70 - 130	3.80	20	
Toluene	39	0.50	40.0		98.4	70 - 130	1.43	20	
Trichloroethene	19	0.50	20.0		96.7	70 - 130	2.57	20	

<i>Surrogate: 1,2-Dichloroethane-d4</i>	21		25.0		85.6	70 - 130			
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Project Number : RAYTHEON FULLERTON-MONTHLY,

Report To : Steve Netto

Reported : 05/01/2012

Volatile Organic Compounds by EPA 8260 - Quality Control (cont'd)

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B2D0584 - MSVOAW_LL (continued)

LCS Dup (B2D0584-BSD1) - Continued

Prepared: 4/17/2012 Analyzed: 4/17/2012

<i>Surrogate: 4-Bromofluorobenzene</i>	22		25.0		88.3	70 - 130			
<i>Surrogate: Dibromofluoromethane</i>	21		25.0		85.5	70 - 130			
<i>Surrogate: Toluene-d8</i>	22		25.0		88.5	70 - 130			



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Project Number : RAYTHEON FULLERTON-MONTHLY,

Report To : Steve Netto

Reported : 05/01/2012

1,4-Dioxane by EPA 8270: Isotope Dilution Technique - Quality Control

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec % Rec	% Rec Limits	RPD RPD	RPD Limit	Notes
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Batch B2D0636 - MSEMI_ISOTOPEDILN

Blank (B2D0636-BLK1)

Prepared: 4/18/2012 Analyzed: 4/18/2012

1,4-Dioxane	ND	2.0			NR				
Surrogate: 1,2-Dichlorobenzene-d4	86		100		85.5	37 - 93			
Surrogate: 2-Fluorobiphenyl	91		100		90.8	51 - 100			
Surrogate: 4-Terphenyl-d14	120		100		123	58 - 113			S1
Surrogate: Nitrobenzene-d5	87		100		86.7	39 - 95			

LCS (B2D0636-BS1)

Prepared: 4/18/2012 Analyzed: 4/18/2012

1,4-Dioxane	100	2.0	100		105	70 - 130			
Surrogate: 1,2-Dichlorobenzene-d4	82		100		81.8	37 - 93			
Surrogate: 2-Fluorobiphenyl	85		100		84.7	51 - 100			
Surrogate: 4-Terphenyl-d14	100		100		102	58 - 113			
Surrogate: Nitrobenzene-d5	81		100		80.8	39 - 95			

LCS Dup (B2D0636-BSD1)

Prepared: 4/18/2012 Analyzed: 4/18/2012

1,4-Dioxane	110	2.0	100		106	70 - 130	1.83	20	
Surrogate: 1,2-Dichlorobenzene-d4	78		100		78.1	37 - 93			
Surrogate: 2-Fluorobiphenyl	87		100		86.7	51 - 100			
Surrogate: 4-Terphenyl-d14	99		100		99.2	58 - 113			
Surrogate: Nitrobenzene-d5	80		100		80.0	39 - 95			



Hargis & Associates, Inc.

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Project Number : RAYTHEON FULLERTON-MONTHLY,

Report To : Steve Netto

Reported : 05/01/2012

1,4-Dioxane by EPA 8270/SIM: Isotope Dilution Technique - Quality Control

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec % Rec	% Rec Limits	RPD RPD	RPD Limit	Notes
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Batch B2D0744 - MSEMI_ISOTOPEDILN

Blank (B2D0744-BLK1)

Prepared: 4/20/2012 Analyzed: 4/20/2012

1,4-Dioxane	ND	0.20			NR				
Surrogate: 1,2-Dichlorobenzene-d4	0.99		1.00		98.6	36 - 107			
Surrogate: 2-Fluorobiphenyl	0.91		1.00		90.6	42 - 120			
Surrogate: 4-Terphenyl-d14	1.0		1.00		103	67 - 142			
Surrogate: Nitrobenzene-d5	1.1		1.00		107	36 - 130			

LCS (B2D0744-BS1)

Prepared: 4/20/2012 Analyzed: 4/20/2012

1,4-Dioxane	1.2	0.20	1.00		119	70 - 130			
Surrogate: 1,2-Dichlorobenzene-d4	1.0		1.00		101	36 - 107			
Surrogate: 2-Fluorobiphenyl	0.92		1.00		91.8	42 - 120			
Surrogate: 4-Terphenyl-d14	0.97		1.00		96.7	67 - 142			
Surrogate: Nitrobenzene-d5	1.1		1.00		112	36 - 130			

LCS Dup (B2D0744-BSD1)

Prepared: 4/20/2012 Analyzed: 4/20/2012

1,4-Dioxane	1.1	0.20	1.00		108	70 - 130	9.54	20	
Surrogate: 1,2-Dichlorobenzene-d4	0.96		1.00		95.5	36 - 107			
Surrogate: 2-Fluorobiphenyl	0.84		1.00		84.4	42 - 120			
Surrogate: 4-Terphenyl-d14	0.96		1.00		96.1	67 - 142			
Surrogate: Nitrobenzene-d5	1.0		1.00		102	36 - 130			



Hargis & Associates, Inc.

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San Diego , CA 92122

Project Number : RAYTHEON FULLERTON-MONTHLY,

Report To : Steve Netto

Reported : 05/01/2012

Notes and Definitions

S8	Surrogate recovery was above laboratory acceptance limit. See CAR for details.
S1	Surrogate recovery was above laboratory acceptance limit. No target analyte was detected in the sample.
ND	Analyte not detected at or above reporting limit
PQL	Practical Quantitation Limit
MDL	Method Detection Limit
NR	Not Reported
RPD	Relative Percent Difference
CA1	CA-NELAP (CDPH)
CA2	CA-ELAP (CDPH)
OR1	OR-NELAP (OSPHL)
TX1	TX-NELAP (TCEQ)

Bromate by EPA 317
 Ion Chromatography with Post-Column Derivatization-Visible Absorption

Column: Dionex AS9-HC/AG9-HSC
 Eluent: 30 mM Na₂CO₃
 Flow: 1.0 mL/min
 Injection: 250 µL
 Detection: Post-column derivatization, Visible detection, 450 nm

Sample preparation: The undiluted samples were treated with a Dionex OnGuard II H cartridge to remove excess basic cations. One sample required dilution with water due to an interfering peak. The detection limit is adjusted for the dilution necessary for analysis.

Parts Per Billion (µg/L)

Sample ID	Result	Detection Limit
1201389-02 / EW-02	ND	0.5
1201389-04 / POX	6	5
1201389-06 / CEFF	7.1	0.5
Method Blank	ND	0.5

Date Analyzed: 04-30-12

Quality Control Summary

Sample ID: 1201389-06 / CEFF

Analyte	Sample Result	Spike Conc	Spike Result	Spike % Rec	Spike Duplicate Result	Spike Duplicate % Rec	Spike RPD
	7.1	11.1	18.3	101	18.2	100	1
QC Guidelines				75 - 125		75 - 125	NMT 10


ADVANCED TECHNOLOG
LABORATORIES

SUBCONTRACT ORDER

Work Order: 1201389

SENDING LABORATORY:

Advanced Technology Laboratories
 3275 Walnut Avenue
 Signal Hill, CA 90755
 Phone: 562.989.4045
 Fax: 562.989.6348
 Project Manager: Rachelle Arada




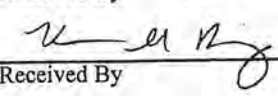
RECEIVING LABORATORY:

Exova Inc.
 9240 Santa Fe Springs Road
 Santa Fe Springs, CA 90670
 Phone : (562) 948-2225
 Fax: (562) 948-5850
 PO#: SC07191 Standard TAT

(RA)

IMPORTANT : Please include Work Order # and PO # in your invoice.

Analysis	Due	Expires	Sampled	Comments
ATL Lab#: 1201389-02 317.0	/ EW-02 04/30/12 17:00	Groundwater 04/17/12 10:12	04/16/12 10:12	Report Bromate
ATL Lab#: 1201389-04 317.0	/ POX 04/30/12 17:00	Groundwater 04/17/12 09:10	04/16/12 09:10	Report Bromate
ATL Lab#: 1201389-06 317.0	/ CEFF 04/30/12 17:00	Groundwater 04/17/12 09:37	04/16/12 09:37	Report Bromate

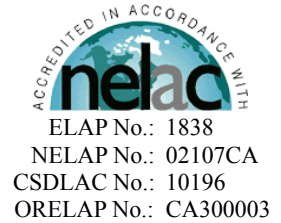
Released By 	Date <u>4/16/12</u>	Received By 	Date <u>4/17/12 9:15</u>
Released By 	Date <u>4/17/12 1450</u>	Received By 	Date <u>Exova 04-17-12 P2:44</u>

PROJECT NAME		PROJECT No./TASK No.		SAMPLE CONTAINERS			ANALYSIS REQUESTED			ESTIMATED CONCENTRATION RANGE (ppb) FOR VOAS			SPECIAL HANDLING			LABORATORY INFORMATION																	
RAYTHEON FULLERTON-MONTHLY		532.15														ALT																	
PROJECT MANAGER CHRIS ROSS		Phone No. 959-455-6500														C/O Racheille Arada																	
QA MANAGER STEVE HETTO		Fax No. 959-455-6533														3275 Mainnet Ave.																	
SAMPLER (SIGNATURE)		SAMPLER (PRINTED) CARLOS RODRIGUEZ														Signal Hill, CA																	
																59007																	
																562-908-4945																	
LAB ID	SAMPLE ID	SAMPLE COLLECTION		MATRIX			PRESERVATION																										
		Date	Time	Soil	Ground - water	Surface water	Lab H2O	HCl	HNO3	NaOH	H2SO4	Ice	40 ml Glass VOA	125 ml Poly	250 ml Poly	500 ml Poly	1 L Amber	VOCS by EPA 8260B	1,4-Dioxane by EPA 8270 SIM	Aromate by 317	TDS by SM2540C	TSS by SM2540D	Bromide by 300	1,4-Dioxane by EPA 8270 MOD	0-10	10-100	100-1,000	>1,000	REMARKS				
201389-07	TR-04/16/12 EW-102	4/16/12	08:00				XX				X	2				X																	Please include
2			10:12	X			X				X	3	2	2	1	X		X	X	X	X	X	X										mrodriguez@hargis.com
3	DF		9:00	X							X			1																		in lab report	
4	POX		9:10	X			X				X	3	2	1	1	X	X	X		X												distribution list	
5	CBY		9:27	X			X				X	3																				set 1,4-Dioxane	
6	CEFF		9:37	X			X				X	3	2	1		X	X	X	X													MOL to 1.0 ppm	
Total number of Containers per analysis:				465										2		Total No. of Containers: 27																	
Relinquished by:		Date: 4/16/2012	Received by:		Date: 4/16/12	INSTRUCTIONS												Shipment Method: <u>DELIVER</u>															
Company: H+A		Time: 12:24	Company: A/C		Time: 1:20	<ol style="list-style-type: none"> Fill out form completely except for shaded areas (lab use only); sign only after verified for completeness. Complete in ballpoint pen. Draw one line through errors, initial and date correction. Indicate number of sample containers in analysis request space; indicate choice with ✓ or x. Note applicable preservatives, special instructions, and deviations from typical environmental samples. Consult project QA documents for specific instructions. 												Send Results to: <u>Steve Hetto</u>															
						1. <input type="checkbox"/> No. of containers correct <input type="checkbox"/> received good condition/cold 2. <input type="checkbox"/> custody seals secure <input type="checkbox"/> conforms to COC document												<input checked="" type="checkbox"/> 9171 TOWNE CENTRE DRIVE, SUITE 375 SAN DIEGO, CA 92122 (858) 455-6500 <input type="checkbox"/> 1640 SOUTH STAPLEY DRIVE, SUITE 124 MESA, AZ 85204 (480) 345-0888 <input type="checkbox"/> 1820 EAST RIVER ROAD, SUITE 220 TUCSON, AZ 85718 (520) 881-7300															
Relinquished by:		Date:	Received by:		Date:	Sample Receipt: <u>4.6</u>												Send invoice to San Diego, CA Attn: Accounts Payable															
Company:		Time:	Company:		Time:																												

Page 28 of 28

May 18, 2012

Steve Netto
Hargis & Associates, Inc.
9171 Towne Centre Drive, Suite 375
San Diego, CA 92122
Tel: (619) 249-3166
Fax: (858) 455-6533



Re: ATL Work Order Number : 1201610
Client Reference : RAYTHEON FULLERTON-MONTHLY, 532.15

Enclosed are the results for sample(s) received on May 01, 2012 by Advanced Technology Laboratories. The sample(s) are tested for the parameters as indicated on the enclosed chain of custody in accordance with applicable laboratory certifications. The laboratory results contained in this report specifically pertains to the sample(s) submitted.

Thank you for the opportunity to serve the needs of your company. If you have any questions, please feel free to contact me or your Project Manager.

Sincerely,

A handwritten signature in black ink, appearing to read "E Rodriguez".

Eddie Rodriguez
Laboratory Director

The cover letter and the case narrative are an integral part of this analytical report and its absence renders the report invalid. The report cannot be reproduced without written permission from the client and Advanced Technology Laboratories.



Hargis & Associates, Inc.
9171 Towne Centre Drive, Suite 375
San Diego , CA 92122

Project Number : RAYTHEON FULLERTON-MONTHLY,
Report To : Steve Netto
Reported : 05/18/2012

SUMMARY OF SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
TB-050112	1201610-01	Lab H2O	5/01/12 9:00	5/01/12 12:55
EW-02	1201610-02	Groundwater	5/01/12 11:20	5/01/12 12:55
PF	1201610-03	Groundwater	5/01/12 9:56	5/01/12 12:55
POX	1201610-04	Groundwater	5/01/12 10:05	5/01/12 12:55
CBT	1201610-05	Groundwater	5/01/12 10:27	5/01/12 12:55
CEFF	1201610-06	Groundwater	5/01/12 10:35	5/01/12 12:55



Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : RAYTHEON FULLERTON-MONTHLY,

Report To : Steve Netto

Reported : 05/18/2012

Client Sample ID TB-050112

Lab ID: 1201610-01

Volatile Organic Compounds by EPA 8260

Analyst: DC

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	0.50	NA	1	B2E0007	05/01/2012	05/01/12 18:38	
1,1,1-Trichloroethane	ND	0.50	NA	1	B2E0007	05/01/2012	05/01/12 18:38	
1,1,2,2-Tetrachloroethane	ND	0.50	NA	1	B2E0007	05/01/2012	05/01/12 18:38	
1,1,2-Trichloroethane	ND	0.50	NA	1	B2E0007	05/01/2012	05/01/12 18:38	
1,1-Dichloroethane	ND	0.50	NA	1	B2E0007	05/01/2012	05/01/12 18:38	
1,1-Dichloroethene	ND	0.50	NA	1	B2E0007	05/01/2012	05/01/12 18:38	
1,1-Dichloropropene	ND	0.50	NA	1	B2E0007	05/01/2012	05/01/12 18:38	
1,2,3-Trichloropropane	ND	0.50	NA	1	B2E0007	05/01/2012	05/01/12 18:38	
1,2,3-Trichlorobenzene	ND	0.50	NA	1	B2E0007	05/01/2012	05/01/12 18:38	
1,2,4-Trichlorobenzene	ND	0.50	NA	1	B2E0007	05/01/2012	05/01/12 18:38	
1,2,4-Trimethylbenzene	ND	0.50	NA	1	B2E0007	05/01/2012	05/01/12 18:38	
1,2-Dibromo-3-chloropropane	ND	0.50	NA	1	B2E0007	05/01/2012	05/01/12 18:38	
1,2-Dibromoethane	ND	0.50	NA	1	B2E0007	05/01/2012	05/01/12 18:38	
1,2-Dichlorobenzene	ND	0.50	NA	1	B2E0007	05/01/2012	05/01/12 18:38	
1,2-Dichloroethane	ND	0.50	NA	1	B2E0007	05/01/2012	05/01/12 18:38	
1,2-Dichloropropane	ND	0.50	NA	1	B2E0007	05/01/2012	05/01/12 18:38	
1,3,5-Trimethylbenzene	ND	0.50	NA	1	B2E0007	05/01/2012	05/01/12 18:38	
1,3-Dichlorobenzene	ND	0.50	NA	1	B2E0007	05/01/2012	05/01/12 18:38	
1,3-Dichloropropane	ND	0.50	NA	1	B2E0007	05/01/2012	05/01/12 18:38	
1,4-Dichlorobenzene	ND	0.50	NA	1	B2E0007	05/01/2012	05/01/12 18:38	
2,2-Dichloropropane	ND	0.50	NA	1	B2E0007	05/01/2012	05/01/12 18:38	
2-Chlorotoluene	ND	0.50	NA	1	B2E0007	05/01/2012	05/01/12 18:38	
4-Chlorotoluene	ND	0.50	NA	1	B2E0007	05/01/2012	05/01/12 18:38	
4-Isopropyltoluene	ND	0.50	NA	1	B2E0007	05/01/2012	05/01/12 18:38	
Benzene	ND	0.50	NA	1	B2E0007	05/01/2012	05/01/12 18:38	
Bromobenzene	ND	0.50	NA	1	B2E0007	05/01/2012	05/01/12 18:38	
Bromodichloromethane	ND	0.50	NA	1	B2E0007	05/01/2012	05/01/12 18:38	
Bromoform	ND	0.50	NA	1	B2E0007	05/01/2012	05/01/12 18:38	
Bromomethane	ND	0.50	NA	1	B2E0007	05/01/2012	05/01/12 18:38	
Carbon tetrachloride	ND	0.50	NA	1	B2E0007	05/01/2012	05/01/12 18:38	
Chlorobenzene	ND	0.50	NA	1	B2E0007	05/01/2012	05/01/12 18:38	
Chloroethane	ND	0.50	NA	1	B2E0007	05/01/2012	05/01/12 18:38	
Chloroform	ND	0.50	NA	1	B2E0007	05/01/2012	05/01/12 18:38	
Chloromethane	ND	0.50	NA	1	B2E0007	05/01/2012	05/01/12 18:38	



Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : RAYTHEON FULLERTON-MONTHLY,

Report To : Steve Netto

Reported : 05/18/2012

Client Sample ID TB-050112

Lab ID: 1201610-01

Volatile Organic Compounds by EPA 8260

Analyst: DC

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
cis-1,2-Dichloroethene	ND	0.50	NA	1	B2E0007	05/01/2012	05/01/12 18:38	
cis-1,3-Dichloropropene	ND	0.50	NA	1	B2E0007	05/01/2012	05/01/12 18:38	
Dibromochloromethane	ND	0.50	NA	1	B2E0007	05/01/2012	05/01/12 18:38	
Dibromomethane	ND	0.50	NA	1	B2E0007	05/01/2012	05/01/12 18:38	
Dichlorodifluoromethane	ND	0.50	NA	1	B2E0007	05/01/2012	05/01/12 18:38	
Ethylbenzene	ND	0.50	NA	1	B2E0007	05/01/2012	05/01/12 18:38	
Hexachlorobutadiene	ND	0.50	NA	1	B2E0007	05/01/2012	05/01/12 18:38	
Isopropylbenzene	ND	0.50	NA	1	B2E0007	05/01/2012	05/01/12 18:38	
m,p-Xylene	ND	1.0	NA	1	B2E0007	05/01/2012	05/01/12 18:38	
Methylene chloride	ND	1.0	NA	1	B2E0007	05/01/2012	05/01/12 18:38	
n-Butylbenzene	ND	0.50	NA	1	B2E0007	05/01/2012	05/01/12 18:38	
n-Propylbenzene	ND	0.50	NA	1	B2E0007	05/01/2012	05/01/12 18:38	
Naphthalene	ND	0.50	NA	1	B2E0007	05/01/2012	05/01/12 18:38	
o-Xylene	ND	0.50	NA	1	B2E0007	05/01/2012	05/01/12 18:38	
sec-Butylbenzene	ND	0.50	NA	1	B2E0007	05/01/2012	05/01/12 18:38	
Styrene	ND	0.50	NA	1	B2E0007	05/01/2012	05/01/12 18:38	
tert-Butylbenzene	ND	0.50	NA	1	B2E0007	05/01/2012	05/01/12 18:38	
Tetrachloroethene	ND	0.50	NA	1	B2E0007	05/01/2012	05/01/12 18:38	
Toluene	ND	0.50	NA	1	B2E0007	05/01/2012	05/01/12 18:38	
trans-1,2-Dichloroethene	ND	0.50	NA	1	B2E0007	05/01/2012	05/01/12 18:38	
Trichloroethene	ND	0.50	NA	1	B2E0007	05/01/2012	05/01/12 18:38	
Trichlorofluoromethane	ND	0.50	NA	1	B2E0007	05/01/2012	05/01/12 18:38	
Vinyl chloride	ND	0.50	NA	1	B2E0007	05/01/2012	05/01/12 18:38	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>75.1 %</i>		<i>70 - 130</i>		B2E0007	05/01/2012	<i>05/01/12 18:38</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>89.8 %</i>		<i>70 - 130</i>		B2E0007	05/01/2012	<i>05/01/12 18:38</i>	
<i>Surrogate: Dibromofluoromethane</i>	<i>84.4 %</i>		<i>70 - 130</i>		B2E0007	05/01/2012	<i>05/01/12 18:38</i>	
<i>Surrogate: Toluene-d8</i>	<i>93.6 %</i>		<i>70 - 130</i>		B2E0007	05/01/2012	<i>05/01/12 18:38</i>	



Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : RAYTHEON FULLERTON-MONTHLY,

Report To : Steve Netto

Reported : 05/18/2012

Client Sample ID EW-02

Lab ID: 1201610-02

Anions by Ion Chromatography EPA 300.0

Analyst: Phali

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Bromide	0.28	0.05	NA	1	B2E0148	05/03/2012	05/03/12 08:58	

Total Dissolved Solids (Residue, Filterable) by SM 2540C

Analyst: AG

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Residue, Dissolved	600	10	10	1	B2E0154	05/02/2012	05/02/12 15:06	

Total Suspended Solids (Residue, Non-Filtrable) by SM 2540D

Analyst: AG

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Residue, Suspended	ND	10	10	1	B2E0136	05/02/2012	05/02/12 13:43	

Volatile Organic Compounds by EPA 8260

Analyst: DC

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	0.50	NA	1	B2E0007	05/01/2012	05/01/12 18:59	
1,1,1-Trichloroethane	ND	0.50	NA	1	B2E0007	05/01/2012	05/01/12 18:59	
1,1,2,2-Tetrachloroethane	ND	0.50	NA	1	B2E0007	05/01/2012	05/01/12 18:59	
1,1,2-Trichloroethane	ND	0.50	NA	1	B2E0007	05/01/2012	05/01/12 18:59	
1,1-Dichloroethane	ND	0.50	NA	1	B2E0007	05/01/2012	05/01/12 18:59	
1,1-Dichloroethene	37	0.50	NA	1	B2E0007	05/01/2012	05/01/12 18:59	
1,1-Dichloropropene	ND	0.50	NA	1	B2E0007	05/01/2012	05/01/12 18:59	
1,2,3-Trichloropropane	ND	0.50	NA	1	B2E0007	05/01/2012	05/01/12 18:59	
1,2,3-Trichlorobenzene	ND	0.50	NA	1	B2E0007	05/01/2012	05/01/12 18:59	
1,2,4-Trichlorobenzene	ND	0.50	NA	1	B2E0007	05/01/2012	05/01/12 18:59	
1,2,4-Trimethylbenzene	ND	0.50	NA	1	B2E0007	05/01/2012	05/01/12 18:59	
1,2-Dibromo-3-chloropropane	ND	0.50	NA	1	B2E0007	05/01/2012	05/01/12 18:59	
1,2-Dibromoethane	ND	0.50	NA	1	B2E0007	05/01/2012	05/01/12 18:59	
1,2-Dichlorobenzene	ND	0.50	NA	1	B2E0007	05/01/2012	05/01/12 18:59	
1,2-Dichloroethane	ND	0.50	NA	1	B2E0007	05/01/2012	05/01/12 18:59	
1,2-Dichloropropane	ND	0.50	NA	1	B2E0007	05/01/2012	05/01/12 18:59	
1,3,5-Trimethylbenzene	ND	0.50	NA	1	B2E0007	05/01/2012	05/01/12 18:59	



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9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : RAYTHEON FULLERTON-MONTHLY,

Report To : Steve Netto

Reported : 05/18/2012

Client Sample ID EW-02

Lab ID: 1201610-02

Volatile Organic Compounds by EPA 8260

Analyst: DC

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,3-Dichlorobenzene	ND	0.50	NA	1	B2E0007	05/01/2012	05/01/12 18:59	
1,3-Dichloropropane	ND	0.50	NA	1	B2E0007	05/01/2012	05/01/12 18:59	
1,4-Dichlorobenzene	ND	0.50	NA	1	B2E0007	05/01/2012	05/01/12 18:59	
2,2-Dichloropropane	ND	0.50	NA	1	B2E0007	05/01/2012	05/01/12 18:59	
2-Chlorotoluene	ND	0.50	NA	1	B2E0007	05/01/2012	05/01/12 18:59	
4-Chlorotoluene	ND	0.50	NA	1	B2E0007	05/01/2012	05/01/12 18:59	
4-Isopropyltoluene	ND	0.50	NA	1	B2E0007	05/01/2012	05/01/12 18:59	
Benzene	ND	0.50	NA	1	B2E0007	05/01/2012	05/01/12 18:59	
Bromobenzene	ND	0.50	NA	1	B2E0007	05/01/2012	05/01/12 18:59	
Bromodichloromethane	ND	0.50	NA	1	B2E0007	05/01/2012	05/01/12 18:59	
Bromoform	ND	0.50	NA	1	B2E0007	05/01/2012	05/01/12 18:59	
Bromomethane	ND	0.50	NA	1	B2E0007	05/01/2012	05/01/12 18:59	
Carbon tetrachloride	ND	0.50	NA	1	B2E0007	05/01/2012	05/01/12 18:59	
Chlorobenzene	ND	0.50	NA	1	B2E0007	05/01/2012	05/01/12 18:59	
Chloroethane	ND	0.50	NA	1	B2E0007	05/01/2012	05/01/12 18:59	
Chloroform	ND	0.50	NA	1	B2E0007	05/01/2012	05/01/12 18:59	
Chloromethane	ND	0.50	NA	1	B2E0007	05/01/2012	05/01/12 18:59	
cis-1,2-Dichloroethene	ND	0.50	NA	1	B2E0007	05/01/2012	05/01/12 18:59	
cis-1,3-Dichloropropene	ND	0.50	NA	1	B2E0007	05/01/2012	05/01/12 18:59	
Dibromochloromethane	ND	0.50	NA	1	B2E0007	05/01/2012	05/01/12 18:59	
Dibromomethane	ND	0.50	NA	1	B2E0007	05/01/2012	05/01/12 18:59	
Dichlorodifluoromethane	ND	0.50	NA	1	B2E0007	05/01/2012	05/01/12 18:59	
Ethylbenzene	ND	0.50	NA	1	B2E0007	05/01/2012	05/01/12 18:59	
Hexachlorobutadiene	ND	0.50	NA	1	B2E0007	05/01/2012	05/01/12 18:59	
Isopropylbenzene	ND	0.50	NA	1	B2E0007	05/01/2012	05/01/12 18:59	
m,p-Xylene	ND	1.0	NA	1	B2E0007	05/01/2012	05/01/12 18:59	
Methylene chloride	ND	1.0	NA	1	B2E0007	05/01/2012	05/01/12 18:59	
n-Butylbenzene	ND	0.50	NA	1	B2E0007	05/01/2012	05/01/12 18:59	
n-Propylbenzene	ND	0.50	NA	1	B2E0007	05/01/2012	05/01/12 18:59	
Naphthalene	ND	0.50	NA	1	B2E0007	05/01/2012	05/01/12 18:59	
o-Xylene	ND	0.50	NA	1	B2E0007	05/01/2012	05/01/12 18:59	
sec-Butylbenzene	ND	0.50	NA	1	B2E0007	05/01/2012	05/01/12 18:59	
Styrene	ND	0.50	NA	1	B2E0007	05/01/2012	05/01/12 18:59	
tert-Butylbenzene	ND	0.50	NA	1	B2E0007	05/01/2012	05/01/12 18:59	



Hargis & Associates, Inc.
9171 Towne Centre Drive, Suite 375
San Diego , CA 92122

Project Number : RAYTHEON FULLERTON-MONTHLY,
Report To : Steve Netto
Reported : 05/18/2012

Client Sample ID EW-02
Lab ID: 1201610-02

Volatile Organic Compounds by EPA 8260

Analyst: DC

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Tetrachloroethene	ND	0.50	NA	1	B2E0007	05/01/2012	05/01/12 18:59	
Toluene	ND	0.50	NA	1	B2E0007	05/01/2012	05/01/12 18:59	
trans-1,2-Dichloroethene	ND	0.50	NA	1	B2E0007	05/01/2012	05/01/12 18:59	
Trichloroethene	ND	0.50	NA	1	B2E0007	05/01/2012	05/01/12 18:59	
Trichlorofluoromethane	ND	0.50	NA	1	B2E0007	05/01/2012	05/01/12 18:59	
Vinyl chloride	ND	0.50	NA	1	B2E0007	05/01/2012	05/01/12 18:59	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>78.3 %</i>		<i>70 - 130</i>		B2E0007	05/01/2012	<i>05/01/12 18:59</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>93.5 %</i>		<i>70 - 130</i>		B2E0007	05/01/2012	<i>05/01/12 18:59</i>	
<i>Surrogate: Dibromofluoromethane</i>	<i>89.1 %</i>		<i>70 - 130</i>		B2E0007	05/01/2012	<i>05/01/12 18:59</i>	
<i>Surrogate: Toluene-d8</i>	<i>96.3 %</i>		<i>70 - 130</i>		B2E0007	05/01/2012	<i>05/01/12 18:59</i>	

1,4-Dioxane by EPA 8270: Isotope Dilution Technique

Analyst: PIL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,4-Dioxane	13	2.0	1.7	1	B2E0088	05/02/2012	05/03/12 15:28	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	<i>96.6 %</i>		<i>37 - 93</i>		B2E0088	05/02/2012	<i>05/03/12 15:28</i>	S8
<i>Surrogate: 2-Fluorobiphenyl</i>	<i>102 %</i>		<i>51 - 100</i>		B2E0088	05/02/2012	<i>05/03/12 15:28</i>	S8
<i>Surrogate: 4-Terphenyl-d14</i>	<i>145 %</i>		<i>58 - 113</i>		B2E0088	05/02/2012	<i>05/03/12 15:28</i>	S8
<i>Surrogate: Nitrobenzene-d5</i>	<i>108 %</i>		<i>39 - 95</i>		B2E0088	05/02/2012	<i>05/03/12 15:28</i>	S8



Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : RAYTHEON FULLERTON-MONTHLY,

Report To : Steve Netto

Reported : 05/18/2012

Client Sample ID PF

Lab ID: 1201610-03

Total Suspended Solids (Residue, Non-Filtrable) by SM 2540D

Analyst: AG

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Residue, Suspended	ND	10	10	1	B2E0136	05/02/2012	05/02/12 13:45	



Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : RAYTHEON FULLERTON-MONTHLY,

Report To : Steve Netto

Reported : 05/18/2012

Client Sample ID POX

Lab ID: 1201610-04

Anions by Ion Chromatography EPA 300.0

Analyst: Phali

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Bromide	0.28	0.05	NA	1	B2E0148	05/03/2012	05/03/12 09:09	

Total Dissolved Solids (Residue, Filterable) by SM 2540C

Analyst: AG

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Residue, Dissolved	600	10	10	1	B2E0154	05/02/2012	05/02/12 15:08	

Volatile Organic Compounds by EPA 8260

Analyst: DC

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	0.50	NA	1	B2E0007	05/01/2012	05/01/12 17:38	
1,1,1-Trichloroethane	ND	0.50	NA	1	B2E0007	05/01/2012	05/01/12 17:38	
1,1,2,2-Tetrachloroethane	ND	0.50	NA	1	B2E0007	05/01/2012	05/01/12 17:38	
1,1,2-Trichloroethane	ND	0.50	NA	1	B2E0007	05/01/2012	05/01/12 17:38	
1,1-Dichloroethane	ND	0.50	NA	1	B2E0007	05/01/2012	05/01/12 17:38	
1,1-Dichloroethene	ND	0.50	NA	1	B2E0007	05/01/2012	05/01/12 17:38	
1,1-Dichloropropene	ND	0.50	NA	1	B2E0007	05/01/2012	05/01/12 17:38	
1,2,3-Trichloropropane	ND	0.50	NA	1	B2E0007	05/01/2012	05/01/12 17:38	
1,2,3-Trichlorobenzene	ND	0.50	NA	1	B2E0007	05/01/2012	05/01/12 17:38	
1,2,4-Trichlorobenzene	ND	0.50	NA	1	B2E0007	05/01/2012	05/01/12 17:38	
1,2,4-Trimethylbenzene	ND	0.50	NA	1	B2E0007	05/01/2012	05/01/12 17:38	
1,2-Dibromo-3-chloropropane	ND	0.50	NA	1	B2E0007	05/01/2012	05/01/12 17:38	
1,2-Dibromoethane	ND	0.50	NA	1	B2E0007	05/01/2012	05/01/12 17:38	
1,2-Dichlorobenzene	ND	0.50	NA	1	B2E0007	05/01/2012	05/01/12 17:38	
1,2-Dichloroethane	ND	0.50	NA	1	B2E0007	05/01/2012	05/01/12 17:38	
1,2-Dichloropropane	ND	0.50	NA	1	B2E0007	05/01/2012	05/01/12 17:38	
1,3,5-Trimethylbenzene	ND	0.50	NA	1	B2E0007	05/01/2012	05/01/12 17:38	
1,3-Dichlorobenzene	ND	0.50	NA	1	B2E0007	05/01/2012	05/01/12 17:38	
1,3-Dichloropropane	ND	0.50	NA	1	B2E0007	05/01/2012	05/01/12 17:38	
1,4-Dichlorobenzene	ND	0.50	NA	1	B2E0007	05/01/2012	05/01/12 17:38	
2,2-Dichloropropane	ND	0.50	NA	1	B2E0007	05/01/2012	05/01/12 17:38	
2-Chlorotoluene	ND	0.50	NA	1	B2E0007	05/01/2012	05/01/12 17:38	
4-Chlorotoluene	ND	0.50	NA	1	B2E0007	05/01/2012	05/01/12 17:38	



Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : RAYTHEON FULLERTON-MONTHLY,

Report To : Steve Netto

Reported : 05/18/2012

Client Sample ID POX

Lab ID: 1201610-04

Volatile Organic Compounds by EPA 8260

Analyst: DC

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
4-Isopropyltoluene	ND	0.50	NA	1	B2E0007	05/01/2012	05/01/12 17:38	
Benzene	ND	0.50	NA	1	B2E0007	05/01/2012	05/01/12 17:38	
Bromobenzene	ND	0.50	NA	1	B2E0007	05/01/2012	05/01/12 17:38	
Bromodichloromethane	ND	0.50	NA	1	B2E0007	05/01/2012	05/01/12 17:38	
Bromoform	ND	0.50	NA	1	B2E0007	05/01/2012	05/01/12 17:38	
Bromomethane	ND	0.50	NA	1	B2E0007	05/01/2012	05/01/12 17:38	
Carbon tetrachloride	ND	0.50	NA	1	B2E0007	05/01/2012	05/01/12 17:38	
Chlorobenzene	ND	0.50	NA	1	B2E0007	05/01/2012	05/01/12 17:38	
Chloroethane	ND	0.50	NA	1	B2E0007	05/01/2012	05/01/12 17:38	
Chloroform	ND	0.50	NA	1	B2E0007	05/01/2012	05/01/12 17:38	
Chloromethane	ND	0.50	NA	1	B2E0007	05/01/2012	05/01/12 17:38	
cis-1,2-Dichloroethene	ND	0.50	NA	1	B2E0007	05/01/2012	05/01/12 17:38	
cis-1,3-Dichloropropene	ND	0.50	NA	1	B2E0007	05/01/2012	05/01/12 17:38	
Dibromochloromethane	ND	0.50	NA	1	B2E0007	05/01/2012	05/01/12 17:38	
Dibromomethane	ND	0.50	NA	1	B2E0007	05/01/2012	05/01/12 17:38	
Dichlorodifluoromethane	ND	0.50	NA	1	B2E0007	05/01/2012	05/01/12 17:38	
Ethylbenzene	ND	0.50	NA	1	B2E0007	05/01/2012	05/01/12 17:38	
Hexachlorobutadiene	ND	0.50	NA	1	B2E0007	05/01/2012	05/01/12 17:38	
Isopropylbenzene	ND	0.50	NA	1	B2E0007	05/01/2012	05/01/12 17:38	
m,p-Xylene	ND	1.0	NA	1	B2E0007	05/01/2012	05/01/12 17:38	
Methylene chloride	ND	1.0	NA	1	B2E0007	05/01/2012	05/01/12 17:38	
n-Butylbenzene	ND	0.50	NA	1	B2E0007	05/01/2012	05/01/12 17:38	
n-Propylbenzene	ND	0.50	NA	1	B2E0007	05/01/2012	05/01/12 17:38	
Naphthalene	ND	0.50	NA	1	B2E0007	05/01/2012	05/01/12 17:38	
o-Xylene	ND	0.50	NA	1	B2E0007	05/01/2012	05/01/12 17:38	
sec-Butylbenzene	ND	0.50	NA	1	B2E0007	05/01/2012	05/01/12 17:38	
Styrene	ND	0.50	NA	1	B2E0007	05/01/2012	05/01/12 17:38	
tert-Butylbenzene	ND	0.50	NA	1	B2E0007	05/01/2012	05/01/12 17:38	
Tetrachloroethene	ND	0.50	NA	1	B2E0007	05/01/2012	05/01/12 17:38	
Toluene	ND	0.50	NA	1	B2E0007	05/01/2012	05/01/12 17:38	
trans-1,2-Dichloroethene	ND	0.50	NA	1	B2E0007	05/01/2012	05/01/12 17:38	
Trichloroethene	ND	0.50	NA	1	B2E0007	05/01/2012	05/01/12 17:38	
Trichlorofluoromethane	ND	0.50	NA	1	B2E0007	05/01/2012	05/01/12 17:38	
Vinyl chloride	ND	0.50	NA	1	B2E0007	05/01/2012	05/01/12 17:38	



Hargis & Associates, Inc.
9171 Towne Centre Drive, Suite 375
San Diego, CA 92122

Project Number : RAYTHEON FULLERTON-MONTHLY,
Report To : Steve Netto
Reported : 05/18/2012

Client Sample ID POX
Lab ID: 1201610-04

Volatile Organic Compounds by EPA 8260

Analyst: DC

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
<i>Surrogate: 1,2-Dichloroethane-d4</i>	83.0 %	70 - 130			B2E0007	05/01/2012	05/01/12 17:38	
<i>Surrogate: 4-Bromofluorobenzene</i>	104 %	70 - 130			B2E0007	05/01/2012	05/01/12 17:38	
<i>Surrogate: Dibromofluoromethane</i>	95.4 %	70 - 130			B2E0007	05/01/2012	05/01/12 17:38	
<i>Surrogate: Toluene-d8</i>	107 %	70 - 130			B2E0007	05/01/2012	05/01/12 17:38	

1,4-Dioxane by EPA 8270/SIM: Isotope Dilution Technique

Analyst: MFR

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,4-Dioxane	ND	0.20	0.13	1	B2E0087	05/02/2012	05/02/12 21:01	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	84.2 %	36 - 107			B2E0087	05/02/2012	05/02/12 21:01	
<i>Surrogate: 2-Fluorobiphenyl</i>	83.1 %	42 - 120			B2E0087	05/02/2012	05/02/12 21:01	
<i>Surrogate: 4-Terphenyl-d14</i>	103 %	67 - 142			B2E0087	05/02/2012	05/02/12 21:01	
<i>Surrogate: Nitrobenzene-d5</i>	90.5 %	36 - 130			B2E0087	05/02/2012	05/02/12 21:01	



Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : RAYTHEON FULLERTON-MONTHLY,

Report To : Steve Netto

Reported : 05/18/2012

Client Sample ID CBT

Lab ID: 1201610-05

Volatile Organic Compounds by EPA 8260

Analyst: DC

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	0.50	NA	1	B2E0007	05/01/2012	05/01/12 17:58	
1,1,1-Trichloroethane	ND	0.50	NA	1	B2E0007	05/01/2012	05/01/12 17:58	
1,1,2,2-Tetrachloroethane	ND	0.50	NA	1	B2E0007	05/01/2012	05/01/12 17:58	
1,1,2-Trichloroethane	ND	0.50	NA	1	B2E0007	05/01/2012	05/01/12 17:58	
1,1-Dichloroethane	0.56	0.50	NA	1	B2E0007	05/01/2012	05/01/12 17:58	
1,1-Dichloroethene	ND	0.50	NA	1	B2E0007	05/01/2012	05/01/12 17:58	
1,1-Dichloropropene	ND	0.50	NA	1	B2E0007	05/01/2012	05/01/12 17:58	
1,2,3-Trichloropropane	ND	0.50	NA	1	B2E0007	05/01/2012	05/01/12 17:58	
1,2,3-Trichlorobenzene	ND	0.50	NA	1	B2E0007	05/01/2012	05/01/12 17:58	
1,2,4-Trichlorobenzene	ND	0.50	NA	1	B2E0007	05/01/2012	05/01/12 17:58	
1,2,4-Trimethylbenzene	ND	0.50	NA	1	B2E0007	05/01/2012	05/01/12 17:58	
1,2-Dibromo-3-chloropropane	ND	0.50	NA	1	B2E0007	05/01/2012	05/01/12 17:58	
1,2-Dibromoethane	ND	0.50	NA	1	B2E0007	05/01/2012	05/01/12 17:58	
1,2-Dichlorobenzene	ND	0.50	NA	1	B2E0007	05/01/2012	05/01/12 17:58	
1,2-Dichloroethane	ND	0.50	NA	1	B2E0007	05/01/2012	05/01/12 17:58	
1,2-Dichloropropane	ND	0.50	NA	1	B2E0007	05/01/2012	05/01/12 17:58	
1,3,5-Trimethylbenzene	ND	0.50	NA	1	B2E0007	05/01/2012	05/01/12 17:58	
1,3-Dichlorobenzene	ND	0.50	NA	1	B2E0007	05/01/2012	05/01/12 17:58	
1,3-Dichloropropane	ND	0.50	NA	1	B2E0007	05/01/2012	05/01/12 17:58	
1,4-Dichlorobenzene	ND	0.50	NA	1	B2E0007	05/01/2012	05/01/12 17:58	
2,2-Dichloropropane	ND	0.50	NA	1	B2E0007	05/01/2012	05/01/12 17:58	
2-Chlorotoluene	ND	0.50	NA	1	B2E0007	05/01/2012	05/01/12 17:58	
4-Chlorotoluene	ND	0.50	NA	1	B2E0007	05/01/2012	05/01/12 17:58	
4-Isopropyltoluene	ND	0.50	NA	1	B2E0007	05/01/2012	05/01/12 17:58	
Benzene	ND	0.50	NA	1	B2E0007	05/01/2012	05/01/12 17:58	
Bromobenzene	ND	0.50	NA	1	B2E0007	05/01/2012	05/01/12 17:58	
Bromodichloromethane	ND	0.50	NA	1	B2E0007	05/01/2012	05/01/12 17:58	
Bromoform	ND	0.50	NA	1	B2E0007	05/01/2012	05/01/12 17:58	
Bromomethane	ND	0.50	NA	1	B2E0007	05/01/2012	05/01/12 17:58	
Carbon tetrachloride	ND	0.50	NA	1	B2E0007	05/01/2012	05/01/12 17:58	
Chlorobenzene	ND	0.50	NA	1	B2E0007	05/01/2012	05/01/12 17:58	
Chloroethane	ND	0.50	NA	1	B2E0007	05/01/2012	05/01/12 17:58	
Chloroform	ND	0.50	NA	1	B2E0007	05/01/2012	05/01/12 17:58	
Chloromethane	ND	0.50	NA	1	B2E0007	05/01/2012	05/01/12 17:58	



Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : RAYTHEON FULLERTON-MONTHLY,

Report To : Steve Netto

Reported : 05/18/2012

Client Sample ID CBT

Lab ID: 1201610-05

Volatile Organic Compounds by EPA 8260

Analyst: DC

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
cis-1,2-Dichloroethene	ND	0.50	NA	1	B2E0007	05/01/2012	05/01/12 17:58	
cis-1,3-Dichloropropene	ND	0.50	NA	1	B2E0007	05/01/2012	05/01/12 17:58	
Dibromochloromethane	ND	0.50	NA	1	B2E0007	05/01/2012	05/01/12 17:58	
Dibromomethane	ND	0.50	NA	1	B2E0007	05/01/2012	05/01/12 17:58	
Dichlorodifluoromethane	ND	0.50	NA	1	B2E0007	05/01/2012	05/01/12 17:58	
Ethylbenzene	ND	0.50	NA	1	B2E0007	05/01/2012	05/01/12 17:58	
Hexachlorobutadiene	ND	0.50	NA	1	B2E0007	05/01/2012	05/01/12 17:58	
Isopropylbenzene	ND	0.50	NA	1	B2E0007	05/01/2012	05/01/12 17:58	
m,p-Xylene	ND	1.0	NA	1	B2E0007	05/01/2012	05/01/12 17:58	
Methylene chloride	ND	1.0	NA	1	B2E0007	05/01/2012	05/01/12 17:58	
n-Butylbenzene	ND	0.50	NA	1	B2E0007	05/01/2012	05/01/12 17:58	
n-Propylbenzene	ND	0.50	NA	1	B2E0007	05/01/2012	05/01/12 17:58	
Naphthalene	ND	0.50	NA	1	B2E0007	05/01/2012	05/01/12 17:58	
o-Xylene	ND	0.50	NA	1	B2E0007	05/01/2012	05/01/12 17:58	
sec-Butylbenzene	ND	0.50	NA	1	B2E0007	05/01/2012	05/01/12 17:58	
Styrene	ND	0.50	NA	1	B2E0007	05/01/2012	05/01/12 17:58	
tert-Butylbenzene	ND	0.50	NA	1	B2E0007	05/01/2012	05/01/12 17:58	
Tetrachloroethene	ND	0.50	NA	1	B2E0007	05/01/2012	05/01/12 17:58	
Toluene	ND	0.50	NA	1	B2E0007	05/01/2012	05/01/12 17:58	
trans-1,2-Dichloroethene	ND	0.50	NA	1	B2E0007	05/01/2012	05/01/12 17:58	
Trichloroethene	ND	0.50	NA	1	B2E0007	05/01/2012	05/01/12 17:58	
Trichlorofluoromethane	ND	0.50	NA	1	B2E0007	05/01/2012	05/01/12 17:58	
Vinyl chloride	ND	0.50	NA	1	B2E0007	05/01/2012	05/01/12 17:58	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>75.8 %</i>		<i>70 - 130</i>		B2E0007	05/01/2012	<i>05/01/12 17:58</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>94.9 %</i>		<i>70 - 130</i>		B2E0007	05/01/2012	<i>05/01/12 17:58</i>	
<i>Surrogate: Dibromofluoromethane</i>	<i>88.4 %</i>		<i>70 - 130</i>		B2E0007	05/01/2012	<i>05/01/12 17:58</i>	
<i>Surrogate: Toluene-d8</i>	<i>97.0 %</i>		<i>70 - 130</i>		B2E0007	05/01/2012	<i>05/01/12 17:58</i>	



Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : RAYTHEON FULLERTON-MONTHLY,

Report To : Steve Netto

Reported : 05/18/2012

Client Sample ID CEFF

Lab ID: 1201610-06

Anions by Ion Chromatography EPA 300.0

Analyst: Phali

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Bromide	0.31	0.05	NA	1	B2E0148	05/03/2012	05/03/12 09:20	

Total Dissolved Solids (Residue, Filterable) by SM 2540C

Analyst: AG

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Residue, Dissolved	600	10	10	1	B2E0154	05/02/2012	05/02/12 15:10	

Volatile Organic Compounds by EPA 8260

Analyst: DC

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	0.50	NA	1	B2E0007	05/01/2012	05/01/12 18:18	
1,1,1-Trichloroethane	ND	0.50	NA	1	B2E0007	05/01/2012	05/01/12 18:18	
1,1,2,2-Tetrachloroethane	ND	0.50	NA	1	B2E0007	05/01/2012	05/01/12 18:18	
1,1,2-Trichloroethane	ND	0.50	NA	1	B2E0007	05/01/2012	05/01/12 18:18	
1,1-Dichloroethane	0.89	0.50	NA	1	B2E0007	05/01/2012	05/01/12 18:18	
1,1-Dichloroethene	ND	0.50	NA	1	B2E0007	05/01/2012	05/01/12 18:18	
1,1-Dichloropropene	ND	0.50	NA	1	B2E0007	05/01/2012	05/01/12 18:18	
1,2,3-Trichloropropane	ND	0.50	NA	1	B2E0007	05/01/2012	05/01/12 18:18	
1,2,3-Trichlorobenzene	ND	0.50	NA	1	B2E0007	05/01/2012	05/01/12 18:18	
1,2,4-Trichlorobenzene	ND	0.50	NA	1	B2E0007	05/01/2012	05/01/12 18:18	
1,2,4-Trimethylbenzene	ND	0.50	NA	1	B2E0007	05/01/2012	05/01/12 18:18	
1,2-Dibromo-3-chloropropane	ND	0.50	NA	1	B2E0007	05/01/2012	05/01/12 18:18	
1,2-Dibromoethane	ND	0.50	NA	1	B2E0007	05/01/2012	05/01/12 18:18	
1,2-Dichlorobenzene	ND	0.50	NA	1	B2E0007	05/01/2012	05/01/12 18:18	
1,2-Dichloroethane	ND	0.50	NA	1	B2E0007	05/01/2012	05/01/12 18:18	
1,2-Dichloropropane	ND	0.50	NA	1	B2E0007	05/01/2012	05/01/12 18:18	
1,3,5-Trimethylbenzene	ND	0.50	NA	1	B2E0007	05/01/2012	05/01/12 18:18	
1,3-Dichlorobenzene	ND	0.50	NA	1	B2E0007	05/01/2012	05/01/12 18:18	
1,3-Dichloropropane	ND	0.50	NA	1	B2E0007	05/01/2012	05/01/12 18:18	
1,4-Dichlorobenzene	ND	0.50	NA	1	B2E0007	05/01/2012	05/01/12 18:18	
2,2-Dichloropropane	ND	0.50	NA	1	B2E0007	05/01/2012	05/01/12 18:18	
2-Chlorotoluene	ND	0.50	NA	1	B2E0007	05/01/2012	05/01/12 18:18	
4-Chlorotoluene	ND	0.50	NA	1	B2E0007	05/01/2012	05/01/12 18:18	



Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : RAYTHEON FULLERTON-MONTHLY,

Report To : Steve Netto

Reported : 05/18/2012

Client Sample ID CEFF

Lab ID: 1201610-06

Volatile Organic Compounds by EPA 8260

Analyst: DC

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
4-Isopropyltoluene	ND	0.50	NA	1	B2E0007	05/01/2012	05/01/12 18:18	
Benzene	ND	0.50	NA	1	B2E0007	05/01/2012	05/01/12 18:18	
Bromobenzene	ND	0.50	NA	1	B2E0007	05/01/2012	05/01/12 18:18	
Bromodichloromethane	ND	0.50	NA	1	B2E0007	05/01/2012	05/01/12 18:18	
Bromoform	ND	0.50	NA	1	B2E0007	05/01/2012	05/01/12 18:18	
Bromomethane	ND	0.50	NA	1	B2E0007	05/01/2012	05/01/12 18:18	
Carbon tetrachloride	ND	0.50	NA	1	B2E0007	05/01/2012	05/01/12 18:18	
Chlorobenzene	ND	0.50	NA	1	B2E0007	05/01/2012	05/01/12 18:18	
Chloroethane	ND	0.50	NA	1	B2E0007	05/01/2012	05/01/12 18:18	
Chloroform	ND	0.50	NA	1	B2E0007	05/01/2012	05/01/12 18:18	
Chloromethane	ND	0.50	NA	1	B2E0007	05/01/2012	05/01/12 18:18	
cis-1,2-Dichloroethene	ND	0.50	NA	1	B2E0007	05/01/2012	05/01/12 18:18	
cis-1,3-Dichloropropene	ND	0.50	NA	1	B2E0007	05/01/2012	05/01/12 18:18	
Dibromochloromethane	ND	0.50	NA	1	B2E0007	05/01/2012	05/01/12 18:18	
Dibromomethane	ND	0.50	NA	1	B2E0007	05/01/2012	05/01/12 18:18	
Dichlorodifluoromethane	ND	0.50	NA	1	B2E0007	05/01/2012	05/01/12 18:18	
Ethylbenzene	ND	0.50	NA	1	B2E0007	05/01/2012	05/01/12 18:18	
Hexachlorobutadiene	ND	0.50	NA	1	B2E0007	05/01/2012	05/01/12 18:18	
Isopropylbenzene	ND	0.50	NA	1	B2E0007	05/01/2012	05/01/12 18:18	
m,p-Xylene	ND	1.0	NA	1	B2E0007	05/01/2012	05/01/12 18:18	
Methylene chloride	ND	1.0	NA	1	B2E0007	05/01/2012	05/01/12 18:18	
n-Butylbenzene	ND	0.50	NA	1	B2E0007	05/01/2012	05/01/12 18:18	
n-Propylbenzene	ND	0.50	NA	1	B2E0007	05/01/2012	05/01/12 18:18	
Naphthalene	ND	0.50	NA	1	B2E0007	05/01/2012	05/01/12 18:18	
o-Xylene	ND	0.50	NA	1	B2E0007	05/01/2012	05/01/12 18:18	
sec-Butylbenzene	ND	0.50	NA	1	B2E0007	05/01/2012	05/01/12 18:18	
Styrene	ND	0.50	NA	1	B2E0007	05/01/2012	05/01/12 18:18	
tert-Butylbenzene	ND	0.50	NA	1	B2E0007	05/01/2012	05/01/12 18:18	
Tetrachloroethene	ND	0.50	NA	1	B2E0007	05/01/2012	05/01/12 18:18	
Toluene	ND	0.50	NA	1	B2E0007	05/01/2012	05/01/12 18:18	
trans-1,2-Dichloroethene	ND	0.50	NA	1	B2E0007	05/01/2012	05/01/12 18:18	
Trichloroethene	ND	0.50	NA	1	B2E0007	05/01/2012	05/01/12 18:18	
Trichlorofluoromethane	ND	0.50	NA	1	B2E0007	05/01/2012	05/01/12 18:18	
Vinyl chloride	ND	0.50	NA	1	B2E0007	05/01/2012	05/01/12 18:18	



Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego, CA 92122

Project Number : RAYTHEON FULLERTON-MONTHLY,

Report To : Steve Netto

Reported : 05/18/2012

Client Sample ID CEFF

Lab ID: 1201610-06

Volatile Organic Compounds by EPA 8260

Analyst: DC

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
<i>Surrogate: 1,2-Dichloroethane-d4</i>	89.6 %	70 - 130			B2E0007	05/01/2012	05/01/12 18:18	
<i>Surrogate: 4-Bromofluorobenzene</i>	111 %	70 - 130			B2E0007	05/01/2012	05/01/12 18:18	
<i>Surrogate: Dibromofluoromethane</i>	103 %	70 - 130			B2E0007	05/01/2012	05/01/12 18:18	
<i>Surrogate: Toluene-d8</i>	113 %	70 - 130			B2E0007	05/01/2012	05/01/12 18:18	



Hargis & Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego , CA 92122

Project Number : RAYTHEON FULLERTON-MONTHLY,
 Report To : Steve Netto
 Reported : 05/18/2012

QUALITY CONTROL SECTION

Anions by Ion Chromatography EPA 300.0 - Quality Control

Analyte	Result (mg/L)	PQL (mg/L)	Spike Level	Source Result	% Rec % Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B2E0148 - No_Prep_IC_1									
Blank (B2E0148-BLK1)				Prepared: 5/3/2012 Analyzed: 5/3/2012					
Bromide	ND	0.05			NR				
LCS (B2E0148-BS1)				Prepared: 5/3/2012 Analyzed: 5/3/2012					
Bromide	0.96	0.05	1.00		96	90 - 110			
Duplicate (B2E0148-DUP1)		Source: 1201631-01		Prepared: 5/3/2012 Analyzed: 5/3/2012					
Bromide	ND	25		3.5	NR			20	
Matrix Spike (B2E0148-MS1)		Source: 1201631-01		Prepared: 5/3/2012 Analyzed: 5/3/2012					
Bromide	2.5		2.50	0.007	101	80 - 120			
Matrix Spike Dup (B2E0148-MSD1)		Source: 1201631-01		Prepared: 5/3/2012 Analyzed: 5/3/2012					
Bromide	2.5		2.50	0.007	101	80 - 120	0.7	20	



Hargis & Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego , CA 92122

Project Number : RAYTHEON FULLERTON-MONTHLY,
 Report To : Steve Netto
 Reported : 05/18/2012

Total Dissolved Solids (Residue, Filterable) by SM 2540C - Quality Control

Analyte	Result (mg/L)	PQL (mg/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B2E0154 - No_Prep_WC_1

Blank (B2E0154-BLK1)

Prepared: 5/2/2012 Analyzed: 5/2/2012

Residue, Dissolved

ND

10

NR

LCS (B2E0154-BS1)

Prepared: 5/2/2012 Analyzed: 5/2/2012

Residue, Dissolved

980

10

970

101

80 - 120

Duplicate (B2E0154-DUP1)

Source: 1201610-06

Prepared: 5/2/2012 Analyzed: 5/2/2012

Residue, Dissolved

600

10

600

NR

0.3

10



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Project Number : RAYTHEON FULLERTON-MONTHLY,
 Report To : Steve Netto
 Reported : 05/18/2012

Total Suspended Solids (Residue, Non-Filtrable) by SM 2540D - Quality Control

Analyte	Result (mg/L)	PQL (mg/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B2E0136 - No_Prep_WC_1

Blank (B2E0136-BLK1)

Prepared: 5/2/2012 Analyzed: 5/2/2012

Residue, Suspended

ND

10

NR

LCS (B2E0136-BS1)

Prepared: 5/2/2012 Analyzed: 5/2/2012

Residue, Suspended

100

10

96.6

104

80 - 120

Duplicate (B2E0136-DUP1)

Source: 1201560-01

Prepared: 5/2/2012 Analyzed: 5/2/2012

Residue, Suspended

19

10

18

NR

5

10



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Project Number : RAYTHEON FULLERTON-MONTHLY,
 Report To : Steve Netto
 Reported : 05/18/2012

Volatile Organic Compounds by EPA 8260 - Quality Control

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec % Rec	% Rec Limits	RPD RPD	RPD Limit	Notes
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Batch B2E0007 - MSVOAW_LL

Blank (B2E0007-BLK1)

Prepared: 5/1/2012 Analyzed: 5/1/2012

1,1,1,2-Tetrachloroethane	ND	0.50			NR
1,1,1-Trichloroethane	ND	0.50			NR
1,1,2,2-Tetrachloroethane	ND	0.50			NR
1,1,2-Trichloroethane	ND	0.50			NR
1,1-Dichloroethane	ND	0.50			NR
1,1-Dichloroethene	ND	0.50			NR
1,1-Dichloropropene	ND	0.50			NR
1,2,3-Trichloropropane	ND	0.50			NR
1,2,3-Trichlorobenzene	ND	0.50			NR
1,2,4-Trichlorobenzene	ND	0.50			NR
1,2,4-Trimethylbenzene	ND	0.50			NR
1,2-Dibromo-3-chloropropane	ND	0.50			NR
1,2-Dibromoethane	ND	0.50			NR
1,2-Dichlorobenzene	ND	0.50			NR
1,2-Dichloroethane	ND	0.50			NR
1,2-Dichloropropane	ND	0.50			NR
1,3,5-Trimethylbenzene	ND	0.50			NR
1,3-Dichlorobenzene	ND	0.50			NR
1,3-Dichloropropane	ND	0.50			NR
1,4-Dichlorobenzene	ND	0.50			NR
2,2-Dichloropropane	ND	0.50			NR
2-Chlorotoluene	ND	0.50			NR
4-Chlorotoluene	ND	0.50			NR
4-Isopropyltoluene	ND	0.50			NR
Benzene	ND	0.50			NR
Bromobenzene	ND	0.50			NR
Bromodichloromethane	ND	0.50			NR
Bromoform	ND	0.50			NR
Bromomethane	ND	0.50			NR
Carbon tetrachloride	ND	0.50			NR
Chlorobenzene	ND	0.50			NR
Chloroethane	ND	0.50			NR
Chloroform	ND	0.50			NR
Chloromethane	ND	0.50			NR
cis-1,2-Dichloroethene	ND	0.50			NR
cis-1,3-Dichloropropene	ND	0.50			NR
Dibromochloromethane	ND	0.50			NR
Dibromomethane	ND	0.50			NR
Dichlorodifluoromethane	ND	0.50			NR
Ethylbenzene	ND	0.50			NR
Hexachlorobutadiene	ND	0.50			NR



Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : RAYTHEON FULLERTON-MONTHLY,

Report To : Steve Netto

Reported : 05/18/2012

Volatile Organic Compounds by EPA 8260 - Quality Control (cont'd)

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec % Rec	% Rec Limits	RPD RPD	RPD Limit	Notes
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Batch B2E0007 - MSVOAW_LL (continued)

Blank (B2E0007-BLK1) - Continued

Prepared: 5/1/2012 Analyzed: 5/1/2012

Isopropylbenzene	ND	0.50				NR			
m,p-Xylene	ND	1.0				NR			
Methylene chloride	ND	1.0				NR			
n-Butylbenzene	ND	0.50				NR			
n-Propylbenzene	ND	0.50				NR			
Naphthalene	ND	0.50				NR			
o-Xylene	ND	0.50				NR			
sec-Butylbenzene	ND	0.50				NR			
Styrene	ND	0.50				NR			
tert-Butylbenzene	ND	0.50				NR			
Tetrachloroethene	ND	0.50				NR			
Toluene	ND	0.50				NR			
trans-1,2-Dichloroethene	ND	0.50				NR			
Trichloroethene	ND	0.50				NR			
Trichlorofluoromethane	ND	0.50				NR			
Vinyl chloride	ND	0.50				NR			

<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>18</i>		<i>25.0</i>		<i>73.0</i>	<i>70 - 130</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>23</i>		<i>25.0</i>		<i>91.7</i>	<i>70 - 130</i>			
<i>Surrogate: Dibromofluoromethane</i>	<i>21</i>		<i>25.0</i>		<i>85.4</i>	<i>70 - 130</i>			
<i>Surrogate: Toluene-d8</i>	<i>24</i>		<i>25.0</i>		<i>94.7</i>	<i>70 - 130</i>			

LCS (B2E0007-BS1)

Prepared: 5/1/2012 Analyzed: 5/1/2012

1,1-Dichloroethene	16	0.50	20.0		78.0	70 - 130			
Benzene	39	0.50	40.0		96.5	70 - 130			
Chlorobenzene	21	0.50	20.0		103	70 - 130			
MTBE	17	0.50	20.0		84.4	70 - 130			
Toluene	40	0.50	40.0		101	70 - 130			
Trichloroethene	20	0.50	20.0		99.9	70 - 130			

<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>19</i>		<i>25.0</i>		<i>74.1</i>	<i>70 - 130</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>23</i>		<i>25.0</i>		<i>90.8</i>	<i>70 - 130</i>			
<i>Surrogate: Dibromofluoromethane</i>	<i>21</i>		<i>25.0</i>		<i>84.9</i>	<i>70 - 130</i>			
<i>Surrogate: Toluene-d8</i>	<i>24</i>		<i>25.0</i>		<i>95.4</i>	<i>70 - 130</i>			

LCS Dup (B2E0007-BSD1)

Prepared: 5/1/2012 Analyzed: 5/1/2012

1,1-Dichloroethene	15	0.50	20.0		77.1	70 - 130	1.16	20	
Benzene	38	0.50	40.0		94.0	70 - 130	2.65	20	
Chlorobenzene	20	0.50	20.0		100	70 - 130	2.47	20	
MTBE	18	0.50	20.0		88.6	70 - 130	4.86	20	
Toluene	39	0.50	40.0		97.5	70 - 130	3.67	20	
Trichloroethene	19	0.50	20.0		95.0	70 - 130	5.08	20	

<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>19</i>		<i>25.0</i>		<i>75.0</i>	<i>70 - 130</i>			
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Hargis & Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122

Project Number : RAYTHEON FULLERTON-MONTHLY,
 Report To : Steve Netto
 Reported : 05/18/2012

Volatile Organic Compounds by EPA 8260 - Quality Control (cont'd)

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec % Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B2E0007 - MSVOAW_LL (continued)

LCS Dup (B2E0007-BSD1) - Continued

Prepared: 5/1/2012 Analyzed: 5/1/2012

Surrogate: 4-Bromofluorobenzene	23		25.0		90.2	70 - 130			
Surrogate: Dibromofluoromethane	21		25.0		84.7	70 - 130			
Surrogate: Toluene-d8	23		25.0		93.1	70 - 130			

Matrix Spike (B2E0007-MS1)

Source: 1201594-24RE2

Prepared: 5/1/2012 Analyzed: 5/1/2012

1,1-Dichloroethene	19	0.50	20.0	ND	93.6	70 - 130			
Benzene	41	0.50	40.0	0.24	103	70 - 130			
Chlorobenzene	21	0.50	20.0	ND	107	70 - 130			
MTBE	320	0.50	20.0	300	65.5	70 - 130			M2
Toluene	43	0.50	40.0	0.29	106	70 - 130			
Trichloroethene	21	0.50	20.0	ND	106	70 - 130			

Surrogate: 1,2-Dichloroethane-d4	24		25.0		95.4	70 - 130			
Surrogate: 4-Bromofluorobenzene	29		25.0		116	70 - 130			
Surrogate: Dibromofluoromethane	26		25.0		106	70 - 130			
Surrogate: Toluene-d8	29		25.0		115	70 - 130			

Matrix Spike Dup (B2E0007-MSD1)

Source: 1201594-24RE2

Prepared: 5/1/2012 Analyzed: 5/1/2012

1,1-Dichloroethene	21	0.50	20.0	ND	104	70 - 130	10.9	20	
Benzene	48	0.50	40.0	0.24	118	70 - 130	13.7	20	
Chlorobenzene	25	0.50	20.0	ND	125	70 - 130	15.4	20	
MTBE	300	0.50	20.0	300	-27.6	70 - 130	6.09	20	M2
Toluene	49	0.50	40.0	0.29	122	70 - 130	14.0	20	
Trichloroethene	24	0.50	20.0	ND	119	70 - 130	11.9	20	

Surrogate: 1,2-Dichloroethane-d4	23		25.0		93.2	70 - 130			
Surrogate: 4-Bromofluorobenzene	29		25.0		115	70 - 130			
Surrogate: Dibromofluoromethane	25		25.0		102	70 - 130			
Surrogate: Toluene-d8	28		25.0		114	70 - 130			



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Project Number : RAYTHEON FULLERTON-MONTHLY,
 Report To : Steve Netto
 Reported : 05/18/2012

1,4-Dioxane by EPA 8270: Isotope Dilution Technique - Quality Control

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec % Rec	% Rec Limits	RPD RPD	RPD Limit	Notes
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Batch B2E0088 - MSSEMI_ISOTOPEDILN

Blank (B2E0088-BLK1)

Prepared: 5/2/2012 Analyzed: 5/2/2012

1,4-Dioxane	ND	2.0			NR				
Surrogate: 1,2-Dichlorobenzene-d4	80		100		80.4	37 - 93			
Surrogate: 2-Fluorobiphenyl	88		100		88.2	51 - 100			
Surrogate: 4-Terphenyl-d14	120		100		122	58 - 113			S1
Surrogate: Nitrobenzene-d5	91		100		91.0	39 - 95			

LCS (B2E0088-BS1)

Prepared: 5/2/2012 Analyzed: 5/2/2012

1,4-Dioxane	97	2.0	100		97.4	70 - 130			
Surrogate: 1,2-Dichlorobenzene-d4	83		100		82.7	37 - 93			
Surrogate: 2-Fluorobiphenyl	91		100		91.4	51 - 100			
Surrogate: 4-Terphenyl-d14	100		100		101	58 - 113			
Surrogate: Nitrobenzene-d5	89		100		89.2	39 - 95			

LCS Dup (B2E0088-BSD1)

Prepared: 5/2/2012 Analyzed: 5/2/2012

1,4-Dioxane	94	2.0	100		94.3	70 - 130	3.18	20	
Surrogate: 1,2-Dichlorobenzene-d4	82		100		81.5	37 - 93			
Surrogate: 2-Fluorobiphenyl	92		100		91.5	51 - 100			
Surrogate: 4-Terphenyl-d14	100		100		101	58 - 113			
Surrogate: Nitrobenzene-d5	93		100		92.6	39 - 95			



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Project Number : RAYTHEON FULLERTON-MONTHLY,
 Report To : Steve Netto
 Reported : 05/18/2012

1,4-Dioxane by EPA 8270/SIM: Isotope Dilution Technique - Quality Control

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec % Rec	% Rec Limits	RPD RPD	RPD Limit	Notes
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Batch B2E0087 - MSSEMI_ISOTOPEDILN

Blank (B2E0087-BLK1)

Prepared: 5/2/2012 Analyzed: 5/2/2012

1,4-Dioxane	ND	0.20			NR				
Surrogate: 1,2-Dichlorobenzene-d4	0.82		1.00		82.2	36 - 107			
Surrogate: 2-Fluorobiphenyl	0.77		1.00		77.2	42 - 120			
Surrogate: 4-Terphenyl-d14	0.94		1.00		94.4	67 - 142			
Surrogate: Nitrobenzene-d5	0.85		1.00		84.8	36 - 130			

LCS (B2E0087-BS1)

Prepared: 5/2/2012 Analyzed: 5/2/2012

1,4-Dioxane	0.95	0.20	1.00		95.1	70 - 130			
Surrogate: 1,2-Dichlorobenzene-d4	0.80		1.00		80.1	36 - 107			
Surrogate: 2-Fluorobiphenyl	0.74		1.00		73.8	42 - 120			
Surrogate: 4-Terphenyl-d14	0.88		1.00		88.3	67 - 142			
Surrogate: Nitrobenzene-d5	0.87		1.00		87.1	36 - 130			

LCS Dup (B2E0087-BSD1)

Prepared: 5/2/2012 Analyzed: 5/2/2012

1,4-Dioxane	0.92	0.20	1.00		91.8	70 - 130	3.55	20	
Surrogate: 1,2-Dichlorobenzene-d4	0.74		1.00		74.0	36 - 107			
Surrogate: 2-Fluorobiphenyl	0.71		1.00		71.4	42 - 120			
Surrogate: 4-Terphenyl-d14	0.77		1.00		76.8	67 - 142			
Surrogate: Nitrobenzene-d5	0.85		1.00		85.2	36 - 130			



Hargis & Associates, Inc.

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Project Number : RAYTHEON FULLERTON-MONTHLY,

Report To : Steve Netto

Reported : 05/18/2012

Notes and Definitions

S8	Surrogate recovery was above laboratory acceptance limit. See CAR for details.
S1	Surrogate recovery was above laboratory acceptance limit. No target analyte was detected in the sample.
M2	Matrix spike recovery outside of acceptance limit due to possible matrix interference. The analytical batch was validated by the laboratory control sample.
ND	Analyte not detected at or above reporting limit
PQL	Practical Quantitation Limit
MDL	Method Detection Limit
NR	Not Reported
RPD	Relative Percent Difference
CA1	CA-NELAP (CDPH)
CA2	CA-ELAP (CDPH)
OR1	OR-NELAP (OSPHL)
TX1	TX-NELAP (TCEQ)

Bromate by EPA 317
 Ion Chromatography with Post-Column Derivatization-Visible Absorption

Column: Dionex AS9-HC/AG9-HSC
 Eluent: 30 mM Na₂CO₃
 Flow: 1.0 mL/min
 Injection: 250 µL
 Detection: Post-column derivatization, Visible detection, 450 nm

Sample preparation: The undiluted samples were treated with a Dionex OnGuard II H cartridge to remove excess basic cations. One sample required dilution with water due to an interfering peak. The detection limit is adjusted for the dilution necessary for analysis.

Parts Per Billion (µg/L)

Sample ID	Result	Detection Limit
1201610-02 / EW-02	ND	0.5
1201610-04 / POX	8	5
1201610-06 / CEFF	6.3	0.5
Method Blank	ND	0.5

Date Analyzed: 05-15-12

Quality Control Summary

Sample ID: 1201610-06 / CEFF

Analyte	Sample Result	Spike Conc	Spike Result	Spike % Rec	Spike Duplicate Result	Spike Duplicate % Rec	Spike RPD
Bromate	6.3	11.1	17.8	104	17.4	100	2
QC Guidelines				75 - 125		75 - 125	NMT 10


ADVANCED TECHNOLOGY
 LABORATORIES

SUBCONTRACT ORDER

Work Order: 1201610

SENDING LABORATORY:



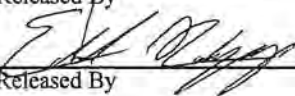
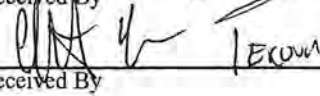
Advanced Technology Laboratories
 3275 Walnut Avenue
 Signal Hill, CA 90755
 Phone: 562.989.4045
 Fax: 562.989.6348
 Project Manager: Rachelle Arada

RECEIVING LABORATORY:

Exova Inc.
 9240 Santa Fe Springs Road
 Santa Fe Springs, CA 90670
 Phone : (562) 948-2225
 Fax: (562) 948-5850
 PO#: SC07238 - Standard TAT RA

IMPORTANT : Please include Work Order # and PO # in your invoice.

Analysis	Due	Expires	Sampled	Comments
ATL Lab#: 1201610-02 317.0	/ EW-02 05/15/12 17:00	Groundwater 05/02/12 11:20	05/01/12 11:20	BROMATE
ATL Lab#: 1201610-04 317.0	/ POX 05/15/12 17:00	Groundwater 05/02/12 10:05	05/01/12 10:05	
ATL Lab#: 1201610-06 317.0	/ CEFF 05/15/12 17:00	Groundwater 05/02/12 10:35	05/01/12 10:35	

 Released By	5/1/12 Date	 Received By	5/2/12 9:17 Date
 Released By	5/2/12 1235 Date	 Received By	05-02-12 Date

CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST FORM

PROJECT NAME		PROJECT No./TASK No.				SAMPLE CONTAINERS		ANALYSIS REQUESTED					ESTIMATED CONCENTRATION RANGE (ppb) FOR VOAS		SPECIAL HANDLING		LABORATORY INFORMATION														
RAYTHEON FULLERTON-MONTHLY		532.15															ALY														
PROJECT MANAGER CHRIS ROSS		Phone No. 858-455-6500															C/O Rachelle Arada														
QA MANAGER STEVE NETTO		Fax No. 858-455-6533															3276 Walnut Ave.														
SAMPLER (SIGNATURE)		SAMPLER (PRINTED)															Signal Hill, CA														
		Travis Arciaga															50307														
LAB ID	SAMPLE ID	SAMPLE COLLECTION		MATRIX			PRESERVATION				40 ml Glass VOA	125 ml Poly	250 ml Poly	500 ml Poly	1 L Amber	VOCs by EPA 8260B	1,4-Dioxane by EPA 8270 SIM	Bromate by 317	PbS by SM2549C	TSS by SM2540D	Bromide by 309	1,4-Dioxane by EPA 8270 MOD	0-10	10-100	100-1,000	>1,000			REMARKS		
		Date	Time	Soil	Ground-water	Surface water	Lab H2O	HCl	HNO 3	NaOH																				H2SO 4	Ice
1201610-01	TB-050112	5/11/12	9:00			X	X				X					X														Please include	
-2	EW-02		11:20	X			X				X	X	X	X	X	X	X	X	X	X		X								mrodriguez@hargis.com	
-3	PF		9:56	X							X								X			X								in lab report	
-4	POX		10:05	X			X				X	X	X	X	X	X			X			X								distribution list	
-5	CBT		10:27	X			X				X					X						X								set 1,4-Dioxane	
-6	CEFF		10:35	X			X				X	X	X	X	X	X			X			X								MDL to 1.0 ppm	
Total number of Containers per analysis:											14	6	5	2												Total No. of Containers:	27				
Relinquished by:		Date	Received by:		Date	INSTRUCTIONS															Shipment Method:										
		5/11/12			5/11/12	<ol style="list-style-type: none"> Fill out form completely except for shaded areas (lab use only); sign only after verified for completeness. Complete in ballpoint pen. Draw one line through errors, initial and date correction. Indicate number of sample containers in analysis request space; indicate choice with \checkmark or x. Note applicable preservatives, special instructions, and deviations from typical environmental samples. Consult project QA documents for specific instructions. 															DHL										
H+A		Time	Company		Time																Send Results to: Steve Netto										
		12:15			12:15																<input checked="" type="checkbox"/> 9171 TOWNE CENTRE DRIVE, SUITE 375 SAN DIEGO, CA 92122 (858) 455-6500										
Relinquished by:		Date	Received by:		Date	<ol style="list-style-type: none"> Sample Receipt: <input type="checkbox"/> No. of containers correct <input checked="" type="checkbox"/> received good condition/cold <input type="checkbox"/> custody seals secure <input type="checkbox"/> conforms to COC document 															Send invoice to San Diego, CA Attn: Accounts Payable										
		5/11/12	FPDIWA		5/11/12																										
H+A		Time	Company		Time																										
		12:55			12:55																										

June 19, 2012

Steve Netto
Hargis & Associates, Inc.
9171 Towne Centre Drive, Suite 375
San Diego, CA 92122
Tel: (619) 249-3166
Fax: (858) 455-6533

ACCREDITED IN ACCORDANCE WITH

ELAP No.: 1838
NELAP No.: 02107CA
CSDLAC No.: 10196
ORELAP No.: CA300003
TCEQ No.: T104704502

Re: ATL Work Order Number : 1202140

Client Reference : RAYTHEON FULLERTON - QUARTERLY, 532.15

Enclosed are the results for sample(s) received on June 08, 2012 by Advanced Technology Laboratories. The sample(s) are tested for the parameters as indicated on the enclosed chain of custody in accordance with applicable laboratory certifications. The laboratory results contained in this report specifically pertains to the sample(s) submitted.

Thank you for the opportunity to serve the needs of your company. If you have any questions, please feel free to contact me or your Project Manager.

Sincerely,



Eddie Rodriguez
Laboratory Director

The cover letter and the case narrative are an integral part of this analytical report and its absence renders the report invalid. The report cannot be reproduced without written permission from the client and Advanced Technology Laboratories.



Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : RAYTHEON FULLERTON - QUARTER

Report To : Steve Netto

Reported : 06/19/2012

SUMMARY OF SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
EW-02	1202140-01	Groundwater	6/08/12 11:20	6/08/12 13:10
POX	1202140-02	Groundwater	6/08/12 10:06	6/08/12 13:10

CASE NARRATIVE

The sample for SM 2320B (Alkalinity) analysis was subcontracted to AETL with DOHS Cert.#1541.



Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : RAYTHEON FULLERTON - QUARTER

Report To : Steve Netto

Reported : 06/19/2012

Client Sample ID EW-02

Lab ID: 1202140-01

Anions Scan by Ion Chromatography EPA 300.0

Analyst: Phali

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Chloride	99	5.0	NA	10	B2F0341	06/08/2012	06/08/12 16:31	
Nitrate as N	4.9	0.10	NA	1	B2F0341	06/08/2012	06/08/12 16:08	
Nitrite, as N	ND	0.10	NA	1	B2F0341	06/08/2012	06/08/12 16:08	
ortho-Phosphate (As P)	ND	0.05	NA	1	B2F0341	06/08/2012	06/08/12 16:08	
Sulfate	130	10	NA	10	B2F0341	06/08/2012	06/08/12 16:31	

Total Organic Carbon by SM 5310B

Analyst: PT

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Organic Carbon, Total	1.4	3.0	NA	1	B2F0404	06/13/2012	06/13/12 17:36	

Chemical Oxygen Demand by EPA 410.4

Analyst: LA

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Chemical Oxygen Demand	ND	5.0	2.5	1	B2F0441	06/14/2012	06/14/12 12:49	

Total Metals by ICP-AES EPA 6010B

Analyst: KK

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Selenium	ND	0.01	NA	1	B2F0368	06/13/2012	06/13/12 12:23	

Dissolved Metals by ICP-AES EPA 6010B

Analyst: KK

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Calcium	88	0.50	NA	1	B2F0425	06/14/2012	06/15/12 14:27	
Iron	ND	0.50	NA	1	B2F0425	06/14/2012	06/15/12 14:28	
Magnesium	27	0.10	NA	1	B2F0425	06/14/2012	06/15/12 14:27	
Manganese	ND	0.50	NA	1	B2F0425	06/14/2012	06/15/12 14:28	
Selenium	ND	0.01	NA	1	B2F0425	06/14/2012	06/15/12 14:28	
Sodium	69	1.0	NA	1	B2F0425	06/14/2012	06/15/12 14:27	



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Project Number : RAYTHEON FULLERTON - QUARTER

Report To : Steve Netto

Reported : 06/19/2012

Client Sample ID POX

Lab ID: 1202140-02

Anions Scan by Ion Chromatography EPA 300.0

Analyst: Phali

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Chloride	98	5.0	NA	10	B2F0341	06/08/2012	06/08/12 16:42	
Nitrate as N	4.9	0.10	NA	1	B2F0341	06/08/2012	06/08/12 16:20	
Nitrite, as N	ND	0.10	NA	1	B2F0341	06/08/2012	06/08/12 16:20	
ortho-Phosphate (As P)	ND	0.05	NA	1	B2F0341	06/08/2012	06/08/12 16:20	
Sulfate	130	10	NA	10	B2F0341	06/08/2012	06/08/12 16:42	

Total Organic Carbon by SM 5310B

Analyst: PT

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Organic Carbon, Total	ND	3.0	NA	1	B2F0404	06/13/2012	06/13/12 17:50	

Chemical Oxygen Demand by EPA 410.4

Analyst: LA

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Chemical Oxygen Demand	9.4	5.0	2.5	1	B2F0441	06/14/2012	06/14/12 12:49	



Hargis & Associates, Inc.
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 San Diego , CA 92122

Project Number : RAYTHEON FULLERTON - QUARTER
 Report To : Steve Netto
 Reported : 06/19/2012

QUALITY CONTROL SECTION

Anions Scan by Ion Chromatography EPA 300.0 - Quality Control

Analyte	Result (mg/L)	PQL (mg/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B2F0341 - No_Prep_IC_1

Blank (B2F0341-BLK1)

Prepared: 6/8/2012 Analyzed: 6/8/2012

Chloride	ND	0.50				NR			
Nitrate as N	ND	0.10				NR			
Nitrite, as N	ND	0.10				NR			
ortho-Phosphate (As P)	ND	0.05				NR			
Sulfate	ND	1.0				NR			

LCS (B2F0341-BS1)

Prepared: 6/8/2012 Analyzed: 6/8/2012

Chloride	0.97	0.50	1.00		97	90 - 110			
Nitrate as N	0.98	0.10	1.00		98	90 - 110			
Nitrite, as N	0.96	0.10	1.00		96	90 - 110			
ortho-Phosphate (As P)	0.97	0.05	1.00		97	90 - 110			
Sulfate	1.9	1.0	2.00		95	90 - 110			

Duplicate (B2F0341-DUP1)

Source: 1202140-02

Prepared: 6/8/2012 Analyzed: 6/8/2012

Chloride	98	5.0		98	NR		0.02	20	
Nitrate as N	5.2	1.0		4.9	NR		5	20	
Nitrite, as N	ND	1.0		ND	NR			20	
ortho-Phosphate (As P)	ND	0.50		ND	NR			20	
Sulfate	130	10		130	NR		0.2	20	

Matrix Spike (B2F0341-MS1)

Source: 1202140-02

Prepared: 6/8/2012 Analyzed: 6/8/2012

Chloride	12		2.50	9.8	93	80 - 120			
Nitrate as N	3.0		2.50	0.49	102	80 - 120			
Nitrite, as N	2.7		2.50	ND	109	80 - 120			
ortho-Phosphate (As P)	3.1		2.50	ND	125	80 - 120			M1
Sulfate	18		5.00	13	105	80 - 120			

Matrix Spike Dup (B2F0341-MSD1)

Source: 1202140-02

Prepared: 6/8/2012 Analyzed: 6/8/2012

Chloride	12		2.50	9.8	91	80 - 120	1	20	
Nitrate as N	3.0		2.50	0.49	101	80 - 120	0.3	20	
Nitrite, as N	2.7		2.50	ND	109	80 - 120	0.04	20	
ortho-Phosphate (As P)	3.1		2.50	ND	122	80 - 120	2	20	M1
Sulfate	18		5.00	13	105	80 - 120	0.6	20	



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San Diego , CA 92122

Project Number : RAYTHEON FULLERTON - QUARTER

Report To : Steve Netto

Reported : 06/19/2012

Total Organic Carbon by SM 5310B - Quality Control

Analyte	Result (mg/L)	PQL (mg/L)	Spike Level	Source Result	% Rec % Rec	% Rec Limits	RPD RPD	RPD Limit	Notes
---------	------------------	---------------	----------------	------------------	----------------	-----------------	------------	--------------	-------

Batch B2F0404 - No_Prep_II_W

Blank (B2F0404-BLK1)

Prepared: 6/13/2012 Analyzed: 6/13/2012

Organic Carbon, Total

ND

3.0

NR

LCS (B2F0404-BS1)

Prepared: 6/13/2012 Analyzed: 6/13/2012

Organic Carbon, Total

19.3

3.0

19.9

97

80 - 120

LCS Dup (B2F0404-BSD1)

Prepared: 6/13/2012 Analyzed: 6/13/2012

Organic Carbon, Total

19.4

3.0

19.9

98

80 - 120

1

20

Matrix Spike (B2F0404-MS1)

Source: 1202094-03

Prepared: 6/13/2012 Analyzed: 6/13/2012

Organic Carbon, Total

41.5

3.0

21.2

17.9

111

80 - 120

Matrix Spike Dup (B2F0404-MSD1)

Source: 1202094-03

Prepared: 6/13/2012 Analyzed: 6/13/2012

Organic Carbon, Total

30.3

3.0

21.2

17.9

58

80 - 120

62

20

M1, R



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Project Number : RAYTHEON FULLERTON - QUARTER
 Report To : Steve Netto
 Reported : 06/19/2012

Chemical Oxygen Demand by EPA 410.4 - Quality Control

Analyte	Result (mg/L)	PQL (mg/L)	Spike Level	Source Result	% Rec % Rec	% Rec Limits	RPD RPD	RPD Limit	Notes
---------	------------------	---------------	----------------	------------------	----------------	-----------------	------------	--------------	-------

Batch B2F0441 - Prep_WC_1_W

Blank (B2F0441-BLK1)

Prepared: 6/14/2012 Analyzed: 6/14/2012

Chemical Oxygen Demand

ND

5.0

NR

LCS (B2F0441-BS1)

Prepared: 6/14/2012 Analyzed: 6/14/2012

Chemical Oxygen Demand

510.4

5.0

500

102

80 - 120

Matrix Spike (B2F0441-MS1)

Source: 1202170-01

Prepared: 6/14/2012 Analyzed: 6/14/2012

Chemical Oxygen Demand

670

5.0

500

9.0

132

80 - 120

M2

Matrix Spike Dup (B2F0441-MSD1)

Source: 1202170-01

Prepared: 6/14/2012 Analyzed: 6/14/2012

Chemical Oxygen Demand

655

5.0

500

9.0

129

80 - 120

2

20

M2



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Project Number : RAYTHEON FULLERTON - QUARTER
 Report To : Steve Netto
 Reported : 06/19/2012

Total Metals by ICP-AES EPA 6010B - Quality Control

Analyte	Result (mg/L)	PQL (mg/L)	Spike Level	Source Result	% Rec % Rec	% Rec Limits	RPD RPD	RPD Limit	Notes
Batch B2F0368 - EPA 3010A									
Blank (B2F0368-BLK1)									
Selenium	ND	0.01							Prepared: 6/13/2012 Analyzed: 6/13/2012 NR
LCS (B2F0368-BS1)									
Selenium	0.92	0.01	1.00		91.8	80 - 120			Prepared: 6/13/2012 Analyzed: 6/13/2012
Duplicate (B2F0368-DUP1)									
Selenium	ND	0.01		0.009	NR			20	Source: 1202140-01 Prepared: 6/13/2012 Analyzed: 6/13/2012
Matrix Spike (B2F0368-MS1)									
Selenium	2.5	0.01	2.50	0.009	101	78 - 116			Source: 1202140-01 Prepared: 6/13/2012 Analyzed: 6/13/2012
Matrix Spike Dup (B2F0368-MSD1)									
Selenium	2.6	0.01	2.50	0.009	105	78 - 116	4.00	20	Source: 1202140-01 Prepared: 6/13/2012 Analyzed: 6/13/2012



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San Diego, CA 92122

Project Number : RAYTHEON FULLERTON - QUARTER

Report To : Steve Netto

Reported : 06/19/2012

Dissolved Metals by ICP-AES EPA 6010B - Quality Control

Analyte	Result (mg/L)	PQL (mg/L)	Spike Level	Source Result	% Rec % Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B2F0425 - EPA 3010A

Blank (B2F0425-BLK1)

Prepared: 6/14/2012 Analyzed: 6/15/2012

Calcium	ND	0.50			NR				
Iron	ND	0.50			NR				
Magnesium	ND	0.10			NR				
Manganese	ND	0.50			NR				
Selenium	ND	0.01			NR				
Sodium	ND	1.0			NR				

LCS (B2F0425-BS1)

Prepared: 6/14/2012 Analyzed: 6/15/2012

Calcium	19	0.50	20.0		94.4	80 - 120			
Iron	19	0.50	20.0		93.6	80 - 120			
Magnesium	19	0.10	20.0		95.0	80 - 120			
Manganese	18	0.50	20.0		90.5	80 - 120			
Selenium	0.95	0.01	1.00		95.4	80 - 120			
Sodium	18	1.0	20.0		89.5	80 - 120			

Matrix Spike (B2F0425-MS1)

Source: 1202140-01

Prepared: 6/14/2012 Analyzed: 6/15/2012

Calcium	110	0.50	20.0	88	95.8	5 - 159			
Iron	19	0.50	20.0	ND	92.6	71 - 118			
Magnesium	45	0.10	20.0	27	92.2	69 - 126			
Manganese	18	0.50	20.0	ND	90.4	79 - 109			
Selenium	3.4	0.01	2.50	0.01	134	78 - 116			M1
Sodium	94	1.0	3.62	69	669	70 - 130			M1

Matrix Spike Dup (B2F0425-MSD1)

Source: 1202140-01

Prepared: 6/14/2012 Analyzed: 6/15/2012

Calcium	100	0.50	20.0	88	78.1	5 - 159	3.35	20	
Iron	18	0.50	20.0	ND	90.4	71 - 118	2.45	20	
Magnesium	44	0.10	20.0	27	85.1	69 - 126	3.20	20	
Manganese	18	0.50	20.0	ND	88.0	79 - 109	2.65	20	
Selenium	3.3	0.01	2.50	0.01	131	78 - 116	2.48	20	M1
Sodium	89	1.0	3.62	69	554	70 - 130	4.57	20	M1



Hargis & Associates, Inc.

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San Diego , CA 92122

Project Number : RAYTHEON FULLERTON - QUARTER

Report To : Steve Netto

Reported : 06/19/2012

Notes and Definitions

R	RPD value outside acceptance criteria. Calculation is based on raw values.
M2	Matrix spike recovery outside of acceptance limit due to possible matrix interference. The analytical batch was validated by the laboratory control sample.
M1	Matrix spike recovery outside of acceptance limit. The analytical batch was validated by the laboratory control sample.
ND	Analyte not detected at or above reporting limit
PQL	Practical Quantitation Limit
MDL	Method Detection Limit
NR	Not Reported
RPD	Relative Percent Difference
CA1	CA-NELAP (CDPH)
CA2	CA-ELAP (CDPH)
OR1	OR-NELAP (OSPHL)
TX1	TX-NELAP (TCEQ)



American Environmental Testing Laboratory Inc.

2834 & 2908 North Naomi Street Burbank, CA 91504 • DOHS NO: 1541, LACSD NO: 10181
Tel: (888) 288-AETL • (818) 845-8200 • Fax: (818) 845-8840 • www.aetlab.com

Ordered By

Advanced Technology Laboratories
3275 Walnut Street
Signal Hill, CA 90755-5225

Number of Pages 2
Date Received 06/11/2012
Date Reported 06/19/2012

Telephone: (562)989-4045
Attention: Rachelle Arada

Job Number	Order Date	Client
66091	06/11/2012	ATL

Project ID: 1202140
Project Name: PO# SC07378

Enclosed please find results of analyses of 1 water sample which was analyzed as specified on the attached chain of custody. If there are any questions, please do not hesitate to call.

Checked By: _____

Approved By: _____

Cyrus Razmara, Ph.D.
Laboratory Director



American Environmental Testing Laboratory Inc.

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Page: 1 A

Ordered By

Advanced Technology Laboratories
3275 Walnut Street
Signal Hill, CA 90755-5225

Project ID: 1202140
Date Received 06/11/2012
Date Reported 06/19/2012

Telephone: (562)989-4045
Attention: Rachelle Arada

Job Number	Order Date	Client
66091	06/11/2012	ATL

CERTIFICATE OF ANALYSIS CASE NARRATIVE

AETL received 1 samples with the following specification on 06/11/2012.

Lab ID	Sample ID	Sample Date	Matrix	QTY of Containers
66091.01	1202140-01	06/08/2012	Aqueous	1

The samples were analyzed as specified on the enclosed chain of custody.
No analytical non-conformances were encountered.

Checked By: _____

Approved By: _____

Cyrus Razmara, Ph.D.
Laboratory Director



American Environmental Testing Laboratory Inc.

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ANALYTICAL RESULTS

Ordered By

Advanced Technology Laboratories
 3275 Walnut Street
 Signal Hill, CA 90755-5225

Telephone: (562)989-4045

Attn: Rachelle Arada

Page: **2**

Project ID: 1202140

Project Name: PO# SC07378

AETL Job Number	Submitted	Client
66091	06/11/2012	ATL

Method: 310.1, Alkalinity, Titrimetric (pH 4.5), (EPA/600/4-79-020)

QC Batch No: 061412-1

Our Lab I.D.		Method Blank	66091.01			
Client Sample I.D.			1202140-01			
Date Sampled			06/08/2012			
Date Prepared		06/14/2012	06/14/2012			
Preparation Method		310.1	310.1			
Date Analyzed		06/14/2012	06/14/2012			
Matrix		Aqueous	Aqueous			
Units		mg/L	mg/L			
Dilution Factor		1	1			
Analytes	MDL	PQL	Results	Results		
Alkalinity, Bicarbonate	2.0	2.0	ND	220		
Alkalinity, Carbonate	2.0	2.0	ND	ND		
Alkalinity, Hydroxide	2.0	2.0	ND	ND		
Alkalinity, Total	2.0	2.0	ND	220		

QUALITY CONTROL REPORT

QC Batch No: 061412-1; Dup or Spiked Sample: 66091.01; LCS: Clean Water; QC Prepared: 06/14/2012; QC Analyzed: 06/14/2012;
 Units: mg/L

Analytes	Sample Result	MS Concen	MS Recov	MS % REC	MS DUP Concen	MS DUP Recov	MS DUP % REC	RPD %	MS/MSD % Limit	MS RPD % Limit
Alkalinity, Bicarbonate	220	20.0	240	100	20.0	240	100	<1	80-120	<15
Alkalinity, Total	220	20.0	240	100	20.0	240	100	<1	80-120	<15

QC Batch No: 061412-1; Dup or Spiked Sample: 66091.01; LCS: Clean Water; QC Prepared: 06/14/2012; QC Analyzed: 06/14/2012;
 Units: mg/L

Analytes	SM Result	SM DUP Result	RPD %	SM RPD % Limit	LCS Concen	LCS Recov	LCS % REC	LCS/LCSD % Limit		
Alkalinity, Bicarbonate	220	220	<1	<15	20.0	20.0	100	80-120		
Alkalinity, Total	220	220	<1	<15	20.0	20.0	100	80-120		



American Environmental Testing Laboratory Inc.

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Data Qualifiers and Descriptors

Data Qualifier:

- #: Recovery is not within acceptable control limits.
- *: In the QC section, sample results have been taken directly from the ICP reading. No preparation factor has been applied.
- B: Analyte was present in the Method Blank.
- D: Result is from a diluted analysis.
- E: Result is beyond calibration limits and is estimated.
- H: Analysis was performed over the allowed holding time due to circumstances which were beyond laboratory control.
- J: Analyte was detected . However, the analyte concentration is an estimated value, which is between the Method Detection Limit (MDL) and the Practical Quantitation Limit (PQL).
- M: Matrix spike recovery is outside control limits due to matrix interference. Laboratory Control Sample recovery was acceptable.
- MCL: Maximum Contaminant Level
- NS: No Standard Available
- S6: Surrogate recovery is outside control limits due to matrix interference.
- S8: The analysis of the sample required a dilution such that the surrogate concentration was diluted below the method acceptance criteria.
- X: Results represent LCS and LCSD data.

Definition:

- %Limi: Percent acceptable limits.
- %REC: Percent recovery.
- Con.L: Acceptable Control Limits
- Conce: Added concentration to the sample.
- LCS: Laboratory Control Sample
- MDL: Method Detection Limit is a statistically derived number which is specific for each instrument, each method, and each compound. It indicates a distinctively detectable quantity with 99% probability.



American Environmental Testing Laboratory Inc.

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Data Qualifiers and Descriptors

MS:	Matrix Spike
MS DU:	Matrix Spike Duplicate
ND:	Analyte was not detected in the sample at or above MDL.
PQL:	Practical Quantitation Limit or ML (Minimum Level as per RWQCB) is the minimum concentration that can be quantified with more than 99% confidence. Taking into account all aspects of the entire analytical instrumentation and practice.
Recov:	Recovered concentration in the sample.
RPD:	Relative Percent Difference


ADVANCED TECHNOLOGY
 LABORATORIES

SUBCONTRACT ORDER

Work Order: 1202140

Job # 66091

SENDING LABORATORY:

Advanced Technology Laboratories
 3275 Walnut Avenue
 Signal Hill, CA 90755
 Phone: 562.989.4045
 Fax: 562.989.6348
 Project Manager: Rachele Arada

RECEIVING LABORATORY:

AETL
 2834 North Naomi Street
 Burbank, CA 91504
 Phone : (818) 845-8200
 Fax: (818) 845-8840
 PO#: SC07378 - Standard TAT RA

IMPORTANT : Please include Work Order # and PO # in your invoice.

Analysis	Due	Expires	Sampled
ATL Lab#: 1202140-01 / EW-02			
310.1_2320B_Speciated	06/15/12 17:00	06/22/12 11:20	06/08/12 11:20
			<i>66091-01</i> Groundwater

Comments: Report Hydroxide, Bicarbonate, Carbonate & Total

Released By <i>[Signature]</i>	Date <i>6/8/12</i>	Received By <i>[Signature]</i>	Date <i>6/11/12</i>
Released By <i>[Signature]</i>	Date <i>6/11/12</i>	Received By <i>Jean Claude</i>	Date <i>06/11/12</i>

June 26, 2012

Steve Netto
Hargis & Associates, Inc.
9171 Towne Centre Drive, Suite 375
San Diego, CA 92122
Tel: (619) 249-3166
Fax: (858) 455-6533



Re: ATL Work Order Number : 1202141
Client Reference : RAYTHEON FULLERTON-MONTHLY, 532.15

Enclosed are the results for sample(s) received on June 08, 2012 by Advanced Technology Laboratories. The sample(s) are tested for the parameters as indicated on the enclosed chain of custody in accordance with applicable laboratory certifications. The laboratory results contained in this report specifically pertains to the sample(s) submitted.

Thank you for the opportunity to serve the needs of your company. If you have any questions, please feel free to contact me or your Project Manager.

Sincerely,

Eddie Rodriguez
Laboratory Director

The cover letter and the case narrative are an integral part of this analytical report and its absence renders the report invalid. The report cannot be reproduced without written permission from the client and Advanced Technology Laboratories.



Hargis & Associates, Inc.
9171 Towne Centre Drive, Suite 375
San Diego , CA 92122

Project Number : RAYTHEON FULLERTON-MONTHLY,
Report To : Steve Netto
Reported : 06/26/2012

SUMMARY OF SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
TB-06082012	1202141-01	Lab H2O	6/08/12 10:02	6/08/12 13:10
EW-02	1202141-02	Groundwater	6/08/12 11:20	6/08/12 13:10
PF	1202141-03	Groundwater	6/08/12 8:31	6/08/12 13:10
POX	1202141-04	Groundwater	6/08/12 8:43	6/08/12 13:10
CBT	1202141-05	Groundwater	6/08/12 9:37	6/08/12 13:10
CEFF	1202141-06	Groundwater	6/08/12 9:51	6/08/12 13:10

CASE NARRATIVE

The samples for EPA 317 (Bromate) analysis were subcontracted to Exova, Inc. with ELAP Cert.# 2652.



Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : RAYTHEON FULLERTON-MONTHLY,

Report To : Steve Netto

Reported : 06/26/2012

Client Sample ID TB-06082012

Lab ID: 1202141-01

Volatile Organic Compounds by EPA 8260

Analyst: DC

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	0.50	NA	1	B2F0445	06/15/2012	06/15/12 15:29	
1,1,1-Trichloroethane	ND	0.50	NA	1	B2F0445	06/15/2012	06/15/12 15:29	
1,1,2,2-Tetrachloroethane	ND	0.50	NA	1	B2F0445	06/15/2012	06/15/12 15:29	
1,1,2-Trichloroethane	ND	0.50	NA	1	B2F0445	06/15/2012	06/15/12 15:29	
1,1-Dichloroethane	ND	0.50	NA	1	B2F0445	06/15/2012	06/15/12 15:29	
1,1-Dichloroethene	ND	0.50	NA	1	B2F0445	06/15/2012	06/15/12 15:29	
1,1-Dichloropropene	ND	0.50	NA	1	B2F0445	06/15/2012	06/15/12 15:29	
1,2,3-Trichloropropane	ND	0.50	NA	1	B2F0445	06/15/2012	06/15/12 15:29	
1,2,3-Trichlorobenzene	ND	0.50	NA	1	B2F0445	06/15/2012	06/15/12 15:29	
1,2,4-Trichlorobenzene	ND	0.50	NA	1	B2F0445	06/15/2012	06/15/12 15:29	
1,2,4-Trimethylbenzene	ND	0.50	NA	1	B2F0445	06/15/2012	06/15/12 15:29	
1,2-Dibromo-3-chloropropane	ND	0.50	NA	1	B2F0445	06/15/2012	06/15/12 15:29	
1,2-Dibromoethane	ND	0.50	NA	1	B2F0445	06/15/2012	06/15/12 15:29	
1,2-Dichlorobenzene	ND	0.50	NA	1	B2F0445	06/15/2012	06/15/12 15:29	
1,2-Dichloroethane	ND	0.50	NA	1	B2F0445	06/15/2012	06/15/12 15:29	
1,2-Dichloropropane	ND	0.50	NA	1	B2F0445	06/15/2012	06/15/12 15:29	
1,3,5-Trimethylbenzene	ND	0.50	NA	1	B2F0445	06/15/2012	06/15/12 15:29	
1,3-Dichlorobenzene	ND	0.50	NA	1	B2F0445	06/15/2012	06/15/12 15:29	
1,3-Dichloropropane	ND	0.50	NA	1	B2F0445	06/15/2012	06/15/12 15:29	
1,4-Dichlorobenzene	ND	0.50	NA	1	B2F0445	06/15/2012	06/15/12 15:29	
2,2-Dichloropropane	ND	0.50	NA	1	B2F0445	06/15/2012	06/15/12 15:29	
2-Chlorotoluene	ND	0.50	NA	1	B2F0445	06/15/2012	06/15/12 15:29	
4-Chlorotoluene	ND	0.50	NA	1	B2F0445	06/15/2012	06/15/12 15:29	
4-Isopropyltoluene	ND	0.50	NA	1	B2F0445	06/15/2012	06/15/12 15:29	
Benzene	ND	0.50	NA	1	B2F0445	06/15/2012	06/15/12 15:29	
Bromobenzene	ND	0.50	NA	1	B2F0445	06/15/2012	06/15/12 15:29	
Bromodichloromethane	ND	0.50	NA	1	B2F0445	06/15/2012	06/15/12 15:29	
Bromoform	ND	0.50	NA	1	B2F0445	06/15/2012	06/15/12 15:29	
Bromomethane	ND	0.50	NA	1	B2F0445	06/15/2012	06/15/12 15:29	
Carbon tetrachloride	ND	0.50	NA	1	B2F0445	06/15/2012	06/15/12 15:29	
Chlorobenzene	ND	0.50	NA	1	B2F0445	06/15/2012	06/15/12 15:29	
Chloroethane	ND	0.50	NA	1	B2F0445	06/15/2012	06/15/12 15:29	
Chloroform	ND	0.50	NA	1	B2F0445	06/15/2012	06/15/12 15:29	
Chloromethane	ND	0.50	NA	1	B2F0445	06/15/2012	06/15/12 15:29	
cis-1,2-Dichloroethene	ND	0.50	NA	1	B2F0445	06/15/2012	06/15/12 15:29	
cis-1,3-Dichloropropene	ND	0.50	NA	1	B2F0445	06/15/2012	06/15/12 15:29	
Dibromochloromethane	ND	0.50	NA	1	B2F0445	06/15/2012	06/15/12 15:29	



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Project Number : RAYTHEON FULLERTON-MONTHLY,

Report To : Steve Netto

Reported : 06/26/2012

Client Sample ID TB-06082012

Lab ID: 1202141-01

Volatile Organic Compounds by EPA 8260

Analyst: DC

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Dibromomethane	ND	0.50	NA	1	B2F0445	06/15/2012	06/15/12 15:29	
Dichlorodifluoromethane	ND	0.50	NA	1	B2F0445	06/15/2012	06/15/12 15:29	
Ethylbenzene	ND	0.50	NA	1	B2F0445	06/15/2012	06/15/12 15:29	
Hexachlorobutadiene	ND	0.50	NA	1	B2F0445	06/15/2012	06/15/12 15:29	
Isopropylbenzene	ND	0.50	NA	1	B2F0445	06/15/2012	06/15/12 15:29	
m,p-Xylene	ND	1.0	NA	1	B2F0445	06/15/2012	06/15/12 15:29	
Methylene chloride	ND	1.0	NA	1	B2F0445	06/15/2012	06/15/12 15:29	
n-Butylbenzene	ND	0.50	NA	1	B2F0445	06/15/2012	06/15/12 15:29	
n-Propylbenzene	ND	0.50	NA	1	B2F0445	06/15/2012	06/15/12 15:29	
Naphthalene	ND	0.50	NA	1	B2F0445	06/15/2012	06/15/12 15:29	
o-Xylene	ND	0.50	NA	1	B2F0445	06/15/2012	06/15/12 15:29	
sec-Butylbenzene	ND	0.50	NA	1	B2F0445	06/15/2012	06/15/12 15:29	
Styrene	ND	0.50	NA	1	B2F0445	06/15/2012	06/15/12 15:29	
tert-Butylbenzene	ND	0.50	NA	1	B2F0445	06/15/2012	06/15/12 15:29	
Tetrachloroethene	ND	0.50	NA	1	B2F0445	06/15/2012	06/15/12 15:29	
Toluene	ND	0.50	NA	1	B2F0445	06/15/2012	06/15/12 15:29	
trans-1,2-Dichloroethene	ND	0.50	NA	1	B2F0445	06/15/2012	06/15/12 15:29	
Trichloroethene	ND	0.50	NA	1	B2F0445	06/15/2012	06/15/12 15:29	
Trichlorofluoromethane	ND	0.50	NA	1	B2F0445	06/15/2012	06/15/12 15:29	
Vinyl chloride	ND	0.50	NA	1	B2F0445	06/15/2012	06/15/12 15:29	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>101 %</i>		<i>70 - 130</i>		B2F0445	06/15/2012	<i>06/15/12 15:29</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>102 %</i>		<i>70 - 130</i>		B2F0445	06/15/2012	<i>06/15/12 15:29</i>	
<i>Surrogate: Dibromofluoromethane</i>	<i>106 %</i>		<i>70 - 130</i>		B2F0445	06/15/2012	<i>06/15/12 15:29</i>	
<i>Surrogate: Toluene-d8</i>	<i>106 %</i>		<i>70 - 130</i>		B2F0445	06/15/2012	<i>06/15/12 15:29</i>	



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Project Number : RAYTHEON FULLERTON-MONTHLY,

Report To : Steve Netto

Reported : 06/26/2012

Client Sample ID EW-02

Lab ID: 1202141-02

Anions by Ion Chromatography EPA 300.0

Analyst: Phali

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Bromide	0.19	0.05	NA	1	B2F0382	06/13/2012	06/13/12 10:47	

Total Dissolved Solids (Residue, Filterable) by SM 2540C

Analyst: AG

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Residue, Dissolved	620	10	NA	1	B2F0486	06/14/2012	06/14/12 16:00	

Total Suspended Solids (Residue, Non-Filtrable) by SM 2540D

Analyst: AG

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Residue, Suspended	ND	10	NA	1	B2F0485	06/15/2012	06/15/12 10:15	

Volatile Organic Compounds by EPA 8260

Analyst: DC

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	0.50	NA	1	B2F0445	06/15/2012	06/15/12 16:50	
1,1,1-Trichloroethane	ND	0.50	NA	1	B2F0445	06/15/2012	06/15/12 16:50	
1,1,2,2-Tetrachloroethane	ND	0.50	NA	1	B2F0445	06/15/2012	06/15/12 16:50	
1,1,2-Trichloroethane	ND	0.50	NA	1	B2F0445	06/15/2012	06/15/12 16:50	
1,1-Dichloroethane	0.62	0.50	NA	1	B2F0445	06/15/2012	06/15/12 16:50	
1,1-Dichloroethene	67	0.50	NA	1	B2F0445	06/15/2012	06/15/12 16:50	
1,1-Dichloropropene	ND	0.50	NA	1	B2F0445	06/15/2012	06/15/12 16:50	
1,2,3-Trichloropropane	ND	0.50	NA	1	B2F0445	06/15/2012	06/15/12 16:50	
1,2,3-Trichlorobenzene	ND	0.50	NA	1	B2F0445	06/15/2012	06/15/12 16:50	
1,2,4-Trichlorobenzene	ND	0.50	NA	1	B2F0445	06/15/2012	06/15/12 16:50	
1,2,4-Trimethylbenzene	ND	0.50	NA	1	B2F0445	06/15/2012	06/15/12 16:50	
1,2-Dibromo-3-chloropropane	ND	0.50	NA	1	B2F0445	06/15/2012	06/15/12 16:50	
1,2-Dibromoethane	ND	0.50	NA	1	B2F0445	06/15/2012	06/15/12 16:50	
1,2-Dichlorobenzene	ND	0.50	NA	1	B2F0445	06/15/2012	06/15/12 16:50	
1,2-Dichloroethane	ND	0.50	NA	1	B2F0445	06/15/2012	06/15/12 16:50	
1,2-Dichloropropane	ND	0.50	NA	1	B2F0445	06/15/2012	06/15/12 16:50	
1,3,5-Trimethylbenzene	ND	0.50	NA	1	B2F0445	06/15/2012	06/15/12 16:50	
1,3-Dichlorobenzene	ND	0.50	NA	1	B2F0445	06/15/2012	06/15/12 16:50	
1,3-Dichloropropane	ND	0.50	NA	1	B2F0445	06/15/2012	06/15/12 16:50	



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Project Number : RAYTHEON FULLERTON-MONTHLY,

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Reported : 06/26/2012

Client Sample ID EW-02

Lab ID: 1202141-02

Volatile Organic Compounds by EPA 8260

Analyst: DC

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,4-Dichlorobenzene	ND	0.50	NA	1	B2F0445	06/15/2012	06/15/12 16:50	
2,2-Dichloropropane	ND	0.50	NA	1	B2F0445	06/15/2012	06/15/12 16:50	
2-Chlorotoluene	ND	0.50	NA	1	B2F0445	06/15/2012	06/15/12 16:50	
4-Chlorotoluene	ND	0.50	NA	1	B2F0445	06/15/2012	06/15/12 16:50	
4-Isopropyltoluene	ND	0.50	NA	1	B2F0445	06/15/2012	06/15/12 16:50	
Benzene	ND	0.50	NA	1	B2F0445	06/15/2012	06/15/12 16:50	
Bromobenzene	ND	0.50	NA	1	B2F0445	06/15/2012	06/15/12 16:50	
Bromodichloromethane	ND	0.50	NA	1	B2F0445	06/15/2012	06/15/12 16:50	
Bromoform	ND	0.50	NA	1	B2F0445	06/15/2012	06/15/12 16:50	
Bromomethane	ND	0.50	NA	1	B2F0445	06/15/2012	06/15/12 16:50	
Carbon tetrachloride	ND	0.50	NA	1	B2F0445	06/15/2012	06/15/12 16:50	
Chlorobenzene	ND	0.50	NA	1	B2F0445	06/15/2012	06/15/12 16:50	
Chloroethane	ND	0.50	NA	1	B2F0445	06/15/2012	06/15/12 16:50	
Chloroform	ND	0.50	NA	1	B2F0445	06/15/2012	06/15/12 16:50	
Chloromethane	ND	0.50	NA	1	B2F0445	06/15/2012	06/15/12 16:50	
cis-1,2-Dichloroethene	ND	0.50	NA	1	B2F0445	06/15/2012	06/15/12 16:50	
cis-1,3-Dichloropropene	ND	0.50	NA	1	B2F0445	06/15/2012	06/15/12 16:50	
Dibromochloromethane	ND	0.50	NA	1	B2F0445	06/15/2012	06/15/12 16:50	
Dibromomethane	ND	0.50	NA	1	B2F0445	06/15/2012	06/15/12 16:50	
Dichlorodifluoromethane	ND	0.50	NA	1	B2F0445	06/15/2012	06/15/12 16:50	
Ethylbenzene	ND	0.50	NA	1	B2F0445	06/15/2012	06/15/12 16:50	
Hexachlorobutadiene	ND	0.50	NA	1	B2F0445	06/15/2012	06/15/12 16:50	
Isopropylbenzene	ND	0.50	NA	1	B2F0445	06/15/2012	06/15/12 16:50	
m,p-Xylene	ND	1.0	NA	1	B2F0445	06/15/2012	06/15/12 16:50	
Methylene chloride	ND	1.0	NA	1	B2F0445	06/15/2012	06/15/12 16:50	
n-Butylbenzene	ND	0.50	NA	1	B2F0445	06/15/2012	06/15/12 16:50	
n-Propylbenzene	ND	0.50	NA	1	B2F0445	06/15/2012	06/15/12 16:50	
Naphthalene	ND	0.50	NA	1	B2F0445	06/15/2012	06/15/12 16:50	
o-Xylene	ND	0.50	NA	1	B2F0445	06/15/2012	06/15/12 16:50	
sec-Butylbenzene	ND	0.50	NA	1	B2F0445	06/15/2012	06/15/12 16:50	
Styrene	ND	0.50	NA	1	B2F0445	06/15/2012	06/15/12 16:50	
tert-Butylbenzene	ND	0.50	NA	1	B2F0445	06/15/2012	06/15/12 16:50	
Tetrachloroethene	ND	0.50	NA	1	B2F0445	06/15/2012	06/15/12 16:50	
Toluene	ND	0.50	NA	1	B2F0445	06/15/2012	06/15/12 16:50	
trans-1,2-Dichloroethene	ND	0.50	NA	1	B2F0445	06/15/2012	06/15/12 16:50	
Trichloroethene	ND	0.50	NA	1	B2F0445	06/15/2012	06/15/12 16:50	
Trichlorofluoromethane	ND	0.50	NA	1	B2F0445	06/15/2012	06/15/12 16:50	



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Project Number : RAYTHEON FULLERTON-MONTHLY,
Report To : Steve Netto
Reported : 06/26/2012

Client Sample ID EW-02

Lab ID: 1202141-02

Volatile Organic Compounds by EPA 8260

Analyst: DC

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Vinyl chloride	ND	0.50	NA	1	B2F0445	06/15/2012	06/15/12 16:50	
Surrogate: 1,2-Dichloroethane-d4	91.8 %		70 - 130		B2F0445	06/15/2012	06/15/12 16:50	
Surrogate: 4-Bromofluorobenzene	91.0 %		70 - 130		B2F0445	06/15/2012	06/15/12 16:50	
Surrogate: Dibromofluoromethane	97.2 %		70 - 130		B2F0445	06/15/2012	06/15/12 16:50	
Surrogate: Toluene-d8	96.9 %		70 - 130		B2F0445	06/15/2012	06/15/12 16:50	

1,4-Dioxane by EPA 8270: Isotope Dilution Technique

Analyst: MFR

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,4-Dioxane	19	2.0	NA	1	B2F0338	06/12/2012	06/12/12 23:30	
Surrogate: 1,2-Dichlorobenzene-d4	80.8 %		37 - 93		B2F0338	06/12/2012	06/12/12 23:30	
Surrogate: 2-Fluorobiphenyl	89.5 %		51 - 100		B2F0338	06/12/2012	06/12/12 23:30	
Surrogate: 4-Terphenyl-d14	103 %		58 - 113		B2F0338	06/12/2012	06/12/12 23:30	
Surrogate: Nitrobenzene-d5	86.4 %		39 - 95		B2F0338	06/12/2012	06/12/12 23:30	



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Project Number : RAYTHEON FULLERTON-MONTHLY,

Report To : Steve Netto

Reported : 06/26/2012

Client Sample ID PF

Lab ID: 1202141-03

Total Suspended Solids (Residue, Non-Filtrable) by SM 2540D

Analyst: AG

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Residue, Suspended	ND	10	NA	1	B2F0485	06/15/2012	06/15/12 10:17	



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Project Number : RAYTHEON FULLERTON-MONTHLY,

Report To : Steve Netto

Reported : 06/26/2012

Client Sample ID POX

Lab ID: 1202141-04

Anions by Ion Chromatography EPA 300.0

Analyst: Phali

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Bromide	0.19	0.05	NA	1	B2F0382	06/13/2012	06/13/12 11:33	

Total Dissolved Solids (Residue, Filterable) by SM 2540C

Analyst: AG

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Residue, Dissolved	640	10	NA	1	B2F0486	06/14/2012	06/14/12 16:02	

Volatile Organic Compounds by EPA 8260

Analyst: DC

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	0.50	NA	1	B2F0445	06/15/2012	06/15/12 15:49	
1,1,1-Trichloroethane	ND	0.50	NA	1	B2F0445	06/15/2012	06/15/12 15:49	
1,1,2,2-Tetrachloroethane	ND	0.50	NA	1	B2F0445	06/15/2012	06/15/12 15:49	
1,1,2-Trichloroethane	ND	0.50	NA	1	B2F0445	06/15/2012	06/15/12 15:49	
1,1-Dichloroethane	ND	0.50	NA	1	B2F0445	06/15/2012	06/15/12 15:49	
1,1-Dichloroethene	ND	0.50	NA	1	B2F0445	06/15/2012	06/15/12 15:49	
1,1-Dichloropropene	ND	0.50	NA	1	B2F0445	06/15/2012	06/15/12 15:49	
1,2,3-Trichloropropane	ND	0.50	NA	1	B2F0445	06/15/2012	06/15/12 15:49	
1,2,3-Trichlorobenzene	ND	0.50	NA	1	B2F0445	06/15/2012	06/15/12 15:49	
1,2,4-Trichlorobenzene	ND	0.50	NA	1	B2F0445	06/15/2012	06/15/12 15:49	
1,2,4-Trimethylbenzene	ND	0.50	NA	1	B2F0445	06/15/2012	06/15/12 15:49	
1,2-Dibromo-3-chloropropane	ND	0.50	NA	1	B2F0445	06/15/2012	06/15/12 15:49	
1,2-Dibromoethane	ND	0.50	NA	1	B2F0445	06/15/2012	06/15/12 15:49	
1,2-Dichlorobenzene	ND	0.50	NA	1	B2F0445	06/15/2012	06/15/12 15:49	
1,2-Dichloroethane	ND	0.50	NA	1	B2F0445	06/15/2012	06/15/12 15:49	
1,2-Dichloropropane	ND	0.50	NA	1	B2F0445	06/15/2012	06/15/12 15:49	
1,3,5-Trimethylbenzene	ND	0.50	NA	1	B2F0445	06/15/2012	06/15/12 15:49	
1,3-Dichlorobenzene	ND	0.50	NA	1	B2F0445	06/15/2012	06/15/12 15:49	
1,3-Dichloropropane	ND	0.50	NA	1	B2F0445	06/15/2012	06/15/12 15:49	
1,4-Dichlorobenzene	ND	0.50	NA	1	B2F0445	06/15/2012	06/15/12 15:49	
2,2-Dichloropropane	ND	0.50	NA	1	B2F0445	06/15/2012	06/15/12 15:49	
2-Chlorotoluene	ND	0.50	NA	1	B2F0445	06/15/2012	06/15/12 15:49	
4-Chlorotoluene	ND	0.50	NA	1	B2F0445	06/15/2012	06/15/12 15:49	
4-Isopropyltoluene	ND	0.50	NA	1	B2F0445	06/15/2012	06/15/12 15:49	
Benzene	ND	0.50	NA	1	B2F0445	06/15/2012	06/15/12 15:49	



Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : RAYTHEON FULLERTON-MONTHLY,

Report To : Steve Netto

Reported : 06/26/2012

Client Sample ID POX

Lab ID: 1202141-04

Volatile Organic Compounds by EPA 8260

Analyst: DC

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Bromobenzene	ND	0.50	NA	1	B2F0445	06/15/2012	06/15/12 15:49	
Bromodichloromethane	ND	0.50	NA	1	B2F0445	06/15/2012	06/15/12 15:49	
Bromoform	ND	0.50	NA	1	B2F0445	06/15/2012	06/15/12 15:49	
Bromomethane	ND	0.50	NA	1	B2F0445	06/15/2012	06/15/12 15:49	
Carbon tetrachloride	ND	0.50	NA	1	B2F0445	06/15/2012	06/15/12 15:49	
Chlorobenzene	ND	0.50	NA	1	B2F0445	06/15/2012	06/15/12 15:49	
Chloroethane	ND	0.50	NA	1	B2F0445	06/15/2012	06/15/12 15:49	
Chloroform	ND	0.50	NA	1	B2F0445	06/15/2012	06/15/12 15:49	
Chloromethane	ND	0.50	NA	1	B2F0445	06/15/2012	06/15/12 15:49	
cis-1,2-Dichloroethene	ND	0.50	NA	1	B2F0445	06/15/2012	06/15/12 15:49	
cis-1,3-Dichloropropene	ND	0.50	NA	1	B2F0445	06/15/2012	06/15/12 15:49	
Dibromochloromethane	ND	0.50	NA	1	B2F0445	06/15/2012	06/15/12 15:49	
Dibromomethane	ND	0.50	NA	1	B2F0445	06/15/2012	06/15/12 15:49	
Dichlorodifluoromethane	ND	0.50	NA	1	B2F0445	06/15/2012	06/15/12 15:49	
Ethylbenzene	ND	0.50	NA	1	B2F0445	06/15/2012	06/15/12 15:49	
Hexachlorobutadiene	ND	0.50	NA	1	B2F0445	06/15/2012	06/15/12 15:49	
Isopropylbenzene	ND	0.50	NA	1	B2F0445	06/15/2012	06/15/12 15:49	
m,p-Xylene	ND	1.0	NA	1	B2F0445	06/15/2012	06/15/12 15:49	
Methylene chloride	ND	1.0	NA	1	B2F0445	06/15/2012	06/15/12 15:49	
n-Butylbenzene	ND	0.50	NA	1	B2F0445	06/15/2012	06/15/12 15:49	
n-Propylbenzene	ND	0.50	NA	1	B2F0445	06/15/2012	06/15/12 15:49	
Naphthalene	ND	0.50	NA	1	B2F0445	06/15/2012	06/15/12 15:49	
o-Xylene	ND	0.50	NA	1	B2F0445	06/15/2012	06/15/12 15:49	
sec-Butylbenzene	ND	0.50	NA	1	B2F0445	06/15/2012	06/15/12 15:49	
Styrene	ND	0.50	NA	1	B2F0445	06/15/2012	06/15/12 15:49	
tert-Butylbenzene	ND	0.50	NA	1	B2F0445	06/15/2012	06/15/12 15:49	
Tetrachloroethene	ND	0.50	NA	1	B2F0445	06/15/2012	06/15/12 15:49	
Toluene	ND	0.50	NA	1	B2F0445	06/15/2012	06/15/12 15:49	
trans-1,2-Dichloroethene	ND	0.50	NA	1	B2F0445	06/15/2012	06/15/12 15:49	
Trichloroethene	ND	0.50	NA	1	B2F0445	06/15/2012	06/15/12 15:49	
Trichlorofluoromethane	ND	0.50	NA	1	B2F0445	06/15/2012	06/15/12 15:49	
Vinyl chloride	ND	0.50	NA	1	B2F0445	06/15/2012	06/15/12 15:49	
Surrogate: 1,2-Dichloroethane-d4	83.6 %		70 - 130		B2F0445	06/15/2012	06/15/12 15:49	
Surrogate: 4-Bromofluorobenzene	83.3 %		70 - 130		B2F0445	06/15/2012	06/15/12 15:49	
Surrogate: Dibromofluoromethane	87.2 %		70 - 130		B2F0445	06/15/2012	06/15/12 15:49	
Surrogate: Toluene-d8	87.2 %		70 - 130		B2F0445	06/15/2012	06/15/12 15:49	



Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : RAYTHEON FULLERTON-MONTHLY,

Report To : Steve Netto

Reported : 06/26/2012

Client Sample ID POX

Lab ID: 1202141-04

1,4-Dioxane by EPA 8270/SIM: Isotope Dilution Technique

Analyst: MFR

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,4-Dioxane	2.2	0.20	NA	1	B2F0317	06/11/2012	06/11/12 17:38	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	<i>81.2 %</i>		<i>36 - 107</i>		B2F0317	06/11/2012	<i>06/11/12 17:38</i>	
<i>Surrogate: 2-Fluorobiphenyl</i>	<i>86.4 %</i>		<i>42 - 120</i>		B2F0317	06/11/2012	<i>06/11/12 17:38</i>	
<i>Surrogate: 4-Terphenyl-d14</i>	<i>99.3 %</i>		<i>67 - 142</i>		B2F0317	06/11/2012	<i>06/11/12 17:38</i>	
<i>Surrogate: Nitrobenzene-d5</i>	<i>91.1 %</i>		<i>36 - 130</i>		B2F0317	06/11/2012	<i>06/11/12 17:38</i>	



Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : RAYTHEON FULLERTON-MONTHLY,

Report To : Steve Netto

Reported : 06/26/2012

Client Sample ID CBT

Lab ID: 1202141-05

Volatile Organic Compounds by EPA 8260

Analyst: DC

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	0.50	NA	1	B2F0445	06/15/2012	06/15/12 16:09	
1,1,1-Trichloroethane	ND	0.50	NA	1	B2F0445	06/15/2012	06/15/12 16:09	
1,1,2,2-Tetrachloroethane	ND	0.50	NA	1	B2F0445	06/15/2012	06/15/12 16:09	
1,1,2-Trichloroethane	ND	0.50	NA	1	B2F0445	06/15/2012	06/15/12 16:09	
1,1-Dichloroethane	0.64	0.50	NA	1	B2F0445	06/15/2012	06/15/12 16:09	
1,1-Dichloroethene	ND	0.50	NA	1	B2F0445	06/15/2012	06/15/12 16:09	
1,1-Dichloropropene	ND	0.50	NA	1	B2F0445	06/15/2012	06/15/12 16:09	
1,2,3-Trichloropropane	ND	0.50	NA	1	B2F0445	06/15/2012	06/15/12 16:09	
1,2,3-Trichlorobenzene	ND	0.50	NA	1	B2F0445	06/15/2012	06/15/12 16:09	
1,2,4-Trichlorobenzene	ND	0.50	NA	1	B2F0445	06/15/2012	06/15/12 16:09	
1,2,4-Trimethylbenzene	ND	0.50	NA	1	B2F0445	06/15/2012	06/15/12 16:09	
1,2-Dibromo-3-chloropropane	ND	0.50	NA	1	B2F0445	06/15/2012	06/15/12 16:09	
1,2-Dibromoethane	ND	0.50	NA	1	B2F0445	06/15/2012	06/15/12 16:09	
1,2-Dichlorobenzene	ND	0.50	NA	1	B2F0445	06/15/2012	06/15/12 16:09	
1,2-Dichloroethane	ND	0.50	NA	1	B2F0445	06/15/2012	06/15/12 16:09	
1,2-Dichloropropane	ND	0.50	NA	1	B2F0445	06/15/2012	06/15/12 16:09	
1,3,5-Trimethylbenzene	ND	0.50	NA	1	B2F0445	06/15/2012	06/15/12 16:09	
1,3-Dichlorobenzene	ND	0.50	NA	1	B2F0445	06/15/2012	06/15/12 16:09	
1,3-Dichloropropane	ND	0.50	NA	1	B2F0445	06/15/2012	06/15/12 16:09	
1,4-Dichlorobenzene	ND	0.50	NA	1	B2F0445	06/15/2012	06/15/12 16:09	
2,2-Dichloropropane	ND	0.50	NA	1	B2F0445	06/15/2012	06/15/12 16:09	
2-Chlorotoluene	ND	0.50	NA	1	B2F0445	06/15/2012	06/15/12 16:09	
4-Chlorotoluene	ND	0.50	NA	1	B2F0445	06/15/2012	06/15/12 16:09	
4-Isopropyltoluene	ND	0.50	NA	1	B2F0445	06/15/2012	06/15/12 16:09	
Benzene	ND	0.50	NA	1	B2F0445	06/15/2012	06/15/12 16:09	
Bromobenzene	ND	0.50	NA	1	B2F0445	06/15/2012	06/15/12 16:09	
Bromodichloromethane	ND	0.50	NA	1	B2F0445	06/15/2012	06/15/12 16:09	
Bromoform	ND	0.50	NA	1	B2F0445	06/15/2012	06/15/12 16:09	
Bromomethane	ND	0.50	NA	1	B2F0445	06/15/2012	06/15/12 16:09	
Carbon tetrachloride	ND	0.50	NA	1	B2F0445	06/15/2012	06/15/12 16:09	
Chlorobenzene	ND	0.50	NA	1	B2F0445	06/15/2012	06/15/12 16:09	
Chloroethane	ND	0.50	NA	1	B2F0445	06/15/2012	06/15/12 16:09	
Chloroform	ND	0.50	NA	1	B2F0445	06/15/2012	06/15/12 16:09	
Chloromethane	ND	0.50	NA	1	B2F0445	06/15/2012	06/15/12 16:09	
cis-1,2-Dichloroethene	ND	0.50	NA	1	B2F0445	06/15/2012	06/15/12 16:09	
cis-1,3-Dichloropropene	ND	0.50	NA	1	B2F0445	06/15/2012	06/15/12 16:09	
Dibromochloromethane	ND	0.50	NA	1	B2F0445	06/15/2012	06/15/12 16:09	



Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego, CA 92122

Project Number : RAYTHEON FULLERTON-MONTHLY,

Report To : Steve Netto

Reported : 06/26/2012

Client Sample ID CBT

Lab ID: 1202141-05

Volatile Organic Compounds by EPA 8260

Analyst: DC

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Dibromomethane	ND	0.50	NA	1	B2F0445	06/15/2012	06/15/12 16:09	
Dichlorodifluoromethane	ND	0.50	NA	1	B2F0445	06/15/2012	06/15/12 16:09	
Ethylbenzene	ND	0.50	NA	1	B2F0445	06/15/2012	06/15/12 16:09	
Hexachlorobutadiene	ND	0.50	NA	1	B2F0445	06/15/2012	06/15/12 16:09	
Isopropylbenzene	ND	0.50	NA	1	B2F0445	06/15/2012	06/15/12 16:09	
m,p-Xylene	ND	1.0	NA	1	B2F0445	06/15/2012	06/15/12 16:09	
Methylene chloride	ND	1.0	NA	1	B2F0445	06/15/2012	06/15/12 16:09	
n-Butylbenzene	ND	0.50	NA	1	B2F0445	06/15/2012	06/15/12 16:09	
n-Propylbenzene	ND	0.50	NA	1	B2F0445	06/15/2012	06/15/12 16:09	
Naphthalene	ND	0.50	NA	1	B2F0445	06/15/2012	06/15/12 16:09	
o-Xylene	ND	0.50	NA	1	B2F0445	06/15/2012	06/15/12 16:09	
sec-Butylbenzene	ND	0.50	NA	1	B2F0445	06/15/2012	06/15/12 16:09	
Styrene	ND	0.50	NA	1	B2F0445	06/15/2012	06/15/12 16:09	
tert-Butylbenzene	ND	0.50	NA	1	B2F0445	06/15/2012	06/15/12 16:09	
Tetrachloroethene	ND	0.50	NA	1	B2F0445	06/15/2012	06/15/12 16:09	
Toluene	ND	0.50	NA	1	B2F0445	06/15/2012	06/15/12 16:09	
trans-1,2-Dichloroethene	ND	0.50	NA	1	B2F0445	06/15/2012	06/15/12 16:09	
Trichloroethene	ND	0.50	NA	1	B2F0445	06/15/2012	06/15/12 16:09	
Trichlorofluoromethane	ND	0.50	NA	1	B2F0445	06/15/2012	06/15/12 16:09	
Vinyl chloride	ND	0.50	NA	1	B2F0445	06/15/2012	06/15/12 16:09	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	88.6 %		70 - 130		B2F0445	06/15/2012	06/15/12 16:09	
<i>Surrogate: 4-Bromofluorobenzene</i>	88.2 %		70 - 130		B2F0445	06/15/2012	06/15/12 16:09	
<i>Surrogate: Dibromofluoromethane</i>	91.2 %		70 - 130		B2F0445	06/15/2012	06/15/12 16:09	
<i>Surrogate: Toluene-d8</i>	92.0 %		70 - 130		B2F0445	06/15/2012	06/15/12 16:09	



Hargis & Associates, Inc.

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Project Number : RAYTHEON FULLERTON-MONTHLY,

Report To : Steve Netto

Reported : 06/26/2012

Client Sample ID CEFF

Lab ID: 1202141-06

Anions by Ion Chromatography EPA 300.0

Analyst: Phali

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Bromide	0.18	0.05	NA	1	B2F0382	06/13/2012	06/13/12 11:44	

Total Dissolved Solids (Residue, Filterable) by SM 2540C

Analyst: AG

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Residue, Dissolved	640	10	NA	1	B2F0486	06/14/2012	06/14/12 16:04	

Volatile Organic Compounds by EPA 8260

Analyst: DC

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	0.50	NA	1	B2F0445	06/15/2012	06/15/12 16:30	
1,1,1-Trichloroethane	ND	0.50	NA	1	B2F0445	06/15/2012	06/15/12 16:30	
1,1,2,2-Tetrachloroethane	ND	0.50	NA	1	B2F0445	06/15/2012	06/15/12 16:30	
1,1,2-Trichloroethane	ND	0.50	NA	1	B2F0445	06/15/2012	06/15/12 16:30	
1,1-Dichloroethane	0.83	0.50	NA	1	B2F0445	06/15/2012	06/15/12 16:30	
1,1-Dichloroethene	ND	0.50	NA	1	B2F0445	06/15/2012	06/15/12 16:30	
1,1-Dichloropropene	ND	0.50	NA	1	B2F0445	06/15/2012	06/15/12 16:30	
1,2,3-Trichloropropane	ND	0.50	NA	1	B2F0445	06/15/2012	06/15/12 16:30	
1,2,3-Trichlorobenzene	ND	0.50	NA	1	B2F0445	06/15/2012	06/15/12 16:30	
1,2,4-Trichlorobenzene	ND	0.50	NA	1	B2F0445	06/15/2012	06/15/12 16:30	
1,2,4-Trimethylbenzene	ND	0.50	NA	1	B2F0445	06/15/2012	06/15/12 16:30	
1,2-Dibromo-3-chloropropane	ND	0.50	NA	1	B2F0445	06/15/2012	06/15/12 16:30	
1,2-Dibromoethane	ND	0.50	NA	1	B2F0445	06/15/2012	06/15/12 16:30	
1,2-Dichlorobenzene	ND	0.50	NA	1	B2F0445	06/15/2012	06/15/12 16:30	
1,2-Dichloroethane	ND	0.50	NA	1	B2F0445	06/15/2012	06/15/12 16:30	
1,2-Dichloropropane	ND	0.50	NA	1	B2F0445	06/15/2012	06/15/12 16:30	
1,3,5-Trimethylbenzene	ND	0.50	NA	1	B2F0445	06/15/2012	06/15/12 16:30	
1,3-Dichlorobenzene	ND	0.50	NA	1	B2F0445	06/15/2012	06/15/12 16:30	
1,3-Dichloropropane	ND	0.50	NA	1	B2F0445	06/15/2012	06/15/12 16:30	
1,4-Dichlorobenzene	ND	0.50	NA	1	B2F0445	06/15/2012	06/15/12 16:30	
2,2-Dichloropropane	ND	0.50	NA	1	B2F0445	06/15/2012	06/15/12 16:30	
2-Chlorotoluene	ND	0.50	NA	1	B2F0445	06/15/2012	06/15/12 16:30	
4-Chlorotoluene	ND	0.50	NA	1	B2F0445	06/15/2012	06/15/12 16:30	
4-Isopropyltoluene	ND	0.50	NA	1	B2F0445	06/15/2012	06/15/12 16:30	
Benzene	ND	0.50	NA	1	B2F0445	06/15/2012	06/15/12 16:30	



Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

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Project Number : RAYTHEON FULLERTON-MONTHLY,

Report To : Steve Netto

Reported : 06/26/2012

Client Sample ID CEFF

Lab ID: 1202141-06

Volatile Organic Compounds by EPA 8260

Analyst: DC

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Bromobenzene	ND	0.50	NA	1	B2F0445	06/15/2012	06/15/12 16:30	
Bromodichloromethane	ND	0.50	NA	1	B2F0445	06/15/2012	06/15/12 16:30	
Bromoform	ND	0.50	NA	1	B2F0445	06/15/2012	06/15/12 16:30	
Bromomethane	ND	0.50	NA	1	B2F0445	06/15/2012	06/15/12 16:30	
Carbon tetrachloride	ND	0.50	NA	1	B2F0445	06/15/2012	06/15/12 16:30	
Chlorobenzene	ND	0.50	NA	1	B2F0445	06/15/2012	06/15/12 16:30	
Chloroethane	ND	0.50	NA	1	B2F0445	06/15/2012	06/15/12 16:30	
Chloroform	ND	0.50	NA	1	B2F0445	06/15/2012	06/15/12 16:30	
Chloromethane	ND	0.50	NA	1	B2F0445	06/15/2012	06/15/12 16:30	
cis-1,2-Dichloroethene	ND	0.50	NA	1	B2F0445	06/15/2012	06/15/12 16:30	
cis-1,3-Dichloropropene	ND	0.50	NA	1	B2F0445	06/15/2012	06/15/12 16:30	
Dibromochloromethane	ND	0.50	NA	1	B2F0445	06/15/2012	06/15/12 16:30	
Dibromomethane	ND	0.50	NA	1	B2F0445	06/15/2012	06/15/12 16:30	
Dichlorodifluoromethane	ND	0.50	NA	1	B2F0445	06/15/2012	06/15/12 16:30	
Ethylbenzene	ND	0.50	NA	1	B2F0445	06/15/2012	06/15/12 16:30	
Hexachlorobutadiene	ND	0.50	NA	1	B2F0445	06/15/2012	06/15/12 16:30	
Isopropylbenzene	ND	0.50	NA	1	B2F0445	06/15/2012	06/15/12 16:30	
m,p-Xylene	ND	1.0	NA	1	B2F0445	06/15/2012	06/15/12 16:30	
Methylene chloride	ND	1.0	NA	1	B2F0445	06/15/2012	06/15/12 16:30	
n-Butylbenzene	ND	0.50	NA	1	B2F0445	06/15/2012	06/15/12 16:30	
n-Propylbenzene	ND	0.50	NA	1	B2F0445	06/15/2012	06/15/12 16:30	
Naphthalene	ND	0.50	NA	1	B2F0445	06/15/2012	06/15/12 16:30	
o-Xylene	ND	0.50	NA	1	B2F0445	06/15/2012	06/15/12 16:30	
sec-Butylbenzene	ND	0.50	NA	1	B2F0445	06/15/2012	06/15/12 16:30	
Styrene	ND	0.50	NA	1	B2F0445	06/15/2012	06/15/12 16:30	
tert-Butylbenzene	ND	0.50	NA	1	B2F0445	06/15/2012	06/15/12 16:30	
Tetrachloroethene	ND	0.50	NA	1	B2F0445	06/15/2012	06/15/12 16:30	
Toluene	ND	0.50	NA	1	B2F0445	06/15/2012	06/15/12 16:30	
trans-1,2-Dichloroethene	ND	0.50	NA	1	B2F0445	06/15/2012	06/15/12 16:30	
Trichloroethene	ND	0.50	NA	1	B2F0445	06/15/2012	06/15/12 16:30	
Trichlorofluoromethane	ND	0.50	NA	1	B2F0445	06/15/2012	06/15/12 16:30	
Vinyl chloride	ND	0.50	NA	1	B2F0445	06/15/2012	06/15/12 16:30	

<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>100 %</i>	<i>70 - 130</i>			B2F0445	06/15/2012	<i>06/15/12 16:30</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>99.9 %</i>	<i>70 - 130</i>			B2F0445	06/15/2012	<i>06/15/12 16:30</i>	
<i>Surrogate: Dibromofluoromethane</i>	<i>105 %</i>	<i>70 - 130</i>			B2F0445	06/15/2012	<i>06/15/12 16:30</i>	
<i>Surrogate: Toluene-d8</i>	<i>105 %</i>	<i>70 - 130</i>			B2F0445	06/15/2012	<i>06/15/12 16:30</i>	



Hargis & Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego , CA 92122

Project Number : RAYTHEON FULLERTON-MONTHLY,
 Report To : Steve Netto
 Reported : 06/26/2012

QUALITY CONTROL SECTION

Anions by Ion Chromatography EPA 300.0 - Quality Control

Analyte	Result (mg/L)	PQL (mg/L)	Spike Level	Source Result	% Rec % Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B2F0382 - No_Prep_IC_1									
Blank (B2F0382-BLK1)				Prepared: 6/13/2012 Analyzed: 6/13/2012					
Bromide	ND	0.05			NR				
LCS (B2F0382-BS1)				Prepared: 6/13/2012 Analyzed: 6/13/2012					
Bromide	0.93	0.05	1.00		93	90 - 110			
Matrix Spike (B2F0382-MS1)		Source: 1202156-03		Prepared: 6/13/2012 Analyzed: 6/13/2012					
Bromide	2.5		2.50	0.04	100	80 - 120			
Matrix Spike Dup (B2F0382-MSD1)		Source: 1202156-03		Prepared: 6/13/2012 Analyzed: 6/13/2012					
Bromide	2.6		2.50	0.04	101	80 - 120	1	20	



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 San Diego , CA 92122

Project Number : RAYTHEON FULLERTON-MONTHLY,
 Report To : Steve Netto
 Reported : 06/26/2012

Total Dissolved Solids (Residue, Filterable) by SM 2540C - Quality Control

Analyte	Result (mg/L)	PQL (mg/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B2F0486 - No_Prep_WC_1

Blank (B2F0486-BLK1)

Prepared: 6/14/2012 Analyzed: 6/14/2012

Residue, Dissolved

ND

10

NR

LCS (B2F0486-BS1)

Prepared: 6/14/2012 Analyzed: 6/14/2012

Residue, Dissolved

980

10

970

101

80 - 120

Duplicate (B2F0486-DUP1)

Source: 1202157-01

Prepared: 6/14/2012 Analyzed: 6/14/2012

Residue, Dissolved

910

10

910

NR

0.9

10



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Project Number : RAYTHEON FULLERTON-MONTHLY,
 Report To : Steve Netto
 Reported : 06/26/2012

Total Suspended Solids (Residue, Non-Filtrable) by SM 2540D - Quality Control

Analyte	Result (mg/L)	PQL (mg/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B2F0485 - No_Prep_WC_1

Blank (B2F0485-BLK1)

Prepared: 6/15/2012 Analyzed: 6/15/2012

Residue, Suspended

ND

10

NR

LCS (B2F0485-BS1)

Prepared: 6/15/2012 Analyzed: 6/15/2012

Residue, Suspended

92

10

96.6

95

80 - 120

Duplicate (B2F0485-DUP1)

Source: 1202141-02

Prepared: 6/15/2012 Analyzed: 6/15/2012

Residue, Suspended

ND

10

ND

NR

10



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Project Number : RAYTHEON FULLERTON-MONTHLY,
 Report To : Steve Netto
 Reported : 06/26/2012

Volatile Organic Compounds by EPA 8260 - Quality Control

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec % Rec	% Rec Limits	RPD RPD	RPD Limit	Notes
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Batch B2F0445 - MSVOAW_LL

Blank (B2F0445-BLK1)

Prepared: 6/15/2012 Analyzed: 6/15/2012

1,1,1,2-Tetrachloroethane	ND	0.50			NR				
1,1,1-Trichloroethane	ND	0.50			NR				
1,1,2,2-Tetrachloroethane	ND	0.50			NR				
1,1,2-Trichloroethane	ND	0.50			NR				
1,1-Dichloroethane	ND	0.50			NR				
1,1-Dichloroethene	ND	0.50			NR				
1,1-Dichloropropene	ND	0.50			NR				
1,2,3-Trichloropropane	ND	0.50			NR				
1,2,3-Trichlorobenzene	ND	0.50			NR				
1,2,4-Trichlorobenzene	ND	0.50			NR				
1,2,4-Trimethylbenzene	ND	0.50			NR				
1,2-Dibromo-3-chloropropane	ND	0.50			NR				
1,2-Dibromoethane	ND	0.50			NR				
1,2-Dichlorobenzene	ND	0.50			NR				
1,2-Dichloroethane	ND	0.50			NR				
1,2-Dichloropropane	ND	0.50			NR				
1,3,5-Trimethylbenzene	ND	0.50			NR				
1,3-Dichlorobenzene	ND	0.50			NR				
1,3-Dichloropropane	ND	0.50			NR				
1,4-Dichlorobenzene	ND	0.50			NR				
2,2-Dichloropropane	ND	0.50			NR				
2-Chlorotoluene	ND	0.50			NR				
4-Chlorotoluene	ND	0.50			NR				
4-Isopropyltoluene	ND	0.50			NR				
Benzene	ND	0.50			NR				
Bromobenzene	ND	0.50			NR				
Bromodichloromethane	ND	0.50			NR				
Bromoform	ND	0.50			NR				
Bromomethane	ND	0.50			NR				
Carbon tetrachloride	ND	0.50			NR				
Chlorobenzene	ND	0.50			NR				
Chloroethane	ND	0.50			NR				
Chloroform	ND	0.50			NR				
Chloromethane	ND	0.50			NR				
cis-1,2-Dichloroethene	ND	0.50			NR				
cis-1,3-Dichloropropene	ND	0.50			NR				
Dibromochloromethane	ND	0.50			NR				
Dibromomethane	ND	0.50			NR				
Dichlorodifluoromethane	ND	0.50			NR				
Ethylbenzene	ND	0.50			NR				
Hexachlorobutadiene	ND	0.50			NR				



Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego, CA 92122

Project Number : RAYTHEON FULLERTON-MONTHLY,

Report To : Steve Netto

Reported : 06/26/2012

Volatile Organic Compounds by EPA 8260 - Quality Control (cont'd)

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec % Rec	% Rec Limits	RPD RPD	RPD Limit	Notes
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Batch B2F0445 - MSVOAW_LL (continued)

Blank (B2F0445-BLK1) - Continued

Prepared: 6/15/2012 Analyzed: 6/15/2012

Isopropylbenzene	ND	0.50				NR			
m,p-Xylene	ND	1.0				NR			
Methylene chloride	ND	1.0				NR			
n-Butylbenzene	ND	0.50				NR			
n-Propylbenzene	ND	0.50				NR			
Naphthalene	ND	0.50				NR			
o-Xylene	ND	0.50				NR			
sec-Butylbenzene	ND	0.50				NR			
Styrene	ND	0.50				NR			
tert-Butylbenzene	ND	0.50				NR			
Tetrachloroethene	ND	0.50				NR			
Toluene	ND	0.50				NR			
trans-1,2-Dichloroethene	ND	0.50				NR			
Trichloroethene	ND	0.50				NR			
Trichlorofluoromethane	ND	0.50				NR			
Vinyl chloride	ND	0.50				NR			

<i>Surrogate: 1,2-Dichloroethane-d4</i>	20		25.0		80.2	70 - 130			
<i>Surrogate: 4-Bromofluorobenzene</i>	20		25.0		80.5	70 - 130			
<i>Surrogate: Dibromofluoromethane</i>	21		25.0		83.8	70 - 130			
<i>Surrogate: Toluene-d8</i>	21		25.0		85.5	70 - 130			

LCS (B2F0445-BS1)

Prepared: 6/15/2012 Analyzed: 6/15/2012

1,1-Dichloroethene	18	0.50	20.0		90.0	70 - 130			
Benzene	37	0.50	40.0		91.6	70 - 130			
Chlorobenzene	21	0.50	20.0		105	70 - 130			
MTBE	16	0.50	20.0		80.1	70 - 130			
Toluene	39	0.50	40.0		97.2	70 - 130			
Trichloroethene	19	0.50	20.0		94.6	70 - 130			

<i>Surrogate: 1,2-Dichloroethane-d4</i>	25		25.0		99.3	70 - 130			
<i>Surrogate: 4-Bromofluorobenzene</i>	24		25.0		94.6	70 - 130			
<i>Surrogate: Dibromofluoromethane</i>	25		25.0		99.2	70 - 130			
<i>Surrogate: Toluene-d8</i>	23		25.0		93.4	70 - 130			

LCS Dup (B2F0445-BS1)

Prepared: 6/15/2012 Analyzed: 6/15/2012

1,1-Dichloroethene	17	0.50	20.0		83.4	70 - 130	7.56	20	
Benzene	36	0.50	40.0		90.4	70 - 130	1.32	20	
Chlorobenzene	20	0.50	20.0		102	70 - 130	2.32	20	
MTBE	15	0.50	20.0		77.0	70 - 130	3.95	20	
Toluene	39	0.50	40.0		96.4	70 - 130	0.904	20	
Trichloroethene	18	0.50	20.0		91.0	70 - 130	3.93	20	

<i>Surrogate: 1,2-Dichloroethane-d4</i>	25		25.0		98.1	70 - 130			
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San Diego , CA 92122

Project Number : RAYTHEON FULLERTON-MONTHLY,

Report To : Steve Netto

Reported : 06/26/2012

Volatile Organic Compounds by EPA 8260 - Quality Control (cont'd)

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B2F0445 - MSVOAW_LL (continued)

LCS Dup (B2F0445-BSD1) - Continued

Prepared: 6/15/2012 Analyzed: 6/15/2012

<i>Surrogate: 4-Bromofluorobenzene</i>	23		25.0		91.9	70 - 130			
<i>Surrogate: Dibromofluoromethane</i>	25		25.0		98.7	70 - 130			
<i>Surrogate: Toluene-d8</i>	24		25.0		95.6	70 - 130			



Hargis & Associates, Inc.

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San Diego , CA 92122

Project Number : RAYTHEON FULLERTON-MONTHLY,

Report To : Steve Netto

Reported : 06/26/2012

1,4-Dioxane by EPA 8270: Isotope Dilution Technique - Quality Control

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec % Rec	% Rec Limits	RPD RPD	RPD Limit	Notes
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Batch B2F0338 - MSSEMI_ISOTOPEDILN

Blank (B2F0338-BLK1)

Prepared: 6/12/2012 Analyzed: 6/12/2012

1,4-Dioxane	ND	2.0			NR				
Surrogate: 1,2-Dichlorobenzene-d4	83		100		82.7	37 - 93			
Surrogate: 2-Fluorobiphenyl	89		100		89.0	51 - 100			
Surrogate: 4-Terphenyl-d14	97		100		96.6	58 - 113			
Surrogate: Nitrobenzene-d5	89		100		89.5	39 - 95			

LCS (B2F0338-BS1)

Prepared: 6/12/2012 Analyzed: 6/12/2012

1,4-Dioxane	100	2.0	100		101	70 - 130			
Surrogate: 1,2-Dichlorobenzene-d4	80		100		80.2	37 - 93			
Surrogate: 2-Fluorobiphenyl	92		100		91.6	51 - 100			
Surrogate: 4-Terphenyl-d14	96		100		96.2	58 - 113			
Surrogate: Nitrobenzene-d5	93		100		92.8	39 - 95			

LCS Dup (B2F0338-BSD1)

Prepared: 6/12/2012 Analyzed: 6/12/2012

1,4-Dioxane	100	2.0	100		103	70 - 130	2.25	20	
Surrogate: 1,2-Dichlorobenzene-d4	80		100		80.0	37 - 93			
Surrogate: 2-Fluorobiphenyl	90		100		90.0	51 - 100			
Surrogate: 4-Terphenyl-d14	90		100		89.7	58 - 113			
Surrogate: Nitrobenzene-d5	93		100		92.6	39 - 95			



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 San Diego , CA 92122

Project Number : RAYTHEON FULLERTON-MONTHLY,
 Report To : Steve Netto
 Reported : 06/26/2012

1,4-Dioxane by EPA 8270/SIM: Isotope Dilution Technique - Quality Control

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec % Rec	% Rec Limits	RPD RPD	RPD Limit	Notes
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Batch B2F0317 - MSSEMI

Blank (B2F0317-BLK1)

Prepared: 6/11/2012 Analyzed: 6/11/2012

1,4-Dioxane	ND	0.20			NR				
Surrogate: 1,2-Dichlorobenzene-d4	0.81		1.00		81.0	36 - 107			
Surrogate: 2-Fluorobiphenyl	0.84		1.00		84.3	42 - 120			
Surrogate: 4-Terphenyl-d14	1.0		1.00		100	67 - 142			
Surrogate: Nitrobenzene-d5	0.93		1.00		92.7	36 - 130			

LCS (B2F0317-BS1)

Prepared: 6/11/2012 Analyzed: 6/11/2012

1,4-Dioxane	1.1	0.20	1.00		105	70 - 130			
Surrogate: 1,2-Dichlorobenzene-d4	0.84		1.00		84.5	36 - 107			
Surrogate: 2-Fluorobiphenyl	0.82		1.00		82.5	42 - 120			
Surrogate: 4-Terphenyl-d14	0.98		1.00		97.8	67 - 142			
Surrogate: Nitrobenzene-d5	0.97		1.00		97.3	36 - 130			

LCS Dup (B2F0317-BSD1)

Prepared: 6/11/2012 Analyzed: 6/11/2012

1,4-Dioxane	1.1	0.20	1.00		106	70 - 130	0.879	20	
Surrogate: 1,2-Dichlorobenzene-d4	0.83		1.00		82.7	36 - 107			
Surrogate: 2-Fluorobiphenyl	0.84		1.00		84.4	42 - 120			
Surrogate: 4-Terphenyl-d14	1.1		1.00		106	67 - 142			
Surrogate: Nitrobenzene-d5	0.96		1.00		95.7	36 - 130			



Hargis & Associates, Inc.

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San Diego , CA 92122

Project Number : RAYTHEON FULLERTON-MONTHLY,

Report To : Steve Netto

Reported : 06/26/2012

Notes and Definitions

ND	Analyte not detected at or above reporting limit
PQL	Practical Quantitation Limit
MDL	Method Detection Limit
NR	Not Reported
RPD	Relative Percent Difference
CA1	CA-NELAP (CDPH)
CA2	CA-ELAP (CDPH)
OR1	OR-NELAP (OSPHL)
TX1	TX-NELAP (TCEQ)

Bromate by EPA 317
 Ion Chromatography with Post-Column Derivatization-Visible Absorption

Column: Dionex AS9-HC/AG9-HSC
 Eluent: 30 mM Na₂CO₃
 Flow: 1.0 mL/min
 Injection: 250 µL
 Detection: Post-column derivatization, Visible detection, 450 nm

Sample preparation: The undiluted samples were treated with a Dionex OnGuard II H cartridge to remove excess basic cations. One sample required dilution with water due to an interfering peak. The detection limit is adjusted for the dilution necessary for analysis.

Parts Per Billion (µg/L)

Sample ID	Result	Detection Limit
1202141-02 / EW-02	ND	0.5
1202141-04 / POX	7	5
1202141-06 / CEFF	3.1	0.5
Method Blank	ND	0.5

Date Analyzed: 06-22-12

Quality Control Summary

Sample ID: 1202141-06 / CEFF

Analyte	Sample Result	Spike Conc	Spike Result	Spike % Rec	Spike Duplicate Result	Spike Duplicate % Rec	Spike RPD
Bromate	3.1	11.1	13.8	96	12.9	88	7
QC Guidelines				75-125		75-125	NMT 10


ADVANCED TECHNOLOGY
 LABORATORIES

SUBCONTRACT ORDER

Work Order: 1202141

SENDING LABORATORY:

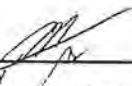



Advanced Technology Laboratories
 3275 Walnut Avenue
 Signal Hill, CA 90755
 Phone: 562.989.4045
 Fax: 562.989.6348
 Project Manager: Rachelle Arada

RECEIVING LABORATORY:

Exova Inc.
 9240 Santa Fe Springs Road
 Santa Fe Springs, CA 90670
 Phone : (562) 948-2225
 Fax: (562) 948-5850
 PO#: SC07377 Standard TAT (RA)

IMPORTANT : Please include Work Order # and PO # in your invoice.

Analysis	Due	Expires	Sampled	Comments
ATL Lab#: 1202141-02 317.0	/ EW-02 06/22/12 17:00	Groundwater 06/09/12 11:20	06/08/12 11:20	Please report Bromate
ATL Lab#: 1202141-04 317.0	/ POX 06/22/12 17:00	Groundwater 06/09/12 08:43	06/08/12 08:43	Please report Bromate
ATL Lab#: 1202141-06 317.0	/ CEFF 06/22/12 17:00	Groundwater 06/09/12 09:51	06/08/12 09:51	Please report Bromate

Released By 	Date <u>6/8/12</u>	Received By 	Date <u>6/11/12 9:45</u>
Released By 	Date <u>6/11/12 1320</u>	Received By 	Date <u>06-11-12 1:20pm</u>

CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST FORM

PROJECT NAME RAYTHEON FULLERTON-MONTHLY		PROJECT No./TASK No. 532.15		SAMPLE CONTAINERS		ANALYSIS REQUESTED		ESTIMATED CONCENTRATION RANGE (ppb) FOR VOAS		SPECIAL HANDLING		LABORATORY INFORMATION			
PROJECT MANAGER CHRIS ROSS		Phone No. 858-455-6500		40 ml Glass Vial 125 ml Poly 250 ml Poly 500 ml Poly 1 L Jarbar VOCs by EPA 8260 1,4-Dioxane by EPA 8270 SIM Bromate by 317 TDS by 8220AC TSS by 8220B Bromide by 317 1,4-Dioxane by EPA 8270 30B		0-10 10-100 100-1,000 >1,000						ALT			
QA MANAGER STEVE NETTO		Fax No. 858-455-6533										C/O Rachelle Arada			
SAMPLER (SIGNATURE) 		SAMPLER (PRINTED) Travis Araya										3275 Walnut Ave.			
SAMPLER (SIGNATURE) 		SAMPLER (PRINTED) Travis Araya								Signal Hill, CA					
LAB ID	SAMPLE ID	SAMPLE COLLECTION		MATRIX			PRESERVATION					REMARKS			
		Date	Time	Soil	Ground water	Surface water	Lab H2O	HCl	HNO3	NaOH	H2SO4		Ice		
1207467	TR-06082412	6/8/12	10:02				X	X				X			Please include
2	EM-02	6/8/12	11:20	X								X			arodriguez@hargis.com
3	PF	6/8/12	9:31	X								X			In lab report
4	POX	6/8/12	8:43	X								X			distribution list
5	CBT	6/8/12	9:37	X								X			set 1,4-Dioxane
6	CEFF	6/8/12	9:57	X								X			WDL to 1.0 ppm
Total number of Containers per analysis:				14		6		5		2		Total No. of Containers:		27	

Relinquished by: 		Date 6/8/12	Received by: 		Date 6/8/12	INSTRUCTIONS 1. Fill out form completely except for shaded areas (lab use only); sign only after verified for completeness. 2. Complete in ballpoint pen. Draw one line through errors, initial and date correction. 3. Indicate number of sample containers in analysis request space; indicate choice with √ or x. 4. Note applicable preservatives, special instructions, and deviations from typical environmental samples. 5. Consult project QA documents for specific instructions.	Shipment Method: <u>DELIVER</u>	
Company H+A		Time 12:10	Company H+A		Time 12:10		<input checked="" type="checkbox"/> 9171 TOWNE CENTRE DRIVE, SUITE 375 SAN DIEGO, CA 92122 (858) 455-6500 <input type="checkbox"/> 1640 SOUTH STAPLEY DRIVE, SUITE 124 MESA, AZ 85204 (480) 345-0888 <input type="checkbox"/> 1820 EAST RIVER ROAD, SUITE 220 TUCSON, AZ 85718 (520) 881-7300	
Relinquished by: 		Date 6/8/12	Received by: 		Date 6/8/12	Sample Receipt: <input type="checkbox"/> No. of containers correct <input type="checkbox"/> custody seals secure <input checked="" type="checkbox"/> received good condition/cold <input type="checkbox"/> conforms to COC document	Send invoice to San Diego, CA Attn: Accounts Payable	
Company H+A		Time 12:10	Company H+A		Time 12:10			

June 19, 2012

Steve Netto
Hargis & Associates, Inc.
9171 Towne Centre Drive, Suite 375
San Diego, CA 92122
Tel: (619) 249-3166
Fax: (858) 455-6533



Re: ATL Work Order Number : 1202143

Client Reference : RAYTHEON FULLERTON - OCSD, 532.15

Enclosed are the results for sample(s) received on June 08, 2012 by Advanced Technology Laboratories. The sample(s) are tested for the parameters as indicated on the enclosed chain of custody in accordance with applicable laboratory certifications. The laboratory results contained in this report specifically pertains to the sample(s) submitted.

Thank you for the opportunity to serve the needs of your company. If you have any questions, please feel free to contact me or your Project Manager.

Sincerely,

Eddie Rodriguez
Laboratory Director

The cover letter and the case narrative are an integral part of this analytical report and its absence renders the report invalid. The report cannot be reproduced without written permission from the client and Advanced Technology Laboratories.



Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : RAYTHEON FULLERTON - OCSD, 532

Report To : Steve Netto

Reported : 06/19/2012

SUMMARY OF SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
CEFF	1202143-01	Groundwater	6/08/12 10:18	6/08/12 13:10
TB-060812	1202143-02	Lab H2O	6/08/12 10:02	6/08/12 13:10



Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : RAYTHEON FULLERTON - OCSD, 532

Report To : Steve Netto

Reported : 06/19/2012

Client Sample ID CEFF

Lab ID: 1202143-01

Volatile Organic Compounds by EPA 624

Analyst: DC

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1-Trichloroethane	ND	5.0	NA	1	B2F0452	06/15/2012	06/15/12 15:50	
1,1,2,2-Tetrachloroethane	ND	5.0	NA	1	B2F0452	06/15/2012	06/15/12 15:50	
1,1,2-Trichloroethane	ND	5.0	NA	1	B2F0452	06/15/2012	06/15/12 15:50	
1,1-Dichloroethane	ND	5.0	NA	1	B2F0452	06/15/2012	06/15/12 15:50	
1,1-Dichloroethene	ND	5.0	NA	1	B2F0452	06/15/2012	06/15/12 15:50	
1,2-Dichlorobenzene	ND	5.0	NA	1	B2F0452	06/15/2012	06/15/12 15:50	
1,2-Dichloroethane	ND	5.0	NA	1	B2F0452	06/15/2012	06/15/12 15:50	
1,2-Dichloropropane	ND	5.0	NA	1	B2F0452	06/15/2012	06/15/12 15:50	
1,3-Dichlorobenzene	ND	5.0	NA	1	B2F0452	06/15/2012	06/15/12 15:50	
1,4-Dichlorobenzene	ND	5.0	NA	1	B2F0452	06/15/2012	06/15/12 15:50	
2-Chloroethyl vinyl ether	ND	5.0	NA	1	B2F0452	06/15/2012	06/15/12 15:50	
Acrolein	ND	50	NA	1	B2F0452	06/15/2012	06/15/12 15:50	
Acrylonitrile	ND	50	NA	1	B2F0452	06/15/2012	06/15/12 15:50	
Benzene	ND	5.0	NA	1	B2F0452	06/15/2012	06/15/12 15:50	
Bromodichloromethane	ND	5.0	NA	1	B2F0452	06/15/2012	06/15/12 15:50	
Bromoform	ND	5.0	NA	1	B2F0452	06/15/2012	06/15/12 15:50	
Bromomethane	ND	5.0	NA	1	B2F0452	06/15/2012	06/15/12 15:50	
Carbon tetrachloride	ND	5.0	NA	1	B2F0452	06/15/2012	06/15/12 15:50	
Chlorobenzene	ND	5.0	NA	1	B2F0452	06/15/2012	06/15/12 15:50	
Chloroethane	ND	5.0	NA	1	B2F0452	06/15/2012	06/15/12 15:50	
Chloroform	ND	5.0	NA	1	B2F0452	06/15/2012	06/15/12 15:50	
Chloromethane	ND	5.0	NA	1	B2F0452	06/15/2012	06/15/12 15:50	
cis-1,3-Dichloropropene	ND	5.0	NA	1	B2F0452	06/15/2012	06/15/12 15:50	
Dibromochloromethane	ND	5.0	NA	1	B2F0452	06/15/2012	06/15/12 15:50	
Ethylbenzene	ND	5.0	NA	1	B2F0452	06/15/2012	06/15/12 15:50	
m,p-Xylene	ND	10	NA	1	B2F0452	06/15/2012	06/15/12 15:50	
Methylene chloride	ND	5.0	NA	1	B2F0452	06/15/2012	06/15/12 15:50	
o-Xylene	ND	5.0	NA	1	B2F0452	06/15/2012	06/15/12 15:50	
Tetrachloroethene	ND	5.0	NA	1	B2F0452	06/15/2012	06/15/12 15:50	
Toluene	ND	5.0	NA	1	B2F0452	06/15/2012	06/15/12 15:50	
trans-1,2-Dichloroethene	ND	5.0	NA	1	B2F0452	06/15/2012	06/15/12 15:50	
trans-1,3-Dichloropropene	ND	50	NA	1	B2F0452	06/15/2012	06/15/12 15:50	
Trichloroethene	ND	5.0	NA	1	B2F0452	06/15/2012	06/15/12 15:50	
Trichlorofluoromethane	ND	5.0	NA	1	B2F0452	06/15/2012	06/15/12 15:50	
Vinyl chloride	ND	5.0	NA	1	B2F0452	06/15/2012	06/15/12 15:50	
Surrogate: 1,2-Dichloroethane-d4	85.9 %		70 - 130		B2F0452	06/15/2012	06/15/12 15:50	
Surrogate: 4-Bromofluorobenzene	81.7 %		70 - 130		B2F0452	06/15/2012	06/15/12 15:50	



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9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : RAYTHEON FULLERTON - OCSD, 532

Report To : Steve Netto

Reported : 06/19/2012

Client Sample ID CEFF

Lab ID: 1202143-01

Volatile Organic Compounds by EPA 624

Analyst: DC

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
<i>Surrogate: Dibromofluoromethane</i>	86.4 %	70 - 130			B2F0452	06/15/2012	06/15/12 15:50	
<i>Surrogate: Toluene-d8</i>	82.6 %	70 - 130			B2F0452	06/15/2012	06/15/12 15:50	

Total Dissolved Solids (Residue, Filterable) by SM 2540C

Analyst: AG

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Residue, Dissolved	630	10	10	1	B2F0486	06/14/2012	06/14/12 16:06	

Total Metals by ICP-AES EPA 6010B

Analyst: KK

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Selenium	ND	0.01	NA	1	B2F0368	06/13/2012	06/13/12 12:27	

1,4-Dioxane by EPA 8270/SIM: Isotope Dilution Technique

Analyst: MFR

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,4-Dioxane	1.9	0.20	0.13	1	B2F0317	06/11/2012	06/11/12 18:09	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	85.0 %	36 - 107			B2F0317	06/11/2012	06/11/12 18:09	
<i>Surrogate: 2-Fluorobiphenyl</i>	90.7 %	42 - 120			B2F0317	06/11/2012	06/11/12 18:09	
<i>Surrogate: 4-Terphenyl-d14</i>	102 %	67 - 142			B2F0317	06/11/2012	06/11/12 18:09	
<i>Surrogate: Nitrobenzene-d5</i>	95.1 %	36 - 130			B2F0317	06/11/2012	06/11/12 18:09	



Hargis & Associates, Inc.

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San Diego , CA 92122

Project Number : RAYTHEON FULLERTON - OCSD, 532

Report To : Steve Netto

Reported : 06/19/2012

Client Sample ID TB-060812

Lab ID: 1202143-02

Volatile Organic Compounds by EPA 624

Analyst: DC

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1-Trichloroethane	ND	5.0	NA	1	B2F0452	06/15/2012	06/15/12 17:45	
1,1,2,2-Tetrachloroethane	ND	5.0	NA	1	B2F0452	06/15/2012	06/15/12 17:45	
1,1,2-Trichloroethane	ND	5.0	NA	1	B2F0452	06/15/2012	06/15/12 17:45	
1,1-Dichloroethane	ND	5.0	NA	1	B2F0452	06/15/2012	06/15/12 17:45	
1,1-Dichloroethene	ND	5.0	NA	1	B2F0452	06/15/2012	06/15/12 17:45	
1,2-Dichlorobenzene	ND	5.0	NA	1	B2F0452	06/15/2012	06/15/12 17:45	
1,2-Dichloroethane	ND	5.0	NA	1	B2F0452	06/15/2012	06/15/12 17:45	
1,2-Dichloropropane	ND	5.0	NA	1	B2F0452	06/15/2012	06/15/12 17:45	
1,3-Dichlorobenzene	ND	5.0	NA	1	B2F0452	06/15/2012	06/15/12 17:45	
1,4-Dichlorobenzene	ND	5.0	NA	1	B2F0452	06/15/2012	06/15/12 17:45	
2-Chloroethyl vinyl ether	ND	5.0	NA	1	B2F0452	06/15/2012	06/15/12 17:45	
Acrolein	ND	50	NA	1	B2F0452	06/15/2012	06/15/12 17:45	
Acrylonitrile	ND	50	NA	1	B2F0452	06/15/2012	06/15/12 17:45	
Benzene	ND	5.0	NA	1	B2F0452	06/15/2012	06/15/12 17:45	
Bromodichloromethane	ND	5.0	NA	1	B2F0452	06/15/2012	06/15/12 17:45	
Bromoform	ND	5.0	NA	1	B2F0452	06/15/2012	06/15/12 17:45	
Bromomethane	ND	5.0	NA	1	B2F0452	06/15/2012	06/15/12 17:45	
Carbon tetrachloride	ND	5.0	NA	1	B2F0452	06/15/2012	06/15/12 17:45	
Chlorobenzene	ND	5.0	NA	1	B2F0452	06/15/2012	06/15/12 17:45	
Chloroethane	ND	5.0	NA	1	B2F0452	06/15/2012	06/15/12 17:45	
Chloroform	ND	5.0	NA	1	B2F0452	06/15/2012	06/15/12 17:45	
Chloromethane	ND	5.0	NA	1	B2F0452	06/15/2012	06/15/12 17:45	
cis-1,3-Dichloropropene	ND	5.0	NA	1	B2F0452	06/15/2012	06/15/12 17:45	
Dibromochloromethane	ND	5.0	NA	1	B2F0452	06/15/2012	06/15/12 17:45	
Ethylbenzene	ND	5.0	NA	1	B2F0452	06/15/2012	06/15/12 17:45	
m,p-Xylene	ND	10	NA	1	B2F0452	06/15/2012	06/15/12 17:45	
Methylene chloride	ND	5.0	NA	1	B2F0452	06/15/2012	06/15/12 17:45	
o-Xylene	ND	5.0	NA	1	B2F0452	06/15/2012	06/15/12 17:45	
Tetrachloroethene	ND	5.0	NA	1	B2F0452	06/15/2012	06/15/12 17:45	
Toluene	ND	5.0	NA	1	B2F0452	06/15/2012	06/15/12 17:45	
trans-1,2-Dichloroethene	ND	5.0	NA	1	B2F0452	06/15/2012	06/15/12 17:45	
trans-1,3-Dichloropropene	ND	50	NA	1	B2F0452	06/15/2012	06/15/12 17:45	
Trichloroethene	ND	5.0	NA	1	B2F0452	06/15/2012	06/15/12 17:45	
Trichlorofluoromethane	ND	5.0	NA	1	B2F0452	06/15/2012	06/15/12 17:45	
Vinyl chloride	ND	5.0	NA	1	B2F0452	06/15/2012	06/15/12 17:45	
Surrogate: 1,2-Dichloroethane-d4	154 %		70 - 130		B2F0452	06/15/2012	06/15/12 17:45	S1
Surrogate: 4-Bromofluorobenzene	147 %		70 - 130		B2F0452	06/15/2012	06/15/12 17:45	S1



Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : RAYTHEON FULLERTON - OCSD, 532

Report To : Steve Netto

Reported : 06/19/2012

Client Sample ID TB-060812

Lab ID: 1202143-02

Volatile Organic Compounds by EPA 624

Analyst: DC

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
<i>Surrogate: Dibromofluoromethane</i>	147 %	70 - 130			B2F0452	06/15/2012	06/15/12 17:45	S1
<i>Surrogate: Toluene-d8</i>	133 %	70 - 130			B2F0452	06/15/2012	06/15/12 17:45	S1



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Project Number : RAYTHEON FULLERTON - OCSD, 532

Report To : Steve Netto

Reported : 06/19/2012

QUALITY CONTROL SECTION

Volatile Organic Compounds by EPA 624 - Quality Control

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B2F0452 - MSVOAW_LL

Blank (B2F0452-BLK1)

Prepared: 6/15/2012 Analyzed: 6/15/2012

1,1,1-Trichloroethane	ND	5.0					NR		
1,1,2,2-Tetrachloroethane	ND	5.0					NR		
1,1,2-Trichloroethane	ND	5.0					NR		
1,1-Dichloroethane	ND	5.0					NR		
1,1-Dichloroethene	ND	5.0					NR		
1,2-Dichlorobenzene	ND	5.0					NR		
1,2-Dichloroethane	ND	5.0					NR		
1,2-Dichloropropane	ND	5.0					NR		
1,3-Dichlorobenzene	ND	5.0					NR		
1,4-Dichlorobenzene	ND	5.0					NR		
2-Chloroethyl vinyl ether	ND	5.0					NR		
Acrolein	ND	50					NR		
Acrylonitrile	ND	50					NR		
Benzene	ND	5.0					NR		
Bromodichloromethane	ND	5.0					NR		
Bromoform	ND	5.0					NR		
Bromomethane	ND	5.0					NR		
Carbon tetrachloride	ND	5.0					NR		
Chlorobenzene	ND	5.0					NR		
Chloroethane	ND	5.0					NR		
Chloroform	ND	5.0					NR		
Chloromethane	ND	5.0					NR		
cis-1,3-Dichloropropene	ND	5.0					NR		
Dibromochloromethane	ND	5.0					NR		
Ethylbenzene	ND	5.0					NR		
m,p-Xylene	ND	10					NR		
Methylene chloride	ND	5.0					NR		
o-Xylene	ND	5.0					NR		
Tetrachloroethene	ND	5.0					NR		
Toluene	ND	5.0					NR		
trans-1,2-Dichloroethene	ND	5.0					NR		
trans-1,3-Dichloropropene	ND	50					NR		
Trichloroethene	ND	5.0					NR		
Trichlorofluoromethane	ND	5.0					NR		
Vinyl chloride	ND	5.0					NR		
Surrogate: 1,2-Dichloroethane-d4	25		25.0		101	70 - 130			
Surrogate: 4-Bromofluorobenzene	21		25.0		83.6	70 - 130			
Surrogate: Dibromofluoromethane	24		25.0		96.4	70 - 130			
Surrogate: Toluene-d8	22		25.0		89.5	70 - 130			



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Project Number : RAYTHEON FULLERTON - OCSD, 532

Report To : Steve Netto

Reported : 06/19/2012

Volatile Organic Compounds by EPA 624 - Quality Control (cont'd)

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec % Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B2F0452 - MSVOAW_LL (continued)

LCS (B2F0452-BS1)

Prepared: 6/15/2012 Analyzed: 6/15/2012

1,1-Dichloroethene	18	5.0	20.0		91.1	70 - 130			
Benzene	39	5.0	40.0		96.5	70 - 130			
Chlorobenzene	18	5.0	20.0		90.3	70 - 130			
Toluene	37	5.0	40.0		93.0	70 - 130			
Trichloroethene	19	5.0	20.0		96.0	70 - 130			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	22		25.0		86.4	70 - 130			
<i>Surrogate: 4-Bromofluorobenzene</i>	19		25.0		75.8	70 - 130			
<i>Surrogate: Dibromofluoromethane</i>	20		25.0		79.8	70 - 130			
<i>Surrogate: Toluene-d8</i>	20		25.0		78.2	70 - 130			

LCS Dup (B2F0452-BS1)

Prepared: 6/15/2012 Analyzed: 6/15/2012

1,1-Dichloroethene	16	5.0	20.0		80.8	70 - 130	12.0	20	
Benzene	36	5.0	40.0		89.6	70 - 130	7.41	20	
Chlorobenzene	19	5.0	20.0		96.6	70 - 130	6.69	20	
Toluene	38	5.0	40.0		95.1	70 - 130	2.29	20	
Trichloroethene	18	5.0	20.0		91.8	70 - 130	4.37	20	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	21		25.0		85.9	70 - 130			
<i>Surrogate: 4-Bromofluorobenzene</i>	19		25.0		76.7	70 - 130			
<i>Surrogate: Dibromofluoromethane</i>	21		25.0		84.6	70 - 130			
<i>Surrogate: Toluene-d8</i>	20		25.0		79.7	70 - 130			



Hargis & Associates, Inc.

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San Diego , CA 92122

Project Number : RAYTHEON FULLERTON - OCSD, 532

Report To : Steve Netto

Reported : 06/19/2012

Total Dissolved Solids (Residue, Filterable) by SM 2540C - Quality Control

Analyte	Result (mg/L)	PQL (mg/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B2F0486 - No_Prep_WC_1

Blank (B2F0486-BLK1)

Prepared: 6/14/2012 Analyzed: 6/14/2012

Residue, Dissolved

ND

10

NR

LCS (B2F0486-BS1)

Prepared: 6/14/2012 Analyzed: 6/14/2012

Residue, Dissolved

980

10

970

101

80 - 120

Duplicate (B2F0486-DUP1)

Source: 1202157-01

Prepared: 6/14/2012 Analyzed: 6/14/2012

Residue, Dissolved

910

10

910

NR

0.9

10



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 San Diego, CA 92122

Project Number : RAYTHEON FULLERTON - OCSD, 532
 Report To : Steve Netto
 Reported : 06/19/2012

Total Metals by ICP-AES EPA 6010B - Quality Control

Analyte	Result (mg/L)	PQL (mg/L)	Spike Level	Source Result	% Rec % Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B2F0368 - EPA 3010A

Blank (B2F0368-BLK1)				Prepared: 6/13/2012 Analyzed: 6/13/2012					
Selenium	ND	0.01			NR				
LCS (B2F0368-BS1)				Prepared: 6/13/2012 Analyzed: 6/13/2012					
Selenium	0.92	0.01	1.00		91.8	80 - 120			
Duplicate (B2F0368-DUP1)				Source: 1202140-01 Prepared: 6/13/2012 Analyzed: 6/13/2012					
Selenium	ND	0.01		0.009	NR			20	
Matrix Spike (B2F0368-MS1)				Source: 1202140-01 Prepared: 6/13/2012 Analyzed: 6/13/2012					
Selenium	2.5	0.01	2.50	0.009	101	78 - 116			
Matrix Spike Dup (B2F0368-MSD1)				Source: 1202140-01 Prepared: 6/13/2012 Analyzed: 6/13/2012					
Selenium	2.6	0.01	2.50	0.009	105	78 - 116	4.00	20	



Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego, CA 92122

Project Number : RAYTHEON FULLERTON - OCSD, 532

Report To : Steve Netto

Reported : 06/19/2012

1,4-Dioxane by EPA 8270/SIM: Isotope Dilution Technique - Quality Control

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec % Rec	% Rec Limits	RPD RPD	RPD Limit	Notes
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Batch B2F0317 - MSSEMI

Blank (B2F0317-BLK1)

Prepared: 6/11/2012 Analyzed: 6/11/2012

1,4-Dioxane	ND	0.20			NR				
Surrogate: 1,2-Dichlorobenzene-d4	0.81		1.00		81.0	36 - 107			
Surrogate: 2-Fluorobiphenyl	0.84		1.00		84.3	42 - 120			
Surrogate: 4-Terphenyl-d14	1.0		1.00		100	67 - 142			
Surrogate: Nitrobenzene-d5	0.93		1.00		92.7	36 - 130			

LCS (B2F0317-BS1)

Prepared: 6/11/2012 Analyzed: 6/11/2012

1,4-Dioxane	1.1	0.20	1.00		105	70 - 130			
Surrogate: 1,2-Dichlorobenzene-d4	0.84		1.00		84.5	36 - 107			
Surrogate: 2-Fluorobiphenyl	0.82		1.00		82.5	42 - 120			
Surrogate: 4-Terphenyl-d14	0.98		1.00		97.8	67 - 142			
Surrogate: Nitrobenzene-d5	0.97		1.00		97.3	36 - 130			

LCS Dup (B2F0317-BSD1)

Prepared: 6/11/2012 Analyzed: 6/11/2012

1,4-Dioxane	1.1	0.20	1.00		106	70 - 130	0.879	20	
Surrogate: 1,2-Dichlorobenzene-d4	0.83		1.00		82.7	36 - 107			
Surrogate: 2-Fluorobiphenyl	0.84		1.00		84.4	42 - 120			
Surrogate: 4-Terphenyl-d14	1.1		1.00		106	67 - 142			
Surrogate: Nitrobenzene-d5	0.96		1.00		95.7	36 - 130			



Hargis & Associates, Inc.

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San Diego , CA 92122

Project Number : RAYTHEON FULLERTON - OCSD, 532

Report To : Steve Netto

Reported : 06/19/2012

Notes and Definitions

S1	Surrogate recovery was above laboratory acceptance limit. No target analyte was detected in the sample.
ND	Analyte not detected at or above reporting limit
PQL	Practical Quantitation Limit
MDL	Method Detection Limit
NR	Not Reported
RPD	Relative Percent Difference
CA1	CA-NELAP (CDPH)
CA2	CA-ELAP (CDPH)
OR1	OR-NELAP (OSPHL)
TX1	TX-NELAP (TCEQ)

Rachelle Arada

From: Amanda Beam [ABeam@HARGIS.COM]
Sent: Tuesday, June 12, 2012 4:56 PM
To: Rachelle Arada
Cc: Carmen Aguila; Marcos Rodriguez; Travis Arciaga
Subject: Method change request for project 532.15

Hello Rachelle,

I just spoke with Carmen about the possibility of changing the VOC analysis method for the samples provided last Friday (project name Raytheon Fullerton – OCSD) from 8260B (as marked on COC) to EPA method 624, if the sample has not already been run. If we caught it in time we would like to have it analyzed under method 624. I apologize for the short notice on this change of method and any inconvenience this may cause.

Thank you,

Amanda Beam
Hydrogeologist

Hargis + Associates, Inc.
9171 Towne Centre Drive, Suite 375
San Diego, California 92122
ph: 858-455-6500 ext. 145
fax: 858-410-7440
abeam@hargis.com

APPENDIX A
LABORATORY ANALYTICAL REPORTS
(THIRD QUARTER 2012)

July 27, 2012

Steve Netto
Hargis & Associates, Inc.
9171 Towne Centre Drive, Suite 375
San Diego, CA 92122
Tel: (619) 249-3166
Fax: (858) 455-6533

ACCREDITED IN ACCORDANCE WITH

ELAP No.: 1838
NELAP No.: 02107CA
CSDLAC No.: 10196
ORELAP No.: CA300003
TCEQ No.: T104704502

Re: ATL Work Order Number : 1202460

Client Reference : RAYTHEON FULLERTON - MONTHLY, 532.15

Enclosed are the results for sample(s) received on July 11, 2012 by Advanced Technology Laboratories. The sample(s) are tested for the parameters as indicated on the enclosed chain of custody in accordance with applicable laboratory certifications. The laboratory results contained in this report specifically pertains to the sample(s) submitted.

Thank you for the opportunity to serve the needs of your company. If you have any questions, please feel free to contact me or your Project Manager.

Sincerely,



Eddie Rodriguez
Laboratory Director

The cover letter and the case narrative are an integral part of this analytical report and its absence renders the report invalid. The report cannot be reproduced without written permission from the client and Advanced Technology Laboratories.



Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : RAYTHEON FULLERTON - MONTHLY

Report To : Steve Netto

Reported : 07/27/2012

SUMMARY OF SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
TB-071112	1202460-01	Lab H2O	7/11/12 7:00	7/11/12 10:45
CEFF	1202460-02	Groundwater	7/11/12 8:20	7/11/12 10:45
CBT	1202460-03	Groundwater	7/11/12 8:10	7/11/12 10:45
POX	1202460-04	Groundwater	7/11/12 8:00	7/11/12 10:45
PF	1202460-05	Groundwater	7/11/12 7:55	7/11/12 10:45
EW-02	1202460-06	Groundwater	7/11/12 9:30	7/11/12 10:45

CASE NARRATIVE

The samples for EPA 317 (Bromate) analysis were subcontracted to Exova, Inc. with ELAP Cert.# 2652.



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Project Number : RAYTHEON FULLERTON - MONTHLY

Report To : Steve Netto

Reported : 07/27/2012

Client Sample ID TB-071112

Lab ID: 1202460-01

Volatile Organic Compounds by EPA 8260

Analyst: RP

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	0.50	NA	1	B2G0300	07/16/2012	07/16/12 20:40	
1,1,1-Trichloroethane	ND	0.50	NA	1	B2G0300	07/16/2012	07/16/12 20:40	
1,1,2,2-Tetrachloroethane	ND	0.50	NA	1	B2G0300	07/16/2012	07/16/12 20:40	
1,1,2-Trichloroethane	ND	0.50	NA	1	B2G0300	07/16/2012	07/16/12 20:40	
1,1-Dichloroethane	ND	0.50	NA	1	B2G0300	07/16/2012	07/16/12 20:40	
1,1-Dichloroethene	ND	0.50	NA	1	B2G0300	07/16/2012	07/16/12 20:40	
1,1-Dichloropropene	ND	0.50	NA	1	B2G0300	07/16/2012	07/16/12 20:40	
1,2,3-Trichloropropane	ND	0.50	NA	1	B2G0300	07/16/2012	07/16/12 20:40	
1,2,3-Trichlorobenzene	ND	0.50	NA	1	B2G0300	07/16/2012	07/16/12 20:40	
1,2,4-Trichlorobenzene	ND	0.50	NA	1	B2G0300	07/16/2012	07/16/12 20:40	
1,2,4-Trimethylbenzene	ND	0.50	NA	1	B2G0300	07/16/2012	07/16/12 20:40	
1,2-Dibromo-3-chloropropane	ND	0.50	NA	1	B2G0300	07/16/2012	07/16/12 20:40	
1,2-Dibromoethane	ND	0.50	NA	1	B2G0300	07/16/2012	07/16/12 20:40	
1,2-Dichlorobenzene	ND	0.50	NA	1	B2G0300	07/16/2012	07/16/12 20:40	
1,2-Dichloroethane	ND	0.50	NA	1	B2G0300	07/16/2012	07/16/12 20:40	
1,2-Dichloropropane	ND	0.50	NA	1	B2G0300	07/16/2012	07/16/12 20:40	
1,3,5-Trimethylbenzene	ND	0.50	NA	1	B2G0300	07/16/2012	07/16/12 20:40	
1,3-Dichlorobenzene	ND	0.50	NA	1	B2G0300	07/16/2012	07/16/12 20:40	
1,3-Dichloropropane	ND	0.50	NA	1	B2G0300	07/16/2012	07/16/12 20:40	
1,4-Dichlorobenzene	ND	0.50	NA	1	B2G0300	07/16/2012	07/16/12 20:40	
2,2-Dichloropropane	ND	0.50	NA	1	B2G0300	07/16/2012	07/16/12 20:40	
2-Chlorotoluene	ND	0.50	NA	1	B2G0300	07/16/2012	07/16/12 20:40	
4-Chlorotoluene	ND	0.50	NA	1	B2G0300	07/16/2012	07/16/12 20:40	
4-Isopropyltoluene	ND	0.50	NA	1	B2G0300	07/16/2012	07/16/12 20:40	
Benzene	ND	0.50	NA	1	B2G0300	07/16/2012	07/16/12 20:40	
Bromobenzene	ND	0.50	NA	1	B2G0300	07/16/2012	07/16/12 20:40	
Bromodichloromethane	ND	0.50	NA	1	B2G0300	07/16/2012	07/16/12 20:40	
Bromoform	ND	0.50	NA	1	B2G0300	07/16/2012	07/16/12 20:40	
Bromomethane	ND	0.50	NA	1	B2G0300	07/16/2012	07/16/12 20:40	
Carbon tetrachloride	ND	0.50	NA	1	B2G0300	07/16/2012	07/16/12 20:40	
Chlorobenzene	ND	0.50	NA	1	B2G0300	07/16/2012	07/16/12 20:40	
Chloroethane	ND	0.50	NA	1	B2G0300	07/16/2012	07/16/12 20:40	
Chloroform	ND	0.50	NA	1	B2G0300	07/16/2012	07/16/12 20:40	
Chloromethane	ND	0.50	NA	1	B2G0300	07/16/2012	07/16/12 20:40	
cis-1,2-Dichloroethene	ND	0.50	NA	1	B2G0300	07/16/2012	07/16/12 20:40	
cis-1,3-Dichloropropene	ND	0.50	NA	1	B2G0300	07/16/2012	07/16/12 20:40	
Dibromochloromethane	ND	0.50	NA	1	B2G0300	07/16/2012	07/16/12 20:40	



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Project Number : RAYTHEON FULLERTON - MONTHLY

Report To : Steve Netto

Reported : 07/27/2012

Client Sample ID TB-071112

Lab ID: 1202460-01

Volatile Organic Compounds by EPA 8260

Analyst: RP

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Dibromomethane	ND	0.50	NA	1	B2G0300	07/16/2012	07/16/12 20:40	
Dichlorodifluoromethane	ND	0.50	NA	1	B2G0300	07/16/2012	07/16/12 20:40	
Ethylbenzene	ND	0.50	NA	1	B2G0300	07/16/2012	07/16/12 20:40	
Hexachlorobutadiene	ND	0.50	NA	1	B2G0300	07/16/2012	07/16/12 20:40	
Isopropylbenzene	ND	0.50	NA	1	B2G0300	07/16/2012	07/16/12 20:40	
m,p-Xylene	ND	1.0	NA	1	B2G0300	07/16/2012	07/16/12 20:40	
Methylene chloride	ND	1.0	NA	1	B2G0300	07/16/2012	07/16/12 20:40	
n-Butylbenzene	ND	0.50	NA	1	B2G0300	07/16/2012	07/16/12 20:40	
n-Propylbenzene	ND	0.50	NA	1	B2G0300	07/16/2012	07/16/12 20:40	
Naphthalene	ND	0.50	NA	1	B2G0300	07/16/2012	07/16/12 20:40	
o-Xylene	ND	0.50	NA	1	B2G0300	07/16/2012	07/16/12 20:40	
sec-Butylbenzene	ND	0.50	NA	1	B2G0300	07/16/2012	07/16/12 20:40	
Styrene	ND	0.50	NA	1	B2G0300	07/16/2012	07/16/12 20:40	
tert-Butylbenzene	ND	0.50	NA	1	B2G0300	07/16/2012	07/16/12 20:40	
Tetrachloroethene	ND	0.50	NA	1	B2G0300	07/16/2012	07/16/12 20:40	
Toluene	ND	0.50	NA	1	B2G0300	07/16/2012	07/16/12 20:40	
trans-1,2-Dichloroethene	ND	0.50	NA	1	B2G0300	07/16/2012	07/16/12 20:40	
Trichloroethene	ND	0.50	NA	1	B2G0300	07/16/2012	07/16/12 20:40	
Trichlorofluoromethane	ND	0.50	NA	1	B2G0300	07/16/2012	07/16/12 20:40	
Vinyl chloride	ND	0.50	NA	1	B2G0300	07/16/2012	07/16/12 20:40	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>94.3 %</i>		<i>70 - 130</i>		B2G0300	07/16/2012	<i>07/16/12 20:40</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>96.7 %</i>		<i>70 - 130</i>		B2G0300	07/16/2012	<i>07/16/12 20:40</i>	
<i>Surrogate: Dibromofluoromethane</i>	<i>97.4 %</i>		<i>70 - 130</i>		B2G0300	07/16/2012	<i>07/16/12 20:40</i>	
<i>Surrogate: Toluene-d8</i>	<i>102 %</i>		<i>70 - 130</i>		B2G0300	07/16/2012	<i>07/16/12 20:40</i>	



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Reported : 07/27/2012

Client Sample ID CEFF

Lab ID: 1202460-02

Anions by Ion Chromatography EPA 300.0

Analyst: AG

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Bromide	0.19	0.05	NA	1	B2G0445	07/19/2012	07/19/12 10:29	

Total Dissolved Solids (Residue, Filterable) by SM 2540C

Analyst: KT

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Residue, Dissolved	620	10	NA	1	B2G0374	07/17/2012	07/18/12 00:00	

Volatile Organic Compounds by EPA 8260

Analyst: RP

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	0.50	NA	1	B2G0300	07/16/2012	07/16/12 23:04	
1,1,1-Trichloroethane	ND	0.50	NA	1	B2G0300	07/16/2012	07/16/12 23:04	
1,1,2,2-Tetrachloroethane	ND	0.50	NA	1	B2G0300	07/16/2012	07/16/12 23:04	
1,1,2-Trichloroethane	ND	0.50	NA	1	B2G0300	07/16/2012	07/16/12 23:04	
1,1-Dichloroethane	0.63	0.50	NA	1	B2G0300	07/16/2012	07/16/12 23:04	
1,1-Dichloroethene	0.75	0.50	NA	1	B2G0300	07/16/2012	07/16/12 23:04	
1,1-Dichloropropene	ND	0.50	NA	1	B2G0300	07/16/2012	07/16/12 23:04	
1,2,3-Trichloropropane	ND	0.50	NA	1	B2G0300	07/16/2012	07/16/12 23:04	
1,2,3-Trichlorobenzene	ND	0.50	NA	1	B2G0300	07/16/2012	07/16/12 23:04	
1,2,4-Trichlorobenzene	ND	0.50	NA	1	B2G0300	07/16/2012	07/16/12 23:04	
1,2,4-Trimethylbenzene	ND	0.50	NA	1	B2G0300	07/16/2012	07/16/12 23:04	
1,2-Dibromo-3-chloropropane	ND	0.50	NA	1	B2G0300	07/16/2012	07/16/12 23:04	
1,2-Dibromoethane	ND	0.50	NA	1	B2G0300	07/16/2012	07/16/12 23:04	
1,2-Dichlorobenzene	ND	0.50	NA	1	B2G0300	07/16/2012	07/16/12 23:04	
1,2-Dichloroethane	ND	0.50	NA	1	B2G0300	07/16/2012	07/16/12 23:04	
1,2-Dichloropropane	ND	0.50	NA	1	B2G0300	07/16/2012	07/16/12 23:04	
1,3,5-Trimethylbenzene	ND	0.50	NA	1	B2G0300	07/16/2012	07/16/12 23:04	
1,3-Dichlorobenzene	ND	0.50	NA	1	B2G0300	07/16/2012	07/16/12 23:04	
1,3-Dichloropropane	ND	0.50	NA	1	B2G0300	07/16/2012	07/16/12 23:04	
1,4-Dichlorobenzene	ND	0.50	NA	1	B2G0300	07/16/2012	07/16/12 23:04	
2,2-Dichloropropane	ND	0.50	NA	1	B2G0300	07/16/2012	07/16/12 23:04	
2-Chlorotoluene	ND	0.50	NA	1	B2G0300	07/16/2012	07/16/12 23:04	
4-Chlorotoluene	ND	0.50	NA	1	B2G0300	07/16/2012	07/16/12 23:04	
4-Isopropyltoluene	ND	0.50	NA	1	B2G0300	07/16/2012	07/16/12 23:04	
Benzene	ND	0.50	NA	1	B2G0300	07/16/2012	07/16/12 23:04	



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Project Number : RAYTHEON FULLERTON - MONTHLY

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Client Sample ID CEFF

Lab ID: 1202460-02

Volatile Organic Compounds by EPA 8260

Analyst: RP

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Bromobenzene	ND	0.50	NA	1	B2G0300	07/16/2012	07/16/12 23:04	
Bromodichloromethane	ND	0.50	NA	1	B2G0300	07/16/2012	07/16/12 23:04	
Bromoform	ND	0.50	NA	1	B2G0300	07/16/2012	07/16/12 23:04	
Bromomethane	ND	0.50	NA	1	B2G0300	07/16/2012	07/16/12 23:04	
Carbon tetrachloride	ND	0.50	NA	1	B2G0300	07/16/2012	07/16/12 23:04	
Chlorobenzene	ND	0.50	NA	1	B2G0300	07/16/2012	07/16/12 23:04	
Chloroethane	ND	0.50	NA	1	B2G0300	07/16/2012	07/16/12 23:04	
Chloroform	ND	0.50	NA	1	B2G0300	07/16/2012	07/16/12 23:04	
Chloromethane	ND	0.50	NA	1	B2G0300	07/16/2012	07/16/12 23:04	
cis-1,2-Dichloroethene	ND	0.50	NA	1	B2G0300	07/16/2012	07/16/12 23:04	
cis-1,3-Dichloropropene	ND	0.50	NA	1	B2G0300	07/16/2012	07/16/12 23:04	
Dibromochloromethane	ND	0.50	NA	1	B2G0300	07/16/2012	07/16/12 23:04	
Dibromomethane	ND	0.50	NA	1	B2G0300	07/16/2012	07/16/12 23:04	
Dichlorodifluoromethane	ND	0.50	NA	1	B2G0300	07/16/2012	07/16/12 23:04	
Ethylbenzene	ND	0.50	NA	1	B2G0300	07/16/2012	07/16/12 23:04	
Hexachlorobutadiene	ND	0.50	NA	1	B2G0300	07/16/2012	07/16/12 23:04	
Isopropylbenzene	ND	0.50	NA	1	B2G0300	07/16/2012	07/16/12 23:04	
m,p-Xylene	ND	1.0	NA	1	B2G0300	07/16/2012	07/16/12 23:04	
Methylene chloride	ND	1.0	NA	1	B2G0300	07/16/2012	07/16/12 23:04	
n-Butylbenzene	ND	0.50	NA	1	B2G0300	07/16/2012	07/16/12 23:04	
n-Propylbenzene	ND	0.50	NA	1	B2G0300	07/16/2012	07/16/12 23:04	
Naphthalene	ND	0.50	NA	1	B2G0300	07/16/2012	07/16/12 23:04	
o-Xylene	ND	0.50	NA	1	B2G0300	07/16/2012	07/16/12 23:04	
sec-Butylbenzene	ND	0.50	NA	1	B2G0300	07/16/2012	07/16/12 23:04	
Styrene	ND	0.50	NA	1	B2G0300	07/16/2012	07/16/12 23:04	
tert-Butylbenzene	ND	0.50	NA	1	B2G0300	07/16/2012	07/16/12 23:04	
Tetrachloroethene	ND	0.50	NA	1	B2G0300	07/16/2012	07/16/12 23:04	
Toluene	ND	0.50	NA	1	B2G0300	07/16/2012	07/16/12 23:04	
trans-1,2-Dichloroethene	ND	0.50	NA	1	B2G0300	07/16/2012	07/16/12 23:04	
Trichloroethene	ND	0.50	NA	1	B2G0300	07/16/2012	07/16/12 23:04	
Trichlorofluoromethane	ND	0.50	NA	1	B2G0300	07/16/2012	07/16/12 23:04	
Vinyl chloride	ND	0.50	NA	1	B2G0300	07/16/2012	07/16/12 23:04	

Surrogate: 1,2-Dichloroethane-d4	97.4 %	70 - 130	B2G0300	07/16/2012	07/16/12 23:04
Surrogate: 4-Bromofluorobenzene	98.1 %	70 - 130	B2G0300	07/16/2012	07/16/12 23:04
Surrogate: Dibromofluoromethane	100 %	70 - 130	B2G0300	07/16/2012	07/16/12 23:04
Surrogate: Toluene-d8	102 %	70 - 130	B2G0300	07/16/2012	07/16/12 23:04



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Project Number : RAYTHEON FULLERTON - MONTHLY

Report To : Steve Netto

Reported : 07/27/2012

Client Sample ID CBT

Lab ID: 1202460-03

Volatile Organic Compounds by EPA 8260

Analyst: RP

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	0.50	NA	1	B2G0300	07/16/2012	07/16/12 22:23	
1,1,1-Trichloroethane	ND	0.50	NA	1	B2G0300	07/16/2012	07/16/12 22:23	
1,1,2,2-Tetrachloroethane	ND	0.50	NA	1	B2G0300	07/16/2012	07/16/12 22:23	
1,1,2-Trichloroethane	ND	0.50	NA	1	B2G0300	07/16/2012	07/16/12 22:23	
1,1-Dichloroethane	0.53	0.50	NA	1	B2G0300	07/16/2012	07/16/12 22:23	
1,1-Dichloroethene	ND	0.50	NA	1	B2G0300	07/16/2012	07/16/12 22:23	
1,1-Dichloropropene	ND	0.50	NA	1	B2G0300	07/16/2012	07/16/12 22:23	
1,2,3-Trichloropropane	ND	0.50	NA	1	B2G0300	07/16/2012	07/16/12 22:23	
1,2,3-Trichlorobenzene	ND	0.50	NA	1	B2G0300	07/16/2012	07/16/12 22:23	
1,2,4-Trichlorobenzene	ND	0.50	NA	1	B2G0300	07/16/2012	07/16/12 22:23	
1,2,4-Trimethylbenzene	ND	0.50	NA	1	B2G0300	07/16/2012	07/16/12 22:23	
1,2-Dibromo-3-chloropropane	ND	0.50	NA	1	B2G0300	07/16/2012	07/16/12 22:23	
1,2-Dibromoethane	ND	0.50	NA	1	B2G0300	07/16/2012	07/16/12 22:23	
1,2-Dichlorobenzene	ND	0.50	NA	1	B2G0300	07/16/2012	07/16/12 22:23	
1,2-Dichloroethane	ND	0.50	NA	1	B2G0300	07/16/2012	07/16/12 22:23	
1,2-Dichloropropane	ND	0.50	NA	1	B2G0300	07/16/2012	07/16/12 22:23	
1,3,5-Trimethylbenzene	ND	0.50	NA	1	B2G0300	07/16/2012	07/16/12 22:23	
1,3-Dichlorobenzene	ND	0.50	NA	1	B2G0300	07/16/2012	07/16/12 22:23	
1,3-Dichloropropane	ND	0.50	NA	1	B2G0300	07/16/2012	07/16/12 22:23	
1,4-Dichlorobenzene	ND	0.50	NA	1	B2G0300	07/16/2012	07/16/12 22:23	
2,2-Dichloropropane	ND	0.50	NA	1	B2G0300	07/16/2012	07/16/12 22:23	
2-Chlorotoluene	ND	0.50	NA	1	B2G0300	07/16/2012	07/16/12 22:23	
4-Chlorotoluene	ND	0.50	NA	1	B2G0300	07/16/2012	07/16/12 22:23	
4-Isopropyltoluene	ND	0.50	NA	1	B2G0300	07/16/2012	07/16/12 22:23	
Benzene	ND	0.50	NA	1	B2G0300	07/16/2012	07/16/12 22:23	
Bromobenzene	ND	0.50	NA	1	B2G0300	07/16/2012	07/16/12 22:23	
Bromodichloromethane	ND	0.50	NA	1	B2G0300	07/16/2012	07/16/12 22:23	
Bromoform	ND	0.50	NA	1	B2G0300	07/16/2012	07/16/12 22:23	
Bromomethane	ND	0.50	NA	1	B2G0300	07/16/2012	07/16/12 22:23	
Carbon tetrachloride	ND	0.50	NA	1	B2G0300	07/16/2012	07/16/12 22:23	
Chlorobenzene	ND	0.50	NA	1	B2G0300	07/16/2012	07/16/12 22:23	
Chloroethane	ND	0.50	NA	1	B2G0300	07/16/2012	07/16/12 22:23	
Chloroform	ND	0.50	NA	1	B2G0300	07/16/2012	07/16/12 22:23	
Chloromethane	ND	0.50	NA	1	B2G0300	07/16/2012	07/16/12 22:23	
cis-1,2-Dichloroethene	ND	0.50	NA	1	B2G0300	07/16/2012	07/16/12 22:23	
cis-1,3-Dichloropropene	ND	0.50	NA	1	B2G0300	07/16/2012	07/16/12 22:23	
Dibromochloromethane	ND	0.50	NA	1	B2G0300	07/16/2012	07/16/12 22:23	



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Project Number : RAYTHEON FULLERTON - MONTHLY

Report To : Steve Netto

Reported : 07/27/2012

Client Sample ID CBT

Lab ID: 1202460-03

Volatile Organic Compounds by EPA 8260

Analyst: RP

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Dibromomethane	ND	0.50	NA	1	B2G0300	07/16/2012	07/16/12 22:23	
Dichlorodifluoromethane	ND	0.50	NA	1	B2G0300	07/16/2012	07/16/12 22:23	
Ethylbenzene	ND	0.50	NA	1	B2G0300	07/16/2012	07/16/12 22:23	
Hexachlorobutadiene	ND	0.50	NA	1	B2G0300	07/16/2012	07/16/12 22:23	
Isopropylbenzene	ND	0.50	NA	1	B2G0300	07/16/2012	07/16/12 22:23	
m,p-Xylene	ND	1.0	NA	1	B2G0300	07/16/2012	07/16/12 22:23	
Methylene chloride	ND	1.0	NA	1	B2G0300	07/16/2012	07/16/12 22:23	
n-Butylbenzene	ND	0.50	NA	1	B2G0300	07/16/2012	07/16/12 22:23	
n-Propylbenzene	ND	0.50	NA	1	B2G0300	07/16/2012	07/16/12 22:23	
Naphthalene	ND	0.50	NA	1	B2G0300	07/16/2012	07/16/12 22:23	
o-Xylene	ND	0.50	NA	1	B2G0300	07/16/2012	07/16/12 22:23	
sec-Butylbenzene	ND	0.50	NA	1	B2G0300	07/16/2012	07/16/12 22:23	
Styrene	ND	0.50	NA	1	B2G0300	07/16/2012	07/16/12 22:23	
tert-Butylbenzene	ND	0.50	NA	1	B2G0300	07/16/2012	07/16/12 22:23	
Tetrachloroethene	ND	0.50	NA	1	B2G0300	07/16/2012	07/16/12 22:23	
Toluene	ND	0.50	NA	1	B2G0300	07/16/2012	07/16/12 22:23	
trans-1,2-Dichloroethene	ND	0.50	NA	1	B2G0300	07/16/2012	07/16/12 22:23	
Trichloroethene	ND	0.50	NA	1	B2G0300	07/16/2012	07/16/12 22:23	
Trichlorofluoromethane	ND	0.50	NA	1	B2G0300	07/16/2012	07/16/12 22:23	
Vinyl chloride	ND	0.50	NA	1	B2G0300	07/16/2012	07/16/12 22:23	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>98.4 %</i>		<i>70 - 130</i>		B2G0300	07/16/2012	<i>07/16/12 22:23</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>98.0 %</i>		<i>70 - 130</i>		B2G0300	07/16/2012	<i>07/16/12 22:23</i>	
<i>Surrogate: Dibromofluoromethane</i>	<i>101 %</i>		<i>70 - 130</i>		B2G0300	07/16/2012	<i>07/16/12 22:23</i>	
<i>Surrogate: Toluene-d8</i>	<i>102 %</i>		<i>70 - 130</i>		B2G0300	07/16/2012	<i>07/16/12 22:23</i>	



Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : RAYTHEON FULLERTON - MONTHLY

Report To : Steve Netto

Reported : 07/27/2012

Client Sample ID POX

Lab ID: 1202460-04

Anions by Ion Chromatography EPA 300.0

Analyst: AG

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Bromide	0.19	0.05	NA	1	B2G0445	07/19/2012	07/19/12 10:51	

Total Dissolved Solids (Residue, Filterable) by SM 2540C

Analyst: KT

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Residue, Dissolved	640	10	NA	1	B2G0374	07/17/2012	07/18/12 00:00	

Volatile Organic Compounds by EPA 8260

Analyst: RP

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	0.50	NA	1	B2G0300	07/16/2012	07/16/12 23:24	
1,1,1-Trichloroethane	ND	0.50	NA	1	B2G0300	07/16/2012	07/16/12 23:24	
1,1,2,2-Tetrachloroethane	ND	0.50	NA	1	B2G0300	07/16/2012	07/16/12 23:24	
1,1,2-Trichloroethane	ND	0.50	NA	1	B2G0300	07/16/2012	07/16/12 23:24	
1,1-Dichloroethane	ND	0.50	NA	1	B2G0300	07/16/2012	07/16/12 23:24	
1,1-Dichloroethene	ND	0.50	NA	1	B2G0300	07/16/2012	07/16/12 23:24	
1,1-Dichloropropene	ND	0.50	NA	1	B2G0300	07/16/2012	07/16/12 23:24	
1,2,3-Trichloropropane	ND	0.50	NA	1	B2G0300	07/16/2012	07/16/12 23:24	
1,2,3-Trichlorobenzene	ND	0.50	NA	1	B2G0300	07/16/2012	07/16/12 23:24	
1,2,4-Trichlorobenzene	ND	0.50	NA	1	B2G0300	07/16/2012	07/16/12 23:24	
1,2,4-Trimethylbenzene	ND	0.50	NA	1	B2G0300	07/16/2012	07/16/12 23:24	
1,2-Dibromo-3-chloropropane	ND	0.50	NA	1	B2G0300	07/16/2012	07/16/12 23:24	
1,2-Dibromoethane	ND	0.50	NA	1	B2G0300	07/16/2012	07/16/12 23:24	
1,2-Dichlorobenzene	ND	0.50	NA	1	B2G0300	07/16/2012	07/16/12 23:24	
1,2-Dichloroethane	ND	0.50	NA	1	B2G0300	07/16/2012	07/16/12 23:24	
1,2-Dichloropropane	ND	0.50	NA	1	B2G0300	07/16/2012	07/16/12 23:24	
1,3,5-Trimethylbenzene	ND	0.50	NA	1	B2G0300	07/16/2012	07/16/12 23:24	
1,3-Dichlorobenzene	ND	0.50	NA	1	B2G0300	07/16/2012	07/16/12 23:24	
1,3-Dichloropropane	ND	0.50	NA	1	B2G0300	07/16/2012	07/16/12 23:24	
1,4-Dichlorobenzene	ND	0.50	NA	1	B2G0300	07/16/2012	07/16/12 23:24	
2,2-Dichloropropane	ND	0.50	NA	1	B2G0300	07/16/2012	07/16/12 23:24	
2-Chlorotoluene	ND	0.50	NA	1	B2G0300	07/16/2012	07/16/12 23:24	
4-Chlorotoluene	ND	0.50	NA	1	B2G0300	07/16/2012	07/16/12 23:24	
4-Isopropyltoluene	ND	0.50	NA	1	B2G0300	07/16/2012	07/16/12 23:24	
Benzene	ND	0.50	NA	1	B2G0300	07/16/2012	07/16/12 23:24	



Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : RAYTHEON FULLERTON - MONTHLY

Report To : Steve Netto

Reported : 07/27/2012

Client Sample ID POX

Lab ID: 1202460-04

Volatile Organic Compounds by EPA 8260

Analyst: RP

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Bromobenzene	ND	0.50	NA	1	B2G0300	07/16/2012	07/16/12 23:24	
Bromodichloromethane	ND	0.50	NA	1	B2G0300	07/16/2012	07/16/12 23:24	
Bromoform	ND	0.50	NA	1	B2G0300	07/16/2012	07/16/12 23:24	
Bromomethane	ND	0.50	NA	1	B2G0300	07/16/2012	07/16/12 23:24	
Carbon tetrachloride	ND	0.50	NA	1	B2G0300	07/16/2012	07/16/12 23:24	
Chlorobenzene	ND	0.50	NA	1	B2G0300	07/16/2012	07/16/12 23:24	
Chloroethane	ND	0.50	NA	1	B2G0300	07/16/2012	07/16/12 23:24	
Chloroform	ND	0.50	NA	1	B2G0300	07/16/2012	07/16/12 23:24	
Chloromethane	ND	0.50	NA	1	B2G0300	07/16/2012	07/16/12 23:24	
cis-1,2-Dichloroethene	ND	0.50	NA	1	B2G0300	07/16/2012	07/16/12 23:24	
cis-1,3-Dichloropropene	ND	0.50	NA	1	B2G0300	07/16/2012	07/16/12 23:24	
Dibromochloromethane	ND	0.50	NA	1	B2G0300	07/16/2012	07/16/12 23:24	
Dibromomethane	ND	0.50	NA	1	B2G0300	07/16/2012	07/16/12 23:24	
Dichlorodifluoromethane	ND	0.50	NA	1	B2G0300	07/16/2012	07/16/12 23:24	
Ethylbenzene	ND	0.50	NA	1	B2G0300	07/16/2012	07/16/12 23:24	
Hexachlorobutadiene	ND	0.50	NA	1	B2G0300	07/16/2012	07/16/12 23:24	
Isopropylbenzene	ND	0.50	NA	1	B2G0300	07/16/2012	07/16/12 23:24	
m,p-Xylene	ND	1.0	NA	1	B2G0300	07/16/2012	07/16/12 23:24	
Methylene chloride	ND	1.0	NA	1	B2G0300	07/16/2012	07/16/12 23:24	
n-Butylbenzene	ND	0.50	NA	1	B2G0300	07/16/2012	07/16/12 23:24	
n-Propylbenzene	ND	0.50	NA	1	B2G0300	07/16/2012	07/16/12 23:24	
Naphthalene	ND	0.50	NA	1	B2G0300	07/16/2012	07/16/12 23:24	
o-Xylene	ND	0.50	NA	1	B2G0300	07/16/2012	07/16/12 23:24	
sec-Butylbenzene	ND	0.50	NA	1	B2G0300	07/16/2012	07/16/12 23:24	
Styrene	ND	0.50	NA	1	B2G0300	07/16/2012	07/16/12 23:24	
tert-Butylbenzene	ND	0.50	NA	1	B2G0300	07/16/2012	07/16/12 23:24	
Tetrachloroethene	ND	0.50	NA	1	B2G0300	07/16/2012	07/16/12 23:24	
Toluene	ND	0.50	NA	1	B2G0300	07/16/2012	07/16/12 23:24	
trans-1,2-Dichloroethene	ND	0.50	NA	1	B2G0300	07/16/2012	07/16/12 23:24	
Trichloroethene	ND	0.50	NA	1	B2G0300	07/16/2012	07/16/12 23:24	
Trichlorofluoromethane	ND	0.50	NA	1	B2G0300	07/16/2012	07/16/12 23:24	
Vinyl chloride	ND	0.50	NA	1	B2G0300	07/16/2012	07/16/12 23:24	
Surrogate: 1,2-Dichloroethane-d4	97.2 %		70 - 130		B2G0300	07/16/2012	07/16/12 23:24	
Surrogate: 4-Bromofluorobenzene	97.4 %		70 - 130		B2G0300	07/16/2012	07/16/12 23:24	
Surrogate: Dibromofluoromethane	100 %		70 - 130		B2G0300	07/16/2012	07/16/12 23:24	
Surrogate: Toluene-d8	101 %		70 - 130		B2G0300	07/16/2012	07/16/12 23:24	



Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : RAYTHEON FULLERTON - MONTHLY

Report To : Steve Netto

Reported : 07/27/2012

Client Sample ID POX

Lab ID: 1202460-04

1,4-Dioxane by EPA 8270/SIM: Isotope Dilution Technique

Analyst: BB

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,4-Dioxane	1.4	0.20	NA	1	B2G0312	07/17/2012	07/17/12 17:30	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	83.3 %		36 - 107		B2G0312	07/17/2012	07/17/12 17:30	
<i>Surrogate: 2-Fluorobiphenyl</i>	84.4 %		42 - 120		B2G0312	07/17/2012	07/17/12 17:30	
<i>Surrogate: 4-Terphenyl-d14</i>	98.9 %		67 - 142		B2G0312	07/17/2012	07/17/12 17:30	
<i>Surrogate: Nitrobenzene-d5</i>	90.1 %		36 - 130		B2G0312	07/17/2012	07/17/12 17:30	



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San Diego , CA 92122

Project Number : RAYTHEON FULLERTON - MONTHLY

Report To : Steve Netto

Reported : 07/27/2012

Client Sample ID PF

Lab ID: 1202460-05

Total Suspended Solids (Residue, Non-Filtrable) by SM 2540D

Analyst: KT

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Residue, Suspended	ND	10	NA	1	B2G0241	07/13/2012	07/13/12 10:30	



Hargis & Associates, Inc.

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San Diego , CA 92122

Project Number : RAYTHEON FULLERTON - MONTHLY

Report To : Steve Netto

Reported : 07/27/2012

Client Sample ID EW-02

Lab ID: 1202460-06

Anions by Ion Chromatography EPA 300.0

Analyst: AG

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Bromide	0.19	0.05	NA	1	B2G0445	07/19/2012	07/19/12 11:03	

Total Dissolved Solids (Residue, Filterable) by SM 2540C

Analyst: KT

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Residue, Dissolved	630	10	NA	1	B2G0374	07/17/2012	07/18/12 00:00	

Total Suspended Solids (Residue, Non-Filtrable) by SM 2540D

Analyst: KT

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Residue, Suspended	ND	10	NA	1	B2G0241	07/13/2012	07/13/12 10:32	

Volatile Organic Compounds by EPA 8260

Analyst: RP

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	0.50	NA	1	B2G0300	07/16/2012	07/16/12 22:43	
1,1,1-Trichloroethane	ND	0.50	NA	1	B2G0300	07/16/2012	07/16/12 22:43	
1,1,2,2-Tetrachloroethane	ND	0.50	NA	1	B2G0300	07/16/2012	07/16/12 22:43	
1,1,2-Trichloroethane	ND	0.50	NA	1	B2G0300	07/16/2012	07/16/12 22:43	
1,1-Dichloroethane	0.53	0.50	NA	1	B2G0300	07/16/2012	07/16/12 22:43	
1,1-Dichloroethene	64	0.50	NA	1	B2G0300	07/16/2012	07/16/12 22:43	
1,1-Dichloropropene	ND	0.50	NA	1	B2G0300	07/16/2012	07/16/12 22:43	
1,2,3-Trichloropropane	ND	0.50	NA	1	B2G0300	07/16/2012	07/16/12 22:43	
1,2,3-Trichlorobenzene	ND	0.50	NA	1	B2G0300	07/16/2012	07/16/12 22:43	
1,2,4-Trichlorobenzene	ND	0.50	NA	1	B2G0300	07/16/2012	07/16/12 22:43	
1,2,4-Trimethylbenzene	ND	0.50	NA	1	B2G0300	07/16/2012	07/16/12 22:43	
1,2-Dibromo-3-chloropropane	ND	0.50	NA	1	B2G0300	07/16/2012	07/16/12 22:43	
1,2-Dibromoethane	ND	0.50	NA	1	B2G0300	07/16/2012	07/16/12 22:43	
1,2-Dichlorobenzene	ND	0.50	NA	1	B2G0300	07/16/2012	07/16/12 22:43	
1,2-Dichloroethane	ND	0.50	NA	1	B2G0300	07/16/2012	07/16/12 22:43	
1,2-Dichloropropane	ND	0.50	NA	1	B2G0300	07/16/2012	07/16/12 22:43	
1,3,5-Trimethylbenzene	ND	0.50	NA	1	B2G0300	07/16/2012	07/16/12 22:43	
1,3-Dichlorobenzene	ND	0.50	NA	1	B2G0300	07/16/2012	07/16/12 22:43	
1,3-Dichloropropane	ND	0.50	NA	1	B2G0300	07/16/2012	07/16/12 22:43	



Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : RAYTHEON FULLERTON - MONTHLY

Report To : Steve Netto

Reported : 07/27/2012

Client Sample ID EW-02

Lab ID: 1202460-06

Volatile Organic Compounds by EPA 8260

Analyst: RP

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,4-Dichlorobenzene	ND	0.50	NA	1	B2G0300	07/16/2012	07/16/12 22:43	
2,2-Dichloropropane	ND	0.50	NA	1	B2G0300	07/16/2012	07/16/12 22:43	
2-Chlorotoluene	ND	0.50	NA	1	B2G0300	07/16/2012	07/16/12 22:43	
4-Chlorotoluene	ND	0.50	NA	1	B2G0300	07/16/2012	07/16/12 22:43	
4-Isopropyltoluene	ND	0.50	NA	1	B2G0300	07/16/2012	07/16/12 22:43	
Benzene	ND	0.50	NA	1	B2G0300	07/16/2012	07/16/12 22:43	
Bromobenzene	ND	0.50	NA	1	B2G0300	07/16/2012	07/16/12 22:43	
Bromodichloromethane	ND	0.50	NA	1	B2G0300	07/16/2012	07/16/12 22:43	
Bromoform	ND	0.50	NA	1	B2G0300	07/16/2012	07/16/12 22:43	
Bromomethane	ND	0.50	NA	1	B2G0300	07/16/2012	07/16/12 22:43	
Carbon tetrachloride	ND	0.50	NA	1	B2G0300	07/16/2012	07/16/12 22:43	
Chlorobenzene	ND	0.50	NA	1	B2G0300	07/16/2012	07/16/12 22:43	
Chloroethane	ND	0.50	NA	1	B2G0300	07/16/2012	07/16/12 22:43	
Chloroform	ND	0.50	NA	1	B2G0300	07/16/2012	07/16/12 22:43	
Chloromethane	ND	0.50	NA	1	B2G0300	07/16/2012	07/16/12 22:43	
cis-1,2-Dichloroethene	ND	0.50	NA	1	B2G0300	07/16/2012	07/16/12 22:43	
cis-1,3-Dichloropropene	ND	0.50	NA	1	B2G0300	07/16/2012	07/16/12 22:43	
Dibromochloromethane	ND	0.50	NA	1	B2G0300	07/16/2012	07/16/12 22:43	
Dibromomethane	ND	0.50	NA	1	B2G0300	07/16/2012	07/16/12 22:43	
Dichlorodifluoromethane	ND	0.50	NA	1	B2G0300	07/16/2012	07/16/12 22:43	
Ethylbenzene	ND	0.50	NA	1	B2G0300	07/16/2012	07/16/12 22:43	
Hexachlorobutadiene	ND	0.50	NA	1	B2G0300	07/16/2012	07/16/12 22:43	
Isopropylbenzene	ND	0.50	NA	1	B2G0300	07/16/2012	07/16/12 22:43	
m,p-Xylene	ND	1.0	NA	1	B2G0300	07/16/2012	07/16/12 22:43	
Methylene chloride	ND	1.0	NA	1	B2G0300	07/16/2012	07/16/12 22:43	
n-Butylbenzene	ND	0.50	NA	1	B2G0300	07/16/2012	07/16/12 22:43	
n-Propylbenzene	ND	0.50	NA	1	B2G0300	07/16/2012	07/16/12 22:43	
Naphthalene	ND	0.50	NA	1	B2G0300	07/16/2012	07/16/12 22:43	
o-Xylene	ND	0.50	NA	1	B2G0300	07/16/2012	07/16/12 22:43	
sec-Butylbenzene	ND	0.50	NA	1	B2G0300	07/16/2012	07/16/12 22:43	
Styrene	ND	0.50	NA	1	B2G0300	07/16/2012	07/16/12 22:43	
tert-Butylbenzene	ND	0.50	NA	1	B2G0300	07/16/2012	07/16/12 22:43	
Tetrachloroethene	ND	0.50	NA	1	B2G0300	07/16/2012	07/16/12 22:43	
Toluene	ND	0.50	NA	1	B2G0300	07/16/2012	07/16/12 22:43	
trans-1,2-Dichloroethene	ND	0.50	NA	1	B2G0300	07/16/2012	07/16/12 22:43	
Trichloroethene	ND	0.50	NA	1	B2G0300	07/16/2012	07/16/12 22:43	
Trichlorofluoromethane	ND	0.50	NA	1	B2G0300	07/16/2012	07/16/12 22:43	



Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : RAYTHEON FULLERTON - MONTHLY

Report To : Steve Netto

Reported : 07/27/2012

Client Sample ID EW-02

Lab ID: 1202460-06

Volatile Organic Compounds by EPA 8260

Analyst: RP

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Vinyl chloride	ND	0.50	NA	1	B2G0300	07/16/2012	07/16/12 22:43	
Surrogate: 1,2-Dichloroethane-d4	97.2 %		70 - 130		B2G0300	07/16/2012	07/16/12 22:43	
Surrogate: 4-Bromofluorobenzene	98.1 %		70 - 130		B2G0300	07/16/2012	07/16/12 22:43	
Surrogate: Dibromofluoromethane	99.7 %		70 - 130		B2G0300	07/16/2012	07/16/12 22:43	
Surrogate: Toluene-d8	101 %		70 - 130		B2G0300	07/16/2012	07/16/12 22:43	

1,4-Dioxane by EPA 8270: Isotope Dilution Technique

Analyst: BB

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,4-Dioxane	19	2.0	NA	1	B2G0217	07/13/2012	07/13/12 15:11	
Surrogate: 1,2-Dichlorobenzene-d4	61.9 %		37 - 93		B2G0217	07/13/2012	07/13/12 15:11	
Surrogate: 2-Fluorobiphenyl	70.5 %		51 - 100		B2G0217	07/13/2012	07/13/12 15:11	
Surrogate: 4-Terphenyl-d14	103 %		58 - 113		B2G0217	07/13/2012	07/13/12 15:11	
Surrogate: Nitrobenzene-d5	71.4 %		39 - 95		B2G0217	07/13/2012	07/13/12 15:11	



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 San Diego , CA 92122

Project Number : RAYTHEON FULLERTON - MONTHLY
 Report To : Steve Netto
 Reported : 07/27/2012

QUALITY CONTROL SECTION

Anions by Ion Chromatography EPA 300.0 - Quality Control

Analyte	Result (mg/L)	PQL (mg/L)	Spike Level	Source Result	% Rec % Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B2G0445 - No_Prep_IC_1									
Blank (B2G0445-BLK1)				Prepared: 7/19/2012 Analyzed: 7/19/2012					
Bromide	ND	0.05			NR				
LCS (B2G0445-BS1)				Prepared: 7/19/2012 Analyzed: 7/19/2012					
Bromide	0.99	0.05	1.00000		99	90 - 110			
Duplicate (B2G0445-DUP1)		Source: 1202460-02		Prepared: 7/19/2012 Analyzed: 7/19/2012					
Bromide	0.209400	0.05		0.193300	NR		8	20	
Matrix Spike (B2G0445-MS1)		Source: 1202460-02		Prepared: 7/19/2012 Analyzed: 7/19/2012					
Bromide	2.8	0.05	2.50000	0.19	104	80 - 120			
Matrix Spike Dup (B2G0445-MSD1)		Source: 1202460-02		Prepared: 7/19/2012 Analyzed: 7/19/2012					
Bromide	2.8	0.05	2.50000	0.19	103	80 - 120	0.6	20	



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Project Number : RAYTHEON FULLERTON - MONTHLY

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Reported : 07/27/2012

Total Dissolved Solids (Residue, Filterable) by SM 2540C - Quality Control

Analyte	Result (mg/L)	PQL (mg/L)	Spike Level	Source Result	% Rec % Rec	% Rec Limits	RPD	RPD	Limit	Notes
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Batch B2G0374 - No_Prep_WC_1

Blank (B2G0374-BLK1)

Prepared: 7/17/2012 Analyzed: 7/18/2012

Residue, Dissolved

ND

10

NR

LCS (B2G0374-BS1)

Prepared: 7/17/2012 Analyzed: 7/18/2012

Residue, Dissolved

997.000

10

970.000

103

80 - 120

Duplicate (B2G0374-DUP1)

Source: 1202462-01

Prepared: 7/17/2012 Analyzed: 7/18/2012

Residue, Dissolved

960

25

910

NR

5

10



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Project Number : RAYTHEON FULLERTON - MONTHLY

Report To : Steve Netto

Reported : 07/27/2012

Total Suspended Solids (Residue, Non-Filtrable) by SM 2540D - Quality Control

Analyte	Result (mg/L)	PQL (mg/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B2G0241 - No_Prep_WC_1

Blank (B2G0241-BLK1)

Prepared: 7/13/2012 Analyzed: 7/13/2012

Residue, Suspended

ND

10

NR

LCS (B2G0241-BS1)

Prepared: 7/13/2012 Analyzed: 7/13/2012

Residue, Suspended

94

10

96.6000

97

80 - 120

Duplicate (B2G0241-DUP1)

Source: 1202471-01

Prepared: 7/13/2012 Analyzed: 7/13/2012

Residue, Suspended

45.0000

10

43.0000

NR

5

10



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Project Number : RAYTHEON FULLERTON - MONTHLY

Report To : Steve Netto

Reported : 07/27/2012

Volatile Organic Compounds by EPA 8260 - Quality Control

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec % Rec	% Rec Limits	RPD RPD	RPD Limit	Notes
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Batch B2G0300 - MSVOAW_LL

Blank (B2G0300-BLK1)

Prepared: 7/16/2012 Analyzed: 7/16/2012

1,1,1,2-Tetrachloroethane	ND	0.50			NR
1,1,1-Trichloroethane	ND	0.50			NR
1,1,2,2-Tetrachloroethane	ND	0.50			NR
1,1,2-Trichloroethane	ND	0.50			NR
1,1-Dichloroethane	ND	0.50			NR
1,1-Dichloroethene	ND	0.50			NR
1,1-Dichloropropene	ND	0.50			NR
1,2,3-Trichloropropane	ND	0.50			NR
1,2,3-Trichlorobenzene	ND	0.50			NR
1,2,4-Trichlorobenzene	ND	0.50			NR
1,2,4-Trimethylbenzene	ND	0.50			NR
1,2-Dibromo-3-chloropropane	ND	0.50			NR
1,2-Dibromoethane	ND	0.50			NR
1,2-Dichlorobenzene	ND	0.50			NR
1,2-Dichloroethane	ND	0.50			NR
1,2-Dichloropropane	ND	0.50			NR
1,3,5-Trimethylbenzene	ND	0.50			NR
1,3-Dichlorobenzene	ND	0.50			NR
1,3-Dichloropropane	ND	0.50			NR
1,4-Dichlorobenzene	ND	0.50			NR
2,2-Dichloropropane	ND	0.50			NR
2-Chlorotoluene	ND	0.50			NR
4-Chlorotoluene	ND	0.50			NR
4-Isopropyltoluene	ND	0.50			NR
Benzene	ND	0.50			NR
Bromobenzene	ND	0.50			NR
Bromodichloromethane	ND	0.50			NR
Bromoform	ND	0.50			NR
Bromomethane	ND	0.50			NR
Carbon tetrachloride	ND	0.50			NR
Chlorobenzene	ND	0.50			NR
Chloroethane	ND	0.50			NR
Chloroform	ND	0.50			NR
Chloromethane	ND	0.50			NR
cis-1,2-Dichloroethene	ND	0.50			NR
cis-1,3-Dichloropropene	ND	0.50			NR
Dibromochloromethane	ND	0.50			NR
Dibromomethane	ND	0.50			NR
Dichlorodifluoromethane	ND	0.50			NR
Ethylbenzene	ND	0.50			NR
Hexachlorobutadiene	ND	0.50			NR



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Project Number : RAYTHEON FULLERTON - MONTHLY

Report To : Steve Netto

Reported : 07/27/2012

Volatile Organic Compounds by EPA 8260 - Quality Control (cont'd)

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec % Rec	% Rec Limits	RPD RPD	RPD Limit	Notes
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Batch B2G0300 - MSVOAW_LL (continued)

Blank (B2G0300-BLK1) - Continued

Prepared: 7/16/2012 Analyzed: 7/16/2012

Isopropylbenzene	ND	0.50						NR	
m,p-Xylene	ND	1.0						NR	
Methylene chloride	ND	1.0						NR	
n-Butylbenzene	ND	0.50						NR	
n-Propylbenzene	ND	0.50						NR	
Naphthalene	ND	0.50						NR	
o-Xylene	ND	0.50						NR	
sec-Butylbenzene	ND	0.50						NR	
Styrene	ND	0.50						NR	
tert-Butylbenzene	ND	0.50						NR	
Tetrachloroethene	ND	0.50						NR	
Toluene	ND	0.50						NR	
trans-1,2-Dichloroethene	ND	0.50						NR	
Trichloroethene	ND	0.50						NR	
Trichlorofluoromethane	ND	0.50						NR	
Vinyl chloride	ND	0.50						NR	

Surrogate: 1,2-Dichloroethane-d4	23.61		25.0000		94.4	70 - 130			
Surrogate: 4-Bromofluorobenzene	24.51		25.0000		98.0	70 - 130			
Surrogate: Dibromofluoromethane	24.91		25.0000		99.6	70 - 130			
Surrogate: Toluene-d8	25.39		25.0000		102	70 - 130			

LCS (B2G0300-BS1)

Prepared: 7/16/2012 Analyzed: 7/16/2012

1,1-Dichloroethene	20.4400		20.0000		102	70 - 130			
Benzene	19.0500		20.0000		95.2	70 - 130			
Chlorobenzene	19.7300		20.0000		98.6	70 - 130			
MTBE	17.6500		20.0000		88.2	70 - 130			
Toluene	19.6200		20.0000		98.1	70 - 130			
Trichloroethene	19.0400		20.0000		95.2	70 - 130			

Surrogate: 1,2-Dichloroethane-d4	23.80		25.0000		95.2	70 - 130			
Surrogate: 4-Bromofluorobenzene	24.94		25.0000		99.8	70 - 130			
Surrogate: Dibromofluoromethane	24.86		25.0000		99.4	70 - 130			
Surrogate: Toluene-d8	25.41		25.0000		102	70 - 130			

LCS Dup (B2G0300-BSD1)

Prepared: 7/16/2012 Analyzed: 7/16/2012

1,1-Dichloroethene	19.8600		20.0000		99.3	70 - 130	2.88	20	
Benzene	18.7300		20.0000		93.6	70 - 130	1.69	20	
Chlorobenzene	19.4900		20.0000		97.4	70 - 130	1.22	20	
MTBE	19.0000		20.0000		95.0	70 - 130	7.37	20	
Toluene	18.9700		20.0000		94.8	70 - 130	3.37	20	
Trichloroethene	18.5300		20.0000		92.6	70 - 130	2.71	20	

Surrogate: 1,2-Dichloroethane-d4	23.84		25.0000		95.4	70 - 130			
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Project Number : RAYTHEON FULLERTON - MONTHLY

Report To : Steve Netto

Reported : 07/27/2012

Volatile Organic Compounds by EPA 8260 - Quality Control (cont'd)

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B2G0300 - MSVOAW_LL (continued)

LCS Dup (B2G0300-BSD1) - Continued

Prepared: 7/16/2012 Analyzed: 7/16/2012

Surrogate: 4-Bromofluorobenzene	24.92		25.0000		99.7	70 - 130			
Surrogate: Dibromofluoromethane	24.61		25.0000		98.4	70 - 130			
Surrogate: Toluene-d8	25.32		25.0000		101	70 - 130			



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Project Number : RAYTHEON FULLERTON - MONTHLY

Report To : Steve Netto

Reported : 07/27/2012

1,4-Dioxane by EPA 8270: Isotope Dilution Technique - Quality Control

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec % Rec	% Rec Limits	RPD RPD	RPD Limit	Notes
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Batch B2G0217 - MSSEMI_ISOTOPEDILN

Blank (B2G0217-BLK1)

Prepared: 7/13/2012 Analyzed: 7/13/2012

1,4-Dioxane	ND	2.0			NR				
Surrogate: 1,2-Dichlorobenzene-d4	59.21		100.000		59.2	37 - 93			
Surrogate: 2-Fluorobiphenyl	77.79		100.000		77.8	51 - 100			
Surrogate: 4-Terphenyl-d14	100.5		100.000		101	58 - 113			
Surrogate: Nitrobenzene-d5	71.31		100.000		71.3	39 - 95			

LCS (B2G0217-BS1)

Prepared: 7/13/2012 Analyzed: 7/13/2012

1,4-Dioxane	103.210	2.0	100.000		103	70 - 130			
Surrogate: 1,2-Dichlorobenzene-d4	64.72		100.000		64.7	37 - 93			
Surrogate: 2-Fluorobiphenyl	96.93		100.000		96.9	51 - 100			
Surrogate: 4-Terphenyl-d14	96.39		100.000		96.4	58 - 113			
Surrogate: Nitrobenzene-d5	83.19		100.000		83.2	39 - 95			

LCS Dup (B2G0217-BSD1)

Prepared: 7/13/2012 Analyzed: 7/13/2012

1,4-Dioxane	110.500	2.0	100.000		110	70 - 130	6.82	20	
Surrogate: 1,2-Dichlorobenzene-d4	65.18		100.000		65.2	37 - 93			
Surrogate: 2-Fluorobiphenyl	96.59		100.000		96.6	51 - 100			
Surrogate: 4-Terphenyl-d14	99.49		100.000		99.5	58 - 113			
Surrogate: Nitrobenzene-d5	83.61		100.000		83.6	39 - 95			



Hargis & Associates, Inc.

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Project Number : RAYTHEON FULLERTON - MONTHLY

Report To : Steve Netto

Reported : 07/27/2012

1,4-Dioxane by EPA 8270/SIM: Isotope Dilution Technique - Quality Control

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec % Rec	% Rec Limits	RPD RPD	RPD Limit	Notes
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Batch B2G0312 - MSSEMI

Blank (B2G0312-BLK1)

Prepared: 7/17/2012 Analyzed: 7/17/2012

1,4-Dioxane	ND	0.20			NR				
Surrogate: 1,2-Dichlorobenzene-d4	0.8236		1.00000		82.4	36 - 107			
Surrogate: 2-Fluorobiphenyl	0.8309		1.00000		83.1	42 - 120			
Surrogate: 4-Terphenyl-d14	0.9986		1.00000		99.9	67 - 142			
Surrogate: Nitrobenzene-d5	0.8716		1.00000		87.2	36 - 130			

LCS (B2G0312-BS1)

Prepared: 7/17/2012 Analyzed: 7/17/2012

1,4-Dioxane	1.26983	0.20	1.00000		127	70 - 130			
Surrogate: 1,2-Dichlorobenzene-d4	0.6400		1.00000		64.0	36 - 107			
Surrogate: 2-Fluorobiphenyl	0.6793		1.00000		67.9	42 - 120			
Surrogate: 4-Terphenyl-d14	0.9214		1.00000		92.1	67 - 142			
Surrogate: Nitrobenzene-d5	0.7071		1.00000		70.7	36 - 130			

LCS Dup (B2G0312-BSD1)

Prepared: 7/17/2012 Analyzed: 7/17/2012

1,4-Dioxane	1.16927	0.20	1.00000		117	70 - 130	8.25	20	
Surrogate: 1,2-Dichlorobenzene-d4	0.6616		1.00000		66.2	36 - 107			
Surrogate: 2-Fluorobiphenyl	0.6727		1.00000		67.3	42 - 120			
Surrogate: 4-Terphenyl-d14	0.8811		1.00000		88.1	67 - 142			
Surrogate: Nitrobenzene-d5	0.6645		1.00000		66.4	36 - 130			



Hargis & Associates, Inc.

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San Diego , CA 92122

Project Number : RAYTHEON FULLERTON - MONTHLY

Report To : Steve Netto

Reported : 07/27/2012

Notes and Definitions

ND	Analyte not detected at or above reporting limit
PQL	Practical Quantitation Limit
MDL	Method Detection Limit
NR	Not Reported
RPD	Relative Percent Difference
CA1	CA-NELAP (CDPH)
CA2	CA-ELAP (CDPH)
OR1	OR-NELAP (OSPHL)
TX1	TX-NELAP (TCEQ)

Bromate by EPA 317
 Ion Chromatography with Post-Column Derivatization-Visible Absorption

Column: Dionex AS9-HC/AG9-HSC
 Eluent: 30 mM Na₂CO₃
 Flow: 1.0 mL/min
 Injection: 250 µL
 Detection: Post-column derivatization, Visible detection, 450 nm

Sample preparation: The undiluted samples were treated with a Dionex OnGuard II H cartridge to remove excess basic cations. One sample required dilution with water due to an interfering peak. The detection limit is adjusted for the dilution necessary for analysis.

Parts Per Billion (µg/L)

Sample ID	Result	Detection Limit
1202460-02 / CEFF	4.2	0.5
1202460-04 / POX	5	5
1202460-06 / EW-02	ND	0.5
Method Blank	ND	0.5

Date Analyzed: 07-24-12

Quality Control Summary

Sample ID: 1202460-02 / CEFF

Analyte	Sample Result	Spike Conc	Spike Result	Spike % Rec	Spike Duplicate Result	Spike Duplicate % Rec	Spike RPD
Bromate	4.2	5.6	10.5	113	9.8	100	7
QC Guidelines				75-125		75-125	NMT 10

ADVANCED TECHNOLOGY
LABORATORIES

SUBCONTRACT ORDER

Work Order: 1202460

SENDING LABORATORY:


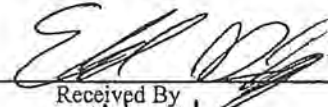
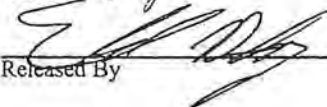
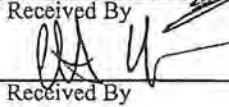
Advanced Technology Laboratories
3275 Walnut Avenue
Signal Hill, CA 90755
Phone: 562.989.4045
Fax: 562.989.6348
Project Manager: Rachele Arada

RECEIVING LABORATORY:

Exova Inc.
9240 Santa Fe Springs Road
Santa Fe Springs, CA 90670
Phone :(562) 948-2225
Fax: (562) 948-5850
PO#: SC07408 Standard TAT RA

IMPORTANT : Please include Work Order # and PO # in your invoice.

Analysis	Due	Expires	Sampled	Comments
ATL Lab#: 1202460-02 317.0	/ CEFF ²⁶ 07/18/12 17:00	07/12/12 08:20	Groundwater 07/11/12 08:20	Report Bromate by 317
ATL Lab#: 1202460-04 317.0	/ POX ²⁶ 07/18/12 17:00	07/12/12 08:00	Groundwater 07/11/12 08:00	
ATL Lab#: 1202460-06 317.0	/ EW-02 ²⁶ 07/18/12 17:00	07/12/12 09:30	Groundwater 07/11/12 09:30	

	7/11/12		7/12/12	9:30
Released By	Date	Received By	Date	
	7/12/12 12:15		07-12-12	12:14pm
Released By	Date	Received By	Date	

PROJECT NAME RAYTHEON FULLERTON - MONTHLY		PROJECT No./TASK No. 532.15		SAMPLE CONTAINERS		ANALYSIS REQUESTED		ESTIMATED CONCENTRATION RANGE (ppb) FOR VOAS		SPECIAL HANDLING		LABORATORY INFORMATION													
PROJECT MANAGER CHRIS ROSS		Phone No. 858-455-6500										ATL													
QA MANAGER STEVE NETTO		Fax No. 858-455-6533										C/O RACHELLE ARADA													
SAMPLER (SIGNATURE) 		SAMPLER (PRINTED) MARCOS RODRIGUEZ										3275 WALNUT AVE.													
												SIGNAL HILL, CA													
												90755													
												562- 988 -4045													
												989													
												REMARKS													
LAB ID	SAMPLE ID	DATE	TIME	SOIL	MATRIX	PRESERVATION	40 ml Glass VOA	125 ml Poly	250 ml Poly	500 ml Poly	1 L Amber	VOCs by EPA 8260B	1,4-Dioxane by EPA 8270 SIM	Bromate by 317	TDS by SM2540C	TSS by SM2540D	Bromide by 300	1,4-Dioxane by EPA 8270 MOD	9-10	10-100	100-1,000	>1,000			
1202460-01	TB-091112	7/11/12	07:00									X													Please include
2	CEFF		08:20	X				3	2	1		X	XX	X											mrodriguez@hargis.com
3	CBT		08:10	X				3				X													in lab report
4	POX		08:00	X				3	2	1	1	XX	XX	X											distribution list
5	PF		07:55	X						1				X											set 1,4-Dioxane
6	EW-02		09:30	X				3	2	2	1	X	XX	XX	XX										MDL to 1.0 ppm
Total number of Containers per analysis:							1465	2											Total No. of Containers: 27						

Relinquished by: 		Date 7/11/12	Received by: 	Date 7/11/12	INSTRUCTIONS 1. Fill out form completely except for shaded areas (lab use only); sign only after verified for completeness. 2. Complete in ballpoint pen. Draw one line through errors, initial and date correction. 3. Indicate number of sample containers in analysis request space; indicate choice with ✓ or x. 4. Note applicable preservatives, special instructions, and deviations from typical environmental samples. 5. Consult project QA documents for specific instructions.	Shipment Method: <u>DELIVER</u>	
Company HARGIS + ASSOCIATES, INC.		Time 10:45	Company ATL	Time 10:45		Send Results to: <u>Steve Netto</u>	
Relinquished by:		Date	Received by:	Date	Sample Receipt: <input type="checkbox"/> No. of containers correct <input type="checkbox"/> custody seals secure	Temp. @ receipt <u>3.8</u> °C	
Company		Time	Company	Time		<input type="checkbox"/> received good condition/cold <input type="checkbox"/> conforms to COC document	
							7571 TOWNE CENTRE DRIVE, SUITE 375 SAN DIEGO, CA 92122 (858) 455-6500
							<input type="checkbox"/> 1640 SOUTH STAPLEY DRIVE, SUITE 124 MESA, AZ 85204 (480) 345-0888
							<input type="checkbox"/> 1820 EAST RIVER ROAD, SUITE 220 TUCSON, AZ 85718 (520) 881-7300
							Send invoice to San Diego, CA Attn: Accounts Payable

August 23, 2012

Steve Netto
Hargis & Associates, Inc.
9171 Towne Centre Drive, Suite 375
San Diego, CA 92122
Tel: (619) 249-3166
Fax: (858) 455-6533



Re: ATL Work Order Number : 1202729
Client Reference : RAYTHEON FULLERTON-MONTHLY, 532.15

Enclosed are the results for sample(s) received on August 03, 2012 by Advanced Technology Laboratories. The sample(s) are tested for the parameters as indicated on the enclosed chain of custody in accordance with applicable laboratory certifications. The laboratory results contained in this report specifically pertains to the sample(s) submitted.

Thank you for the opportunity to serve the needs of your company. If you have any questions, please feel free to contact me or your Project Manager.

Sincerely,

Eddie Rodriguez
Laboratory Director

The cover letter and the case narrative are an integral part of this analytical report and its absence renders the report invalid. The report cannot be reproduced without written permission from the client and Advanced Technology Laboratories.



Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : RAYTHEON FULLERTON-MONTHLY,

Report To : Steve Netto

Reported : 08/23/2012

SUMMARY OF SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
TB-080312	1202729-01	Lab H2O	8/03/12 7:00	8/03/12 11:04
EW-02	1202729-02	Groundwater	8/03/12 9:40	8/03/12 11:04
PF	1202729-03	Groundwater	8/03/12 8:30	8/03/12 11:04
POX	1202729-04	Groundwater	8/03/12 8:40	8/03/12 11:04
CBT	1202729-05	Groundwater	8/03/12 8:50	8/03/12 11:04
CEFF	1202729-06	Groundwater	8/03/12 9:05	8/03/12 11:04

CASE NARRATIVE

The samples for EPA 317 (Bromate) analysis were subcontracted to Exova, Inc. with ELAP Cert.# 2652.



Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : RAYTHEON FULLERTON-MONTHLY,

Report To : Steve Netto

Reported : 08/23/2012

Client Sample ID TB-080312

Lab ID: 1202729-01

Volatile Organic Compounds by EPA 8260

Analyst: RP

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	0.50	NA	1	B2H0165	08/08/2012	08/08/12 11:26	
1,1,1-Trichloroethane	ND	0.50	NA	1	B2H0165	08/08/2012	08/08/12 11:26	
1,1,2,2-Tetrachloroethane	ND	0.50	NA	1	B2H0165	08/08/2012	08/08/12 11:26	
1,1,2-Trichloroethane	ND	0.50	NA	1	B2H0165	08/08/2012	08/08/12 11:26	
1,1-Dichloroethane	ND	0.50	NA	1	B2H0165	08/08/2012	08/08/12 11:26	
1,1-Dichloroethene	ND	0.50	NA	1	B2H0165	08/08/2012	08/08/12 11:26	
1,1-Dichloropropene	ND	0.50	NA	1	B2H0165	08/08/2012	08/08/12 11:26	
1,2,3-Trichloropropane	ND	0.50	NA	1	B2H0165	08/08/2012	08/08/12 11:26	
1,2,3-Trichlorobenzene	ND	0.50	NA	1	B2H0165	08/08/2012	08/08/12 11:26	
1,2,4-Trichlorobenzene	ND	0.50	NA	1	B2H0165	08/08/2012	08/08/12 11:26	
1,2,4-Trimethylbenzene	ND	0.50	NA	1	B2H0165	08/08/2012	08/08/12 11:26	
1,2-Dibromo-3-chloropropane	ND	0.50	NA	1	B2H0165	08/08/2012	08/08/12 11:26	
1,2-Dibromoethane	ND	0.50	NA	1	B2H0165	08/08/2012	08/08/12 11:26	
1,2-Dichlorobenzene	ND	0.50	NA	1	B2H0165	08/08/2012	08/08/12 11:26	
1,2-Dichloroethane	ND	0.50	NA	1	B2H0165	08/08/2012	08/08/12 11:26	
1,2-Dichloropropane	ND	0.50	NA	1	B2H0165	08/08/2012	08/08/12 11:26	
1,3,5-Trimethylbenzene	ND	0.50	NA	1	B2H0165	08/08/2012	08/08/12 11:26	
1,3-Dichlorobenzene	ND	0.50	NA	1	B2H0165	08/08/2012	08/08/12 11:26	
1,3-Dichloropropane	ND	0.50	NA	1	B2H0165	08/08/2012	08/08/12 11:26	
1,4-Dichlorobenzene	ND	0.50	NA	1	B2H0165	08/08/2012	08/08/12 11:26	
2,2-Dichloropropane	ND	0.50	NA	1	B2H0165	08/08/2012	08/08/12 11:26	
2-Chlorotoluene	ND	0.50	NA	1	B2H0165	08/08/2012	08/08/12 11:26	
4-Chlorotoluene	ND	0.50	NA	1	B2H0165	08/08/2012	08/08/12 11:26	
4-Isopropyltoluene	ND	0.50	NA	1	B2H0165	08/08/2012	08/08/12 11:26	
Benzene	ND	0.50	NA	1	B2H0165	08/08/2012	08/08/12 11:26	
Bromobenzene	ND	0.50	NA	1	B2H0165	08/08/2012	08/08/12 11:26	
Bromodichloromethane	ND	0.50	NA	1	B2H0165	08/08/2012	08/08/12 11:26	
Bromoform	ND	0.50	NA	1	B2H0165	08/08/2012	08/08/12 11:26	
Bromomethane	ND	0.50	NA	1	B2H0165	08/08/2012	08/08/12 11:26	
Carbon tetrachloride	ND	0.50	NA	1	B2H0165	08/08/2012	08/08/12 11:26	
Chlorobenzene	ND	0.50	NA	1	B2H0165	08/08/2012	08/08/12 11:26	
Chloroethane	ND	0.50	NA	1	B2H0165	08/08/2012	08/08/12 11:26	
Chloroform	ND	0.50	NA	1	B2H0165	08/08/2012	08/08/12 11:26	
Chloromethane	ND	0.50	NA	1	B2H0165	08/08/2012	08/08/12 11:26	
cis-1,2-Dichloroethene	ND	0.50	NA	1	B2H0165	08/08/2012	08/08/12 11:26	
cis-1,3-Dichloropropene	ND	0.50	NA	1	B2H0165	08/08/2012	08/08/12 11:26	
Dibromochloromethane	ND	0.50	NA	1	B2H0165	08/08/2012	08/08/12 11:26	



Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : RAYTHEON FULLERTON-MONTHLY,

Report To : Steve Netto

Reported : 08/23/2012

Client Sample ID TB-080312

Lab ID: 1202729-01

Volatile Organic Compounds by EPA 8260

Analyst: RP

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Dibromomethane	ND	0.50	NA	1	B2H0165	08/08/2012	08/08/12 11:26	
Dichlorodifluoromethane	ND	0.50	NA	1	B2H0165	08/08/2012	08/08/12 11:26	
Ethylbenzene	ND	0.50	NA	1	B2H0165	08/08/2012	08/08/12 11:26	
Hexachlorobutadiene	ND	0.50	NA	1	B2H0165	08/08/2012	08/08/12 11:26	
Isopropylbenzene	ND	0.50	NA	1	B2H0165	08/08/2012	08/08/12 11:26	
m,p-Xylene	ND	1.0	NA	1	B2H0165	08/08/2012	08/08/12 11:26	
Methylene chloride	ND	1.0	NA	1	B2H0165	08/08/2012	08/08/12 11:26	
n-Butylbenzene	ND	0.50	NA	1	B2H0165	08/08/2012	08/08/12 11:26	
n-Propylbenzene	ND	0.50	NA	1	B2H0165	08/08/2012	08/08/12 11:26	
Naphthalene	ND	0.50	NA	1	B2H0165	08/08/2012	08/08/12 11:26	
o-Xylene	ND	0.50	NA	1	B2H0165	08/08/2012	08/08/12 11:26	
sec-Butylbenzene	ND	0.50	NA	1	B2H0165	08/08/2012	08/08/12 11:26	
Styrene	ND	0.50	NA	1	B2H0165	08/08/2012	08/08/12 11:26	
tert-Butylbenzene	ND	0.50	NA	1	B2H0165	08/08/2012	08/08/12 11:26	
Tetrachloroethene	ND	0.50	NA	1	B2H0165	08/08/2012	08/08/12 11:26	
Toluene	ND	0.50	NA	1	B2H0165	08/08/2012	08/08/12 11:26	
trans-1,2-Dichloroethene	ND	0.50	NA	1	B2H0165	08/08/2012	08/08/12 11:26	
Trichloroethene	ND	0.50	NA	1	B2H0165	08/08/2012	08/08/12 11:26	
Trichlorofluoromethane	ND	0.50	NA	1	B2H0165	08/08/2012	08/08/12 11:26	
Vinyl chloride	ND	0.50	NA	1	B2H0165	08/08/2012	08/08/12 11:26	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>104 %</i>		<i>70 - 130</i>		B2H0165	08/08/2012	<i>08/08/12 11:26</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>99.4 %</i>		<i>70 - 130</i>		B2H0165	08/08/2012	<i>08/08/12 11:26</i>	
<i>Surrogate: Dibromofluoromethane</i>	<i>103 %</i>		<i>70 - 130</i>		B2H0165	08/08/2012	<i>08/08/12 11:26</i>	
<i>Surrogate: Toluene-d8</i>	<i>101 %</i>		<i>70 - 130</i>		B2H0165	08/08/2012	<i>08/08/12 11:26</i>	



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San Diego , CA 92122

Project Number : RAYTHEON FULLERTON-MONTHLY,

Report To : Steve Netto

Reported : 08/23/2012

Client Sample ID EW-02

Lab ID: 1202729-02

Anions by Ion Chromatography EPA 300.0

Analyst: AG

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Bromide	0.52	0.05	NA	1	B2H0185	08/08/2012	08/08/12 10:29	

Total Dissolved Solids (Residue, Filterable) by SM 2540C

Analyst: KT

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Residue, Dissolved	670	10	NA	1	B2H0234	08/09/2012	08/09/12 15:00	

Total Suspended Solids (Residue, Non-Filtrable) by SM 2540D

Analyst: AG

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Residue, Suspended	ND	10	NA	1	B2H0181	08/08/2012	08/08/12 10:02	

Volatile Organic Compounds by EPA 8260

Analyst: RP

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	0.50	NA	1	B2H0165	08/08/2012	08/08/12 18:31	
1,1,1-Trichloroethane	ND	0.50	NA	1	B2H0165	08/08/2012	08/08/12 18:31	
1,1,2,2-Tetrachloroethane	ND	0.50	NA	1	B2H0165	08/08/2012	08/08/12 18:31	
1,1,2-Trichloroethane	ND	0.50	NA	1	B2H0165	08/08/2012	08/08/12 18:31	
1,1-Dichloroethane	0.55	0.50	NA	1	B2H0165	08/08/2012	08/08/12 18:31	
1,1-Dichloroethene	67	0.50	NA	1	B2H0165	08/08/2012	08/08/12 18:31	
1,1-Dichloropropene	ND	0.50	NA	1	B2H0165	08/08/2012	08/08/12 18:31	
1,2,3-Trichloropropane	ND	0.50	NA	1	B2H0165	08/08/2012	08/08/12 18:31	
1,2,3-Trichlorobenzene	ND	0.50	NA	1	B2H0165	08/08/2012	08/08/12 18:31	
1,2,4-Trichlorobenzene	ND	0.50	NA	1	B2H0165	08/08/2012	08/08/12 18:31	
1,2,4-Trimethylbenzene	ND	0.50	NA	1	B2H0165	08/08/2012	08/08/12 18:31	
1,2-Dibromo-3-chloropropane	ND	0.50	NA	1	B2H0165	08/08/2012	08/08/12 18:31	
1,2-Dibromoethane	ND	0.50	NA	1	B2H0165	08/08/2012	08/08/12 18:31	
1,2-Dichlorobenzene	ND	0.50	NA	1	B2H0165	08/08/2012	08/08/12 18:31	
1,2-Dichloroethane	ND	0.50	NA	1	B2H0165	08/08/2012	08/08/12 18:31	
1,2-Dichloropropane	ND	0.50	NA	1	B2H0165	08/08/2012	08/08/12 18:31	
1,3,5-Trimethylbenzene	ND	0.50	NA	1	B2H0165	08/08/2012	08/08/12 18:31	
1,3-Dichlorobenzene	ND	0.50	NA	1	B2H0165	08/08/2012	08/08/12 18:31	
1,3-Dichloropropane	ND	0.50	NA	1	B2H0165	08/08/2012	08/08/12 18:31	



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9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : RAYTHEON FULLERTON-MONTHLY,

Report To : Steve Netto

Reported : 08/23/2012

Client Sample ID EW-02

Lab ID: 1202729-02

Volatile Organic Compounds by EPA 8260

Analyst: RP

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,4-Dichlorobenzene	ND	0.50	NA	1	B2H0165	08/08/2012	08/08/12 18:31	
2,2-Dichloropropane	ND	0.50	NA	1	B2H0165	08/08/2012	08/08/12 18:31	
2-Chlorotoluene	ND	0.50	NA	1	B2H0165	08/08/2012	08/08/12 18:31	
4-Chlorotoluene	ND	0.50	NA	1	B2H0165	08/08/2012	08/08/12 18:31	
4-Isopropyltoluene	ND	0.50	NA	1	B2H0165	08/08/2012	08/08/12 18:31	
Benzene	ND	0.50	NA	1	B2H0165	08/08/2012	08/08/12 18:31	
Bromobenzene	ND	0.50	NA	1	B2H0165	08/08/2012	08/08/12 18:31	
Bromodichloromethane	ND	0.50	NA	1	B2H0165	08/08/2012	08/08/12 18:31	
Bromoform	ND	0.50	NA	1	B2H0165	08/08/2012	08/08/12 18:31	
Bromomethane	ND	0.50	NA	1	B2H0165	08/08/2012	08/08/12 18:31	
Carbon tetrachloride	ND	0.50	NA	1	B2H0165	08/08/2012	08/08/12 18:31	
Chlorobenzene	ND	0.50	NA	1	B2H0165	08/08/2012	08/08/12 18:31	
Chloroethane	ND	0.50	NA	1	B2H0165	08/08/2012	08/08/12 18:31	
Chloroform	ND	0.50	NA	1	B2H0165	08/08/2012	08/08/12 18:31	
Chloromethane	ND	0.50	NA	1	B2H0165	08/08/2012	08/08/12 18:31	
cis-1,2-Dichloroethene	ND	0.50	NA	1	B2H0165	08/08/2012	08/08/12 18:31	
cis-1,3-Dichloropropene	ND	0.50	NA	1	B2H0165	08/08/2012	08/08/12 18:31	
Dibromochloromethane	ND	0.50	NA	1	B2H0165	08/08/2012	08/08/12 18:31	
Dibromomethane	ND	0.50	NA	1	B2H0165	08/08/2012	08/08/12 18:31	
Dichlorodifluoromethane	ND	0.50	NA	1	B2H0165	08/08/2012	08/08/12 18:31	
Ethylbenzene	ND	0.50	NA	1	B2H0165	08/08/2012	08/08/12 18:31	
Hexachlorobutadiene	ND	0.50	NA	1	B2H0165	08/08/2012	08/08/12 18:31	
Isopropylbenzene	ND	0.50	NA	1	B2H0165	08/08/2012	08/08/12 18:31	
m,p-Xylene	ND	1.0	NA	1	B2H0165	08/08/2012	08/08/12 18:31	
Methylene chloride	ND	1.0	NA	1	B2H0165	08/08/2012	08/08/12 18:31	
n-Butylbenzene	ND	0.50	NA	1	B2H0165	08/08/2012	08/08/12 18:31	
n-Propylbenzene	ND	0.50	NA	1	B2H0165	08/08/2012	08/08/12 18:31	
Naphthalene	ND	0.50	NA	1	B2H0165	08/08/2012	08/08/12 18:31	
o-Xylene	ND	0.50	NA	1	B2H0165	08/08/2012	08/08/12 18:31	
sec-Butylbenzene	ND	0.50	NA	1	B2H0165	08/08/2012	08/08/12 18:31	
Styrene	ND	0.50	NA	1	B2H0165	08/08/2012	08/08/12 18:31	
tert-Butylbenzene	ND	0.50	NA	1	B2H0165	08/08/2012	08/08/12 18:31	
Tetrachloroethene	ND	0.50	NA	1	B2H0165	08/08/2012	08/08/12 18:31	
Toluene	ND	0.50	NA	1	B2H0165	08/08/2012	08/08/12 18:31	
trans-1,2-Dichloroethene	ND	0.50	NA	1	B2H0165	08/08/2012	08/08/12 18:31	
Trichloroethene	ND	0.50	NA	1	B2H0165	08/08/2012	08/08/12 18:31	
Trichlorofluoromethane	ND	0.50	NA	1	B2H0165	08/08/2012	08/08/12 18:31	



Hargis & Associates, Inc.
9171 Towne Centre Drive, Suite 375
San Diego, CA 92122

Project Number : RAYTHEON FULLERTON-MONTHLY,
Report To : Steve Netto
Reported : 08/23/2012

Client Sample ID EW-02
Lab ID: 1202729-02

Volatile Organic Compounds by EPA 8260

Analyst: RP

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Vinyl chloride	ND	0.50	NA	1	B2H0165	08/08/2012	08/08/12 18:31	
Surrogate: 1,2-Dichloroethane-d4	111 %		70 - 130		B2H0165	08/08/2012	08/08/12 18:31	
Surrogate: 4-Bromofluorobenzene	98.3 %		70 - 130		B2H0165	08/08/2012	08/08/12 18:31	
Surrogate: Dibromofluoromethane	107 %		70 - 130		B2H0165	08/08/2012	08/08/12 18:31	
Surrogate: Toluene-d8	100 %		70 - 130		B2H0165	08/08/2012	08/08/12 18:31	

1,4-Dioxane by EPA 8270: Isotope Dilution Technique

Analyst: BB

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,4-Dioxane	16	2.0	NA	1	B2H0223	08/10/2012	08/10/12 12:52	
Surrogate: 1,2-Dichlorobenzene-d4	63.0 %		37 - 93		B2H0223	08/10/2012	08/10/12 12:52	
Surrogate: 2-Fluorobiphenyl	76.4 %		51 - 100		B2H0223	08/10/2012	08/10/12 12:52	
Surrogate: 4-Terphenyl-d14	92.9 %		58 - 113		B2H0223	08/10/2012	08/10/12 12:52	
Surrogate: Nitrobenzene-d5	67.4 %		39 - 95		B2H0223	08/10/2012	08/10/12 12:52	



Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : RAYTHEON FULLERTON-MONTHLY,

Report To : Steve Netto

Reported : 08/23/2012

Client Sample ID PF

Lab ID: 1202729-03

Total Suspended Solids (Residue, Non-Filtrable) by SM 2540D

Analyst: AG

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Residue, Suspended	ND	10	NA	1	B2H0181	08/08/2012	08/08/12 10:04	



Hargis & Associates, Inc.

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San Diego , CA 92122

Project Number : RAYTHEON FULLERTON-MONTHLY,

Report To : Steve Netto

Reported : 08/23/2012

Client Sample ID POX

Lab ID: 1202729-04

Anions by Ion Chromatography EPA 300.0

Analyst: AG

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Bromide	0.50	0.05	NA	1	B2H0185	08/08/2012	08/08/12 10:40	

Total Dissolved Solids (Residue, Filterable) by SM 2540C

Analyst: KT

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Residue, Dissolved	630	10	NA	1	B2H0234	08/09/2012	08/09/12 15:02	

Volatile Organic Compounds by EPA 8260

Analyst: RP

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	0.50	NA	1	B2H0165	08/08/2012	08/08/12 17:30	
1,1,1-Trichloroethane	ND	0.50	NA	1	B2H0165	08/08/2012	08/08/12 17:30	
1,1,2,2-Tetrachloroethane	ND	0.50	NA	1	B2H0165	08/08/2012	08/08/12 17:30	
1,1,2-Trichloroethane	ND	0.50	NA	1	B2H0165	08/08/2012	08/08/12 17:30	
1,1-Dichloroethane	ND	0.50	NA	1	B2H0165	08/08/2012	08/08/12 17:30	
1,1-Dichloroethene	ND	0.50	NA	1	B2H0165	08/08/2012	08/08/12 17:30	
1,1-Dichloropropene	ND	0.50	NA	1	B2H0165	08/08/2012	08/08/12 17:30	
1,2,3-Trichloropropane	ND	0.50	NA	1	B2H0165	08/08/2012	08/08/12 17:30	
1,2,3-Trichlorobenzene	ND	0.50	NA	1	B2H0165	08/08/2012	08/08/12 17:30	
1,2,4-Trichlorobenzene	ND	0.50	NA	1	B2H0165	08/08/2012	08/08/12 17:30	
1,2,4-Trimethylbenzene	ND	0.50	NA	1	B2H0165	08/08/2012	08/08/12 17:30	
1,2-Dibromo-3-chloropropane	ND	0.50	NA	1	B2H0165	08/08/2012	08/08/12 17:30	
1,2-Dibromoethane	ND	0.50	NA	1	B2H0165	08/08/2012	08/08/12 17:30	
1,2-Dichlorobenzene	ND	0.50	NA	1	B2H0165	08/08/2012	08/08/12 17:30	
1,2-Dichloroethane	ND	0.50	NA	1	B2H0165	08/08/2012	08/08/12 17:30	
1,2-Dichloropropane	ND	0.50	NA	1	B2H0165	08/08/2012	08/08/12 17:30	
1,3,5-Trimethylbenzene	ND	0.50	NA	1	B2H0165	08/08/2012	08/08/12 17:30	
1,3-Dichlorobenzene	ND	0.50	NA	1	B2H0165	08/08/2012	08/08/12 17:30	
1,3-Dichloropropane	ND	0.50	NA	1	B2H0165	08/08/2012	08/08/12 17:30	
1,4-Dichlorobenzene	ND	0.50	NA	1	B2H0165	08/08/2012	08/08/12 17:30	
2,2-Dichloropropane	ND	0.50	NA	1	B2H0165	08/08/2012	08/08/12 17:30	
2-Chlorotoluene	ND	0.50	NA	1	B2H0165	08/08/2012	08/08/12 17:30	
4-Chlorotoluene	ND	0.50	NA	1	B2H0165	08/08/2012	08/08/12 17:30	
4-Isopropyltoluene	ND	0.50	NA	1	B2H0165	08/08/2012	08/08/12 17:30	
Benzene	ND	0.50	NA	1	B2H0165	08/08/2012	08/08/12 17:30	



Hargis & Associates, Inc.

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San Diego , CA 92122

Project Number : RAYTHEON FULLERTON-MONTHLY,

Report To : Steve Netto

Reported : 08/23/2012

Client Sample ID POX

Lab ID: 1202729-04

Volatile Organic Compounds by EPA 8260

Analyst: RP

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Bromobenzene	ND	0.50	NA	1	B2H0165	08/08/2012	08/08/12 17:30	
Bromodichloromethane	ND	0.50	NA	1	B2H0165	08/08/2012	08/08/12 17:30	
Bromoform	ND	0.50	NA	1	B2H0165	08/08/2012	08/08/12 17:30	
Bromomethane	ND	0.50	NA	1	B2H0165	08/08/2012	08/08/12 17:30	
Carbon tetrachloride	ND	0.50	NA	1	B2H0165	08/08/2012	08/08/12 17:30	
Chlorobenzene	ND	0.50	NA	1	B2H0165	08/08/2012	08/08/12 17:30	
Chloroethane	ND	0.50	NA	1	B2H0165	08/08/2012	08/08/12 17:30	
Chloroform	ND	0.50	NA	1	B2H0165	08/08/2012	08/08/12 17:30	
Chloromethane	ND	0.50	NA	1	B2H0165	08/08/2012	08/08/12 17:30	
cis-1,2-Dichloroethene	ND	0.50	NA	1	B2H0165	08/08/2012	08/08/12 17:30	
cis-1,3-Dichloropropene	ND	0.50	NA	1	B2H0165	08/08/2012	08/08/12 17:30	
Dibromochloromethane	ND	0.50	NA	1	B2H0165	08/08/2012	08/08/12 17:30	
Dibromomethane	ND	0.50	NA	1	B2H0165	08/08/2012	08/08/12 17:30	
Dichlorodifluoromethane	ND	0.50	NA	1	B2H0165	08/08/2012	08/08/12 17:30	
Ethylbenzene	ND	0.50	NA	1	B2H0165	08/08/2012	08/08/12 17:30	
Hexachlorobutadiene	ND	0.50	NA	1	B2H0165	08/08/2012	08/08/12 17:30	
Isopropylbenzene	ND	0.50	NA	1	B2H0165	08/08/2012	08/08/12 17:30	
m,p-Xylene	ND	1.0	NA	1	B2H0165	08/08/2012	08/08/12 17:30	
Methylene chloride	ND	1.0	NA	1	B2H0165	08/08/2012	08/08/12 17:30	
n-Butylbenzene	ND	0.50	NA	1	B2H0165	08/08/2012	08/08/12 17:30	
n-Propylbenzene	ND	0.50	NA	1	B2H0165	08/08/2012	08/08/12 17:30	
Naphthalene	ND	0.50	NA	1	B2H0165	08/08/2012	08/08/12 17:30	
o-Xylene	ND	0.50	NA	1	B2H0165	08/08/2012	08/08/12 17:30	
sec-Butylbenzene	ND	0.50	NA	1	B2H0165	08/08/2012	08/08/12 17:30	
Styrene	ND	0.50	NA	1	B2H0165	08/08/2012	08/08/12 17:30	
tert-Butylbenzene	ND	0.50	NA	1	B2H0165	08/08/2012	08/08/12 17:30	
Tetrachloroethene	ND	0.50	NA	1	B2H0165	08/08/2012	08/08/12 17:30	
Toluene	ND	0.50	NA	1	B2H0165	08/08/2012	08/08/12 17:30	
trans-1,2-Dichloroethene	ND	0.50	NA	1	B2H0165	08/08/2012	08/08/12 17:30	
Trichloroethene	ND	0.50	NA	1	B2H0165	08/08/2012	08/08/12 17:30	
Trichlorofluoromethane	ND	0.50	NA	1	B2H0165	08/08/2012	08/08/12 17:30	
Vinyl chloride	ND	0.50	NA	1	B2H0165	08/08/2012	08/08/12 17:30	

Surrogate: 1,2-Dichloroethane-d4	110 %	70 - 130		B2H0165	08/08/2012	08/08/12 17:30
Surrogate: 4-Bromofluorobenzene	98.5 %	70 - 130		B2H0165	08/08/2012	08/08/12 17:30
Surrogate: Dibromofluoromethane	105 %	70 - 130		B2H0165	08/08/2012	08/08/12 17:30
Surrogate: Toluene-d8	101 %	70 - 130		B2H0165	08/08/2012	08/08/12 17:30



Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : RAYTHEON FULLERTON-MONTHLY,

Report To : Steve Netto

Reported : 08/23/2012

Client Sample ID POX

Lab ID: 1202729-04

1,4-Dioxane by EPA 8270/SIM: Isotope Dilution Technique

Analyst: BB

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,4-Dioxane	ND	0.20	NA	1	B2H0225	08/10/2012	08/10/12 16:21	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	<i>82.9 %</i>		<i>36 - 107</i>		B2H0225	08/10/2012	<i>08/10/12 16:21</i>	
<i>Surrogate: 2-Fluorobiphenyl</i>	<i>105 %</i>		<i>42 - 120</i>		B2H0225	08/10/2012	<i>08/10/12 16:21</i>	
<i>Surrogate: 4-Terphenyl-d14</i>	<i>110 %</i>		<i>67 - 142</i>		B2H0225	08/10/2012	<i>08/10/12 16:21</i>	
<i>Surrogate: Nitrobenzene-d5</i>	<i>65.1 %</i>		<i>36 - 130</i>		B2H0225	08/10/2012	<i>08/10/12 16:21</i>	



Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : RAYTHEON FULLERTON-MONTHLY,

Report To : Steve Netto

Reported : 08/23/2012

Client Sample ID CBT

Lab ID: 1202729-05

Volatile Organic Compounds by EPA 8260

Analyst: RP

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	0.50	NA	1	B2H0165	08/08/2012	08/08/12 18:10	
1,1,1-Trichloroethane	ND	0.50	NA	1	B2H0165	08/08/2012	08/08/12 18:10	
1,1,2,2-Tetrachloroethane	ND	0.50	NA	1	B2H0165	08/08/2012	08/08/12 18:10	
1,1,2-Trichloroethane	ND	0.50	NA	1	B2H0165	08/08/2012	08/08/12 18:10	
1,1-Dichloroethane	0.63	0.50	NA	1	B2H0165	08/08/2012	08/08/12 18:10	
1,1-Dichloroethene	ND	0.50	NA	1	B2H0165	08/08/2012	08/08/12 18:10	
1,1-Dichloropropene	ND	0.50	NA	1	B2H0165	08/08/2012	08/08/12 18:10	
1,2,3-Trichloropropane	ND	0.50	NA	1	B2H0165	08/08/2012	08/08/12 18:10	
1,2,3-Trichlorobenzene	ND	0.50	NA	1	B2H0165	08/08/2012	08/08/12 18:10	
1,2,4-Trichlorobenzene	ND	0.50	NA	1	B2H0165	08/08/2012	08/08/12 18:10	
1,2,4-Trimethylbenzene	ND	0.50	NA	1	B2H0165	08/08/2012	08/08/12 18:10	
1,2-Dibromo-3-chloropropane	ND	0.50	NA	1	B2H0165	08/08/2012	08/08/12 18:10	
1,2-Dibromoethane	ND	0.50	NA	1	B2H0165	08/08/2012	08/08/12 18:10	
1,2-Dichlorobenzene	ND	0.50	NA	1	B2H0165	08/08/2012	08/08/12 18:10	
1,2-Dichloroethane	ND	0.50	NA	1	B2H0165	08/08/2012	08/08/12 18:10	
1,2-Dichloropropane	ND	0.50	NA	1	B2H0165	08/08/2012	08/08/12 18:10	
1,3,5-Trimethylbenzene	ND	0.50	NA	1	B2H0165	08/08/2012	08/08/12 18:10	
1,3-Dichlorobenzene	ND	0.50	NA	1	B2H0165	08/08/2012	08/08/12 18:10	
1,3-Dichloropropane	ND	0.50	NA	1	B2H0165	08/08/2012	08/08/12 18:10	
1,4-Dichlorobenzene	ND	0.50	NA	1	B2H0165	08/08/2012	08/08/12 18:10	
2,2-Dichloropropane	ND	0.50	NA	1	B2H0165	08/08/2012	08/08/12 18:10	
2-Chlorotoluene	ND	0.50	NA	1	B2H0165	08/08/2012	08/08/12 18:10	
4-Chlorotoluene	ND	0.50	NA	1	B2H0165	08/08/2012	08/08/12 18:10	
4-Isopropyltoluene	ND	0.50	NA	1	B2H0165	08/08/2012	08/08/12 18:10	
Benzene	ND	0.50	NA	1	B2H0165	08/08/2012	08/08/12 18:10	
Bromobenzene	ND	0.50	NA	1	B2H0165	08/08/2012	08/08/12 18:10	
Bromodichloromethane	ND	0.50	NA	1	B2H0165	08/08/2012	08/08/12 18:10	
Bromoform	ND	0.50	NA	1	B2H0165	08/08/2012	08/08/12 18:10	
Bromomethane	ND	0.50	NA	1	B2H0165	08/08/2012	08/08/12 18:10	
Carbon tetrachloride	ND	0.50	NA	1	B2H0165	08/08/2012	08/08/12 18:10	
Chlorobenzene	ND	0.50	NA	1	B2H0165	08/08/2012	08/08/12 18:10	
Chloroethane	ND	0.50	NA	1	B2H0165	08/08/2012	08/08/12 18:10	
Chloroform	ND	0.50	NA	1	B2H0165	08/08/2012	08/08/12 18:10	
Chloromethane	ND	0.50	NA	1	B2H0165	08/08/2012	08/08/12 18:10	
cis-1,2-Dichloroethene	ND	0.50	NA	1	B2H0165	08/08/2012	08/08/12 18:10	
cis-1,3-Dichloropropene	ND	0.50	NA	1	B2H0165	08/08/2012	08/08/12 18:10	
Dibromochloromethane	ND	0.50	NA	1	B2H0165	08/08/2012	08/08/12 18:10	



Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : RAYTHEON FULLERTON-MONTHLY,

Report To : Steve Netto

Reported : 08/23/2012

Client Sample ID CBT

Lab ID: 1202729-05

Volatile Organic Compounds by EPA 8260

Analyst: RP

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Dibromomethane	ND	0.50	NA	1	B2H0165	08/08/2012	08/08/12 18:10	
Dichlorodifluoromethane	ND	0.50	NA	1	B2H0165	08/08/2012	08/08/12 18:10	
Ethylbenzene	ND	0.50	NA	1	B2H0165	08/08/2012	08/08/12 18:10	
Hexachlorobutadiene	ND	0.50	NA	1	B2H0165	08/08/2012	08/08/12 18:10	
Isopropylbenzene	ND	0.50	NA	1	B2H0165	08/08/2012	08/08/12 18:10	
m,p-Xylene	ND	1.0	NA	1	B2H0165	08/08/2012	08/08/12 18:10	
Methylene chloride	ND	1.0	NA	1	B2H0165	08/08/2012	08/08/12 18:10	
n-Butylbenzene	ND	0.50	NA	1	B2H0165	08/08/2012	08/08/12 18:10	
n-Propylbenzene	ND	0.50	NA	1	B2H0165	08/08/2012	08/08/12 18:10	
Naphthalene	ND	0.50	NA	1	B2H0165	08/08/2012	08/08/12 18:10	
o-Xylene	ND	0.50	NA	1	B2H0165	08/08/2012	08/08/12 18:10	
sec-Butylbenzene	ND	0.50	NA	1	B2H0165	08/08/2012	08/08/12 18:10	
Styrene	ND	0.50	NA	1	B2H0165	08/08/2012	08/08/12 18:10	
tert-Butylbenzene	ND	0.50	NA	1	B2H0165	08/08/2012	08/08/12 18:10	
Tetrachloroethene	ND	0.50	NA	1	B2H0165	08/08/2012	08/08/12 18:10	
Toluene	ND	0.50	NA	1	B2H0165	08/08/2012	08/08/12 18:10	
trans-1,2-Dichloroethene	ND	0.50	NA	1	B2H0165	08/08/2012	08/08/12 18:10	
Trichloroethene	ND	0.50	NA	1	B2H0165	08/08/2012	08/08/12 18:10	
Trichlorofluoromethane	ND	0.50	NA	1	B2H0165	08/08/2012	08/08/12 18:10	
Vinyl chloride	ND	0.50	NA	1	B2H0165	08/08/2012	08/08/12 18:10	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>112 %</i>		<i>70 - 130</i>		B2H0165	08/08/2012	<i>08/08/12 18:10</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>99.1 %</i>		<i>70 - 130</i>		B2H0165	08/08/2012	<i>08/08/12 18:10</i>	
<i>Surrogate: Dibromofluoromethane</i>	<i>106 %</i>		<i>70 - 130</i>		B2H0165	08/08/2012	<i>08/08/12 18:10</i>	
<i>Surrogate: Toluene-d8</i>	<i>101 %</i>		<i>70 - 130</i>		B2H0165	08/08/2012	<i>08/08/12 18:10</i>	



Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : RAYTHEON FULLERTON-MONTHLY,

Report To : Steve Netto

Reported : 08/23/2012

Client Sample ID CEFF

Lab ID: 1202729-06

Anions by Ion Chromatography EPA 300.0

Analyst: AG

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Bromide	0.19	0.05	NA	1	B2H0185	08/08/2012	08/08/12 10:52	

Total Dissolved Solids (Residue, Filterable) by SM 2540C

Analyst: KT

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Residue, Dissolved	630	10	NA	1	B2H0234	08/09/2012	08/09/12 15:04	

Volatile Organic Compounds by EPA 8260

Analyst: RP

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	0.50	NA	1	B2H0165	08/08/2012	08/08/12 17:50	
1,1,1-Trichloroethane	ND	0.50	NA	1	B2H0165	08/08/2012	08/08/12 17:50	
1,1,2,2-Tetrachloroethane	ND	0.50	NA	1	B2H0165	08/08/2012	08/08/12 17:50	
1,1,2-Trichloroethane	ND	0.50	NA	1	B2H0165	08/08/2012	08/08/12 17:50	
1,1-Dichloroethane	0.75	0.50	NA	1	B2H0165	08/08/2012	08/08/12 17:50	
1,1-Dichloroethene	ND	0.50	NA	1	B2H0165	08/08/2012	08/08/12 17:50	
1,1-Dichloropropene	ND	0.50	NA	1	B2H0165	08/08/2012	08/08/12 17:50	
1,2,3-Trichloropropane	ND	0.50	NA	1	B2H0165	08/08/2012	08/08/12 17:50	
1,2,3-Trichlorobenzene	ND	0.50	NA	1	B2H0165	08/08/2012	08/08/12 17:50	
1,2,4-Trichlorobenzene	ND	0.50	NA	1	B2H0165	08/08/2012	08/08/12 17:50	
1,2,4-Trimethylbenzene	ND	0.50	NA	1	B2H0165	08/08/2012	08/08/12 17:50	
1,2-Dibromo-3-chloropropane	ND	0.50	NA	1	B2H0165	08/08/2012	08/08/12 17:50	
1,2-Dibromoethane	ND	0.50	NA	1	B2H0165	08/08/2012	08/08/12 17:50	
1,2-Dichlorobenzene	ND	0.50	NA	1	B2H0165	08/08/2012	08/08/12 17:50	
1,2-Dichloroethane	ND	0.50	NA	1	B2H0165	08/08/2012	08/08/12 17:50	
1,2-Dichloropropane	ND	0.50	NA	1	B2H0165	08/08/2012	08/08/12 17:50	
1,3,5-Trimethylbenzene	ND	0.50	NA	1	B2H0165	08/08/2012	08/08/12 17:50	
1,3-Dichlorobenzene	ND	0.50	NA	1	B2H0165	08/08/2012	08/08/12 17:50	
1,3-Dichloropropane	ND	0.50	NA	1	B2H0165	08/08/2012	08/08/12 17:50	
1,4-Dichlorobenzene	ND	0.50	NA	1	B2H0165	08/08/2012	08/08/12 17:50	
2,2-Dichloropropane	ND	0.50	NA	1	B2H0165	08/08/2012	08/08/12 17:50	
2-Chlorotoluene	ND	0.50	NA	1	B2H0165	08/08/2012	08/08/12 17:50	
4-Chlorotoluene	ND	0.50	NA	1	B2H0165	08/08/2012	08/08/12 17:50	
4-Isopropyltoluene	ND	0.50	NA	1	B2H0165	08/08/2012	08/08/12 17:50	
Benzene	ND	0.50	NA	1	B2H0165	08/08/2012	08/08/12 17:50	



Hargis & Associates, Inc.

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San Diego , CA 92122

Project Number : RAYTHEON FULLERTON-MONTHLY,

Report To : Steve Netto

Reported : 08/23/2012

Client Sample ID CEFF

Lab ID: 1202729-06

Volatile Organic Compounds by EPA 8260

Analyst: RP

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Bromobenzene	ND	0.50	NA	1	B2H0165	08/08/2012	08/08/12 17:50	
Bromodichloromethane	ND	0.50	NA	1	B2H0165	08/08/2012	08/08/12 17:50	
Bromoform	ND	0.50	NA	1	B2H0165	08/08/2012	08/08/12 17:50	
Bromomethane	ND	0.50	NA	1	B2H0165	08/08/2012	08/08/12 17:50	
Carbon tetrachloride	ND	0.50	NA	1	B2H0165	08/08/2012	08/08/12 17:50	
Chlorobenzene	ND	0.50	NA	1	B2H0165	08/08/2012	08/08/12 17:50	
Chloroethane	ND	0.50	NA	1	B2H0165	08/08/2012	08/08/12 17:50	
Chloroform	ND	0.50	NA	1	B2H0165	08/08/2012	08/08/12 17:50	
Chloromethane	ND	0.50	NA	1	B2H0165	08/08/2012	08/08/12 17:50	
cis-1,2-Dichloroethene	ND	0.50	NA	1	B2H0165	08/08/2012	08/08/12 17:50	
cis-1,3-Dichloropropene	ND	0.50	NA	1	B2H0165	08/08/2012	08/08/12 17:50	
Dibromochloromethane	ND	0.50	NA	1	B2H0165	08/08/2012	08/08/12 17:50	
Dibromomethane	ND	0.50	NA	1	B2H0165	08/08/2012	08/08/12 17:50	
Dichlorodifluoromethane	ND	0.50	NA	1	B2H0165	08/08/2012	08/08/12 17:50	
Ethylbenzene	ND	0.50	NA	1	B2H0165	08/08/2012	08/08/12 17:50	
Hexachlorobutadiene	ND	0.50	NA	1	B2H0165	08/08/2012	08/08/12 17:50	
Isopropylbenzene	ND	0.50	NA	1	B2H0165	08/08/2012	08/08/12 17:50	
m,p-Xylene	ND	1.0	NA	1	B2H0165	08/08/2012	08/08/12 17:50	
Methylene chloride	ND	1.0	NA	1	B2H0165	08/08/2012	08/08/12 17:50	
n-Butylbenzene	ND	0.50	NA	1	B2H0165	08/08/2012	08/08/12 17:50	
n-Propylbenzene	ND	0.50	NA	1	B2H0165	08/08/2012	08/08/12 17:50	
Naphthalene	ND	0.50	NA	1	B2H0165	08/08/2012	08/08/12 17:50	
o-Xylene	ND	0.50	NA	1	B2H0165	08/08/2012	08/08/12 17:50	
sec-Butylbenzene	ND	0.50	NA	1	B2H0165	08/08/2012	08/08/12 17:50	
Styrene	ND	0.50	NA	1	B2H0165	08/08/2012	08/08/12 17:50	
tert-Butylbenzene	ND	0.50	NA	1	B2H0165	08/08/2012	08/08/12 17:50	
Tetrachloroethene	ND	0.50	NA	1	B2H0165	08/08/2012	08/08/12 17:50	
Toluene	ND	0.50	NA	1	B2H0165	08/08/2012	08/08/12 17:50	
trans-1,2-Dichloroethene	ND	0.50	NA	1	B2H0165	08/08/2012	08/08/12 17:50	
Trichloroethene	ND	0.50	NA	1	B2H0165	08/08/2012	08/08/12 17:50	
Trichlorofluoromethane	ND	0.50	NA	1	B2H0165	08/08/2012	08/08/12 17:50	
Vinyl chloride	ND	0.50	NA	1	B2H0165	08/08/2012	08/08/12 17:50	

<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>111 %</i>	<i>70 - 130</i>		B2H0165	08/08/2012	<i>08/08/12 17:50</i>
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>99.0 %</i>	<i>70 - 130</i>		B2H0165	08/08/2012	<i>08/08/12 17:50</i>
<i>Surrogate: Dibromofluoromethane</i>	<i>106 %</i>	<i>70 - 130</i>		B2H0165	08/08/2012	<i>08/08/12 17:50</i>
<i>Surrogate: Toluene-d8</i>	<i>102 %</i>	<i>70 - 130</i>		B2H0165	08/08/2012	<i>08/08/12 17:50</i>



Hargis & Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego , CA 92122

Project Number : RAYTHEON FULLERTON-MONTHLY,
 Report To : Steve Netto
 Reported : 08/23/2012

QUALITY CONTROL SECTION

Anions by Ion Chromatography EPA 300.0 - Quality Control

Analyte	Result (mg/L)	PQL (mg/L)	Spike Level	Source Result	% Rec % Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B2H0185 - No_Prep_IC_1									
Blank (B2H0185-BLK1)				Prepared: 8/8/2012 Analyzed: 8/8/2012					
Bromide	ND	0.05			NR				
LCS (B2H0185-BS1)				Prepared: 8/8/2012 Analyzed: 8/8/2012					
Bromide	0.949100	0.05	1.00000		94.9	90 - 110			
Duplicate (B2H0185-DUP1)		Source: 1202729-06		Prepared: 8/8/2012 Analyzed: 8/8/2012					
Bromide	0.181200	0.05		0.189200	NR		4.32	20	
Matrix Spike (B2H0185-MS1)		Source: 1202729-06		Prepared: 8/8/2012 Analyzed: 8/8/2012					
Bromide	2.56950	0.05	2.50000	0.189200	95.2	80 - 120			
Matrix Spike Dup (B2H0185-MSD1)		Source: 1202729-06		Prepared: 8/8/2012 Analyzed: 8/8/2012					
Bromide	2.57090	0.05	2.50000	0.189200	95.3	80 - 120	0.0545	20	



Hargis & Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego , CA 92122

Project Number : RAYTHEON FULLERTON-MONTHLY,
 Report To : Steve Netto
 Reported : 08/23/2012

Total Dissolved Solids (Residue, Filterable) by SM 2540C - Quality Control

Analyte	Result (mg/L)	PQL (mg/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B2H0234 - No_Prep_WC_1

Blank (B2H0234-BLK1)

Prepared: 8/9/2012 Analyzed: 8/9/2012

Residue, Dissolved

ND

10

NR

LCS (B2H0234-BS1)

Prepared: 8/9/2012 Analyzed: 8/9/2012

Residue, Dissolved

999.000

10

970.000

103

80 - 120

Duplicate (B2H0234-DUP1)

Source: 1202785-04

Prepared: 8/9/2012 Analyzed: 8/9/2012

Residue, Dissolved

3297.14

29

3337.14

NR

1.21

10



Hargis & Associates, Inc.
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 San Diego , CA 92122

Project Number : RAYTHEON FULLERTON-MONTHLY,
 Report To : Steve Netto
 Reported : 08/23/2012

Total Suspended Solids (Residue, Non-Filtrable) by SM 2540D - Quality Control

Analyte	Result (mg/L)	PQL (mg/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B2H0181 - No_Prep_WC_1

Blank (B2H0181-BLK1)

Prepared: 8/8/2012 Analyzed: 8/8/2012

Residue, Suspended

ND

10

NR

LCS (B2H0181-BS1)

Prepared: 8/8/2012 Analyzed: 8/8/2012

Residue, Suspended

101.000

10

96.6000

105

80 - 120

Duplicate (B2H0181-DUP1)

Source: 1202749-02

Prepared: 8/8/2012 Analyzed: 8/8/2012

Residue, Suspended

ND

10

ND

NR

10



Hargis & Associates, Inc.
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 San Diego , CA 92122

Project Number : RAYTHEON FULLERTON-MONTHLY,
 Report To : Steve Netto
 Reported : 08/23/2012

Volatile Organic Compounds by EPA 8260 - Quality Control

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec % Rec	% Rec Limits	RPD RPD	RPD Limit	Notes
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Batch B2H0165 - MSVOAW_LL

Blank (B2H0165-BLK1)

Prepared: 8/8/2012 Analyzed: 8/8/2012

1,1,1,2-Tetrachloroethane	ND	0.50			NR				
1,1,1-Trichloroethane	ND	0.50			NR				
1,1,2,2-Tetrachloroethane	ND	0.50			NR				
1,1,2-Trichloroethane	ND	0.50			NR				
1,1-Dichloroethane	ND	0.50			NR				
1,1-Dichloroethene	ND	0.50			NR				
1,1-Dichloropropene	ND	0.50			NR				
1,2,3-Trichloropropane	ND	0.50			NR				
1,2,3-Trichlorobenzene	ND	0.50			NR				
1,2,4-Trichlorobenzene	ND	0.50			NR				
1,2,4-Trimethylbenzene	ND	0.50			NR				
1,2-Dibromo-3-chloropropane	ND	0.50			NR				
1,2-Dibromoethane	ND	0.50			NR				
1,2-Dichlorobenzene	ND	0.50			NR				
1,2-Dichloroethane	ND	0.50			NR				
1,2-Dichloropropane	ND	0.50			NR				
1,3,5-Trimethylbenzene	ND	0.50			NR				
1,3-Dichlorobenzene	ND	0.50			NR				
1,3-Dichloropropane	ND	0.50			NR				
1,4-Dichlorobenzene	ND	0.50			NR				
2,2-Dichloropropane	ND	0.50			NR				
2-Chlorotoluene	ND	0.50			NR				
4-Chlorotoluene	ND	0.50			NR				
4-Isopropyltoluene	ND	0.50			NR				
Benzene	ND	0.50			NR				
Bromobenzene	ND	0.50			NR				
Bromodichloromethane	ND	0.50			NR				
Bromoform	ND	0.50			NR				
Bromomethane	ND	0.50			NR				
Carbon tetrachloride	ND	0.50			NR				
Chlorobenzene	ND	0.50			NR				
Chloroethane	ND	0.50			NR				
Chloroform	ND	0.50			NR				
Chloromethane	ND	0.50			NR				
cis-1,2-Dichloroethene	ND	0.50			NR				
cis-1,3-Dichloropropene	ND	0.50			NR				
Dibromochloromethane	ND	0.50			NR				
Dibromomethane	ND	0.50			NR				
Dichlorodifluoromethane	ND	0.50			NR				
Ethylbenzene	ND	0.50			NR				
Hexachlorobutadiene	ND	0.50			NR				



Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : RAYTHEON FULLERTON-MONTHLY,

Report To : Steve Netto

Reported : 08/23/2012

Volatile Organic Compounds by EPA 8260 - Quality Control (cont'd)

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec % Rec	% Rec Limits	RPD RPD	RPD Limit	Notes
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Batch B2H0165 - MSVOAW_LL (continued)

Blank (B2H0165-BLK1) - Continued

Prepared: 8/8/2012 Analyzed: 8/8/2012

Isopropylbenzene	ND	0.50						NR	
m,p-Xylene	ND	1.0						NR	
Methylene chloride	ND	1.0						NR	
n-Butylbenzene	ND	0.50						NR	
n-Propylbenzene	ND	0.50						NR	
Naphthalene	ND	0.50						NR	
o-Xylene	ND	0.50						NR	
sec-Butylbenzene	ND	0.50						NR	
Styrene	ND	0.50						NR	
tert-Butylbenzene	ND	0.50						NR	
Tetrachloroethene	ND	0.50						NR	
Toluene	ND	0.50						NR	
trans-1,2-Dichloroethene	ND	0.50						NR	
Trichloroethene	ND	0.50						NR	
Trichlorofluoromethane	ND	0.50						NR	
Vinyl chloride	ND	0.50						NR	

<i>Surrogate: 1,2-Dichloroethane-d4</i>	25.22		25.0000		101	70 - 130			
<i>Surrogate: 4-Bromofluorobenzene</i>	24.66		25.0000		98.6	70 - 130			
<i>Surrogate: Dibromofluoromethane</i>	25.52		25.0000		102	70 - 130			
<i>Surrogate: Toluene-d8</i>	25.31		25.0000		101	70 - 130			

LCS (B2H0165-BS1)

Prepared: 8/8/2012 Analyzed: 8/8/2012

1,1-Dichloroethene	19.1100		20.0000		95.6	70 - 130			
Benzene	18.2100		20.0000		91.0	70 - 130			
Chlorobenzene	17.5800		20.0000		87.9	70 - 130			
MTBE	19.6000		20.0000		98.0	70 - 130			
Toluene	17.8100		20.0000		89.0	70 - 130			
Trichloroethene	18.0700		20.0000		90.4	70 - 130			

<i>Surrogate: 1,2-Dichloroethane-d4</i>	27.27		25.0000		109	70 - 130			
<i>Surrogate: 4-Bromofluorobenzene</i>	25.83		25.0000		103	70 - 130			
<i>Surrogate: Dibromofluoromethane</i>	26.40		25.0000		106	70 - 130			
<i>Surrogate: Toluene-d8</i>	25.87		25.0000		103	70 - 130			

LCS Dup (B2H0165-BSD1)

Prepared: 8/8/2012 Analyzed: 8/8/2012

1,1-Dichloroethene	20.5900		20.0000		103	70 - 130	7.46	20	
Benzene	20.3800		20.0000		102	70 - 130	11.2	20	
Chlorobenzene	19.5900		20.0000		98.0	70 - 130	10.8	20	
MTBE	21.7700		20.0000		109	70 - 130	10.5	20	
Toluene	20.1000		20.0000		100	70 - 130	12.1	20	
Trichloroethene	19.9700		20.0000		99.8	70 - 130	9.99	20	

<i>Surrogate: 1,2-Dichloroethane-d4</i>	26.16		25.0000		105	70 - 130			
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Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : RAYTHEON FULLERTON-MONTHLY,

Report To : Steve Netto

Reported : 08/23/2012

Volatile Organic Compounds by EPA 8260 - Quality Control (cont'd)

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B2H0165 - MSVOAW_LL (continued)

LCS Dup (B2H0165-BSD1) - Continued

Prepared: 8/8/2012 Analyzed: 8/8/2012

<i>Surrogate: 4-Bromofluorobenzene</i>	25.47		25.0000		102	70 - 130			
<i>Surrogate: Dibromofluoromethane</i>	25.57		25.0000		102	70 - 130			
<i>Surrogate: Toluene-d8</i>	25.53		25.0000		102	70 - 130			



Hargis & Associates, Inc.
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 San Diego , CA 92122

Project Number : RAYTHEON FULLERTON-MONTHLY,
 Report To : Steve Netto
 Reported : 08/23/2012

1,4-Dioxane by EPA 8270: Isotope Dilution Technique - Quality Control

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec % Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B2H0223 - MSSEMI_ISOTOPEDILN

Blank (B2H0223-BLK1)

Prepared: 8/10/2012 Analyzed: 8/10/2012

1,4-Dioxane	ND	2.0			NR				
Surrogate: 1,2-Dichlorobenzene-d4	81.83		100.000		81.8	37 - 93			
Surrogate: 2-Fluorobiphenyl	96.16		100.000		96.2	51 - 100			
Surrogate: 4-Terphenyl-d14	99.56		100.000		99.6	58 - 113			
Surrogate: Nitrobenzene-d5	86.58		100.000		86.6	39 - 95			

LCS (B2H0223-BS1)

Prepared: 8/10/2012 Analyzed: 8/10/2012

1,4-Dioxane	97.5500	2.0	100.000		97.6	70 - 130			
Surrogate: 1,2-Dichlorobenzene-d4	82.47		100.000		82.5	37 - 93			
Surrogate: 2-Fluorobiphenyl	97.83		100.000		97.8	51 - 100			
Surrogate: 4-Terphenyl-d14	92.41		100.000		92.4	58 - 113			
Surrogate: Nitrobenzene-d5	90.68		100.000		90.7	39 - 95			

Matrix Spike (B2H0223-MS1)

Source: 1202758-05

Prepared: 8/10/2012 Analyzed: 8/10/2012

1,4-Dioxane	136.880	2.0	100.000	42.1900	94.7	0 - 200			
Surrogate: 1,2-Dichlorobenzene-d4	78.55		100.000		78.6	37 - 93			
Surrogate: 2-Fluorobiphenyl	97.74		100.000		97.7	51 - 100			
Surrogate: 4-Terphenyl-d14	90.68		100.000		90.7	58 - 113			
Surrogate: Nitrobenzene-d5	85.81		100.000		85.8	39 - 95			

Matrix Spike Dup (B2H0223-MSD1)

Source: 1202758-05

Prepared: 8/10/2012 Analyzed: 8/10/2012

1,4-Dioxane	135.440	2.0	100.000	42.1900	93.2	0 - 200	1.06	200	
Surrogate: 1,2-Dichlorobenzene-d4	82.04		100.000		82.0	37 - 93			
Surrogate: 2-Fluorobiphenyl	96.11		100.000		96.1	51 - 100			
Surrogate: 4-Terphenyl-d14	89.48		100.000		89.5	58 - 113			
Surrogate: Nitrobenzene-d5	89.45		100.000		89.4	39 - 95			



Hargis & Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122

Project Number : RAYTHEON FULLERTON-MONTHLY,
 Report To : Steve Netto
 Reported : 08/23/2012

1,4-Dioxane by EPA 8270/SIM: Isotope Dilution Technique - Quality Control

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec % Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B2H0225 - MSSEMI

Blank (B2H0225-BLK1)

Prepared: 8/10/2012 Analyzed: 8/10/2012

1,4-Dioxane	ND	0.20			NR				
Surrogate: 1,2-Dichlorobenzene-d4	0.8013		1.00000		80.1	36 - 107			
Surrogate: 2-Fluorobiphenyl	0.8991		1.00000		89.9	42 - 120			
Surrogate: 4-Terphenyl-d14	1.088		1.00000		109	67 - 142			
Surrogate: Nitrobenzene-d5	0.7258		1.00000		72.6	36 - 130			

LCS (B2H0225-BS1)

Prepared: 8/10/2012 Analyzed: 8/13/2012

1,4-Dioxane	0.765890	0.20	1.00000		76.6	70 - 130			
Surrogate: 1,2-Dichlorobenzene-d4	0.8308		1.00000		83.1	36 - 107			
Surrogate: 2-Fluorobiphenyl	0.8210		1.00000		82.1	42 - 120			
Surrogate: 4-Terphenyl-d14	0.8169		1.00000		81.7	67 - 142			
Surrogate: Nitrobenzene-d5	0.6246		1.00000		62.5	36 - 130			

Matrix Spike (B2H0225-MS1)

Source: 1202779-02

Prepared: 8/10/2012 Analyzed: 8/13/2012

1,4-Dioxane	0.788860	0.20	1.00000	ND	78.9	70 - 130			
Surrogate: 1,2-Dichlorobenzene-d4	0.8280		1.00000		82.8	36 - 107			
Surrogate: 2-Fluorobiphenyl	0.8148		1.00000		81.5	42 - 120			
Surrogate: 4-Terphenyl-d14	0.7520		1.00000		75.2	67 - 142			
Surrogate: Nitrobenzene-d5	0.6067		1.00000		60.7	36 - 130			

Matrix Spike Dup (B2H0225-MSD1)

Source: 1202779-02

Prepared: 8/10/2012 Analyzed: 8/13/2012

1,4-Dioxane	0.797980	0.20	1.00000	ND	79.8	70 - 130	1.15	20	
Surrogate: 1,2-Dichlorobenzene-d4	0.8078		1.00000		80.8	36 - 107			
Surrogate: 2-Fluorobiphenyl	0.8077		1.00000		80.8	42 - 120			
Surrogate: 4-Terphenyl-d14	0.7737		1.00000		77.4	67 - 142			
Surrogate: Nitrobenzene-d5	0.5841		1.00000		58.4	36 - 130			



Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : RAYTHEON FULLERTON-MONTHLY,

Report To : Steve Netto

Reported : 08/23/2012

Notes and Definitions

ND	Analyte not detected at or above reporting limit
PQL	Practical Quantitation Limit
MDL	Method Detection Limit
NR	Not Reported
RPD	Relative Percent Difference
CA1	CA-NELAP (CDPH)
CA2	CA-ELAP (CDPH)
OR1	OR-NELAP (OSPHL)
TX1	TX-NELAP (TCEQ)

Client: Advanced Technology Laboratories
Job No.: 141659

Bromate by EPA 317
Ion Chromatography with Post-Column Derivatization-Visible Absorption

Column: Dionex AS9-HC/AG9-HSC
Eluent: 30 mM Na₂CO₃
Flow: 1.0 mL/min
Injection: 250 µL
Detection: Post-column derivatization, Visible detection, 450 nm

Sample preparation: The undiluted samples were treated with a Dionex OnGuard II H cartridge to remove excess basic cations.

Parts Per Billion (µg/L)

<u>Sample ID</u>	<u>Result</u>
1202729-02H / EW-02	ND
1202729-04G / POX	5.7
1202729-06F / CEFF	5.4
1202729-06F / CEFF Duplicate	5.6
Method Blank	ND
Detection Limit	0.5

Date Analyzed: 08-20-12

Quality Control Summary

Sample ID: 1202729-06F / CEFF

<u>Analyte</u>	<u>Sample Result</u>	<u>Duplicate Result</u>	<u>Sample RPD</u>	<u>Spike Conc</u>	<u>Spike Result</u>	<u>Spike % Rec</u>
Bromate	5.4	5.6	4	20.0	25.3	99
QC Guidelines			NMT 10			75-125

Exova Inc – Santa Fe Springs – 562-948-2225
The above data is considered preliminary and may not reflect final reported values.
A final signed report will be mailed to you.


ADVANCED TECHNOLOG[®]
LABORATORIES

SUBCONTRACT ORDER

Work Order: 1202729

SENDING LABORATORY:

Advanced Technology Laboratories
 3275 Walnut Avenue
 Signal Hill, CA 90755
 Phone: 562.989.4045
 Fax: 562.989.6348
 Project Manager: Rachele Arada


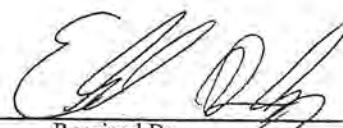
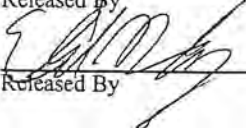
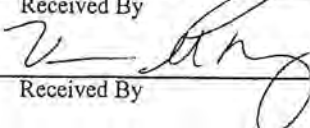
RECEIVING LABORATORY:

Exova Inc.
 9240 Santa Fe Springs Road
 Santa Fe Springs, CA 90670
 Phone : (562) 948-2225
 Fax: (562) 948-5850
 PO#: SC07431 - Standard TAT

RA

IMPORTANT : Please include Work Order # and PO # in your invoice.

Analysis	Due	Expires	Sampled	Comments
ATL Lab#: 1202729-02 317.0	/ EW-02 08/17/12 17:00	08/04/12 09:40	Groundwater 08/03/12 09:40	Analyze for Bromate
ATL Lab#: 1202729-04 317.0	/ POX 08/17/12 17:00	08/04/12 08:40	Groundwater 08/03/12 08:40	
ATL Lab#: 1202729-06 317.0	/ CEFF 08/17/12 17:00	08/04/12 09:05	Groundwater 08/03/12 09:05	

 Released By	8/3/12 Date	 Received By	8/3/12 12:50 Date
 Released By	8/3/12 13:50 Date	 Received By	EXON 18-03-12 P1:52 Date

CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST FORM

PROJECT NAME RAYNEON FULLERTON-MONTHLY		PROJECT No./TASK No. 532.15			SAMPLE CONTAINERS		ANALYSIS REQUESTED				ESTIMATED CONCENTRATION RANGE (ppb) FOR VOA'S		SPECIAL HANDLING		LABORATORY INFORMATION												
PROJECT MANAGER CHRIS RROSS		Phone No. 858-455-6500					VOCs by EPA 8260B 1,4-Dioxane by EPA 8270 SIM Bromate by 317 TDS by SM2540C TSS by SM2540D Bromide by 300 1,4-Dioxane by EPA 8270 MOD								ALT												
QA MANAGER STEVE NETTO		Fax No. 858-455-6533													C/O Rachele Arada												
SAMPLER (SIGNATURE) 		SAMPLER (PRINTED) Travis Arriaga											3275 Walnut Ave. Signal Hill, CA														
LAB ID	SAMPLE ID	SAMPLE COLLECTION		MATRIX			PRESERVATION					ESTIMATED CONCENTRATION RANGE (ppb) FOR VOA'S		REMARKS													
		Date	Time	Soil	Ground water	Surface water	Lab H2O	HCl	HNO3	NaOH	H2SO4	Ice	40 ml Glass VOA			125 ml Poly	250 ml Poly	500 ml Poly	1 L Amber	0-10	10-100	100-1,000	>1,000				
1202729-01	TB	8/3/12	7:00			X																					Please include
	- 2 EW-02		9:40	X		X					X		X	X	X	X	X										mrodriguez@hargis.com
	- 3 PF		8:30	X										X													in lab report
	- Y POX		8:40	X		X					X	X	X	X	X												distribution list
	- 5 CBT		8:50	X		X					X																set 1,4-Dioxane
	- C CEFF		9:05	X		X					X	X	X	X													MDL to 1.0 ppm
Total number of Containers per analysis:					4 6 5 2										Total No. of Containers: 27												
Relinquished by: 		Date: 8/3/12	Received by: 		Date: 8/3/12	INSTRUCTIONS 1. Fill out form completely except for shaded areas (lab use only); sign only after verified for completeness. 2. Complete in ballpoint pen. Draw one line through errors, initial and date correction. 3. Indicate number of sample containers in analysis request space; indicate choice with ✓ or x. 4. Note applicable preservatives, special instructions, and deviations from typical environmental samples. 5. Consult project QA documents for specific instructions.										Shipment Method: Deliver											
Company: H+A		Time: 11:04	Company: ATL		Time: 11:04											Send Results to: Steve Netto											
Relinquished by:		Date:	Received by:		Date:	<input checked="" type="checkbox"/> 9171 TOWNE CENTRE DRIVE, SUITE 375 SAN DIEGO, CA 92122 (858) 455-6500																					
Company:		Time:	Company:		Time:	<input type="checkbox"/> 1640 SOUTH STAPLEY DRIVE, SUITE 124 MESA, AZ 85204 (480) 345-0888																					
						<input type="checkbox"/> 1820 EAST RIVER ROAD, SUITE 220 TUCSON, AZ 85718 (520) 881-7300																					
						Send invoice to San Diego, CA Attn: Accounts Payable																					
						Sample Receipt: <input type="checkbox"/> No. of containers correct <input type="checkbox"/> received good condition/cold <input type="checkbox"/> custody seals secure <input type="checkbox"/> conforms to COC document																					
						Temp. @ receipt: 5.4 °C																					

Rachelle Arada

From: Travis Arciaga [TARCIAGA@HARGIS.COM]
Sent: Thursday, August 16, 2012 1:52 PM
To: Rachelle Arada
Cc: Amanda Beam; customer.relations@atlglobal.com
Subject: RE: 532 Sample ID Change
Attachments: Scan001.PDF

See attached. Thanks so much.

Travis Arciaga
Engineer
HARGIS + ASSOCIATES, INC.
9171 Towne Centre Dr, Suite 375
San Diego, CA 92122
Phone: (858) 455-6500 x154
Mobile: (619) 370-3938
Fax: (858) 455-6533

From: Rachelle Arada [mailto:Rachelle@atlglobal.com]
Sent: Thursday, August 16, 2012 1:39 PM
To: Travis Arciaga
Cc: Amanda Beam; customer.relations@atlglobal.com
Subject: RE: 532 Sample ID Change

Hi Travis,

I'll be able to change the sample ID in the report. Here is a copy of the COC, please revise and send it back to me.

Rachelle

From: Travis Arciaga [mailto:TARCIAGA@HARGIS.COM]
Sent: Thursday, August 16, 2012 1:29 PM
To: Rachelle Arada
Cc: Amanda Beam
Subject: 532 Sample ID Change

Rachelle,

I noticed that we did not label the Trip Blank correctly on COC from the samples we took on 8/3/12. The COC I gave ATL has the Trip Blank just labeled as "TB" when it should be "TB-080312" which needs to transfer to the lab report as well. Would you be able to add this to the Trip Blank label for the Lab Report and COC before you send it out?

Thanks.

Travis Arciaga
Engineer
HARGIS + ASSOCIATES, INC.
9171 Towne Centre Dr, Suite 375
San Diego, CA 92122
Phone: (858) 455-6500 x154
Mobile: (619) 370-3938
Fax: (858) 455-6533

CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST FORM

PROJECT NAME		PROJECT No./TASK No.		SAMPLE CONTAINERS		ANALYSIS REQUESTED		ESTIMATED CONCENTRATION RANGE (ppb) FOR VOAs		SPECIAL HANDLING		LABORATORY INFORMATION		
RAYTHEON FULLERTON-MONTHLY		532.16										ALT		
PROJECT MANAGER CHRISROSS		Phone No. 858-455-6500										C/O Rachele Arada		
QA MANAGER STEVE NETTO		Fax No. 858-455-6533										3275 Walnut Ave.		
SAMPLER (SIGNATURE)		SAMPLER (PRINTED)										Signal Hill, CA		
		Travis Arriaga										50807		
												562-908-4045		
LAB ID	SAMPLE ID	SAMPLE COLLECTION		MATRIX			PRESERVATION					REMARKS		
		Date	Time	Soil	Ground water	Surface water	Lab H2O	HCl	HNO3	NaOH	H2SO4		Ice	
1202729-01	TB-080312	8/3/12	7:00			X			X					Please include
-2	EH-02		9:40	X			X		X					mrodriguez@hargis.co
-3	PF		8:30	X					X					in lab report
-Y	POX		8:40	X		X		X	X	X	X			distribution list
-5	CBT		8:50	X		X		X				X		set 1,4-Dioxane
-C	CEFF		9:05	X		X		X	X	X	X	X		MDL to 1.0 ppm
Total number of Containers per analysis:										4652		Total No. of Containers: 27		
Relinquished by:		Date: 8/3/12	Received by:		Date: 8/3/12	INSTRUCTIONS						Shipment Method: <u>Deliver</u>		
H+A Company		Time: 11:04	ATC Company		Time: 11:04	<ol style="list-style-type: none"> Fill out form completely except for shaded areas (lab use only); sign only after verified for completeness. Complete in ballpoint pen. Draw one line through errors, initial and date correction. Indicate number of sample containers in analysis request space; indicate choice with ✓ or x. Note applicable preservatives, special instructions, and deviations from typical environmental samples. Consult project QA documents for specific instructions. 						Send Results to: <u>Steve Netto</u>		
Relinquished by:		Date:	Received by:		Date:	Sample Receipt: <input type="checkbox"/> No. of containers correct <input type="checkbox"/> received good condition/cold <input type="checkbox"/> custody seals secure <input type="checkbox"/> conforms to COC document						<input checked="" type="checkbox"/> 9171 TOWNE CENTRE DRIVE, SUITE 375 SAN DIEGO, CA 92122 (858) 455-8500 <input type="checkbox"/> 1640 SOUTH STAPLEY DRIVE, SUITE 124 MESA, AZ 85204 (480) 345-0888 <input type="checkbox"/> 1820 EAST RIVER ROAD, SUITE 220 TUCSON, AZ 85718 (520) 831-7300		
Company:		Time:	Company:		Time:	Temp. @ receipt <u>5.4</u> °C						Send invoice to San Diego, CA Attn: Accounts Payable		

September 17, 2012

Steve Netto
Hargis & Associates, Inc.
9171 Towne Centre Drive, Suite 375
San Diego, CA 92122
Tel: (619) 249-3166
Fax: (858) 455-6533



Re: ATL Work Order Number : 1203136
Client Reference : Raytheon Main; Fullerton Quarterly, 532.15

Enclosed are the results for sample(s) received on September 06, 2012 by Advanced Technology Laboratories. The sample(s) are tested for the parameters as indicated on the enclosed chain of custody in accordance with applicable laboratory certifications. The laboratory results contained in this report specifically pertains to the sample(s) submitted.

Thank you for the opportunity to serve the needs of your company. If you have any questions, please feel free to contact me or your Project Manager.

Sincerely,

Eddie Rodriguez
Laboratory Director

The cover letter and the case narrative are an integral part of this analytical report and its absence renders the report invalid. Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Conference and/or applicable state-specific certification programs. The report cannot be reproduced without written permission from the client and Advanced Technology Laboratories.



Certificate of Analysis

Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : Raytheon Main; Fullerton Quarterly, 532.1

Report To : Steve Netto

Reported : 09/17/2012

SUMMARY OF SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
EW-02	1203136-01	Groundwater	9/06/12 11:10	9/06/12 13:53
POX	1203136-02	Groundwater	9/06/12 10:10	9/06/12 13:53

CASE NARRATIVE

The sample for SM 2320B (Alkalinity) analysis was subcontracted to AETL with DOHS Cert.#1541.



Certificate of Analysis

Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : Raytheon Main; Fullerton Quarterly, 532.1

Report To : Steve Netto

Reported : 09/17/2012

Client Sample ID EW-02

Lab ID: 1203136-01

Anions Scan by Ion Chromatography EPA 300.0

Analyst: AG

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Chloride	100	10	NA	20	B210104	09/07/2012	09/07/12 14:13	
Nitrate as N	5.4	0.10	NA	1	B210104	09/07/2012	09/07/12 11:22	
Nitrite, as N	ND	0.10	NA	1	B210104	09/07/2012	09/07/12 11:22	
ortho-Phosphate (As P)	ND	0.05	NA	1	B210104	09/07/2012	09/07/12 11:22	
Sulfate	140	20	NA	20	B210104	09/07/2012	09/07/12 14:13	

Total Organic Carbon by SM 5310B

Analyst: AG

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Organic Carbon, Total	ND	3.0	NA	1	B210154	09/10/2012	09/10/12 12:33	

Chemical Oxygen Demand by EPA 410.4

Analyst: LA

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Chemical Oxygen Demand	37	5.0	2.5	1	B210236	09/12/2012	09/12/12 01:40	

Total Metals by ICP-AES EPA 6010B

Analyst: ICP

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Selenium	ND	0.01	NA	1	B210213	09/11/2012	09/12/12 13:49	

Dissolved Metals by ICP-AES EPA 6010B

Analyst: KT/SB

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Calcium	92	0.50	NA	1	B210259	09/13/2012	09/13/12 16:15	
Iron	ND	0.50	NA	1	B210259	09/13/2012	09/13/12 16:15	
Magnesium	28	0.10	NA	1	B210259	09/13/2012	09/13/12 16:15	
Manganese	ND	0.50	NA	1	B210259	09/13/2012	09/13/12 16:15	
Selenium	ND	0.01	NA	1	B210259	09/13/2012	09/13/12 16:15	
Sodium	77	1.0	NA	1	B210259	09/13/2012	09/13/12 16:15	



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San Diego , CA 92122

Project Number : Raytheon Main; Fullerton Quarterly, 532.1

Report To : Steve Netto

Reported : 09/17/2012

Client Sample ID POX

Lab ID: 1203136-02

Anions Scan by Ion Chromatography EPA 300.0

Analyst: AG

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Chloride	100	10	NA	20	B210104	09/07/2012	09/07/12 15:45	
Nitrate as N	5.4	0.10	NA	1	B210104	09/07/2012	09/07/12 11:34	
Nitrite, as N	ND	0.10	NA	1	B210104	09/07/2012	09/07/12 11:34	
ortho-Phosphate (As P)	ND	0.05	NA	1	B210104	09/07/2012	09/07/12 11:34	
Sulfate	140	20	NA	20	B210104	09/07/2012	09/07/12 15:45	

Total Organic Carbon by SM 5310B

Analyst: AG

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Organic Carbon, Total	ND	3.0	NA	1	B210154	09/10/2012	09/10/12 12:46	

Chemical Oxygen Demand by EPA 410.4

Analyst: LA

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Chemical Oxygen Demand	33	5.0	2.5	1	B210236	09/12/2012	09/12/12 01:40	



Certificate of Analysis

Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : Raytheon Main; Fullerton Quarterly, 532.1

Report To : Steve Netto

Reported : 09/17/2012

QUALITY CONTROL SECTION

Anions Scan by Ion Chromatography EPA 300.0 - Quality Control

Analyte	Result (mg/L)	PQL (mg/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B2I0104 - No_Prep_IC_1

Blank (B2I0104-BLK1)

Prepared: 9/7/2012 Analyzed: 9/7/2012

Chloride	ND	0.50			NR				
Nitrate as N	ND	0.10			NR				
Nitrite, as N	ND	0.10			NR				
ortho-Phosphate (As P)	ND	0.05			NR				
Sulfate	ND	1.0			NR				

LCS (B2I0104-BS1)

Prepared: 9/7/2012 Analyzed: 9/7/2012

Chloride	0.945100	0.50	1.00000		94.5	90 - 110			
Nitrate as N	0.977400	0.10	1.00000		97.7	90 - 110			
Nitrite, as N	1.01250	0.10	1.00000		101	90 - 110			
ortho-Phosphate (As P)	1.04300	0.05	1.00000		104	90 - 110			
Sulfate	1.99380	1.0	2.00000		99.7	90 - 110			

Duplicate (B2I0104-DUP1)

Source: 1203136-01

Prepared: 9/7/2012 Analyzed: 9/7/2012

Chloride	100.810	10		101.114	NR		0.301	20	
Nitrate as N	5.60380	0.10		5.39380	NR		3.82	20	
Nitrite, as N	ND	0.10		ND	NR			20	
ortho-Phosphate (As P)	ND	0.05		ND	NR			20	
Sulfate	135.700	20		136.006	NR		0.225	20	

Matrix Spike (B2I0104-MS1)

Source: 1203136-01

Prepared: 9/7/2012 Analyzed: 9/7/2012

Chloride	102.544	10	2.50000	101.114	57.2	80 - 120			M3
Nitrate as N	7.95040	0.10	2.50000	5.39380	102	80 - 120			
Nitrite, as N	3.46460	0.10	2.50000	ND	139	80 - 120			M2
ortho-Phosphate (As P)	0.328000	0.05	2.50000	ND	13.1	80 - 120			M1
Sulfate	142.422	20	5.00000	136.006	128	80 - 120			M3

Matrix Spike Dup (B2I0104-MSD1)

Source: 1203136-01

Prepared: 9/7/2012 Analyzed: 9/7/2012

Chloride	102.770	10	2.50000	101.114	66.2	80 - 120	0.220	20	M3
Nitrate as N	8.14890	0.10	2.50000	5.39380	110	80 - 120	2.47	20	
Nitrite, as N	3.66190	0.10	2.50000	ND	146	80 - 120	5.54	20	M2
ortho-Phosphate (As P)	1.78800	0.05	2.50000	ND	71.5	80 - 120	138	20	M1
Sulfate	143.298	20	5.00000	136.006	146	80 - 120	0.613	20	M3



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Project Number : Raytheon Main; Fullerton Quarterly, 532.1

Report To : Steve Netto

Reported : 09/17/2012

Total Organic Carbon by SM 5310B - Quality Control

Analyte	Result (mg/L)	PQL (mg/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B2I0154 - No_Prep_II_W

Blank (B2I0154-BLK1)

Prepared: 9/10/2012 Analyzed: 9/10/2012

Organic Carbon, Total

ND 3.0

NR

LCS (B2I0154-BS1)

Prepared: 9/10/2012 Analyzed: 9/10/2012

Organic Carbon, Total

20.4100 3.0 20.0000

102 80 - 120

LCS Dup (B2I0154-BSD1)

Prepared: 9/10/2012 Analyzed: 9/10/2012

Organic Carbon, Total

19.5800 3.0 20.0000

97.9 80 - 120 4.15 20



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Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : Raytheon Main; Fullerton Quarterly, 532.1

Report To : Steve Netto

Reported : 09/17/2012

Chemical Oxygen Demand by EPA 410.4 - Quality Control

Analyte	Result (mg/L)	PQL (mg/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B2I0236 - Prep_WC_1_W

Blank (B2I0236-BLK1)

Prepared: 9/12/2012 Analyzed: 9/12/2012

Chemical Oxygen Demand

ND

5.0

NR

LCS (B2I0236-BS1)

Prepared: 9/12/2012 Analyzed: 9/12/2012

Chemical Oxygen Demand

508.859

5.0

500.000

102

80 - 120

Matrix Spike (B2I0236-MS1)

Source: 1203209-01

Prepared: 9/12/2012 Analyzed: 9/12/2012

Chemical Oxygen Demand

591.571

5.0

502.000

8.82200

116

80 - 120

Matrix Spike Dup (B2I0236-MSD1)

Source: 1203209-01

Prepared: 9/12/2012 Analyzed: 9/12/2012

Chemical Oxygen Demand

540.048

5.0

502.000

8.82200

106

80 - 120

9.11

20



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San Diego , CA 92122

Project Number : Raytheon Main; Fullerton Quarterly, 532.1

Report To : Steve Netto

Reported : 09/17/2012

Total Metals by ICP-AES EPA 6010B - Quality Control

Analyte	Result (mg/L)	PQL (mg/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B2I0213 - EPA 3010A

Blank (B2I0213-BLK1)

Prepared: 9/11/2012 Analyzed: 9/12/2012

Selenium ND 0.01 NR

LCS (B2I0213-BS1)

Prepared: 9/11/2012 Analyzed: 9/12/2012

Selenium 0.958742 0.01 1.00000 95.9 80 - 120

Duplicate (B2I0213-DUP1)

Source: 1203136-01

Prepared: 9/11/2012 Analyzed: 9/12/2012

Selenium ND 0.01 0.007270 NR 20

Matrix Spike (B2I0213-MS1)

Source: 1203136-01

Prepared: 9/11/2012 Analyzed: 9/12/2012

Selenium 2.54436 0.01 2.50000 0.007270 101 78 - 116

Matrix Spike Dup (B2I0213-MSD1)

Source: 1203136-01

Prepared: 9/11/2012 Analyzed: 9/12/2012

Selenium 2.22567 0.01 2.50000 0.007270 88.7 78 - 116 13.4 20



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San Diego , CA 92122

Project Number : Raytheon Main; Fullerton Quarterly, 532.1

Report To : Steve Netto

Reported : 09/17/2012

Dissolved Metals by ICP-AES EPA 6010B - Quality Control

Analyte	Result (mg/L)	PQL (mg/L)	Spike Level	Source Result	% Rec % Rec	% Rec Limits	RPD RPD	RPD Limit	Notes
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Batch B2I0259 - EPA 3010A

Blank (B2I0259-BLK1)

Prepared: 9/13/2012 Analyzed: 9/13/2012

Calcium	ND	0.50			NR				
Iron	ND	0.50			NR				
Magnesium	ND	0.10			NR				
Manganese	ND	0.50			NR				
Selenium	ND	0.01			NR				
Sodium	ND	1.0			NR				

LCS (B2I0259-BS1)

Prepared: 9/13/2012 Analyzed: 9/13/2012

Calcium	20.2085	0.50	20.0000		101	80 - 120			
Iron	19.7212	0.50	20.0000		98.6	80 - 120			
Magnesium	19.9041	0.10	20.0000		99.5	80 - 120			
Manganese	18.8275	0.50	20.0000		94.1	80 - 120			
Selenium	0.934693	0.01	1.00000		93.5	80 - 120			
Sodium	20.3751	1.0	20.0000		102	80 - 120			

Matrix Spike (B2I0259-MS1)

Source: 1203136-01

Prepared: 9/13/2012 Analyzed: 9/13/2012

Calcium	113.489	0.50	20.0000	91.5686	110	5 - 159			
Iron	19.9118	0.50	20.0000	ND	99.6	71 - 118			
Magnesium	47.7450	0.10	20.0000	27.8259	99.6	69 - 126			
Manganese	18.6617	0.50	20.0000	ND	93.3	79 - 109			
Selenium	2.40408	0.01	2.50000	ND	96.2	78 - 116			
Sodium	98.9940	1.0	3.61610	77.0778	606	70 - 130			M1

Matrix Spike Dup (B2I0259-MSD1)

Source: 1203136-01

Prepared: 9/13/2012 Analyzed: 9/13/2012

Calcium	104.468	0.50	20.0000	91.5686	64.5	5 - 159	8.28	20	
Iron	18.3828	0.50	20.0000	ND	91.9	71 - 118	7.99	20	
Magnesium	44.1295	0.10	20.0000	27.8259	81.5	69 - 126	7.87	20	
Manganese	17.4872	0.50	20.0000	ND	87.4	79 - 109	6.50	20	
Selenium	2.23485	0.01	2.50000	ND	89.4	78 - 116	7.30	20	
Sodium	90.9395	1.0	3.61610	77.0778	383	70 - 130	8.48	20	M1



Certificate of Analysis

Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : Raytheon Main; Fullerton Quarterly, 532.1

Report To : Steve Netto

Reported : 09/17/2012

Notes and Definitions

- M3 Matrix spike recovery outside of acceptance limit due to disproportionate concentration of the analyte to spike level. The analytical batch was validated by the laboratory control sample.
- M2 Matrix spike recovery outside of acceptance limit due to possible matrix interference. The analytical batch was validated by the laboratory control sample.
- M1 Matrix spike recovery outside of acceptance limit. The analytical batch was validated by the laboratory control sample.
- ND Analyte not detected at or above reporting limit
- PQL Practical Quantitation Limit
- MDL Method Detection Limit
- NR Not Reported
- RPD Relative Percent Difference
- CA1 CA-NELAP (CDPH)
- CA2 CA-ELAP (CDPH)
- OR1 OR-NELAP (OSPHL)
- TX1 TX-NELAP (TCEQ)



American Environmental Testing Laboratory Inc.

2834 & 2908 North Naomi Street Burbank, CA 91504 • DOHS NO: 1541, LACSD NO: 10181
Tel: (888) 288-AETL • (818) 845-8200 • Fax: (818) 845-8840 • www.aetlab.com

Ordered By

Advanced Technology Laboratories
3275 Walnut Street
Signal Hill, CA 90755-5225

Number of Pages 2
Date Received 09/07/2012
Date Reported 09/17/2012

Telephone: (562)989-4045
Attention: Rachelle Arada

Job Number	Order Date	Client
66783	09/07/2012	ATL

Project ID: 1203136
Project Name: PO# SC07481

Enclosed please find results of analyses of 1 water sample which was analyzed as specified on the attached chain of custody. If there are any questions, please do not hesitate to call.

Checked By: _____

Approved By: _____

Cyrus Razmara, Ph.D.
Laboratory Director



American Environmental Testing Laboratory Inc.

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Page: 1 A

Ordered By

Advanced Technology Laboratories
3275 Walnut Street
Signal Hill, CA 90755-5225

Project ID: 1203136
Date Received 09/07/2012
Date Reported 09/17/2012

Telephone: (562)989-4045
Attention: Rachelle Arada

Job Number	Order Date	Client
66783	09/07/2012	ATL

CERTIFICATE OF ANALYSIS CASE NARRATIVE

AETL received 1 samples with the following specification on 09/07/2012.

Lab ID	Sample ID	Sample Date	Matrix	QTY of Containers
66783.01	1203136-01	09/06/2012	Aqueous	1

The samples were analyzed as specified on the enclosed chain of custody.
No analytical non-conformances were encountered.

Checked By: _____

Approved By: _____

Cyrus Razmara, Ph.D.
Laboratory Director



American Environmental Testing Laboratory Inc.

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ANALYTICAL RESULTS

Ordered By

Advanced Technology Laboratories
 3275 Walnut Street
 Signal Hill, CA 90755-5225

Telephone: (562)989-4045

Attn: Rachelle Arada

Page: **2**

Project ID: 1203136
 Project Name: PO# SC07481

AETL Job Number	Submitted	Client
66783	09/07/2012	ATL

Method: 310.1, Alkalinity, Titrimetric (pH 4.5), (EPA/600/4-79-020)

QC Batch No: 091212-1

Our Lab I.D.		Method Blank	66783.01			
Client Sample I.D.			1203136-01			
Date Sampled			09/06/2012			
Date Prepared		09/12/2012	09/12/2012			
Preparation Method		310.1	310.1			
Date Analyzed		09/12/2012	09/12/2012			
Matrix		Aqueous	Aqueous			
Units		mg/L	mg/L			
Dilution Factor		1	1			
Analytes	MDL	PQL	Results	Results		
Alkalinity, Bicarbonate	2.0	2.0	ND	230		
Alkalinity, Carbonate	2.0	2.0	ND	ND		
Alkalinity, Hydroxide	2.0	2.0	ND	ND		
Alkalinity, Total	2.0	2.0	ND	230		

QUALITY CONTROL REPORT

QC Batch No: 091212-1; Dup or Spiked Sample: 66762.01; LCS: Clean Water; QC Prepared: 09/12/2012; QC Analyzed: 09/12/2012;
 Units: mg/L

Analytes	Sample Result	MS Concen	MS Recov	MS % REC	MS DUP Concen	MS DUP Recov	MS DUP % REC	RPD %	MS/MSD % Limit	MS RPD % Limit
Alkalinity, Bicarbonate	540	20.0	560	100	20.0	560	100	<1	80-120	<15
Alkalinity, Total	540	20.0	560	100	20.0	560	100	<1	80-120	<15

QC Batch No: 091212-1; Dup or Spiked Sample: 66762.01; LCS: Clean Water; QC Prepared: 09/12/2012; QC Analyzed: 09/12/2012;
 Units: mg/L

Analytes	SM Result	SM DUP Result	RPD %	SM RPD % Limit	LCS Concen	LCS Recov	LCS % REC	LCS/LCSD % Limit		
Alkalinity, Bicarbonate	540	550	1.8	<15	20.0	20.0	100	80-120		
Alkalinity, Total	540	550	1.8	<15	20.0	20.0	100	80-120		



American Environmental Testing Laboratory Inc.

2834 & 2908 North Naomi Street, Burbank, CA 91504 • DOHS NO: 1541, LACSD NO: 10181
Tel: (888) 288-AETL • (818) 845-8200 • Fax: (818) 845-8840 • www.aetlab.com

Data Qualifiers and Descriptors

Data Qualifier:

- #: Recovery is not within acceptable control limits.
- *: In the QC section, sample results have been taken directly from the ICP reading. No preparation factor has been applied.
- B: Analyte was present in the Method Blank.
- D: Result is from a diluted analysis.
- E: Result is beyond calibration limits and is estimated.
- H: Analysis was performed over the allowed holding time due to circumstances which were beyond laboratory control.
- J: Analyte was detected. However, the analyte concentration is an estimated value, which is between the Method Detection Limit (MDL) and the Practical Quantitation Limit (PQL).
- M: Matrix spike recovery is outside control limits due to matrix interference. Laboratory Control Sample recovery was acceptable.
- MCL: Maximum Contaminant Level
- NS: No Standard Available
- S6: Surrogate recovery is outside control limits due to matrix interference.
- S8: The analysis of the sample required a dilution such that the surrogate concentration was diluted below the method acceptance criteria.
- X: Results represent LCS and LCSD data.

Definition:

- %Limi: Percent acceptable limits.
- %REC: Percent recovery.
- Con.L: Acceptable Control Limits
- Conce: Added concentration to the sample.
- LCS: Laboratory Control Sample
- MDL: Method Detection Limit is a statistically derived number which is specific for each instrument, each method, and each compound. It indicates a distinctively detectable quantity with 99% probability.



American Environmental Testing Laboratory Inc.

2834 & 2908 North Naomi Street, Burbank, CA 91504 • DOHS NO: 1541, LACSD NO: 10181
Tel: (888) 288-AETL • (818) 845-8200 • Fax: (818) 845-8840 • www.aetlab.com

Data Qualifiers and Descriptors

- MS: Matrix Spike
- MS DU: Matrix Spike Duplicate
- ND: Analyte was not detected in the sample at or above MDL.
- PQL: Practical Quantitation Limit or ML (Minimum Level as per RWQCB) is the minimum concentration that can be quantified with more than 99% confidence. Taking into account all aspects of the entire analytical instrumentation and practice.
- Recov: Recovered concentration in the sample.
- RPD: Relative Percent Difference
-


ADVANCED TECHNOLOGY
 LABORATORIES

Job# 66783

SUBCONTRACT ORDER

Work Order: 1203136

SENDING LABORATORY:

Advanced Technology Laboratories
 3275 Walnut Avenue
 Signal Hill, CA 90755
 Phone: 562.989.4045
 Fax: 562.989.6348
 Project Manager: Rachele Arada

RECEIVING LABORATORY:

AETL
 2834 North Naomi Street
 Burbank, CA 91504
 Phone : (818) 845-8200
 Fax: (818) 845-8840
 PO#: SC07481 Standard TAT BR

IMPORTANT : Please include Work Order # and PO # in your invoice.

Analysis	Due	Expires	Sampled
ATL Lab#: 1203136-01 / EW-02			Groundwater 09/06/12 11:10
310.1_2320B_Total_SUB	09/13/12 17:00	09/20/12 11:10	66783.01

Comments: speciated (hydroxide,bicarbonate,carbonate&total)
 Need Excel EDD.

Released By <i>[Signature]</i>	Date <i>9/6/12</i>	Received By <i>[Signature]</i>	Date <i>9/7/12</i> 1020
Released By <i>[Signature]</i>	Date <i>9/7/12 1400</i>	Received By <i>[Signature]</i>	Date <i>09/07/12</i> 14.00

CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST FORM

PROJECT NAME Raytheon Main; Fullerton Quarterly				PROJECT No./TASK No. 532.15				SAMPLE CONTAINERS				ANALYSIS REQUESTED				ESTIMATED CONCENTRATION RANGE (ppb) FOR VOAS		SPECIAL HANDLING		LABORATORY INFORMATION																		
PROJECT MANAGER Chris Ross				Phone No. 358-455-6500								Total Se by EPA 6010B Dissolved Se. FE, Mn, Ca, Na & Mg by EPA 6010B Alkalinity (as CaCO ₃) by EPA 8230B & total by EPA SM2320B TOC by EPA SM5310B COD by EPA 410.4 Anions (CL, SO ₄ , NO ₃ , NO ₂ , PO ₄) by EPA 8230 0-10 10-100				Lab to filter and acidify Dissolved metals Lab to filter Anions		Advanced Technology Laboratories 3257 La Bata Ave Signal Hill CA 90755 Attn: Rachelle Arada																				
QA MANAGER Steve Netto				Fax No. 852-455-6533																																		
SAMPLER (SIGNATURE) 				SAMPLER (PRINTED) CARLOS RODRIGUEZ																																		
LAB ID	SAMPLE ID	SAMPLE COLLECTION		MATRIX			PRESER-VATION											REMARKS																				
		Date	Time	Soil	Ground - water	Surface water	Lab H2O	HCl	HNO ₃	NaOH	H ₂ SO ₄								Ice	40 ml VOA	125 ml Poly	250 ml Poly	500 ml Poly															
1203196-07	EW-02	9/6/12	11:10	X				X	X	X	X	1	1	1	3	X	X	X	X	X																		
12	POX	↓	10:10	X				X				3	1	1	1																							

Total number of Containers per analysis:				<u>6214</u>				Total No. of Containers: <u>13</u>										
Relinquished by: 		Date 9/1/12	Received by: TPOLAN	Date 9/6/12	INSTRUCTIONS										Shipment Method: <u>DELVER</u>			
Company H+A		Time 13:53	Company DR	Time 1353											1. Fill out form completely except for shaded areas (lab use only); sign only after verified for completeness. 2. Complete in ballpoint pen. Draw one line through errors, initial and date correction. 3. Indicate number of sample containers in analysis request space; indicate choice with ✓ or x. 4. Note applicable preservatives, special instructions, and deviations from typical environmental samples. 5. Consult project QA documents for specific instructions.				☒ 9171 TOWNE CENTRE DRIVE, SUITE 375 SAN DIEGO, CA 92122 (858) 455-6500 ☐ 1640 SOUTH STAPLEY DRIVE, SUITE 124 MESA, AZ 85204 (480) 345-0888 ☐ 1820 EAST RIVER ROAD, SUITE 220 TUCSON, AZ 85718 (520) 881-7300
Relinquished by:		Date	Received by:	Date	Sample Receipt:				Temp. @ receipt <u>14</u> °C				Send invoice to San Diego, CA					
Company		Time	Company	Time	<input type="checkbox"/> No. of containers correct <input type="checkbox"/> custody seals secure				<input checked="" type="checkbox"/> received good condition/cold <input type="checkbox"/> conforms to COC document				Attn: Accounts Payable					

September 24, 2012

Steve Netto
Hargis & Associates, Inc.
9171 Towne Centre Drive, Suite 375
San Diego, CA 92122
Tel: (619) 249-3166
Fax: (858) 455-6533



Re: ATL Work Order Number : 1203137
Client Reference : Raytheon Main; Fullerton Monthly, 532.15

Enclosed are the results for sample(s) received on September 06, 2012 by Advanced Technology Laboratories. The sample(s) are tested for the parameters as indicated on the enclosed chain of custody in accordance with applicable laboratory certifications. The laboratory results contained in this report specifically pertains to the sample(s) submitted.

Thank you for the opportunity to serve the needs of your company. If you have any questions, please feel free to contact me or your Project Manager.

Sincerely,

Eddie Rodriguez
Laboratory Director

The cover letter and the case narrative are an integral part of this analytical report and its absence renders the report invalid. Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Conference and/or applicable state-specific certification programs. The report cannot be reproduced without written permission from the client and Advanced Technology Laboratories.



Certificate of Analysis

Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : Raytheon Main; Fullerton Monthly, 532.1:

Report To : Steve Netto

Reported : 09/24/2012

SUMMARY OF SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
TB-090612	1203137-01	Lab H2O	9/06/12 9:00	9/06/12 13:53
EW-02	1203137-02	Groundwater	9/06/12 11:10	9/06/12 13:53
PF	1203137-03	Groundwater	9/06/12 10:00	9/06/12 13:53
POX	1203137-04	Groundwater	9/06/12 10:10	9/06/12 13:53
CBT	1203137-05	Groundwater	9/06/12 10:23	9/06/12 13:53
CEFF	1203137-06	Groundwater	9/06/12 10:35	9/06/12 13:53

CASE NARRATIVE

The samples for EPA 317 (Bromate) analysis were subcontracted to Exova, Inc. with ELAP Cert.# 2652.



Certificate of Analysis

Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : Raytheon Main; Fullerton Monthly, 532.1:

Report To : Steve Netto

Reported : 09/24/2012

Client Sample ID TB-090612

Lab ID: 1203137-01

Volatile Organic Compounds by EPA 8260

Analyst: RP

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	0.50	NA	1	B2I0091	09/07/2012	09/07/12 12:20	
1,1,1-Trichloroethane	ND	0.50	NA	1	B2I0091	09/07/2012	09/07/12 12:20	
1,1,2,2-Tetrachloroethane	ND	0.50	NA	1	B2I0091	09/07/2012	09/07/12 12:20	
1,1,2-Trichloroethane	ND	0.50	NA	1	B2I0091	09/07/2012	09/07/12 12:20	
1,1-Dichloroethane	ND	0.50	NA	1	B2I0091	09/07/2012	09/07/12 12:20	
1,1-Dichloroethene	ND	0.50	NA	1	B2I0091	09/07/2012	09/07/12 12:20	
1,1-Dichloropropene	ND	0.50	NA	1	B2I0091	09/07/2012	09/07/12 12:20	
1,2,3-Trichloropropane	ND	0.50	NA	1	B2I0091	09/07/2012	09/07/12 12:20	
1,2,3-Trichlorobenzene	ND	0.50	NA	1	B2I0091	09/07/2012	09/07/12 12:20	
1,2,4-Trichlorobenzene	ND	0.50	NA	1	B2I0091	09/07/2012	09/07/12 12:20	
1,2,4-Trimethylbenzene	ND	0.50	NA	1	B2I0091	09/07/2012	09/07/12 12:20	
1,2-Dibromo-3-chloropropane	ND	0.50	NA	1	B2I0091	09/07/2012	09/07/12 12:20	
1,2-Dibromoethane	ND	0.50	NA	1	B2I0091	09/07/2012	09/07/12 12:20	
1,2-Dichlorobenzene	ND	0.50	NA	1	B2I0091	09/07/2012	09/07/12 12:20	
1,2-Dichloroethane	ND	0.50	NA	1	B2I0091	09/07/2012	09/07/12 12:20	
1,2-Dichloropropane	ND	0.50	NA	1	B2I0091	09/07/2012	09/07/12 12:20	
1,3,5-Trimethylbenzene	ND	0.50	NA	1	B2I0091	09/07/2012	09/07/12 12:20	
1,3-Dichlorobenzene	ND	0.50	NA	1	B2I0091	09/07/2012	09/07/12 12:20	
1,3-Dichloropropane	ND	0.50	NA	1	B2I0091	09/07/2012	09/07/12 12:20	
1,4-Dichlorobenzene	ND	0.50	NA	1	B2I0091	09/07/2012	09/07/12 12:20	
2,2-Dichloropropane	ND	0.50	NA	1	B2I0091	09/07/2012	09/07/12 12:20	
2-Chlorotoluene	ND	0.50	NA	1	B2I0091	09/07/2012	09/07/12 12:20	
4-Chlorotoluene	ND	0.50	NA	1	B2I0091	09/07/2012	09/07/12 12:20	
4-Isopropyltoluene	ND	0.50	NA	1	B2I0091	09/07/2012	09/07/12 12:20	
Benzene	ND	0.50	NA	1	B2I0091	09/07/2012	09/07/12 12:20	
Bromobenzene	ND	0.50	NA	1	B2I0091	09/07/2012	09/07/12 12:20	
Bromodichloromethane	ND	0.50	NA	1	B2I0091	09/07/2012	09/07/12 12:20	
Bromoform	ND	0.50	NA	1	B2I0091	09/07/2012	09/07/12 12:20	
Bromomethane	ND	0.50	NA	1	B2I0091	09/07/2012	09/07/12 12:20	
Carbon tetrachloride	ND	0.50	NA	1	B2I0091	09/07/2012	09/07/12 12:20	
Chlorobenzene	ND	0.50	NA	1	B2I0091	09/07/2012	09/07/12 12:20	
Chloroethane	ND	0.50	NA	1	B2I0091	09/07/2012	09/07/12 12:20	
Chloroform	ND	0.50	NA	1	B2I0091	09/07/2012	09/07/12 12:20	
Chloromethane	ND	0.50	NA	1	B2I0091	09/07/2012	09/07/12 12:20	
cis-1,2-Dichloroethene	ND	0.50	NA	1	B2I0091	09/07/2012	09/07/12 12:20	
cis-1,3-Dichloropropene	ND	0.50	NA	1	B2I0091	09/07/2012	09/07/12 12:20	
Dibromochloromethane	ND	0.50	NA	1	B2I0091	09/07/2012	09/07/12 12:20	



Certificate of Analysis

Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : Raytheon Main; Fullerton Monthly, 532.1:

Report To : Steve Netto

Reported : 09/24/2012

Client Sample ID TB-090612

Lab ID: 1203137-01

Volatile Organic Compounds by EPA 8260

Analyst: RP

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Dibromomethane	ND	0.50	NA	1	B2I0091	09/07/2012	09/07/12 12:20	
Dichlorodifluoromethane	ND	0.50	NA	1	B2I0091	09/07/2012	09/07/12 12:20	
Ethylbenzene	ND	0.50	NA	1	B2I0091	09/07/2012	09/07/12 12:20	
Hexachlorobutadiene	ND	0.50	NA	1	B2I0091	09/07/2012	09/07/12 12:20	
Isopropylbenzene	ND	0.50	NA	1	B2I0091	09/07/2012	09/07/12 12:20	
m,p-Xylene	ND	1.0	NA	1	B2I0091	09/07/2012	09/07/12 12:20	
Methylene chloride	ND	1.0	NA	1	B2I0091	09/07/2012	09/07/12 12:20	
n-Butylbenzene	ND	0.50	NA	1	B2I0091	09/07/2012	09/07/12 12:20	
n-Propylbenzene	ND	0.50	NA	1	B2I0091	09/07/2012	09/07/12 12:20	
Naphthalene	ND	0.50	NA	1	B2I0091	09/07/2012	09/07/12 12:20	
o-Xylene	ND	0.50	NA	1	B2I0091	09/07/2012	09/07/12 12:20	
sec-Butylbenzene	ND	0.50	NA	1	B2I0091	09/07/2012	09/07/12 12:20	
Styrene	ND	0.50	NA	1	B2I0091	09/07/2012	09/07/12 12:20	
tert-Butylbenzene	ND	0.50	NA	1	B2I0091	09/07/2012	09/07/12 12:20	
Tetrachloroethene	ND	0.50	NA	1	B2I0091	09/07/2012	09/07/12 12:20	
Toluene	ND	0.50	NA	1	B2I0091	09/07/2012	09/07/12 12:20	
trans-1,2-Dichloroethene	ND	0.50	NA	1	B2I0091	09/07/2012	09/07/12 12:20	
Trichloroethene	ND	0.50	NA	1	B2I0091	09/07/2012	09/07/12 12:20	
Trichlorofluoromethane	ND	0.50	NA	1	B2I0091	09/07/2012	09/07/12 12:20	
Vinyl chloride	ND	0.50	NA	1	B2I0091	09/07/2012	09/07/12 12:20	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>110 %</i>		<i>70 - 130</i>		B2I0091	09/07/2012	<i>09/07/12 12:20</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>97.9 %</i>		<i>70 - 130</i>		B2I0091	09/07/2012	<i>09/07/12 12:20</i>	
<i>Surrogate: Dibromofluoromethane</i>	<i>109 %</i>		<i>70 - 130</i>		B2I0091	09/07/2012	<i>09/07/12 12:20</i>	
<i>Surrogate: Toluene-d8</i>	<i>106 %</i>		<i>70 - 130</i>		B2I0091	09/07/2012	<i>09/07/12 12:20</i>	



Certificate of Analysis

Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : Raytheon Main; Fullerton Monthly, 532.1:

Report To : Steve Netto

Reported : 09/24/2012

Client Sample ID EW-02

Lab ID: 1203137-02

Anions by Ion Chromatography EPA 300.0

Analyst: AG

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Bromide	0.19	0.05	NA	1	B210104	09/07/2012	09/07/12 11:45	

Total Dissolved Solids (Residue, Filterable) by SM 2540C

Analyst: AG

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Residue, Dissolved	650	10	10	1	B210206	09/10/2012	09/10/12 11:40	

Total Suspended Solids (Residue, Non-Filtrable) by SM 2540D

Analyst: AG

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Residue, Suspended	ND	10	10	1	B210199	09/10/2012	09/10/12 11:00	

Volatile Organic Compounds by EPA 8260

Analyst: RP

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	0.50	NA	1	B210091	09/07/2012	09/07/12 15:12	
1,1,1-Trichloroethane	ND	0.50	NA	1	B210091	09/07/2012	09/07/12 15:12	
1,1,2,2-Tetrachloroethane	ND	0.50	NA	1	B210091	09/07/2012	09/07/12 15:12	
1,1,2-Trichloroethane	ND	0.50	NA	1	B210091	09/07/2012	09/07/12 15:12	
1,1-Dichloroethane	0.58	0.50	NA	1	B210091	09/07/2012	09/07/12 15:12	
1,1-Dichloroethene	62	0.50	NA	1	B210091	09/07/2012	09/07/12 15:12	
1,1-Dichloropropene	ND	0.50	NA	1	B210091	09/07/2012	09/07/12 15:12	
1,2,3-Trichloropropane	ND	0.50	NA	1	B210091	09/07/2012	09/07/12 15:12	
1,2,3-Trichlorobenzene	ND	0.50	NA	1	B210091	09/07/2012	09/07/12 15:12	
1,2,4-Trichlorobenzene	ND	0.50	NA	1	B210091	09/07/2012	09/07/12 15:12	
1,2,4-Trimethylbenzene	ND	0.50	NA	1	B210091	09/07/2012	09/07/12 15:12	
1,2-Dibromo-3-chloropropane	ND	0.50	NA	1	B210091	09/07/2012	09/07/12 15:12	
1,2-Dibromoethane	ND	0.50	NA	1	B210091	09/07/2012	09/07/12 15:12	
1,2-Dichlorobenzene	ND	0.50	NA	1	B210091	09/07/2012	09/07/12 15:12	
1,2-Dichloroethane	ND	0.50	NA	1	B210091	09/07/2012	09/07/12 15:12	
1,2-Dichloropropane	ND	0.50	NA	1	B210091	09/07/2012	09/07/12 15:12	
1,3,5-Trimethylbenzene	ND	0.50	NA	1	B210091	09/07/2012	09/07/12 15:12	
1,3-Dichlorobenzene	ND	0.50	NA	1	B210091	09/07/2012	09/07/12 15:12	
1,3-Dichloropropane	ND	0.50	NA	1	B210091	09/07/2012	09/07/12 15:12	



Certificate of Analysis

Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego, CA 92122

Project Number : Raytheon Main; Fullerton Monthly, 532.1:

Report To : Steve Netto

Reported : 09/24/2012

Client Sample ID EW-02

Lab ID: 1203137-02

Volatile Organic Compounds by EPA 8260

Analyst: RP

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,4-Dichlorobenzene	ND	0.50	NA	1	B2I0091	09/07/2012	09/07/12 15:12	
2,2-Dichloropropane	ND	0.50	NA	1	B2I0091	09/07/2012	09/07/12 15:12	
2-Chlorotoluene	ND	0.50	NA	1	B2I0091	09/07/2012	09/07/12 15:12	
4-Chlorotoluene	ND	0.50	NA	1	B2I0091	09/07/2012	09/07/12 15:12	
4-Isopropyltoluene	ND	0.50	NA	1	B2I0091	09/07/2012	09/07/12 15:12	
Benzene	ND	0.50	NA	1	B2I0091	09/07/2012	09/07/12 15:12	
Bromobenzene	ND	0.50	NA	1	B2I0091	09/07/2012	09/07/12 15:12	
Bromodichloromethane	ND	0.50	NA	1	B2I0091	09/07/2012	09/07/12 15:12	
Bromoform	ND	0.50	NA	1	B2I0091	09/07/2012	09/07/12 15:12	
Bromomethane	ND	0.50	NA	1	B2I0091	09/07/2012	09/07/12 15:12	
Carbon tetrachloride	ND	0.50	NA	1	B2I0091	09/07/2012	09/07/12 15:12	
Chlorobenzene	ND	0.50	NA	1	B2I0091	09/07/2012	09/07/12 15:12	
Chloroethane	ND	0.50	NA	1	B2I0091	09/07/2012	09/07/12 15:12	
Chloroform	ND	0.50	NA	1	B2I0091	09/07/2012	09/07/12 15:12	
Chloromethane	ND	0.50	NA	1	B2I0091	09/07/2012	09/07/12 15:12	
cis-1,2-Dichloroethene	ND	0.50	NA	1	B2I0091	09/07/2012	09/07/12 15:12	
cis-1,3-Dichloropropene	ND	0.50	NA	1	B2I0091	09/07/2012	09/07/12 15:12	
Dibromochloromethane	ND	0.50	NA	1	B2I0091	09/07/2012	09/07/12 15:12	
Dibromomethane	ND	0.50	NA	1	B2I0091	09/07/2012	09/07/12 15:12	
Dichlorodifluoromethane	ND	0.50	NA	1	B2I0091	09/07/2012	09/07/12 15:12	
Ethylbenzene	ND	0.50	NA	1	B2I0091	09/07/2012	09/07/12 15:12	
Hexachlorobutadiene	ND	0.50	NA	1	B2I0091	09/07/2012	09/07/12 15:12	
Isopropylbenzene	ND	0.50	NA	1	B2I0091	09/07/2012	09/07/12 15:12	
m,p-Xylene	ND	1.0	NA	1	B2I0091	09/07/2012	09/07/12 15:12	
Methylene chloride	ND	1.0	NA	1	B2I0091	09/07/2012	09/07/12 15:12	
n-Butylbenzene	ND	0.50	NA	1	B2I0091	09/07/2012	09/07/12 15:12	
n-Propylbenzene	ND	0.50	NA	1	B2I0091	09/07/2012	09/07/12 15:12	
Naphthalene	ND	0.50	NA	1	B2I0091	09/07/2012	09/07/12 15:12	
o-Xylene	ND	0.50	NA	1	B2I0091	09/07/2012	09/07/12 15:12	
sec-Butylbenzene	ND	0.50	NA	1	B2I0091	09/07/2012	09/07/12 15:12	
Styrene	ND	0.50	NA	1	B2I0091	09/07/2012	09/07/12 15:12	
tert-Butylbenzene	ND	0.50	NA	1	B2I0091	09/07/2012	09/07/12 15:12	
Tetrachloroethene	ND	0.50	NA	1	B2I0091	09/07/2012	09/07/12 15:12	
Toluene	ND	0.50	NA	1	B2I0091	09/07/2012	09/07/12 15:12	
trans-1,2-Dichloroethene	ND	0.50	NA	1	B2I0091	09/07/2012	09/07/12 15:12	
Trichloroethene	ND	0.50	NA	1	B2I0091	09/07/2012	09/07/12 15:12	
Trichlorofluoromethane	ND	0.50	NA	1	B2I0091	09/07/2012	09/07/12 15:12	



Certificate of Analysis

Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego, CA 92122

Project Number : Raytheon Main; Fullerton Monthly, 532.1:

Report To : Steve Netto

Reported : 09/24/2012

Client Sample ID EW-02

Lab ID: 1203137-02

Volatile Organic Compounds by EPA 8260

Analyst: RP

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Vinyl chloride	ND	0.50	NA	1	B210091	09/07/2012	09/07/12 15:12	
Surrogate: 1,2-Dichloroethane-d4	111 %		70 - 130		B210091	09/07/2012	09/07/12 15:12	
Surrogate: 4-Bromofluorobenzene	96.3 %		70 - 130		B210091	09/07/2012	09/07/12 15:12	
Surrogate: Dibromofluoromethane	111 %		70 - 130		B210091	09/07/2012	09/07/12 15:12	
Surrogate: Toluene-d8	105 %		70 - 130		B210091	09/07/2012	09/07/12 15:12	

1,4-Dioxane by EPA 8270: Isotope Dilution Technique

Analyst: BB

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,4-Dioxane	11	2.0	0.69	1	B210232	09/12/2012	09/12/12 15:53	
Surrogate: 1,2-Dichlorobenzene-d4	77.4 %		37 - 93		B210232	09/12/2012	09/12/12 15:53	
Surrogate: 2-Fluorobiphenyl	85.4 %		51 - 100		B210232	09/12/2012	09/12/12 15:53	
Surrogate: 4-Terphenyl-d14	99.2 %		58 - 113		B210232	09/12/2012	09/12/12 15:53	
Surrogate: Nitrobenzene-d5	78.4 %		39 - 95		B210232	09/12/2012	09/12/12 15:53	



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San Diego , CA 92122

Project Number : Raytheon Main; Fullerton Monthly, 532.1:

Report To : Steve Netto

Reported : 09/24/2012

Client Sample ID PF

Lab ID: 1203137-03

Total Suspended Solids (Residue, Non-Filtrable) by SM 2540D

Analyst: AG

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Residue, Suspended	ND	10	10	1	B210199	09/10/2012	09/10/12 11:00	



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San Diego, CA 92122

Project Number : Raytheon Main; Fullerton Monthly, 532.1:

Report To : Steve Netto

Reported : 09/24/2012

Client Sample ID POX

Lab ID: 1203137-04

Anions by Ion Chromatography EPA 300.0

Analyst: AG

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Bromide	0.19	0.05	NA	1	B210104	09/07/2012	09/07/12 11:57	

Total Dissolved Solids (Residue, Filterable) by SM 2540C

Analyst: AG

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Residue, Dissolved	640	10	10	1	B210206	09/10/2012	09/10/12 11:42	

Volatile Organic Compounds by EPA 8260

Analyst: RP

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	0.50	NA	1	B210091	09/07/2012	09/07/12 14:09	
1,1,1-Trichloroethane	ND	0.50	NA	1	B210091	09/07/2012	09/07/12 14:09	
1,1,2,2-Tetrachloroethane	ND	0.50	NA	1	B210091	09/07/2012	09/07/12 14:09	
1,1,2-Trichloroethane	ND	0.50	NA	1	B210091	09/07/2012	09/07/12 14:09	
1,1-Dichloroethane	ND	0.50	NA	1	B210091	09/07/2012	09/07/12 14:09	
1,1-Dichloroethene	ND	0.50	NA	1	B210091	09/07/2012	09/07/12 14:09	
1,1-Dichloropropene	ND	0.50	NA	1	B210091	09/07/2012	09/07/12 14:09	
1,2,3-Trichloropropane	ND	0.50	NA	1	B210091	09/07/2012	09/07/12 14:09	
1,2,3-Trichlorobenzene	ND	0.50	NA	1	B210091	09/07/2012	09/07/12 14:09	
1,2,4-Trichlorobenzene	ND	0.50	NA	1	B210091	09/07/2012	09/07/12 14:09	
1,2,4-Trimethylbenzene	ND	0.50	NA	1	B210091	09/07/2012	09/07/12 14:09	
1,2-Dibromo-3-chloropropane	ND	0.50	NA	1	B210091	09/07/2012	09/07/12 14:09	
1,2-Dibromoethane	ND	0.50	NA	1	B210091	09/07/2012	09/07/12 14:09	
1,2-Dichlorobenzene	ND	0.50	NA	1	B210091	09/07/2012	09/07/12 14:09	
1,2-Dichloroethane	ND	0.50	NA	1	B210091	09/07/2012	09/07/12 14:09	
1,2-Dichloropropane	ND	0.50	NA	1	B210091	09/07/2012	09/07/12 14:09	
1,3,5-Trimethylbenzene	ND	0.50	NA	1	B210091	09/07/2012	09/07/12 14:09	
1,3-Dichlorobenzene	ND	0.50	NA	1	B210091	09/07/2012	09/07/12 14:09	
1,3-Dichloropropane	ND	0.50	NA	1	B210091	09/07/2012	09/07/12 14:09	
1,4-Dichlorobenzene	ND	0.50	NA	1	B210091	09/07/2012	09/07/12 14:09	
2,2-Dichloropropane	ND	0.50	NA	1	B210091	09/07/2012	09/07/12 14:09	
2-Chlorotoluene	ND	0.50	NA	1	B210091	09/07/2012	09/07/12 14:09	
4-Chlorotoluene	ND	0.50	NA	1	B210091	09/07/2012	09/07/12 14:09	
4-Isopropyltoluene	ND	0.50	NA	1	B210091	09/07/2012	09/07/12 14:09	
Benzene	ND	0.50	NA	1	B210091	09/07/2012	09/07/12 14:09	



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Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego, CA 92122

Project Number : Raytheon Main; Fullerton Monthly, 532.1:

Report To : Steve Netto

Reported : 09/24/2012

Client Sample ID POX

Lab ID: 1203137-04

Volatile Organic Compounds by EPA 8260

Analyst: RP

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Bromobenzene	ND	0.50	NA	1	B210091	09/07/2012	09/07/12 14:09	
Bromodichloromethane	ND	0.50	NA	1	B210091	09/07/2012	09/07/12 14:09	
Bromoform	ND	0.50	NA	1	B210091	09/07/2012	09/07/12 14:09	
Bromomethane	ND	0.50	NA	1	B210091	09/07/2012	09/07/12 14:09	
Carbon tetrachloride	ND	0.50	NA	1	B210091	09/07/2012	09/07/12 14:09	
Chlorobenzene	ND	0.50	NA	1	B210091	09/07/2012	09/07/12 14:09	
Chloroethane	ND	0.50	NA	1	B210091	09/07/2012	09/07/12 14:09	
Chloroform	ND	0.50	NA	1	B210091	09/07/2012	09/07/12 14:09	
Chloromethane	0.57	0.50	NA	1	B210091	09/07/2012	09/07/12 14:09	
cis-1,2-Dichloroethene	ND	0.50	NA	1	B210091	09/07/2012	09/07/12 14:09	
cis-1,3-Dichloropropene	ND	0.50	NA	1	B210091	09/07/2012	09/07/12 14:09	
Dibromochloromethane	ND	0.50	NA	1	B210091	09/07/2012	09/07/12 14:09	
Dibromomethane	ND	0.50	NA	1	B210091	09/07/2012	09/07/12 14:09	
Dichlorodifluoromethane	ND	0.50	NA	1	B210091	09/07/2012	09/07/12 14:09	
Ethylbenzene	ND	0.50	NA	1	B210091	09/07/2012	09/07/12 14:09	
Hexachlorobutadiene	ND	0.50	NA	1	B210091	09/07/2012	09/07/12 14:09	
Isopropylbenzene	ND	0.50	NA	1	B210091	09/07/2012	09/07/12 14:09	
m,p-Xylene	ND	1.0	NA	1	B210091	09/07/2012	09/07/12 14:09	
Methylene chloride	ND	1.0	NA	1	B210091	09/07/2012	09/07/12 14:09	
n-Butylbenzene	ND	0.50	NA	1	B210091	09/07/2012	09/07/12 14:09	
n-Propylbenzene	ND	0.50	NA	1	B210091	09/07/2012	09/07/12 14:09	
Naphthalene	ND	0.50	NA	1	B210091	09/07/2012	09/07/12 14:09	
o-Xylene	ND	0.50	NA	1	B210091	09/07/2012	09/07/12 14:09	
sec-Butylbenzene	ND	0.50	NA	1	B210091	09/07/2012	09/07/12 14:09	
Styrene	ND	0.50	NA	1	B210091	09/07/2012	09/07/12 14:09	
tert-Butylbenzene	ND	0.50	NA	1	B210091	09/07/2012	09/07/12 14:09	
Tetrachloroethene	ND	0.50	NA	1	B210091	09/07/2012	09/07/12 14:09	
Toluene	ND	0.50	NA	1	B210091	09/07/2012	09/07/12 14:09	
trans-1,2-Dichloroethene	ND	0.50	NA	1	B210091	09/07/2012	09/07/12 14:09	
Trichloroethene	ND	0.50	NA	1	B210091	09/07/2012	09/07/12 14:09	
Trichlorofluoromethane	ND	0.50	NA	1	B210091	09/07/2012	09/07/12 14:09	
Vinyl chloride	ND	0.50	NA	1	B210091	09/07/2012	09/07/12 14:09	

Surrogate: 1,2-Dichloroethane-d4

109 %

70 - 130

B210091

09/07/2012

09/07/12 14:09

Surrogate: 4-Bromofluorobenzene

96.6 %

70 - 130

B210091

09/07/2012

09/07/12 14:09

Surrogate: Dibromofluoromethane

109 %

70 - 130

B210091

09/07/2012

09/07/12 14:09

Surrogate: Toluene-d8

105 %

70 - 130

B210091

09/07/2012

09/07/12 14:09



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Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego, CA 92122

Project Number : Raytheon Main; Fullerton Monthly, 532.1:

Report To : Steve Netto

Reported : 09/24/2012

Client Sample ID POX

Lab ID: 1203137-04

1,4-Dioxane by EPA 8270/SIM: Isotope Dilution Technique

Analyst: BB

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,4-Dioxane	ND	0.20	0.13	1	B210203	09/11/2012	09/11/12 20:28	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	<i>89.7 %</i>		<i>36 - 107</i>		B210203	09/11/2012	<i>09/11/12 20:28</i>	
<i>Surrogate: 2-Fluorobiphenyl</i>	<i>110 %</i>		<i>42 - 120</i>		B210203	09/11/2012	<i>09/11/12 20:28</i>	
<i>Surrogate: 4-Terphenyl-d14</i>	<i>96.5 %</i>		<i>67 - 142</i>		B210203	09/11/2012	<i>09/11/12 20:28</i>	
<i>Surrogate: Nitrobenzene-d5</i>	<i>57.0 %</i>		<i>36 - 130</i>		B210203	09/11/2012	<i>09/11/12 20:28</i>	



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9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : Raytheon Main; Fullerton Monthly, 532.1:

Report To : Steve Netto

Reported : 09/24/2012

Client Sample ID CBT

Lab ID: 1203137-05

Volatile Organic Compounds by EPA 8260

Analyst: RP

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	0.50	NA	1	B2I0091	09/07/2012	09/07/12 14:51	
1,1,1-Trichloroethane	ND	0.50	NA	1	B2I0091	09/07/2012	09/07/12 14:51	
1,1,2,2-Tetrachloroethane	ND	0.50	NA	1	B2I0091	09/07/2012	09/07/12 14:51	
1,1,2-Trichloroethane	ND	0.50	NA	1	B2I0091	09/07/2012	09/07/12 14:51	
1,1-Dichloroethane	0.51	0.50	NA	1	B2I0091	09/07/2012	09/07/12 14:51	
1,1-Dichloroethene	ND	0.50	NA	1	B2I0091	09/07/2012	09/07/12 14:51	
1,1-Dichloropropene	ND	0.50	NA	1	B2I0091	09/07/2012	09/07/12 14:51	
1,2,3-Trichloropropane	ND	0.50	NA	1	B2I0091	09/07/2012	09/07/12 14:51	
1,2,3-Trichlorobenzene	ND	0.50	NA	1	B2I0091	09/07/2012	09/07/12 14:51	
1,2,4-Trichlorobenzene	ND	0.50	NA	1	B2I0091	09/07/2012	09/07/12 14:51	
1,2,4-Trimethylbenzene	ND	0.50	NA	1	B2I0091	09/07/2012	09/07/12 14:51	
1,2-Dibromo-3-chloropropane	ND	0.50	NA	1	B2I0091	09/07/2012	09/07/12 14:51	
1,2-Dibromoethane	ND	0.50	NA	1	B2I0091	09/07/2012	09/07/12 14:51	
1,2-Dichlorobenzene	ND	0.50	NA	1	B2I0091	09/07/2012	09/07/12 14:51	
1,2-Dichloroethane	ND	0.50	NA	1	B2I0091	09/07/2012	09/07/12 14:51	
1,2-Dichloropropane	ND	0.50	NA	1	B2I0091	09/07/2012	09/07/12 14:51	
1,3,5-Trimethylbenzene	ND	0.50	NA	1	B2I0091	09/07/2012	09/07/12 14:51	
1,3-Dichlorobenzene	ND	0.50	NA	1	B2I0091	09/07/2012	09/07/12 14:51	
1,3-Dichloropropane	ND	0.50	NA	1	B2I0091	09/07/2012	09/07/12 14:51	
1,4-Dichlorobenzene	ND	0.50	NA	1	B2I0091	09/07/2012	09/07/12 14:51	
2,2-Dichloropropane	ND	0.50	NA	1	B2I0091	09/07/2012	09/07/12 14:51	
2-Chlorotoluene	ND	0.50	NA	1	B2I0091	09/07/2012	09/07/12 14:51	
4-Chlorotoluene	ND	0.50	NA	1	B2I0091	09/07/2012	09/07/12 14:51	
4-Isopropyltoluene	ND	0.50	NA	1	B2I0091	09/07/2012	09/07/12 14:51	
Benzene	ND	0.50	NA	1	B2I0091	09/07/2012	09/07/12 14:51	
Bromobenzene	ND	0.50	NA	1	B2I0091	09/07/2012	09/07/12 14:51	
Bromodichloromethane	ND	0.50	NA	1	B2I0091	09/07/2012	09/07/12 14:51	
Bromoform	ND	0.50	NA	1	B2I0091	09/07/2012	09/07/12 14:51	
Bromomethane	ND	0.50	NA	1	B2I0091	09/07/2012	09/07/12 14:51	
Carbon tetrachloride	ND	0.50	NA	1	B2I0091	09/07/2012	09/07/12 14:51	
Chlorobenzene	ND	0.50	NA	1	B2I0091	09/07/2012	09/07/12 14:51	
Chloroethane	ND	0.50	NA	1	B2I0091	09/07/2012	09/07/12 14:51	
Chloroform	ND	0.50	NA	1	B2I0091	09/07/2012	09/07/12 14:51	
Chloromethane	ND	0.50	NA	1	B2I0091	09/07/2012	09/07/12 14:51	
cis-1,2-Dichloroethene	ND	0.50	NA	1	B2I0091	09/07/2012	09/07/12 14:51	
cis-1,3-Dichloropropene	ND	0.50	NA	1	B2I0091	09/07/2012	09/07/12 14:51	
Dibromochloromethane	ND	0.50	NA	1	B2I0091	09/07/2012	09/07/12 14:51	



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Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : Raytheon Main; Fullerton Monthly, 532.1:

Report To : Steve Netto

Reported : 09/24/2012

Client Sample ID CBT

Lab ID: 1203137-05

Volatile Organic Compounds by EPA 8260

Analyst: RP

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Dibromomethane	ND	0.50	NA	1	B2I0091	09/07/2012	09/07/12 14:51	
Dichlorodifluoromethane	ND	0.50	NA	1	B2I0091	09/07/2012	09/07/12 14:51	
Ethylbenzene	ND	0.50	NA	1	B2I0091	09/07/2012	09/07/12 14:51	
Hexachlorobutadiene	ND	0.50	NA	1	B2I0091	09/07/2012	09/07/12 14:51	
Isopropylbenzene	ND	0.50	NA	1	B2I0091	09/07/2012	09/07/12 14:51	
m,p-Xylene	ND	1.0	NA	1	B2I0091	09/07/2012	09/07/12 14:51	
Methylene chloride	ND	1.0	NA	1	B2I0091	09/07/2012	09/07/12 14:51	
n-Butylbenzene	ND	0.50	NA	1	B2I0091	09/07/2012	09/07/12 14:51	
n-Propylbenzene	ND	0.50	NA	1	B2I0091	09/07/2012	09/07/12 14:51	
Naphthalene	ND	0.50	NA	1	B2I0091	09/07/2012	09/07/12 14:51	
o-Xylene	ND	0.50	NA	1	B2I0091	09/07/2012	09/07/12 14:51	
sec-Butylbenzene	ND	0.50	NA	1	B2I0091	09/07/2012	09/07/12 14:51	
Styrene	ND	0.50	NA	1	B2I0091	09/07/2012	09/07/12 14:51	
tert-Butylbenzene	ND	0.50	NA	1	B2I0091	09/07/2012	09/07/12 14:51	
Tetrachloroethene	ND	0.50	NA	1	B2I0091	09/07/2012	09/07/12 14:51	
Toluene	ND	0.50	NA	1	B2I0091	09/07/2012	09/07/12 14:51	
trans-1,2-Dichloroethene	ND	0.50	NA	1	B2I0091	09/07/2012	09/07/12 14:51	
Trichloroethene	ND	0.50	NA	1	B2I0091	09/07/2012	09/07/12 14:51	
Trichlorofluoromethane	ND	0.50	NA	1	B2I0091	09/07/2012	09/07/12 14:51	
Vinyl chloride	ND	0.50	NA	1	B2I0091	09/07/2012	09/07/12 14:51	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>110 %</i>		<i>70 - 130</i>		B2I0091	09/07/2012	<i>09/07/12 14:51</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>96.9 %</i>		<i>70 - 130</i>		B2I0091	09/07/2012	<i>09/07/12 14:51</i>	
<i>Surrogate: Dibromofluoromethane</i>	<i>108 %</i>		<i>70 - 130</i>		B2I0091	09/07/2012	<i>09/07/12 14:51</i>	
<i>Surrogate: Toluene-d8</i>	<i>106 %</i>		<i>70 - 130</i>		B2I0091	09/07/2012	<i>09/07/12 14:51</i>	



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9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : Raytheon Main; Fullerton Monthly, 532.1:

Report To : Steve Netto

Reported : 09/24/2012

Client Sample ID CEFF

Lab ID: 1203137-06

Anions by Ion Chromatography EPA 300.0

Analyst: AG

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Bromide	0.21	0.05	NA	1	B210104	09/07/2012	09/07/12 12:08	

Total Dissolved Solids (Residue, Filterable) by SM 2540C

Analyst: AG

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Residue, Dissolved	540	10	10	1	B210206	09/10/2012	09/10/12 11:44	

Volatile Organic Compounds by EPA 8260

Analyst: RP

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	0.50	NA	1	B210091	09/07/2012	09/07/12 14:30	
1,1,1-Trichloroethane	ND	0.50	NA	1	B210091	09/07/2012	09/07/12 14:30	
1,1,2,2-Tetrachloroethane	ND	0.50	NA	1	B210091	09/07/2012	09/07/12 14:30	
1,1,2-Trichloroethane	ND	0.50	NA	1	B210091	09/07/2012	09/07/12 14:30	
1,1-Dichloroethane	0.61	0.50	NA	1	B210091	09/07/2012	09/07/12 14:30	
1,1-Dichloroethene	ND	0.50	NA	1	B210091	09/07/2012	09/07/12 14:30	
1,1-Dichloropropene	ND	0.50	NA	1	B210091	09/07/2012	09/07/12 14:30	
1,2,3-Trichloropropane	ND	0.50	NA	1	B210091	09/07/2012	09/07/12 14:30	
1,2,3-Trichlorobenzene	ND	0.50	NA	1	B210091	09/07/2012	09/07/12 14:30	
1,2,4-Trichlorobenzene	ND	0.50	NA	1	B210091	09/07/2012	09/07/12 14:30	
1,2,4-Trimethylbenzene	ND	0.50	NA	1	B210091	09/07/2012	09/07/12 14:30	
1,2-Dibromo-3-chloropropane	ND	0.50	NA	1	B210091	09/07/2012	09/07/12 14:30	
1,2-Dibromoethane	ND	0.50	NA	1	B210091	09/07/2012	09/07/12 14:30	
1,2-Dichlorobenzene	ND	0.50	NA	1	B210091	09/07/2012	09/07/12 14:30	
1,2-Dichloroethane	ND	0.50	NA	1	B210091	09/07/2012	09/07/12 14:30	
1,2-Dichloropropane	ND	0.50	NA	1	B210091	09/07/2012	09/07/12 14:30	
1,3,5-Trimethylbenzene	ND	0.50	NA	1	B210091	09/07/2012	09/07/12 14:30	
1,3-Dichlorobenzene	ND	0.50	NA	1	B210091	09/07/2012	09/07/12 14:30	
1,3-Dichloropropane	ND	0.50	NA	1	B210091	09/07/2012	09/07/12 14:30	
1,4-Dichlorobenzene	ND	0.50	NA	1	B210091	09/07/2012	09/07/12 14:30	
2,2-Dichloropropane	ND	0.50	NA	1	B210091	09/07/2012	09/07/12 14:30	
2-Chlorotoluene	ND	0.50	NA	1	B210091	09/07/2012	09/07/12 14:30	
4-Chlorotoluene	ND	0.50	NA	1	B210091	09/07/2012	09/07/12 14:30	
4-Isopropyltoluene	ND	0.50	NA	1	B210091	09/07/2012	09/07/12 14:30	
Benzene	ND	0.50	NA	1	B210091	09/07/2012	09/07/12 14:30	



Certificate of Analysis

Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego, CA 92122

Project Number : Raytheon Main; Fullerton Monthly, 532.1:

Report To : Steve Netto

Reported : 09/24/2012

Client Sample ID CEFF

Lab ID: 1203137-06

Volatile Organic Compounds by EPA 8260

Analyst: RP

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Bromobenzene	ND	0.50	NA	1	B2I0091	09/07/2012	09/07/12 14:30	
Bromodichloromethane	ND	0.50	NA	1	B2I0091	09/07/2012	09/07/12 14:30	
Bromoform	ND	0.50	NA	1	B2I0091	09/07/2012	09/07/12 14:30	
Bromomethane	ND	0.50	NA	1	B2I0091	09/07/2012	09/07/12 14:30	
Carbon tetrachloride	ND	0.50	NA	1	B2I0091	09/07/2012	09/07/12 14:30	
Chlorobenzene	ND	0.50	NA	1	B2I0091	09/07/2012	09/07/12 14:30	
Chloroethane	ND	0.50	NA	1	B2I0091	09/07/2012	09/07/12 14:30	
Chloroform	ND	0.50	NA	1	B2I0091	09/07/2012	09/07/12 14:30	
Chloromethane	ND	0.50	NA	1	B2I0091	09/07/2012	09/07/12 14:30	
cis-1,2-Dichloroethene	ND	0.50	NA	1	B2I0091	09/07/2012	09/07/12 14:30	
cis-1,3-Dichloropropene	ND	0.50	NA	1	B2I0091	09/07/2012	09/07/12 14:30	
Dibromochloromethane	ND	0.50	NA	1	B2I0091	09/07/2012	09/07/12 14:30	
Dibromomethane	ND	0.50	NA	1	B2I0091	09/07/2012	09/07/12 14:30	
Dichlorodifluoromethane	ND	0.50	NA	1	B2I0091	09/07/2012	09/07/12 14:30	
Ethylbenzene	ND	0.50	NA	1	B2I0091	09/07/2012	09/07/12 14:30	
Hexachlorobutadiene	ND	0.50	NA	1	B2I0091	09/07/2012	09/07/12 14:30	
Isopropylbenzene	ND	0.50	NA	1	B2I0091	09/07/2012	09/07/12 14:30	
m,p-Xylene	ND	1.0	NA	1	B2I0091	09/07/2012	09/07/12 14:30	
Methylene chloride	ND	1.0	NA	1	B2I0091	09/07/2012	09/07/12 14:30	
n-Butylbenzene	ND	0.50	NA	1	B2I0091	09/07/2012	09/07/12 14:30	
n-Propylbenzene	ND	0.50	NA	1	B2I0091	09/07/2012	09/07/12 14:30	
Naphthalene	ND	0.50	NA	1	B2I0091	09/07/2012	09/07/12 14:30	
o-Xylene	ND	0.50	NA	1	B2I0091	09/07/2012	09/07/12 14:30	
sec-Butylbenzene	ND	0.50	NA	1	B2I0091	09/07/2012	09/07/12 14:30	
Styrene	ND	0.50	NA	1	B2I0091	09/07/2012	09/07/12 14:30	
tert-Butylbenzene	ND	0.50	NA	1	B2I0091	09/07/2012	09/07/12 14:30	
Tetrachloroethene	ND	0.50	NA	1	B2I0091	09/07/2012	09/07/12 14:30	
Toluene	ND	0.50	NA	1	B2I0091	09/07/2012	09/07/12 14:30	
trans-1,2-Dichloroethene	ND	0.50	NA	1	B2I0091	09/07/2012	09/07/12 14:30	
Trichloroethene	ND	0.50	NA	1	B2I0091	09/07/2012	09/07/12 14:30	
Trichlorofluoromethane	ND	0.50	NA	1	B2I0091	09/07/2012	09/07/12 14:30	
Vinyl chloride	ND	0.50	NA	1	B2I0091	09/07/2012	09/07/12 14:30	

Surrogate: 1,2-Dichloroethane-d4	112 %	70 - 130	B2I0091	09/07/2012	09/07/12 14:30
Surrogate: 4-Bromofluorobenzene	98.4 %	70 - 130	B2I0091	09/07/2012	09/07/12 14:30
Surrogate: Dibromofluoromethane	110 %	70 - 130	B2I0091	09/07/2012	09/07/12 14:30
Surrogate: Toluene-d8	104 %	70 - 130	B2I0091	09/07/2012	09/07/12 14:30



Certificate of Analysis

Hargis & Associates, Inc.

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San Diego , CA 92122

Project Number : Raytheon Main; Fullerton Monthly, 532.1:

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QUALITY CONTROL SECTION

Anions by Ion Chromatography EPA 300.0 - Quality Control

Analyte	Result (mg/L)	PQL (mg/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B2I0104 - No_Prep_IC_1									
Blank (B2I0104-BLK1)				Prepared: 9/7/2012 Analyzed: 9/7/2012					
Bromide	ND	0.05			NR				
LCS (B2I0104-BS1)				Prepared: 9/7/2012 Analyzed: 9/7/2012					
Bromide	0.995500	0.05	1.00000		99.6	90 - 110			
Duplicate (B2I0104-DUP1)				Source: 1203136-01 Prepared: 9/7/2012 Analyzed: 9/7/2012					
Bromide	0.218500	0.05		0.212300	NR		2.88	20	
Matrix Spike (B2I0104-MS1)				Source: 1203136-01 Prepared: 9/7/2012 Analyzed: 9/7/2012					
Bromide	2.97610	0.05	2.50000	0.212300	111	80 - 120			
Matrix Spike Dup (B2I0104-MSD1)				Source: 1203136-01 Prepared: 9/7/2012 Analyzed: 9/7/2012					
Bromide	3.81100	0.05	2.50000	0.212300	144	80 - 120	24.6	20	M1



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Total Dissolved Solids (Residue, Filterable) by SM 2540C - Quality Control

Analyte	Result (mg/L)	PQL (mg/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B2I0206 - No_Prep_WC_1

Blank (B2I0206-BLK1)

Prepared: 9/10/2012 Analyzed: 9/10/2012

Residue, Dissolved

ND

10

NR

LCS (B2I0206-BS1)

Prepared: 9/10/2012 Analyzed: 9/10/2012

Residue, Dissolved

994.000

10

970.000

102

80 - 120

Duplicate (B2I0206-DUP1)

Source: 1203126-01

Prepared: 9/10/2012 Analyzed: 9/10/2012

Residue, Dissolved

1083.33

11

1068.89

NR

1.34

10

Duplicate (B2I0206-DUP2)

Source: 1203126-05

Prepared: 9/10/2012 Analyzed: 9/10/2012

Residue, Dissolved

ND

10

ND

NR

10



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Project Number : Raytheon Main; Fullerton Monthly, 532.1:

Report To : Steve Netto

Reported : 09/24/2012

Total Suspended Solids (Residue, Non-Filtrable) by SM 2540D - Quality Control

Analyte	Result (mg/L)	PQL (mg/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B2I0199 - No_Prep_WC_1

Blank (B2I0199-BLK1)

Prepared: 9/10/2012 Analyzed: 9/10/2012

Residue, Suspended

ND

10

NR

LCS (B2I0199-BS1)

Prepared: 9/10/2012 Analyzed: 9/10/2012

Residue, Suspended

99.0000

10

96.6000

102

80 - 120

Duplicate (B2I0199-DUP1)

Source: 1203126-01

Prepared: 9/10/2012 Analyzed: 9/10/2012

Residue, Suspended

70.0000

11

71.1111

NR

1.57

10



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Volatile Organic Compounds by EPA 8260 - Quality Control

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec % Rec	Limits	RPD RPD	RPD Limit	Notes
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Batch B2I0091 - MSVOAW_LL

Blank (B2I0091-BLK1)

Prepared: 9/7/2012 Analyzed: 9/7/2012

1,1,1,2-Tetrachloroethane	ND	0.50		NR
1,1,1-Trichloroethane	ND	0.50		NR
1,1,2,2-Tetrachloroethane	ND	0.50		NR
1,1,2-Trichloroethane	ND	0.50		NR
1,1-Dichloroethane	ND	0.50		NR
1,1-Dichloroethene	ND	0.50		NR
1,1-Dichloropropene	ND	0.50		NR
1,2,3-Trichloropropane	ND	0.50		NR
1,2,3-Trichlorobenzene	ND	0.50		NR
1,2,4-Trichlorobenzene	ND	0.50		NR
1,2,4-Trimethylbenzene	ND	0.50		NR
1,2-Dibromo-3-chloropropane	ND	0.50		NR
1,2-Dibromoethane	ND	0.50		NR
1,2-Dichlorobenzene	ND	0.50		NR
1,2-Dichloroethane	ND	0.50		NR
1,2-Dichloropropane	ND	0.50		NR
1,3,5-Trimethylbenzene	ND	0.50		NR
1,3-Dichlorobenzene	ND	0.50		NR
1,3-Dichloropropane	ND	0.50		NR
1,4-Dichlorobenzene	ND	0.50		NR
2,2-Dichloropropane	ND	0.50		NR
2-Chlorotoluene	ND	0.50		NR
4-Chlorotoluene	ND	0.50		NR
4-Isopropyltoluene	ND	0.50		NR
Benzene	ND	0.50		NR
Bromobenzene	ND	0.50		NR
Bromodichloromethane	ND	0.50		NR
Bromoform	ND	0.50		NR
Bromomethane	ND	0.50		NR
Carbon tetrachloride	ND	0.50		NR
Chlorobenzene	ND	0.50		NR
Chloroethane	ND	0.50		NR
Chloroform	ND	0.50		NR
Chloromethane	ND	0.50		NR
cis-1,2-Dichloroethene	ND	0.50		NR
cis-1,3-Dichloropropene	ND	0.50		NR
Dibromochloromethane	ND	0.50		NR
Dibromomethane	ND	0.50		NR
Dichlorodifluoromethane	ND	0.50		NR
Ethylbenzene	ND	0.50		NR
Hexachlorobutadiene	ND	0.50		NR



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Volatile Organic Compounds by EPA 8260 - Quality Control (cont'd)

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B2I0091 - MSVOAW_LL (continued)

Blank (B2I0091-BLK1) - Continued

Prepared: 9/7/2012 Analyzed: 9/7/2012

Isopropylbenzene	ND	0.50				NR			
m,p-Xylene	ND	1.0				NR			
Methylene chloride	ND	1.0				NR			
n-Butylbenzene	ND	0.50				NR			
n-Propylbenzene	ND	0.50				NR			
Naphthalene	ND	0.50				NR			
o-Xylene	ND	0.50				NR			
sec-Butylbenzene	ND	0.50				NR			
Styrene	ND	0.50				NR			
tert-Butylbenzene	ND	0.50				NR			
Tetrachloroethene	ND	0.50				NR			
Toluene	ND	0.50				NR			
trans-1,2-Dichloroethene	ND	0.50				NR			
Trichloroethene	ND	0.50				NR			
Trichlorofluoromethane	ND	0.50				NR			
Vinyl chloride	ND	0.50				NR			

<i>Surrogate: 1,2-Dichloroethane-d4</i>	25.76		25.0000		103	70 - 130			
<i>Surrogate: 4-Bromofluorobenzene</i>	24.69		25.0000		98.8	70 - 130			
<i>Surrogate: Dibromofluoromethane</i>	26.52		25.0000		106	70 - 130			
<i>Surrogate: Toluene-d8</i>	26.14		25.0000		105	70 - 130			

LCS (B2I0091-BS1)

Prepared: 9/7/2012 Analyzed: 9/7/2012

1,1-Dichloroethene	21.0000		20.0000		105	70 - 130			
Benzene	40.2700		40.0000		101	70 - 130			
Chlorobenzene	19.4100		20.0000		97.0	70 - 130			
MTBE	19.6500		20.0000		98.2	70 - 130			
Toluene	40.1700		40.0000		100	70 - 130			
Trichloroethene	19.6600		20.0000		98.3	70 - 130			

<i>Surrogate: 1,2-Dichloroethane-d4</i>	24.40		25.0000		97.6	70 - 130			
<i>Surrogate: 4-Bromofluorobenzene</i>	25.66		25.0000		103	70 - 130			
<i>Surrogate: Dibromofluoromethane</i>	25.19		25.0000		101	70 - 130			
<i>Surrogate: Toluene-d8</i>	25.46		25.0000		102	70 - 130			

LCS Dup (B2I0091-BSD1)

Prepared: 9/7/2012 Analyzed: 9/7/2012

1,1-Dichloroethene	20.5500		20.0000		103	70 - 130	2.17	20	
Benzene	40.3500		40.0000		101	70 - 130	0.198	20	
Chlorobenzene	19.8800		20.0000		99.4	70 - 130	2.39	20	
MTBE	20.5200		20.0000		103	70 - 130	4.33	20	
Toluene	38.2100		40.0000		95.5	70 - 130	5.00	20	
Trichloroethene	19.6500		20.0000		98.2	70 - 130	0.0509	20	

<i>Surrogate: 1,2-Dichloroethane-d4</i>	24.74		25.0000		99.0	70 - 130			
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San Diego, CA 92122

Project Number : Raytheon Main; Fullerton Monthly, 532.1:

Report To : Steve Netto

Reported : 09/24/2012

Volatile Organic Compounds by EPA 8260 - Quality Control (cont'd)

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B2I0091 - MSVOAW_LL (continued)

LCS Dup (B2I0091-BSD1) - Continued

Prepared: 9/7/2012 Analyzed: 9/7/2012

Surrogate: 4-Bromofluorobenzene	26.11		25.0000		104	70 - 130			
Surrogate: Dibromofluoromethane	25.54		25.0000		102	70 - 130			
Surrogate: Toluene-d8	24.53		25.0000		98.1	70 - 130			



Certificate of Analysis

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9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : Raytheon Main; Fullerton Monthly, 532.1:

Report To : Steve Netto

Reported : 09/24/2012

1,4-Dioxane by EPA 8270: Isotope Dilution Technique - Quality Control

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec % Rec	% Rec Limits	RPD RPD	RPD Limit	Notes
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Batch B2I0232 - MSSEMI_ISOTOPEDILN

Blank (B2I0232-BLK1)

Prepared: 9/12/2012 Analyzed: 9/12/2012

1,4-Dioxane	ND	2.0			NR				
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	81.75		100.000		81.8	37 - 93			
<i>Surrogate: 2-Fluorobiphenyl</i>	90.78		100.000		90.8	51 - 100			
<i>Surrogate: 4-Terphenyl-d14</i>	96.43		100.000		96.4	58 - 113			
<i>Surrogate: Nitrobenzene-d5</i>	82.22		100.000		82.2	39 - 95			

LCS (B2I0232-BS1)

Prepared: 9/12/2012 Analyzed: 9/12/2012

1,4-Dioxane	88.2100	2.0	100.000		88.2	70 - 130			
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	73.77		100.000		73.8	37 - 93			
<i>Surrogate: 2-Fluorobiphenyl</i>	82.03		100.000		82.0	51 - 100			
<i>Surrogate: 4-Terphenyl-d14</i>	72.55		100.000		72.6	58 - 113			
<i>Surrogate: Nitrobenzene-d5</i>	75.82		100.000		75.8	39 - 95			

LCS Dup (B2I0232-BSD1)

Prepared: 9/12/2012 Analyzed: 9/12/2012

1,4-Dioxane	85.1700	2.0	100.000		85.2	70 - 130	3.51	20	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	73.29		100.000		73.3	37 - 93			
<i>Surrogate: 2-Fluorobiphenyl</i>	84.68		100.000		84.7	51 - 100			
<i>Surrogate: 4-Terphenyl-d14</i>	71.82		100.000		71.8	58 - 113			
<i>Surrogate: Nitrobenzene-d5</i>	76.65		100.000		76.6	39 - 95			



Certificate of Analysis

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Project Number : Raytheon Main; Fullerton Monthly, 532.1:

Report To : Steve Netto

Reported : 09/24/2012

1,4-Dioxane by EPA 8270/SIM: Isotope Dilution Technique - Quality Control

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec % Rec	% Rec Limits	RPD RPD	RPD Limit	Notes
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Batch B2I0203 - MSSEMI

Blank (B2I0203-BLK1)

Prepared: 9/11/2012 Analyzed: 9/11/2012

1,4-Dioxane	ND	0.20			NR				
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	0.8578		1.00000		85.8	36 - 107			
<i>Surrogate: 2-Fluorobiphenyl</i>	1.038		1.00000		104	42 - 120			
<i>Surrogate: 4-Terphenyl-d14</i>	0.8896		1.00000		89.0	67 - 142			
<i>Surrogate: Nitrobenzene-d5</i>	0.5537		1.00000		55.4	36 - 130			

LCS (B2I0203-BS1)

Prepared: 9/11/2012 Analyzed: 9/12/2012

1,4-Dioxane	0.863110	0.20	1.00000		86.3	70 - 130			
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	0.8214		1.00000		82.1	36 - 107			
<i>Surrogate: 2-Fluorobiphenyl</i>	1.026		1.00000		103	42 - 120			
<i>Surrogate: 4-Terphenyl-d14</i>	0.8236		1.00000		82.4	67 - 142			
<i>Surrogate: Nitrobenzene-d5</i>	0.5224		1.00000		52.2	36 - 130			

LCS Dup (B2I0203-BSD1)

Prepared: 9/11/2012 Analyzed: 9/12/2012

1,4-Dioxane	0.895700	0.20	1.00000		89.6	70 - 130	3.71	20	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	0.8731		1.00000		87.3	36 - 107			
<i>Surrogate: 2-Fluorobiphenyl</i>	1.042		1.00000		104	42 - 120			
<i>Surrogate: 4-Terphenyl-d14</i>	0.8484		1.00000		84.8	67 - 142			
<i>Surrogate: Nitrobenzene-d5</i>	0.5347		1.00000		53.5	36 - 130			



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Report To : Steve Netto

Reported : 09/24/2012

Notes and Definitions

M1	Matrix spike recovery outside of acceptance limit. The analytical batch was validated by the laboratory control sample.
ND	Analyte not detected at or above reporting limit
PQL	Practical Quantitation Limit
MDL	Method Detection Limit
NR	Not Reported
RPD	Relative Percent Difference
CA1	CA-NELAP (CDPH)
CA2	CA-ELAP (CDPH)
OR1	OR-NELAP (OSPHL)
TX1	TX-NELAP (TCEQ)

Client: Advanced Technology Laboratories
Job No.: 142453

Bromate by EPA 317
Ion Chromatography with Post-Column Derivatization-Visible Absorption

Column: Dionex AS9-HC/AG9-HSC
Eluent: 30 mM Na₂CO₃
Flow: 1.0 mL/min
Injection: 250 µL
Detection: Post-column derivatization, Visible detection, 450 nm

Sample preparation: The undiluted samples were treated with a Dionex OnGuard II H cartridge to remove excess basic cations.

Parts Per Billion (µg/L)

<u>Sample ID</u>	<u>Result</u>
1203137-02H / EW-02	ND
1203137-04G / POX	6.7
1203137-06F / CEFF	7.1
1203137-06F / CEFF Duplicate	6.6
Method Blank	ND
Detection Limit	0.5

Date Analyzed: 09-20-12

Quality Control Summary

Sample ID: 1203137-06F / CEFF

<u>Analyte</u>	<u>Sample Result</u>	<u>Duplicate Result</u>	<u>Sample RPD</u>	<u>Spike Conc</u>	<u>Spike Result</u>	<u>Spike % Rec</u>
Bromate	7.1	6.6	7	20.0	26.7	99
QC Guidelines			NMT 10			75-125


ADVANCED TECHNOLOGY
 LABORATORIES

SUBCONTRACT ORDER

Work Order: 1203137

SENDING LABORATORY:



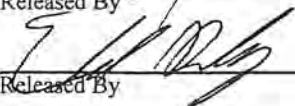
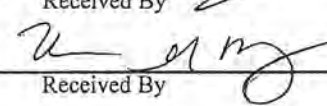
Advanced Technology Laboratories
 3275 Walnut Avenue
 Signal Hill, CA 90755
 Phone: 562.989.4045
 Fax: 562.989.6348
 Project Manager: Rachele Arada

RECEIVING LABORATORY:

Exova Inc.
 9240 Santa Fe Springs Road
 Santa Fe Springs, CA 90670
 Phone : (562) 948-2225
 Fax: (562) 948-5850
 PO#: SC07482 Standard TAT RP

IMPORTANT : Please include Work Order # and PO # in your invoice.

Analysis	Due	Expires	Sampled	Comments
ATL Lab#: 1203137-02 317.0	/ EW-02 09/13/12 17:00	09/07/12 11:10	Groundwater 09/06/12 11:10	Report Bromate
ATL Lab#: 1203137-04 317.0	/ POX 09/13/12 17:00	09/07/12 10:10	Groundwater 09/06/12 10:10	
ATL Lab#: 1203137-06 317.0	/ CEFF 09/13/12 17:00	09/07/12 10:35	Groundwater 09/06/12 10:35	

Released By 	Date <u>9/6/12</u>	Received By 	Date <u>9/7/12 9:30</u>
Released By 	Date <u>9/7/12 10:45</u>	Received By 	Date <u>09-07-12 / 11:04</u>

CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST FORM

PROJECT NAME Raytheon Main; Fullerton Monthly		PROJECT No./TASK No. 532.15		SAMPLE CONTAINERS		ANALYSIS REQUESTED		ESTIMATED CONCENTRATION RANGE (ppb) FOR VOAS		SPECIAL HANDLING		LABORATORY INFORMATION			
PROJECT MANAGER Chris Ross		Phone No. 858-455-6500		40 ml VOA 125 ml Poly 250 ml Poly 1 L Amber		VOCs by EPA 8260B 1,4-Dioxane by EPA 8270S1M 1,4-Dioxane by EPA 8270M00 Bromate by EPA 317 Bromide by EPA 300 TDS by EPA SM2540C TSS by EPA SM2540D		0 - 10 10 - 100 100 - 1,000 >1,000				Advanced Technology Laboratories 3275 Walnut Ave Signal Hill CA 90755 Attn: Rachelle Arada			
QA MANAGER Steve Netto		Fax No. 858-455-6533													
SAMPLER (SIGNATURE) <i>[Signature]</i>		SAMPLER (PRINTED) MARCO RODRIGUEZ													
LAB ID	SAMPLE ID	SAMPLE COLLECTION		MATRIX			PRESERVATION					REMARKS			
		Date	Time	Soil	Ground Water	Surface Water	Lab H2O	HCl	HNO3	NaOH	H2SO4		Ice		
1203/37-01	TR-090612	9/6/12	09:00				X	X							
2	EW-02		11:10	X			X				X				Please include
3	PF		10:00	X							X				rrodriguez@hargis.com
4	POX		10:10	X			X				X				in lab report
5	CBT		10:23	X			X				X				distribution list.
6	CEFF		10:35	X			X				X				Set 1,4-Dioxane
Total number of Containers per analysis:								4652				Total No. of Containers: 27			
Relinquished by: <i>[Signature]</i>		Date 9/6/12	Received by: <i>[Signature]</i>		Date 9/6/12	INSTRUCTIONS 1. Fill out form completely except for shaded areas (lab use only); sign only after verified for completeness. 2. Complete in ballpoint pen. Draw one line through errors, initial and date correction. 3. Indicate number of sample containers in analysis request space; indicate choice with ✓ or x. 4. Note applicable preservatives, special instructions, and deviations from typical environmental samples. 5. Consult project QA documents for specific instructions.						Shipment Method: DELIVER			
Company H+A		Time 13:53	Company AR		Time 13:53							Send Results to: Steve Netto			
Relinquished by:		Date	Received by:		Date	Sample Receipt: <input type="checkbox"/> No. of containers correct <input type="checkbox"/> custody seals secure				<input checked="" type="checkbox"/> received good condition/cold <input type="checkbox"/> conforms to COC document					
Company		Time	Company		Time									Temp. @ receipt 4.2 °C	
Relinquished by:		Date	Received by:		Date	Send invoice to San Diego, CA				Attn: Accounts Payable					
Company		Time	Company		Time										

September 17, 2012

Steve Netto
Hargis & Associates, Inc.
9171 Towne Centre Drive, Suite 375
San Diego, CA 92122
Tel: (619) 249-3166
Fax: (858) 455-6533



Re: ATL Work Order Number : 1203144

Client Reference : RAYTHEON MAIN; FULLERTON OCSD, 532.15

Enclosed are the results for sample(s) received on September 06, 2012 by Advanced Technology Laboratories. The sample(s) are tested for the parameters as indicated on the enclosed chain of custody in accordance with applicable laboratory certifications. The laboratory results contained in this report specifically pertains to the sample(s) submitted.

Thank you for the opportunity to serve the needs of your company. If you have any questions, please feel free to contact me or your Project Manager.

Sincerely,

Eddie Rodriguez
Laboratory Director

The cover letter and the case narrative are an integral part of this analytical report and its absence renders the report invalid. Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Conference and/or applicable state-specific certification programs. The report cannot be reproduced without written permission from the client and Advanced Technology Laboratories.



Certificate of Analysis

Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : RAYTHEON MAIN; FULLERTON OCS

Report To : Steve Netto

Reported : 09/17/2012

SUMMARY OF SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
TB-090612	1203144-01	Lab H2O	9/06/12 9:00	9/06/12 13:53
CEFF	1203144-02	Groundwater	9/06/12 10:35	9/06/12 13:53



Certificate of Analysis

Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego, CA 92122

Project Number : RAYTHEON MAIN; FULLERTON OCS

Report To : Steve Netto

Reported : 09/17/2012

Client Sample ID TB-090612

Lab ID: 1203144-01

Volatile Organic Compounds by EPA 624

Analyst: RP

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1-Trichloroethane	ND	5.0	NA	1	B2I0091	09/07/2012	09/07/12 11:39	
1,1,2,2-Tetrachloroethane	ND	5.0	NA	1	B2I0091	09/07/2012	09/07/12 11:39	
1,1,2-Trichloroethane	ND	5.0	NA	1	B2I0091	09/07/2012	09/07/12 11:39	
1,1-Dichloroethane	ND	5.0	NA	1	B2I0091	09/07/2012	09/07/12 11:39	
1,1-Dichloroethene	ND	5.0	NA	1	B2I0091	09/07/2012	09/07/12 11:39	
1,2-Dichlorobenzene	ND	5.0	NA	1	B2I0091	09/07/2012	09/07/12 11:39	
1,2-Dichloroethane	ND	5.0	NA	1	B2I0091	09/07/2012	09/07/12 11:39	
1,2-Dichloropropane	ND	5.0	NA	1	B2I0091	09/07/2012	09/07/12 11:39	
1,3-Dichlorobenzene	ND	5.0	NA	1	B2I0091	09/07/2012	09/07/12 11:39	
1,4-Dichlorobenzene	ND	5.0	NA	1	B2I0091	09/07/2012	09/07/12 11:39	
2-Chloroethyl vinyl ether	ND	5.0	NA	1	B2I0091	09/07/2012	09/07/12 11:39	
Acrolein	ND	50	NA	1	B2I0091	09/07/2012	09/07/12 11:39	
Acrylonitrile	ND	50	NA	1	B2I0091	09/07/2012	09/07/12 11:39	
Benzene	ND	5.0	NA	1	B2I0091	09/07/2012	09/07/12 11:39	
Bromodichloromethane	ND	5.0	NA	1	B2I0091	09/07/2012	09/07/12 11:39	
Bromoform	ND	5.0	NA	1	B2I0091	09/07/2012	09/07/12 11:39	
Bromomethane	ND	5.0	NA	1	B2I0091	09/07/2012	09/07/12 11:39	
Carbon tetrachloride	ND	5.0	NA	1	B2I0091	09/07/2012	09/07/12 11:39	
Chlorobenzene	ND	5.0	NA	1	B2I0091	09/07/2012	09/07/12 11:39	
Chloroethane	ND	5.0	NA	1	B2I0091	09/07/2012	09/07/12 11:39	
Chloroform	ND	5.0	NA	1	B2I0091	09/07/2012	09/07/12 11:39	
Chloromethane	ND	5.0	NA	1	B2I0091	09/07/2012	09/07/12 11:39	
cis-1,3-Dichloropropene	ND	5.0	NA	1	B2I0091	09/07/2012	09/07/12 11:39	
Dibromochloromethane	ND	5.0	NA	1	B2I0091	09/07/2012	09/07/12 11:39	
Ethylbenzene	ND	5.0	NA	1	B2I0091	09/07/2012	09/07/12 11:39	
m,p-Xylene	ND	10	NA	1	B2I0091	09/07/2012	09/07/12 11:39	
Methylene chloride	ND	5.0	NA	1	B2I0091	09/07/2012	09/07/12 11:39	
o-Xylene	ND	5.0	NA	1	B2I0091	09/07/2012	09/07/12 11:39	
Tetrachloroethene	ND	5.0	NA	1	B2I0091	09/07/2012	09/07/12 11:39	
Toluene	ND	5.0	NA	1	B2I0091	09/07/2012	09/07/12 11:39	
trans-1,2-Dichloroethene	ND	5.0	NA	1	B2I0091	09/07/2012	09/07/12 11:39	
trans-1,3-Dichloropropene	ND	50	NA	1	B2I0091	09/07/2012	09/07/12 11:39	
Trichloroethene	ND	5.0	NA	1	B2I0091	09/07/2012	09/07/12 11:39	
Trichlorofluoromethane	ND	5.0	NA	1	B2I0091	09/07/2012	09/07/12 11:39	
Vinyl chloride	ND	5.0	NA	1	B2I0091	09/07/2012	09/07/12 11:39	

Surrogate: 1,2-Dichloroethane-d4

107 %

70 - 130

B2I0091

09/07/2012

09/07/12 11:39

Surrogate: 4-Bromofluorobenzene

97.4 %

70 - 130

B2I0091

09/07/2012

09/07/12 11:39



Certificate of Analysis

Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego, CA 92122

Project Number : RAYTHEON MAIN; FULLERTON OCS

Report To : Steve Netto

Reported : 09/17/2012

Client Sample ID TB-090612

Lab ID: 1203144-01

Volatile Organic Compounds by EPA 624

Analyst: RP

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
<i>Surrogate: Dibromofluoromethane</i>	107 %	70 - 130			B210091	09/07/2012	09/07/12 11:39	
<i>Surrogate: Toluene-d8</i>	104 %	70 - 130			B210091	09/07/2012	09/07/12 11:39	



Certificate of Analysis

Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : RAYTHEON MAIN; FULLERTON OCS

Report To : Steve Netto

Reported : 09/17/2012

Client Sample ID CEFF

Lab ID: 1203144-02

Volatile Organic Compounds by EPA 624

Analyst: RP

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1-Trichloroethane	ND	5.0	NA	1	B2I0180	09/11/2012	09/11/12 11:22	
1,1,2,2-Tetrachloroethane	ND	5.0	NA	1	B2I0180	09/11/2012	09/11/12 11:22	
1,1,2-Trichloroethane	ND	5.0	NA	1	B2I0180	09/11/2012	09/11/12 11:22	
1,1-Dichloroethane	ND	5.0	NA	1	B2I0180	09/11/2012	09/11/12 11:22	
1,1-Dichloroethene	ND	5.0	NA	1	B2I0180	09/11/2012	09/11/12 11:22	
1,2-Dichlorobenzene	ND	5.0	NA	1	B2I0180	09/11/2012	09/11/12 11:22	
1,2-Dichloroethane	ND	5.0	NA	1	B2I0180	09/11/2012	09/11/12 11:22	
1,2-Dichloropropane	ND	5.0	NA	1	B2I0180	09/11/2012	09/11/12 11:22	
1,3-Dichlorobenzene	ND	5.0	NA	1	B2I0180	09/11/2012	09/11/12 11:22	
1,4-Dichlorobenzene	ND	5.0	NA	1	B2I0180	09/11/2012	09/11/12 11:22	
2-Chloroethyl vinyl ether	ND	5.0	NA	1	B2I0180	09/11/2012	09/11/12 11:22	
Acrolein	ND	50	NA	1	B2I0180	09/11/2012	09/11/12 11:22	
Acrylonitrile	ND	50	NA	1	B2I0180	09/11/2012	09/11/12 11:22	
Benzene	ND	5.0	NA	1	B2I0180	09/11/2012	09/11/12 11:22	
Bromodichloromethane	ND	5.0	NA	1	B2I0180	09/11/2012	09/11/12 11:22	
Bromoform	ND	5.0	NA	1	B2I0180	09/11/2012	09/11/12 11:22	
Bromomethane	ND	5.0	NA	1	B2I0180	09/11/2012	09/11/12 11:22	
Carbon tetrachloride	ND	5.0	NA	1	B2I0180	09/11/2012	09/11/12 11:22	
Chlorobenzene	ND	5.0	NA	1	B2I0180	09/11/2012	09/11/12 11:22	
Chloroethane	ND	5.0	NA	1	B2I0180	09/11/2012	09/11/12 11:22	
Chloroform	ND	5.0	NA	1	B2I0180	09/11/2012	09/11/12 11:22	
Chloromethane	ND	5.0	NA	1	B2I0180	09/11/2012	09/11/12 11:22	
cis-1,3-Dichloropropene	ND	5.0	NA	1	B2I0180	09/11/2012	09/11/12 11:22	
Dibromochloromethane	ND	5.0	NA	1	B2I0180	09/11/2012	09/11/12 11:22	
Ethylbenzene	ND	5.0	NA	1	B2I0180	09/11/2012	09/11/12 11:22	
m,p-Xylene	ND	10	NA	1	B2I0180	09/11/2012	09/11/12 11:22	
Methylene chloride	ND	5.0	NA	1	B2I0180	09/11/2012	09/11/12 11:22	
o-Xylene	ND	5.0	NA	1	B2I0180	09/11/2012	09/11/12 11:22	
Tetrachloroethene	ND	5.0	NA	1	B2I0180	09/11/2012	09/11/12 11:22	
Toluene	ND	5.0	NA	1	B2I0180	09/11/2012	09/11/12 11:22	
trans-1,2-Dichloroethene	ND	5.0	NA	1	B2I0180	09/11/2012	09/11/12 11:22	
trans-1,3-Dichloropropene	ND	50	NA	1	B2I0180	09/11/2012	09/11/12 11:22	
Trichloroethene	ND	5.0	NA	1	B2I0180	09/11/2012	09/11/12 11:22	
Trichlorofluoromethane	ND	5.0	NA	1	B2I0180	09/11/2012	09/11/12 11:22	
Vinyl chloride	ND	5.0	NA	1	B2I0180	09/11/2012	09/11/12 11:22	
Surrogate: 1,2-Dichloroethane-d4	91.2 %		70 - 130		B2I0180	09/11/2012	09/11/12 11:22	
Surrogate: 4-Bromofluorobenzene	97.9 %		70 - 130		B2I0180	09/11/2012	09/11/12 11:22	



Certificate of Analysis

Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego, CA 92122

Project Number : RAYTHEON MAIN; FULLERTON OCS

Report To : Steve Netto

Reported : 09/17/2012

Client Sample ID CEFF

Lab ID: 1203144-02

Volatile Organic Compounds by EPA 624

Analyst: RP

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
<i>Surrogate: Dibromofluoromethane</i>	98.0 %		70 - 130		B210180	09/11/2012	09/11/12 11:22	
<i>Surrogate: Toluene-d8</i>	103 %		70 - 130		B210180	09/11/2012	09/11/12 11:22	

1,4-Dioxane by EPA 8270/SIM: Isotope Dilution Technique

Analyst: BB

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,4-Dioxane	ND	0.20	0.13	1	B210203	09/11/2012	09/11/12 22:25	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	74.9 %		36 - 107		B210203	09/11/2012	09/11/12 22:25	
<i>Surrogate: 2-Fluorobiphenyl</i>	89.2 %		42 - 120		B210203	09/11/2012	09/11/12 22:25	
<i>Surrogate: 4-Terphenyl-d14</i>	81.6 %		67 - 142		B210203	09/11/2012	09/11/12 22:25	
<i>Surrogate: Nitrobenzene-d5</i>	45.9 %		36 - 130		B210203	09/11/2012	09/11/12 22:25	



Certificate of Analysis

Hargis & Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego , CA 92122

Project Number : RAYTHEON MAIN; FULLERTON OCS
 Report To : Steve Netto
 Reported : 09/17/2012

QUALITY CONTROL SECTION

Volatile Organic Compounds by EPA 624 - Quality Control

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B2I0091 - MSVOAW_LL

Blank (B2I0091-BLK1)

Prepared: 9/7/2012 Analyzed: 9/7/2012

1,1,1-Trichloroethane	ND	5.0				NR			
1,1,2,2-Tetrachloroethane	ND	5.0				NR			
1,1,2-Trichloroethane	ND	5.0				NR			
1,1-Dichloroethane	ND	5.0				NR			
1,1-Dichloroethene	ND	5.0				NR			
1,2-Dichlorobenzene	ND	5.0				NR			
1,2-Dichloroethane	ND	5.0				NR			
1,2-Dichloropropane	ND	5.0				NR			
1,3-Dichlorobenzene	ND	5.0				NR			
1,4-Dichlorobenzene	ND	5.0				NR			
2-Chloroethyl vinyl ether	ND	5.0				NR			
Acrolein	ND	50				NR			
Acrylonitrile	ND	50				NR			
Benzene	ND	5.0				NR			
Bromodichloromethane	ND	5.0				NR			
Bromoform	ND	5.0				NR			
Bromomethane	ND	5.0				NR			
Carbon tetrachloride	ND	5.0				NR			
Chlorobenzene	ND	5.0				NR			
Chloroethane	ND	5.0				NR			
Chloroform	ND	5.0				NR			
Chloromethane	ND	5.0				NR			
cis-1,3-Dichloropropene	ND	5.0				NR			
Dibromochloromethane	ND	5.0				NR			
Ethylbenzene	ND	5.0				NR			
m,p-Xylene	ND	10				NR			
Methylene chloride	ND	5.0				NR			
o-Xylene	ND	5.0				NR			
Tetrachloroethene	ND	5.0				NR			
Toluene	ND	5.0				NR			
trans-1,2-Dichloroethene	ND	5.0				NR			
trans-1,3-Dichloropropene	ND	50				NR			
Trichloroethene	ND	5.0				NR			
Trichlorofluoromethane	ND	5.0				NR			
Vinyl chloride	ND	5.0				NR			

Surrogate: 1,2-Dichloroethane-d4	25.76		25.0000		103	70 - 130			
Surrogate: 4-Bromofluorobenzene	24.69		25.0000		98.8	70 - 130			
Surrogate: Dibromofluoromethane	26.52		25.0000		106	70 - 130			
Surrogate: Toluene-d8	26.14		25.0000		105	70 - 130			



Certificate of Analysis

Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego, CA 92122

Project Number : RAYTHEON MAIN; FULLERTON OCS

Report To : Steve Netto

Reported : 09/17/2012

Volatile Organic Compounds by EPA 624 - Quality Control (cont'd)

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec % Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B2I0091 - MSVOAW_LL (continued)

LCS (B2I0091-BS1)

Prepared: 9/7/2012 Analyzed: 9/7/2012

1,1-Dichloroethene	21.0000		20.0000		105	70 - 130			
Benzene	40.2700		40.0000		101	70 - 130			
Chlorobenzene	19.4100		20.0000		97.0	70 - 130			
Toluene	40.1700		40.0000		100	70 - 130			
Trichloroethene	19.6600		20.0000		98.3	70 - 130			
<hr/>									
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>24.40</i>		<i>25.0000</i>		<i>97.6</i>	<i>70 - 130</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>25.66</i>		<i>25.0000</i>		<i>103</i>	<i>70 - 130</i>			
<i>Surrogate: Dibromofluoromethane</i>	<i>25.19</i>		<i>25.0000</i>		<i>101</i>	<i>70 - 130</i>			
<i>Surrogate: Toluene-d8</i>	<i>25.46</i>		<i>25.0000</i>		<i>102</i>	<i>70 - 130</i>			

LCS Dup (B2I0091-BS1)

Prepared: 9/7/2012 Analyzed: 9/7/2012

1,1-Dichloroethene	20.5500		20.0000		103	70 - 130	2.17	20	
Benzene	40.3500		40.0000		101	70 - 130	0.198	20	
Chlorobenzene	19.8800		20.0000		99.4	70 - 130	2.39	20	
Toluene	38.2100		40.0000		95.5	70 - 130	5.00	20	
Trichloroethene	19.6500		20.0000		98.2	70 - 130	0.0509	20	
<hr/>									
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>24.74</i>		<i>25.0000</i>		<i>99.0</i>	<i>70 - 130</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>26.11</i>		<i>25.0000</i>		<i>104</i>	<i>70 - 130</i>			
<i>Surrogate: Dibromofluoromethane</i>	<i>25.54</i>		<i>25.0000</i>		<i>102</i>	<i>70 - 130</i>			
<i>Surrogate: Toluene-d8</i>	<i>24.53</i>		<i>25.0000</i>		<i>98.1</i>	<i>70 - 130</i>			

Batch B2I0180 - MSVOAW_LL

Blank (B2I0180-BLK1)

Prepared: 9/11/2012 Analyzed: 9/11/2012

1,1,1-Trichloroethane	ND	5.0		NR					
1,1,2,2-Tetrachloroethane	ND	5.0		NR					
1,1,2-Trichloroethane	ND	5.0		NR					
1,1-Dichloroethane	ND	5.0		NR					
1,1-Dichloroethene	ND	5.0		NR					
1,2-Dichlorobenzene	ND	5.0		NR					
1,2-Dichloroethane	ND	5.0		NR					
1,2-Dichloropropane	ND	5.0		NR					
1,3-Dichlorobenzene	ND	5.0		NR					
1,4-Dichlorobenzene	ND	5.0		NR					
2-Chloroethyl vinyl ether	ND	5.0		NR					
Acrolein	ND	50		NR					
Acrylonitrile	ND	50		NR					
Benzene	ND	5.0		NR					
Bromodichloromethane	ND	5.0		NR					
Bromoform	ND	5.0		NR					
Bromomethane	ND	5.0		NR					



Certificate of Analysis

Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : RAYTHEON MAIN; FULLERTON OCS

Report To : Steve Netto

Reported : 09/17/2012

Volatile Organic Compounds by EPA 624 - Quality Control (cont'd)

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B2I0180 - MSVOAW_LL (continued)

Blank (B2I0180-BLK1) - Continued

Prepared: 9/11/2012 Analyzed: 9/11/2012

Carbon tetrachloride	ND	5.0			NR				
Chlorobenzene	ND	5.0			NR				
Chloroethane	ND	5.0			NR				
Chloroform	ND	5.0			NR				
Chloromethane	ND	5.0			NR				
cis-1,3-Dichloropropene	ND	5.0			NR				
Dibromochloromethane	ND	5.0			NR				
Ethylbenzene	ND	5.0			NR				
m,p-Xylene	ND	10			NR				
Methylene chloride	ND	5.0			NR				
o-Xylene	ND	5.0			NR				
Tetrachloroethene	ND	5.0			NR				
Toluene	ND	5.0			NR				
trans-1,2-Dichloroethene	ND	5.0			NR				
trans-1,3-Dichloropropene	ND	5.0			NR				
Trichloroethene	ND	5.0			NR				
Trichlorofluoromethane	ND	5.0			NR				
Vinyl chloride	ND	5.0			NR				

<i>Surrogate: 1,2-Dichloroethane-d4</i>	22.00		25.0000		88.0	70 - 130			
<i>Surrogate: 4-Bromofluorobenzene</i>	23.93		25.0000		95.7	70 - 130			
<i>Surrogate: Dibromofluoromethane</i>	24.28		25.0000		97.1	70 - 130			
<i>Surrogate: Toluene-d8</i>	25.62		25.0000		102	70 - 130			

LCS (B2I0180-BS1)

Prepared: 9/11/2012 Analyzed: 9/11/2012

1,1-Dichloroethene	18.7900		20.0000		94.0	70 - 130			
Benzene	39.1300		40.0000		97.8	70 - 130			
Chlorobenzene	19.4500		20.0000		97.2	70 - 130			
Toluene	39.3900		40.0000		98.5	70 - 130			
Trichloroethene	19.1600		20.0000		95.8	70 - 130			

<i>Surrogate: 1,2-Dichloroethane-d4</i>	21.79		25.0000		87.2	70 - 130			
<i>Surrogate: 4-Bromofluorobenzene</i>	24.97		25.0000		99.9	70 - 130			
<i>Surrogate: Dibromofluoromethane</i>	24.12		25.0000		96.5	70 - 130			
<i>Surrogate: Toluene-d8</i>	25.79		25.0000		103	70 - 130			

LCS Dup (B2I0180-BSD1)

Prepared: 9/11/2012 Analyzed: 9/11/2012

1,1-Dichloroethene	18.8000		20.0000		94.0	70 - 130	0.0532	20	
Benzene	39.9500		40.0000		99.9	70 - 130	2.07	20	
Chlorobenzene	19.9100		20.0000		99.6	70 - 130	2.34	20	
Toluene	40.3900		40.0000		101	70 - 130	2.51	20	
Trichloroethene	19.7200		20.0000		98.6	70 - 130	2.88	20	

<i>Surrogate: 1,2-Dichloroethane-d4</i>	21.91		25.0000		87.6	70 - 130			
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San Diego, CA 92122

Project Number : RAYTHEON MAIN; FULLERTON OCS

Report To : Steve Netto

Reported : 09/17/2012

Volatile Organic Compounds by EPA 624 - Quality Control (cont'd)

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B2I0180 - MSVOAW_LL (continued)

LCS Dup (B2I0180-BSD1) - Continued

Prepared: 9/11/2012 Analyzed: 9/11/2012

Surrogate: 4-Bromofluorobenzene	24.55		25.0000		98.2	70 - 130			
Surrogate: Dibromofluoromethane	24.08		25.0000		96.3	70 - 130			
Surrogate: Toluene-d8	25.81		25.0000		103	70 - 130			



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San Diego , CA 92122

Project Number : RAYTHEON MAIN; FULLERTON OCS

Report To : Steve Netto

Reported : 09/17/2012

1,4-Dioxane by EPA 8270/SIM: Isotope Dilution Technique - Quality Control

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec % Rec	% Rec Limits	RPD RPD	RPD Limit	Notes
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Batch B2I0203 - MSSEMI

Blank (B2I0203-BLK1)

Prepared: 9/11/2012 Analyzed: 9/11/2012

1,4-Dioxane	ND	0.20				NR			
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	<i>0.8578</i>		<i>1.00000</i>		<i>85.8</i>	<i>36 - 107</i>			
<i>Surrogate: 2-Fluorobiphenyl</i>	<i>1.038</i>		<i>1.00000</i>		<i>104</i>	<i>42 - 120</i>			
<i>Surrogate: 4-Terphenyl-d14</i>	<i>0.8896</i>		<i>1.00000</i>		<i>89.0</i>	<i>67 - 142</i>			
<i>Surrogate: Nitrobenzene-d5</i>	<i>0.5537</i>		<i>1.00000</i>		<i>55.4</i>	<i>36 - 130</i>			

LCS (B2I0203-BS1)

Prepared: 9/11/2012 Analyzed: 9/12/2012

1,4-Dioxane	0.863110	0.20	1.00000		86.3	70 - 130			
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	<i>0.8214</i>		<i>1.00000</i>		<i>82.1</i>	<i>36 - 107</i>			
<i>Surrogate: 2-Fluorobiphenyl</i>	<i>1.026</i>		<i>1.00000</i>		<i>103</i>	<i>42 - 120</i>			
<i>Surrogate: 4-Terphenyl-d14</i>	<i>0.8236</i>		<i>1.00000</i>		<i>82.4</i>	<i>67 - 142</i>			
<i>Surrogate: Nitrobenzene-d5</i>	<i>0.5224</i>		<i>1.00000</i>		<i>52.2</i>	<i>36 - 130</i>			

LCS Dup (B2I0203-BSD1)

Prepared: 9/11/2012 Analyzed: 9/12/2012

1,4-Dioxane	0.895700	0.20	1.00000		89.6	70 - 130	3.71	20	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	<i>0.8731</i>		<i>1.00000</i>		<i>87.3</i>	<i>36 - 107</i>			
<i>Surrogate: 2-Fluorobiphenyl</i>	<i>1.042</i>		<i>1.00000</i>		<i>104</i>	<i>42 - 120</i>			
<i>Surrogate: 4-Terphenyl-d14</i>	<i>0.8484</i>		<i>1.00000</i>		<i>84.8</i>	<i>67 - 142</i>			
<i>Surrogate: Nitrobenzene-d5</i>	<i>0.5347</i>		<i>1.00000</i>		<i>53.5</i>	<i>36 - 130</i>			



Certificate of Analysis

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9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : RAYTHEON MAIN; FULLERTON OCS

Report To : Steve Netto

Reported : 09/17/2012

Notes and Definitions

ND	Analyte not detected at or above reporting limit
PQL	Practical Quantitation Limit
MDL	Method Detection Limit
NR	Not Reported
RPD	Relative Percent Difference
CA1	CA-NELAP (CDPH)
CA2	CA-ELAP (CDPH)
OR1	OR-NELAP (OSPHL)
TX1	TX-NELAP (TCEQ)

CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST FORM

PROJECT NAME RAYTHEON MAIN; FULLERTON OCSD				PROJECT No./TASK No. 532.15				SAMPLE CONTAINERS		ANALYSIS REQUESTED		ESTIMATED CONCENTRATION RANGE (ppb) FOR VOAS		SPECIAL HANDLING		LABORATORY INFORMATION		
PROJECT MANAGER CHRIS ROSS				Phone No. 858-455-6500												ADVANCED TECHNOLOGY Laboratories 3275 Walnut Ave. Signal Hill, CA 90755 Attn: Rachelle Arada		
QA MANAGER STEVE NETTO				Fax No. 858-455-6533														
SAMPLER (SIGNATURE) 				SAMPLER (PRINTED) MARLOS RODRIGUEZ														
LAB ID	SAMPLE ID	SAMPLE COLLECTION		MATRIX			PRESERVATION			40 ml VOA	250 ml Poly	500 ml Poly	1L Amber	VOCS by EPA 624 1,4-Dioxane by EPA 8270 SIM Total Se by EPA 6010B TDS by EPA 8225.40C	0-10			
		Date	Time	Soil	Ground water	Surface water	Lab H2O	HCl	HNO3									NaOH	H2SO4	Ice
1203144-51	TB-090612	9/6/12	09:00				X	X						X				
1-02	CEFF	↓	10:35	X			X							X				
Total number of Containers per analysis: <u>5</u> Total No. of Containers: <u>6</u>																		
Relinquished by: 		Date <u>9/6/12</u>	Received by: 		Date <u>9/6/12</u>	INSTRUCTIONS 1. Fill out form completely except for shaded areas (lab use only); sign only after verified for completeness. 2. Complete in ballpoint pen. Draw one line through errors, initial and date correction. 3. Indicate number of sample containers in analysis request space; indicate choice with ✓ or x. 4. Note applicable preservatives, special instructions, and deviations from typical environmental samples. 5. Consult project QA documents for specific instructions.											Shipment Method: <u>DRIVER</u>	
Company H+A		Time <u>13:53</u>	Company <u>AR</u>		Time <u>1353</u>												Send Results to: <u>Steve Netto</u>	
Relinquished by:		Date:	Received by:		Date:	Sample Receipt: <input type="checkbox"/> No. of containers correct <input checked="" type="checkbox"/> received good condition/cold <input type="checkbox"/> custody seals secure <input type="checkbox"/> conforms to COC document											<input checked="" type="checkbox"/> 9171 TOWNE CENTRE DRIVE, SUITE 375 SAN DIEGO, CA 92122 (858) 455-6500 <input type="checkbox"/> 1640 SOUTH STAPLEY DRIVE, SUITE 124 MESA, AZ 85204 (480) 345-0888 <input type="checkbox"/> 1820 EAST RIVER ROAD, SUITE 220 TUCSON, AZ 85718 (520) 881-7300	
Company:		Time:	Company:		Time:												Send invoice to San Diego, CA Attn: Accounts Payable	

APPENDIX A
LABORATORY ANALYTICAL REPORTS
(*FOURTH QUARTER 2012*)

October 30, 2012

Steve Netto
Hargis & Associates, Inc.
9171 Towne Centre Drive, Suite 375
San Diego, CA 92122
Tel: (619) 249-3166
Fax: (858) 455-6533



Re: ATL Work Order Number : 1203629
Client Reference : Raytheon Main; Fullerton Monthly, 532.15

Enclosed are the results for sample(s) received on October 15, 2012 by Advanced Technology Laboratories. The sample(s) are tested for the parameters as indicated on the enclosed chain of custody in accordance with applicable laboratory certifications. The laboratory results contained in this report specifically pertains to the sample(s) submitted.

Thank you for the opportunity to serve the needs of your company. If you have any questions, please feel free to contact me or your Project Manager.

Sincerely,

Eddie Rodriguez
Laboratory Director

The cover letter and the case narrative are an integral part of this analytical report and its absence renders the report invalid. Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Conference and/or applicable state-specific certification programs. The report cannot be reproduced without written permission from the client and Advanced Technology Laboratories.



Certificate of Analysis

Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : Raytheon Main; Fullerton Monthly, 532.1:

Report To : Steve Netto

Reported : 10/30/2012

SUMMARY OF SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
TB-101512	1203629-01	Lab H2O	10/15/12 8:00	10/15/12 10:20
EW-02	1203629-02	Groundwater	10/15/12 9:15	10/15/12 10:20
PF	1203629-03	Groundwater	10/15/12 7:50	10/15/12 10:20
POX	1203629-04	Groundwater	10/15/12 8:00	10/15/12 10:20
CBT	1203629-05	Groundwater	10/15/12 8:05	10/15/12 10:20
CEFF	1203629-06	Groundwater	10/15/12 8:15	10/15/12 10:20

CASE NARRATIVE

The samples for EPA 317 (Bromate) analysis were subcontracted to Exova, Inc. with ELAP Cert.# 2652.



Certificate of Analysis

Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : Raytheon Main; Fullerton Monthly, 532.1:

Report To : Steve Netto

Reported : 10/30/2012

Client Sample ID TB-101512

Lab ID: 1203629-01

Volatile Organic Compounds by EPA 8260

Analyst: SL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	0.50	NA	1	B2J0574	10/22/2012	10/22/12 10:22	
1,1,1-Trichloroethane	ND	0.50	NA	1	B2J0574	10/22/2012	10/22/12 10:22	
1,1,2,2-Tetrachloroethane	ND	0.50	NA	1	B2J0574	10/22/2012	10/22/12 10:22	
1,1,2-Trichloroethane	ND	0.50	NA	1	B2J0574	10/22/2012	10/22/12 10:22	
1,1-Dichloroethane	ND	0.50	NA	1	B2J0574	10/22/2012	10/22/12 10:22	
1,1-Dichloroethene	ND	0.50	NA	1	B2J0574	10/22/2012	10/22/12 10:22	
1,1-Dichloropropene	ND	0.50	NA	1	B2J0574	10/22/2012	10/22/12 10:22	
1,2,3-Trichloropropane	ND	0.50	NA	1	B2J0574	10/22/2012	10/22/12 10:22	
1,2,3-Trichlorobenzene	ND	0.50	NA	1	B2J0574	10/22/2012	10/22/12 10:22	
1,2,4-Trichlorobenzene	ND	0.50	NA	1	B2J0574	10/22/2012	10/22/12 10:22	
1,2,4-Trimethylbenzene	ND	0.50	NA	1	B2J0574	10/22/2012	10/22/12 10:22	
1,2-Dibromo-3-chloropropane	ND	0.50	NA	1	B2J0574	10/22/2012	10/22/12 10:22	
1,2-Dibromoethane	ND	0.50	NA	1	B2J0574	10/22/2012	10/22/12 10:22	
1,2-Dichlorobenzene	ND	0.50	NA	1	B2J0574	10/22/2012	10/22/12 10:22	
1,2-Dichloroethane	ND	0.50	NA	1	B2J0574	10/22/2012	10/22/12 10:22	
1,2-Dichloropropane	ND	0.50	NA	1	B2J0574	10/22/2012	10/22/12 10:22	
1,3,5-Trimethylbenzene	ND	0.50	NA	1	B2J0574	10/22/2012	10/22/12 10:22	
1,3-Dichlorobenzene	ND	0.50	NA	1	B2J0574	10/22/2012	10/22/12 10:22	
1,3-Dichloropropane	ND	0.50	NA	1	B2J0574	10/22/2012	10/22/12 10:22	
1,4-Dichlorobenzene	ND	0.50	NA	1	B2J0574	10/22/2012	10/22/12 10:22	
2,2-Dichloropropane	ND	0.50	NA	1	B2J0574	10/22/2012	10/22/12 10:22	
2-Chlorotoluene	ND	0.50	NA	1	B2J0574	10/22/2012	10/22/12 10:22	
4-Chlorotoluene	ND	0.50	NA	1	B2J0574	10/22/2012	10/22/12 10:22	
4-Isopropyltoluene	ND	0.50	NA	1	B2J0574	10/22/2012	10/22/12 10:22	
Benzene	ND	0.50	NA	1	B2J0574	10/22/2012	10/22/12 10:22	
Bromobenzene	ND	0.50	NA	1	B2J0574	10/22/2012	10/22/12 10:22	
Bromodichloromethane	ND	0.50	NA	1	B2J0574	10/22/2012	10/22/12 10:22	
Bromoform	ND	0.50	NA	1	B2J0574	10/22/2012	10/22/12 10:22	
Bromomethane	ND	0.50	NA	1	B2J0574	10/22/2012	10/22/12 10:22	
Carbon tetrachloride	ND	0.50	NA	1	B2J0574	10/22/2012	10/22/12 10:22	
Chlorobenzene	ND	0.50	NA	1	B2J0574	10/22/2012	10/22/12 10:22	
Chloroethane	ND	0.50	NA	1	B2J0574	10/22/2012	10/22/12 10:22	
Chloroform	ND	0.50	NA	1	B2J0574	10/22/2012	10/22/12 10:22	
Chloromethane	ND	0.50	NA	1	B2J0574	10/22/2012	10/22/12 10:22	
cis-1,2-Dichloroethene	ND	0.50	NA	1	B2J0574	10/22/2012	10/22/12 10:22	
cis-1,3-Dichloropropene	ND	0.50	NA	1	B2J0574	10/22/2012	10/22/12 10:22	
Dibromochloromethane	ND	0.50	NA	1	B2J0574	10/22/2012	10/22/12 10:22	



Certificate of Analysis

Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego, CA 92122

Project Number : Raytheon Main; Fullerton Monthly, 532.1:

Report To : Steve Netto

Reported : 10/30/2012

Client Sample ID TB-101512

Lab ID: 1203629-01

Volatile Organic Compounds by EPA 8260

Analyst: SL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Dibromomethane	ND	0.50	NA	1	B2J0574	10/22/2012	10/22/12 10:22	
Dichlorodifluoromethane	ND	0.50	NA	1	B2J0574	10/22/2012	10/22/12 10:22	
Ethylbenzene	ND	0.50	NA	1	B2J0574	10/22/2012	10/22/12 10:22	
Hexachlorobutadiene	ND	0.50	NA	1	B2J0574	10/22/2012	10/22/12 10:22	
Isopropylbenzene	ND	0.50	NA	1	B2J0574	10/22/2012	10/22/12 10:22	
m,p-Xylene	ND	1.0	NA	1	B2J0574	10/22/2012	10/22/12 10:22	
Methylene chloride	ND	1.0	NA	1	B2J0574	10/22/2012	10/22/12 10:22	
n-Butylbenzene	ND	0.50	NA	1	B2J0574	10/22/2012	10/22/12 10:22	
n-Propylbenzene	ND	0.50	NA	1	B2J0574	10/22/2012	10/22/12 10:22	
Naphthalene	ND	0.50	NA	1	B2J0574	10/22/2012	10/22/12 10:22	
o-Xylene	ND	0.50	NA	1	B2J0574	10/22/2012	10/22/12 10:22	
sec-Butylbenzene	ND	0.50	NA	1	B2J0574	10/22/2012	10/22/12 10:22	
Styrene	ND	0.50	NA	1	B2J0574	10/22/2012	10/22/12 10:22	
tert-Butylbenzene	ND	0.50	NA	1	B2J0574	10/22/2012	10/22/12 10:22	
Tetrachloroethene	ND	0.50	NA	1	B2J0574	10/22/2012	10/22/12 10:22	
Toluene	ND	0.50	NA	1	B2J0574	10/22/2012	10/22/12 10:22	
trans-1,2-Dichloroethene	ND	0.50	NA	1	B2J0574	10/22/2012	10/22/12 10:22	
Trichloroethene	ND	0.50	NA	1	B2J0574	10/22/2012	10/22/12 10:22	
Trichlorofluoromethane	ND	0.50	NA	1	B2J0574	10/22/2012	10/22/12 10:22	
Vinyl chloride	ND	0.50	NA	1	B2J0574	10/22/2012	10/22/12 10:22	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>106 %</i>		<i>70 - 130</i>		B2J0574	10/22/2012	<i>10/22/12 10:22</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>107 %</i>		<i>70 - 130</i>		B2J0574	10/22/2012	<i>10/22/12 10:22</i>	
<i>Surrogate: Dibromofluoromethane</i>	<i>113 %</i>		<i>70 - 130</i>		B2J0574	10/22/2012	<i>10/22/12 10:22</i>	
<i>Surrogate: Toluene-d8</i>	<i>103 %</i>		<i>70 - 130</i>		B2J0574	10/22/2012	<i>10/22/12 10:22</i>	



Certificate of Analysis

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9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : Raytheon Main; Fullerton Monthly, 532.1:

Report To : Steve Netto

Reported : 10/30/2012

Client Sample ID EW-02

Lab ID: 1203629-02

Anions by Ion Chromatography EPA 300.0

Analyst: AG

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Bromide	0.20	0.05	NA	1	B2J0563	10/17/2012	10/17/12 14:10	

Total Dissolved Solids (Residue, Filterable) by SM 2540C

Analyst: AG

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Residue, Dissolved	620	10	NA	1	B2J0561	10/18/2012	10/18/12 13:30	

Total Suspended Solids (Residue, Non-Filtrable) by SM 2540D

Analyst: AG

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Residue, Suspended	ND	10	NA	1	B2J0562	10/18/2012	10/18/12 12:42	

Volatile Organic Compounds by EPA 8260

Analyst: SL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	0.50	NA	1	B2J0574	10/22/2012	10/22/12 12:19	
1,1,1-Trichloroethane	ND	0.50	NA	1	B2J0574	10/22/2012	10/22/12 12:19	
1,1,2,2-Tetrachloroethane	ND	0.50	NA	1	B2J0574	10/22/2012	10/22/12 12:19	
1,1,2-Trichloroethane	ND	0.50	NA	1	B2J0574	10/22/2012	10/22/12 12:19	
1,1-Dichloroethane	0.74	0.50	NA	1	B2J0574	10/22/2012	10/22/12 12:19	
1,1-Dichloroethene	75	0.50	NA	1	B2J0574	10/22/2012	10/22/12 12:19	
1,1-Dichloropropene	ND	0.50	NA	1	B2J0574	10/22/2012	10/22/12 12:19	
1,2,3-Trichloropropane	ND	0.50	NA	1	B2J0574	10/22/2012	10/22/12 12:19	
1,2,3-Trichlorobenzene	ND	0.50	NA	1	B2J0574	10/22/2012	10/22/12 12:19	
1,2,4-Trichlorobenzene	ND	0.50	NA	1	B2J0574	10/22/2012	10/22/12 12:19	
1,2,4-Trimethylbenzene	ND	0.50	NA	1	B2J0574	10/22/2012	10/22/12 12:19	
1,2-Dibromo-3-chloropropane	ND	0.50	NA	1	B2J0574	10/22/2012	10/22/12 12:19	
1,2-Dibromoethane	ND	0.50	NA	1	B2J0574	10/22/2012	10/22/12 12:19	
1,2-Dichlorobenzene	ND	0.50	NA	1	B2J0574	10/22/2012	10/22/12 12:19	
1,2-Dichloroethane	ND	0.50	NA	1	B2J0574	10/22/2012	10/22/12 12:19	
1,2-Dichloropropane	ND	0.50	NA	1	B2J0574	10/22/2012	10/22/12 12:19	
1,3,5-Trimethylbenzene	ND	0.50	NA	1	B2J0574	10/22/2012	10/22/12 12:19	
1,3-Dichlorobenzene	ND	0.50	NA	1	B2J0574	10/22/2012	10/22/12 12:19	
1,3-Dichloropropane	ND	0.50	NA	1	B2J0574	10/22/2012	10/22/12 12:19	



Certificate of Analysis

Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : Raytheon Main; Fullerton Monthly, 532.1:

Report To : Steve Netto

Reported : 10/30/2012

Client Sample ID EW-02

Lab ID: 1203629-02

Volatile Organic Compounds by EPA 8260

Analyst: SL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,4-Dichlorobenzene	ND	0.50	NA	1	B2J0574	10/22/2012	10/22/12 12:19	
2,2-Dichloropropane	ND	0.50	NA	1	B2J0574	10/22/2012	10/22/12 12:19	
2-Chlorotoluene	ND	0.50	NA	1	B2J0574	10/22/2012	10/22/12 12:19	
4-Chlorotoluene	ND	0.50	NA	1	B2J0574	10/22/2012	10/22/12 12:19	
4-Isopropyltoluene	ND	0.50	NA	1	B2J0574	10/22/2012	10/22/12 12:19	
Benzene	ND	0.50	NA	1	B2J0574	10/22/2012	10/22/12 12:19	
Bromobenzene	ND	0.50	NA	1	B2J0574	10/22/2012	10/22/12 12:19	
Bromodichloromethane	ND	0.50	NA	1	B2J0574	10/22/2012	10/22/12 12:19	
Bromoform	ND	0.50	NA	1	B2J0574	10/22/2012	10/22/12 12:19	
Bromomethane	ND	0.50	NA	1	B2J0574	10/22/2012	10/22/12 12:19	
Carbon tetrachloride	ND	0.50	NA	1	B2J0574	10/22/2012	10/22/12 12:19	
Chlorobenzene	ND	0.50	NA	1	B2J0574	10/22/2012	10/22/12 12:19	
Chloroethane	ND	0.50	NA	1	B2J0574	10/22/2012	10/22/12 12:19	
Chloroform	ND	0.50	NA	1	B2J0574	10/22/2012	10/22/12 12:19	
Chloromethane	ND	0.50	NA	1	B2J0574	10/22/2012	10/22/12 12:19	
cis-1,2-Dichloroethene	ND	0.50	NA	1	B2J0574	10/22/2012	10/22/12 12:19	
cis-1,3-Dichloropropene	ND	0.50	NA	1	B2J0574	10/22/2012	10/22/12 12:19	
Dibromochloromethane	ND	0.50	NA	1	B2J0574	10/22/2012	10/22/12 12:19	
Dibromomethane	ND	0.50	NA	1	B2J0574	10/22/2012	10/22/12 12:19	
Dichlorodifluoromethane	ND	0.50	NA	1	B2J0574	10/22/2012	10/22/12 12:19	
Ethylbenzene	ND	0.50	NA	1	B2J0574	10/22/2012	10/22/12 12:19	
Hexachlorobutadiene	ND	0.50	NA	1	B2J0574	10/22/2012	10/22/12 12:19	
Isopropylbenzene	ND	0.50	NA	1	B2J0574	10/22/2012	10/22/12 12:19	
m,p-Xylene	ND	1.0	NA	1	B2J0574	10/22/2012	10/22/12 12:19	
Methylene chloride	ND	1.0	NA	1	B2J0574	10/22/2012	10/22/12 12:19	
n-Butylbenzene	ND	0.50	NA	1	B2J0574	10/22/2012	10/22/12 12:19	
n-Propylbenzene	ND	0.50	NA	1	B2J0574	10/22/2012	10/22/12 12:19	
Naphthalene	ND	0.50	NA	1	B2J0574	10/22/2012	10/22/12 12:19	
o-Xylene	ND	0.50	NA	1	B2J0574	10/22/2012	10/22/12 12:19	
sec-Butylbenzene	ND	0.50	NA	1	B2J0574	10/22/2012	10/22/12 12:19	
Styrene	ND	0.50	NA	1	B2J0574	10/22/2012	10/22/12 12:19	
tert-Butylbenzene	ND	0.50	NA	1	B2J0574	10/22/2012	10/22/12 12:19	
Tetrachloroethene	ND	0.50	NA	1	B2J0574	10/22/2012	10/22/12 12:19	
Toluene	ND	0.50	NA	1	B2J0574	10/22/2012	10/22/12 12:19	
trans-1,2-Dichloroethene	ND	0.50	NA	1	B2J0574	10/22/2012	10/22/12 12:19	
Trichloroethene	ND	0.50	NA	1	B2J0574	10/22/2012	10/22/12 12:19	
Trichlorofluoromethane	ND	0.50	NA	1	B2J0574	10/22/2012	10/22/12 12:19	



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San Diego, CA 92122

Project Number : Raytheon Main; Fullerton Monthly, 532.1:

Report To : Steve Netto

Reported : 10/30/2012

Client Sample ID EW-02

Lab ID: 1203629-02

Volatile Organic Compounds by EPA 8260

Analyst: SL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Vinyl chloride	ND	0.50	NA	1	B2J0574	10/22/2012	10/22/12 12:19	
Surrogate: 1,2-Dichloroethane-d4	108 %		70 - 130		B2J0574	10/22/2012	10/22/12 12:19	
Surrogate: 4-Bromofluorobenzene	108 %		70 - 130		B2J0574	10/22/2012	10/22/12 12:19	
Surrogate: Dibromofluoromethane	111 %		70 - 130		B2J0574	10/22/2012	10/22/12 12:19	
Surrogate: Toluene-d8	106 %		70 - 130		B2J0574	10/22/2012	10/22/12 12:19	

1,4-Dioxane by EPA 8270: Isotope Dilution Technique

Analyst: BB

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,4-Dioxane	18	2.0	NA	1	B2J0513	10/18/2012	10/18/12 17:24	
Surrogate: 1,2-Dichlorobenzene-d4	77.1 %		37 - 93		B2J0513	10/18/2012	10/18/12 17:24	
Surrogate: 2-Fluorobiphenyl	85.4 %		51 - 100		B2J0513	10/18/2012	10/18/12 17:24	
Surrogate: 4-Terphenyl-d14	121 %		58 - 113		B2J0513	10/18/2012	10/18/12 17:24	S8
Surrogate: Nitrobenzene-d5	78.1 %		39 - 95		B2J0513	10/18/2012	10/18/12 17:24	



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Project Number : Raytheon Main; Fullerton Monthly, 532.1:

Report To : Steve Netto

Reported : 10/30/2012

Client Sample ID PF

Lab ID: 1203629-03

Total Suspended Solids (Residue, Non-Filtrable) by SM 2540D

Analyst: AG

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Residue, Suspended	ND	10	NA	1	B2J0562	10/18/2012	10/18/12 12:44	



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Project Number : Raytheon Main; Fullerton Monthly, 532.1:

Report To : Steve Netto

Reported : 10/30/2012

Client Sample ID POX

Lab ID: 1203629-04

Anions by Ion Chromatography EPA 300.0

Analyst: AG

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Bromide	0.20	0.05	NA	1	B2J0563	10/17/2012	10/17/12 14:22	

Total Dissolved Solids (Residue, Filterable) by SM 2540C

Analyst: AG

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Residue, Dissolved	620	10	NA	1	B2J0561	10/18/2012	10/18/12 13:32	

Volatile Organic Compounds by EPA 8260

Analyst: SL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	0.50	NA	1	B2J0574	10/22/2012	10/22/12 12:00	
1,1,1-Trichloroethane	ND	0.50	NA	1	B2J0574	10/22/2012	10/22/12 12:00	
1,1,2,2-Tetrachloroethane	ND	0.50	NA	1	B2J0574	10/22/2012	10/22/12 12:00	
1,1,2-Trichloroethane	ND	0.50	NA	1	B2J0574	10/22/2012	10/22/12 12:00	
1,1-Dichloroethane	0.52	0.50	NA	1	B2J0574	10/22/2012	10/22/12 12:00	
1,1-Dichloroethene	ND	0.50	NA	1	B2J0574	10/22/2012	10/22/12 12:00	
1,1-Dichloropropene	ND	0.50	NA	1	B2J0574	10/22/2012	10/22/12 12:00	
1,2,3-Trichloropropane	ND	0.50	NA	1	B2J0574	10/22/2012	10/22/12 12:00	
1,2,3-Trichlorobenzene	ND	0.50	NA	1	B2J0574	10/22/2012	10/22/12 12:00	
1,2,4-Trichlorobenzene	ND	0.50	NA	1	B2J0574	10/22/2012	10/22/12 12:00	
1,2,4-Trimethylbenzene	ND	0.50	NA	1	B2J0574	10/22/2012	10/22/12 12:00	
1,2-Dibromo-3-chloropropane	ND	0.50	NA	1	B2J0574	10/22/2012	10/22/12 12:00	
1,2-Dibromoethane	ND	0.50	NA	1	B2J0574	10/22/2012	10/22/12 12:00	
1,2-Dichlorobenzene	ND	0.50	NA	1	B2J0574	10/22/2012	10/22/12 12:00	
1,2-Dichloroethane	ND	0.50	NA	1	B2J0574	10/22/2012	10/22/12 12:00	
1,2-Dichloropropane	ND	0.50	NA	1	B2J0574	10/22/2012	10/22/12 12:00	
1,3,5-Trimethylbenzene	ND	0.50	NA	1	B2J0574	10/22/2012	10/22/12 12:00	
1,3-Dichlorobenzene	ND	0.50	NA	1	B2J0574	10/22/2012	10/22/12 12:00	
1,3-Dichloropropane	ND	0.50	NA	1	B2J0574	10/22/2012	10/22/12 12:00	
1,4-Dichlorobenzene	ND	0.50	NA	1	B2J0574	10/22/2012	10/22/12 12:00	
2,2-Dichloropropane	ND	0.50	NA	1	B2J0574	10/22/2012	10/22/12 12:00	
2-Chlorotoluene	ND	0.50	NA	1	B2J0574	10/22/2012	10/22/12 12:00	
4-Chlorotoluene	ND	0.50	NA	1	B2J0574	10/22/2012	10/22/12 12:00	
4-Isopropyltoluene	ND	0.50	NA	1	B2J0574	10/22/2012	10/22/12 12:00	
Benzene	ND	0.50	NA	1	B2J0574	10/22/2012	10/22/12 12:00	



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Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego, CA 92122

Project Number : Raytheon Main; Fullerton Monthly, 532.1:

Report To : Steve Netto

Reported : 10/30/2012

Client Sample ID POX

Lab ID: 1203629-04

Volatile Organic Compounds by EPA 8260

Analyst: SL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Bromobenzene	ND	0.50	NA	1	B2J0574	10/22/2012	10/22/12 12:00	
Bromodichloromethane	ND	0.50	NA	1	B2J0574	10/22/2012	10/22/12 12:00	
Bromoform	ND	0.50	NA	1	B2J0574	10/22/2012	10/22/12 12:00	
Bromomethane	ND	0.50	NA	1	B2J0574	10/22/2012	10/22/12 12:00	
Carbon tetrachloride	ND	0.50	NA	1	B2J0574	10/22/2012	10/22/12 12:00	
Chlorobenzene	ND	0.50	NA	1	B2J0574	10/22/2012	10/22/12 12:00	
Chloroethane	ND	0.50	NA	1	B2J0574	10/22/2012	10/22/12 12:00	
Chloroform	ND	0.50	NA	1	B2J0574	10/22/2012	10/22/12 12:00	
Chloromethane	ND	0.50	NA	1	B2J0574	10/22/2012	10/22/12 12:00	
cis-1,2-Dichloroethene	ND	0.50	NA	1	B2J0574	10/22/2012	10/22/12 12:00	
cis-1,3-Dichloropropene	ND	0.50	NA	1	B2J0574	10/22/2012	10/22/12 12:00	
Dibromochloromethane	ND	0.50	NA	1	B2J0574	10/22/2012	10/22/12 12:00	
Dibromomethane	ND	0.50	NA	1	B2J0574	10/22/2012	10/22/12 12:00	
Dichlorodifluoromethane	ND	0.50	NA	1	B2J0574	10/22/2012	10/22/12 12:00	
Ethylbenzene	ND	0.50	NA	1	B2J0574	10/22/2012	10/22/12 12:00	
Hexachlorobutadiene	ND	0.50	NA	1	B2J0574	10/22/2012	10/22/12 12:00	
Isopropylbenzene	ND	0.50	NA	1	B2J0574	10/22/2012	10/22/12 12:00	
m,p-Xylene	ND	1.0	NA	1	B2J0574	10/22/2012	10/22/12 12:00	
Methylene chloride	ND	1.0	NA	1	B2J0574	10/22/2012	10/22/12 12:00	
n-Butylbenzene	ND	0.50	NA	1	B2J0574	10/22/2012	10/22/12 12:00	
n-Propylbenzene	ND	0.50	NA	1	B2J0574	10/22/2012	10/22/12 12:00	
Naphthalene	ND	0.50	NA	1	B2J0574	10/22/2012	10/22/12 12:00	
o-Xylene	ND	0.50	NA	1	B2J0574	10/22/2012	10/22/12 12:00	
sec-Butylbenzene	ND	0.50	NA	1	B2J0574	10/22/2012	10/22/12 12:00	
Styrene	ND	0.50	NA	1	B2J0574	10/22/2012	10/22/12 12:00	
tert-Butylbenzene	ND	0.50	NA	1	B2J0574	10/22/2012	10/22/12 12:00	
Tetrachloroethene	ND	0.50	NA	1	B2J0574	10/22/2012	10/22/12 12:00	
Toluene	ND	0.50	NA	1	B2J0574	10/22/2012	10/22/12 12:00	
trans-1,2-Dichloroethene	ND	0.50	NA	1	B2J0574	10/22/2012	10/22/12 12:00	
Trichloroethene	ND	0.50	NA	1	B2J0574	10/22/2012	10/22/12 12:00	
Trichlorofluoromethane	ND	0.50	NA	1	B2J0574	10/22/2012	10/22/12 12:00	
Vinyl chloride	ND	0.50	NA	1	B2J0574	10/22/2012	10/22/12 12:00	

Surrogate: 1,2-Dichloroethane-d4	99.3 %	70 - 130	B2J0574	10/22/2012	10/22/12 12:00
Surrogate: 4-Bromofluorobenzene	107 %	70 - 130	B2J0574	10/22/2012	10/22/12 12:00
Surrogate: Dibromofluoromethane	109 %	70 - 130	B2J0574	10/22/2012	10/22/12 12:00
Surrogate: Toluene-d8	107 %	70 - 130	B2J0574	10/22/2012	10/22/12 12:00



Certificate of Analysis

Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego, CA 92122

Project Number : Raytheon Main; Fullerton Monthly, 532.1:

Report To : Steve Netto

Reported : 10/30/2012

Client Sample ID POX

Lab ID: 1203629-04

1,4-Dioxane by EPA 8270/SIM: Isotope Dilution Technique

Analyst: BB

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,4-Dioxane	ND	0.20	0.13	1	B2J0599	10/22/2012	10/23/12 15:54	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	85.3 %		36 - 107		B2J0599	10/22/2012	10/23/12 15:54	
<i>Surrogate: 2-Fluorobiphenyl</i>	97.6 %		42 - 120		B2J0599	10/22/2012	10/23/12 15:54	
<i>Surrogate: 4-Terphenyl-d14</i>	125 %		67 - 142		B2J0599	10/22/2012	10/23/12 15:54	
<i>Surrogate: Nitrobenzene-d5</i>	69.6 %		36 - 130		B2J0599	10/22/2012	10/23/12 15:54	



Certificate of Analysis

Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego, CA 92122

Project Number : Raytheon Main; Fullerton Monthly, 532.1:

Report To : Steve Netto

Reported : 10/30/2012

Client Sample ID CBT

Lab ID: 1203629-05

Volatile Organic Compounds by EPA 8260

Analyst: SL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	0.50	NA	1	B2J0574	10/22/2012	10/22/12 11:23	
1,1,1-Trichloroethane	ND	0.50	NA	1	B2J0574	10/22/2012	10/22/12 11:23	
1,1,2,2-Tetrachloroethane	ND	0.50	NA	1	B2J0574	10/22/2012	10/22/12 11:23	
1,1,2-Trichloroethane	ND	0.50	NA	1	B2J0574	10/22/2012	10/22/12 11:23	
1,1-Dichloroethane	0.50	0.50	NA	1	B2J0574	10/22/2012	10/22/12 11:23	
1,1-Dichloroethene	ND	0.50	NA	1	B2J0574	10/22/2012	10/22/12 11:23	
1,1-Dichloropropene	ND	0.50	NA	1	B2J0574	10/22/2012	10/22/12 11:23	
1,2,3-Trichloropropane	ND	0.50	NA	1	B2J0574	10/22/2012	10/22/12 11:23	
1,2,3-Trichlorobenzene	ND	0.50	NA	1	B2J0574	10/22/2012	10/22/12 11:23	
1,2,4-Trichlorobenzene	ND	0.50	NA	1	B2J0574	10/22/2012	10/22/12 11:23	
1,2,4-Trimethylbenzene	ND	0.50	NA	1	B2J0574	10/22/2012	10/22/12 11:23	
1,2-Dibromo-3-chloropropane	ND	0.50	NA	1	B2J0574	10/22/2012	10/22/12 11:23	
1,2-Dibromoethane	ND	0.50	NA	1	B2J0574	10/22/2012	10/22/12 11:23	
1,2-Dichlorobenzene	ND	0.50	NA	1	B2J0574	10/22/2012	10/22/12 11:23	
1,2-Dichloroethane	ND	0.50	NA	1	B2J0574	10/22/2012	10/22/12 11:23	
1,2-Dichloropropane	ND	0.50	NA	1	B2J0574	10/22/2012	10/22/12 11:23	
1,3,5-Trimethylbenzene	ND	0.50	NA	1	B2J0574	10/22/2012	10/22/12 11:23	
1,3-Dichlorobenzene	ND	0.50	NA	1	B2J0574	10/22/2012	10/22/12 11:23	
1,3-Dichloropropane	ND	0.50	NA	1	B2J0574	10/22/2012	10/22/12 11:23	
1,4-Dichlorobenzene	ND	0.50	NA	1	B2J0574	10/22/2012	10/22/12 11:23	
2,2-Dichloropropane	ND	0.50	NA	1	B2J0574	10/22/2012	10/22/12 11:23	
2-Chlorotoluene	ND	0.50	NA	1	B2J0574	10/22/2012	10/22/12 11:23	
4-Chlorotoluene	ND	0.50	NA	1	B2J0574	10/22/2012	10/22/12 11:23	
4-Isopropyltoluene	ND	0.50	NA	1	B2J0574	10/22/2012	10/22/12 11:23	
Benzene	ND	0.50	NA	1	B2J0574	10/22/2012	10/22/12 11:23	
Bromobenzene	ND	0.50	NA	1	B2J0574	10/22/2012	10/22/12 11:23	
Bromodichloromethane	ND	0.50	NA	1	B2J0574	10/22/2012	10/22/12 11:23	
Bromoform	ND	0.50	NA	1	B2J0574	10/22/2012	10/22/12 11:23	
Bromomethane	ND	0.50	NA	1	B2J0574	10/22/2012	10/22/12 11:23	
Carbon tetrachloride	ND	0.50	NA	1	B2J0574	10/22/2012	10/22/12 11:23	
Chlorobenzene	ND	0.50	NA	1	B2J0574	10/22/2012	10/22/12 11:23	
Chloroethane	ND	0.50	NA	1	B2J0574	10/22/2012	10/22/12 11:23	
Chloroform	ND	0.50	NA	1	B2J0574	10/22/2012	10/22/12 11:23	
Chloromethane	0.85	0.50	NA	1	B2J0574	10/22/2012	10/22/12 11:23	
cis-1,2-Dichloroethene	ND	0.50	NA	1	B2J0574	10/22/2012	10/22/12 11:23	
cis-1,3-Dichloropropene	ND	0.50	NA	1	B2J0574	10/22/2012	10/22/12 11:23	
Dibromochloromethane	ND	0.50	NA	1	B2J0574	10/22/2012	10/22/12 11:23	



Certificate of Analysis

Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : Raytheon Main; Fullerton Monthly, 532.1:

Report To : Steve Netto

Reported : 10/30/2012

Client Sample ID CBT

Lab ID: 1203629-05

Volatile Organic Compounds by EPA 8260

Analyst: SL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Dibromomethane	ND	0.50	NA	1	B2J0574	10/22/2012	10/22/12 11:23	
Dichlorodifluoromethane	ND	0.50	NA	1	B2J0574	10/22/2012	10/22/12 11:23	
Ethylbenzene	ND	0.50	NA	1	B2J0574	10/22/2012	10/22/12 11:23	
Hexachlorobutadiene	ND	0.50	NA	1	B2J0574	10/22/2012	10/22/12 11:23	
Isopropylbenzene	ND	0.50	NA	1	B2J0574	10/22/2012	10/22/12 11:23	
m,p-Xylene	ND	1.0	NA	1	B2J0574	10/22/2012	10/22/12 11:23	
Methylene chloride	ND	1.0	NA	1	B2J0574	10/22/2012	10/22/12 11:23	
n-Butylbenzene	ND	0.50	NA	1	B2J0574	10/22/2012	10/22/12 11:23	
n-Propylbenzene	ND	0.50	NA	1	B2J0574	10/22/2012	10/22/12 11:23	
Naphthalene	ND	0.50	NA	1	B2J0574	10/22/2012	10/22/12 11:23	
o-Xylene	ND	0.50	NA	1	B2J0574	10/22/2012	10/22/12 11:23	
sec-Butylbenzene	ND	0.50	NA	1	B2J0574	10/22/2012	10/22/12 11:23	
Styrene	ND	0.50	NA	1	B2J0574	10/22/2012	10/22/12 11:23	
tert-Butylbenzene	ND	0.50	NA	1	B2J0574	10/22/2012	10/22/12 11:23	
Tetrachloroethene	ND	0.50	NA	1	B2J0574	10/22/2012	10/22/12 11:23	
Toluene	ND	0.50	NA	1	B2J0574	10/22/2012	10/22/12 11:23	
trans-1,2-Dichloroethene	ND	0.50	NA	1	B2J0574	10/22/2012	10/22/12 11:23	
Trichloroethene	ND	0.50	NA	1	B2J0574	10/22/2012	10/22/12 11:23	
Trichlorofluoromethane	ND	0.50	NA	1	B2J0574	10/22/2012	10/22/12 11:23	
Vinyl chloride	ND	0.50	NA	1	B2J0574	10/22/2012	10/22/12 11:23	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>104 %</i>		<i>70 - 130</i>		B2J0574	10/22/2012	<i>10/22/12 11:23</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>105 %</i>		<i>70 - 130</i>		B2J0574	10/22/2012	<i>10/22/12 11:23</i>	
<i>Surrogate: Dibromofluoromethane</i>	<i>108 %</i>		<i>70 - 130</i>		B2J0574	10/22/2012	<i>10/22/12 11:23</i>	
<i>Surrogate: Toluene-d8</i>	<i>99.5 %</i>		<i>70 - 130</i>		B2J0574	10/22/2012	<i>10/22/12 11:23</i>	



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Project Number : Raytheon Main; Fullerton Monthly, 532.1:

Report To : Steve Netto

Reported : 10/30/2012

Client Sample ID CEFF

Lab ID: 1203629-06

Anions by Ion Chromatography EPA 300.0

Analyst: AG

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Bromide	0.19	0.05	NA	1	B2J0563	10/17/2012	10/17/12 14:33	

Total Dissolved Solids (Residue, Filterable) by SM 2540C

Analyst: AG

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Residue, Dissolved	610	10	NA	1	B2J0561	10/18/2012	10/18/12 13:34	

Volatile Organic Compounds by EPA 8260

Analyst: SL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	0.50	NA	1	B2J0574	10/22/2012	10/22/12 11:02	
1,1,1-Trichloroethane	ND	0.50	NA	1	B2J0574	10/22/2012	10/22/12 11:02	
1,1,2,2-Tetrachloroethane	ND	0.50	NA	1	B2J0574	10/22/2012	10/22/12 11:02	
1,1,2-Trichloroethane	ND	0.50	NA	1	B2J0574	10/22/2012	10/22/12 11:02	
1,1-Dichloroethane	0.58	0.50	NA	1	B2J0574	10/22/2012	10/22/12 11:02	
1,1-Dichloroethene	ND	0.50	NA	1	B2J0574	10/22/2012	10/22/12 11:02	
1,1-Dichloropropene	ND	0.50	NA	1	B2J0574	10/22/2012	10/22/12 11:02	
1,2,3-Trichloropropane	ND	0.50	NA	1	B2J0574	10/22/2012	10/22/12 11:02	
1,2,3-Trichlorobenzene	ND	0.50	NA	1	B2J0574	10/22/2012	10/22/12 11:02	
1,2,4-Trichlorobenzene	ND	0.50	NA	1	B2J0574	10/22/2012	10/22/12 11:02	
1,2,4-Trimethylbenzene	ND	0.50	NA	1	B2J0574	10/22/2012	10/22/12 11:02	
1,2-Dibromo-3-chloropropane	ND	0.50	NA	1	B2J0574	10/22/2012	10/22/12 11:02	
1,2-Dibromoethane	ND	0.50	NA	1	B2J0574	10/22/2012	10/22/12 11:02	
1,2-Dichlorobenzene	ND	0.50	NA	1	B2J0574	10/22/2012	10/22/12 11:02	
1,2-Dichloroethane	ND	0.50	NA	1	B2J0574	10/22/2012	10/22/12 11:02	
1,2-Dichloropropane	ND	0.50	NA	1	B2J0574	10/22/2012	10/22/12 11:02	
1,3,5-Trimethylbenzene	ND	0.50	NA	1	B2J0574	10/22/2012	10/22/12 11:02	
1,3-Dichlorobenzene	ND	0.50	NA	1	B2J0574	10/22/2012	10/22/12 11:02	
1,3-Dichloropropane	ND	0.50	NA	1	B2J0574	10/22/2012	10/22/12 11:02	
1,4-Dichlorobenzene	ND	0.50	NA	1	B2J0574	10/22/2012	10/22/12 11:02	
2,2-Dichloropropane	ND	0.50	NA	1	B2J0574	10/22/2012	10/22/12 11:02	
2-Chlorotoluene	ND	0.50	NA	1	B2J0574	10/22/2012	10/22/12 11:02	
4-Chlorotoluene	ND	0.50	NA	1	B2J0574	10/22/2012	10/22/12 11:02	
4-Isopropyltoluene	ND	0.50	NA	1	B2J0574	10/22/2012	10/22/12 11:02	
Benzene	ND	0.50	NA	1	B2J0574	10/22/2012	10/22/12 11:02	



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San Diego, CA 92122

Project Number : Raytheon Main; Fullerton Monthly, 532.1:

Report To : Steve Netto

Reported : 10/30/2012

Client Sample ID CEFF

Lab ID: 1203629-06

Volatile Organic Compounds by EPA 8260

Analyst: SL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Bromobenzene	ND	0.50	NA	1	B2J0574	10/22/2012	10/22/12 11:02	
Bromodichloromethane	ND	0.50	NA	1	B2J0574	10/22/2012	10/22/12 11:02	
Bromoform	ND	0.50	NA	1	B2J0574	10/22/2012	10/22/12 11:02	
Bromomethane	ND	0.50	NA	1	B2J0574	10/22/2012	10/22/12 11:02	
Carbon tetrachloride	ND	0.50	NA	1	B2J0574	10/22/2012	10/22/12 11:02	
Chlorobenzene	ND	0.50	NA	1	B2J0574	10/22/2012	10/22/12 11:02	
Chloroethane	ND	0.50	NA	1	B2J0574	10/22/2012	10/22/12 11:02	
Chloroform	ND	0.50	NA	1	B2J0574	10/22/2012	10/22/12 11:02	
Chloromethane	ND	0.50	NA	1	B2J0574	10/22/2012	10/22/12 11:02	
cis-1,2-Dichloroethene	ND	0.50	NA	1	B2J0574	10/22/2012	10/22/12 11:02	
cis-1,3-Dichloropropene	ND	0.50	NA	1	B2J0574	10/22/2012	10/22/12 11:02	
Dibromochloromethane	ND	0.50	NA	1	B2J0574	10/22/2012	10/22/12 11:02	
Dibromomethane	ND	0.50	NA	1	B2J0574	10/22/2012	10/22/12 11:02	
Dichlorodifluoromethane	ND	0.50	NA	1	B2J0574	10/22/2012	10/22/12 11:02	
Ethylbenzene	ND	0.50	NA	1	B2J0574	10/22/2012	10/22/12 11:02	
Hexachlorobutadiene	ND	0.50	NA	1	B2J0574	10/22/2012	10/22/12 11:02	
Isopropylbenzene	ND	0.50	NA	1	B2J0574	10/22/2012	10/22/12 11:02	
m,p-Xylene	ND	1.0	NA	1	B2J0574	10/22/2012	10/22/12 11:02	
Methylene chloride	ND	1.0	NA	1	B2J0574	10/22/2012	10/22/12 11:02	
n-Butylbenzene	ND	0.50	NA	1	B2J0574	10/22/2012	10/22/12 11:02	
n-Propylbenzene	ND	0.50	NA	1	B2J0574	10/22/2012	10/22/12 11:02	
Naphthalene	ND	0.50	NA	1	B2J0574	10/22/2012	10/22/12 11:02	
o-Xylene	ND	0.50	NA	1	B2J0574	10/22/2012	10/22/12 11:02	
sec-Butylbenzene	ND	0.50	NA	1	B2J0574	10/22/2012	10/22/12 11:02	
Styrene	ND	0.50	NA	1	B2J0574	10/22/2012	10/22/12 11:02	
tert-Butylbenzene	ND	0.50	NA	1	B2J0574	10/22/2012	10/22/12 11:02	
Tetrachloroethene	ND	0.50	NA	1	B2J0574	10/22/2012	10/22/12 11:02	
Toluene	ND	0.50	NA	1	B2J0574	10/22/2012	10/22/12 11:02	
trans-1,2-Dichloroethene	ND	0.50	NA	1	B2J0574	10/22/2012	10/22/12 11:02	
Trichloroethene	ND	0.50	NA	1	B2J0574	10/22/2012	10/22/12 11:02	
Trichlorofluoromethane	ND	0.50	NA	1	B2J0574	10/22/2012	10/22/12 11:02	
Vinyl chloride	ND	0.50	NA	1	B2J0574	10/22/2012	10/22/12 11:02	

Surrogate: 1,2-Dichloroethane-d4	111 %	70 - 130	B2J0574	10/22/2012	10/22/12 11:02
Surrogate: 4-Bromofluorobenzene	108 %	70 - 130	B2J0574	10/22/2012	10/22/12 11:02
Surrogate: Dibromofluoromethane	114 %	70 - 130	B2J0574	10/22/2012	10/22/12 11:02
Surrogate: Toluene-d8	103 %	70 - 130	B2J0574	10/22/2012	10/22/12 11:02



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 9171 Towne Centre Drive, Suite 375
 San Diego , CA 92122

Project Number : Raytheon Main; Fullerton Monthly, 532.1:
 Report To : Steve Netto
 Reported : 10/30/2012

QUALITY CONTROL SECTION

Anions by Ion Chromatography EPA 300.0 - Quality Control

Analyte	Result (mg/L)	PQL (mg/L)	Spike Level	Source Result	% Rec % Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B2J0563 - No_Prep_IC_1									
Blank (B2J0563-BLK1)				Prepared: 10/17/2012 Analyzed: 10/17/2012					
Bromide	ND	0.05			NR				
LCS (B2J0563-BS1)				Prepared: 10/17/2012 Analyzed: 10/17/2012					
Bromide	0.980300	0.05	1.00000		98.0	90 - 110			
Duplicate (B2J0563-DUP1)				Source: 1203646-01 Prepared: 10/17/2012 Analyzed: 10/17/2012					
Bromide	0.0595	0.05		0.0602	NR		1.17	20	
Matrix Spike (B2J0563-MS1)				Source: 1203646-01 Prepared: 10/17/2012 Analyzed: 10/17/2012					
Bromide	2.81500	0.05	2.50000	0.0602	110	80 - 120			
Matrix Spike (B2J0563-MS2)				Source: 1203653-01 Prepared: 10/17/2012 Analyzed: 10/17/2012					
Bromide	2.84850	0.05	2.50000	0.136900	108	80 - 120			
Matrix Spike Dup (B2J0563-MSD1)				Source: 1203646-01 Prepared: 10/17/2012 Analyzed: 10/17/2012					
Bromide	2.77250	0.05	2.50000	0.0602	108	80 - 120	1.52	20	



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San Diego , CA 92122

Project Number : Raytheon Main; Fullerton Monthly, 532.1:

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Reported : 10/30/2012

Total Dissolved Solids (Residue, Filterable) by SM 2540C - Quality Control

Analyte	Result (mg/L)	PQL (mg/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B2J0561 - No_Prep_WC_1

Blank (B2J0561-BLK1)

Prepared: 10/18/2012 Analyzed: 10/18/2012

Residue, Dissolved

ND

10

NR

LCS (B2J0561-BS1)

Prepared: 10/18/2012 Analyzed: 10/18/2012

Residue, Dissolved

968.000

10

970.000

99.8

80 - 120

Duplicate (B2J0561-DUP1)

Source: 1203668-01

Prepared: 10/18/2012 Analyzed: 10/18/2012

Residue, Dissolved

1170.00

100

1110.00

NR

5.26

10



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San Diego , CA 92122

Project Number : Raytheon Main; Fullerton Monthly, 532.1:

Report To : Steve Netto

Reported : 10/30/2012

Total Suspended Solids (Residue, Non-Filtrable) by SM 2540D - Quality Control

Analyte	Result (mg/L)	PQL (mg/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B2J0562 - No_Prep_WC_1

Blank (B2J0562-BLK1)

Prepared: 10/18/2012 Analyzed: 10/18/2012

Residue, Suspended

ND

10

NR

LCS (B2J0562-BS1)

Prepared: 10/18/2012 Analyzed: 10/18/2012

Residue, Suspended

94.0000

10

96.6000

97.3

80 - 120

Duplicate (B2J0562-DUP1)

Source: 1203653-01

Prepared: 10/18/2012 Analyzed: 10/18/2012

Residue, Suspended

134.000

10

141.000

NR

5.09

10



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Reported : 10/30/2012

Volatile Organic Compounds by EPA 8260 - Quality Control

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec % Rec	% Rec Limits	RPD RPD	RPD Limit	Notes
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Batch B2J0574 - MSVOAW_LL

Blank (B2J0574-BLK1)

Prepared: 10/22/2012 Analyzed: 10/22/2012

1,1,1,2-Tetrachloroethane	ND	0.50			NR				
1,1,1-Trichloroethane	ND	0.50			NR				
1,1,2,2-Tetrachloroethane	ND	0.50			NR				
1,1,2-Trichloroethane	ND	0.50			NR				
1,1-Dichloroethane	ND	0.50			NR				
1,1-Dichloroethene	ND	0.50			NR				
1,1-Dichloropropene	ND	0.50			NR				
1,2,3-Trichloropropane	ND	0.50			NR				
1,2,3-Trichlorobenzene	ND	0.50			NR				
1,2,4-Trichlorobenzene	ND	0.50			NR				
1,2,4-Trimethylbenzene	ND	0.50			NR				
1,2-Dibromo-3-chloropropane	ND	0.50			NR				
1,2-Dibromoethane	ND	0.50			NR				
1,2-Dichlorobenzene	ND	0.50			NR				
1,2-Dichloroethane	ND	0.50			NR				
1,2-Dichloropropane	ND	0.50			NR				
1,3,5-Trimethylbenzene	ND	0.50			NR				
1,3-Dichlorobenzene	ND	0.50			NR				
1,3-Dichloropropane	ND	0.50			NR				
1,4-Dichlorobenzene	ND	0.50			NR				
2,2-Dichloropropane	ND	0.50			NR				
2-Chlorotoluene	ND	0.50			NR				
4-Chlorotoluene	ND	0.50			NR				
4-Isopropyltoluene	ND	0.50			NR				
Benzene	ND	0.50			NR				
Bromobenzene	ND	0.50			NR				
Bromodichloromethane	ND	0.50			NR				
Bromoform	ND	0.50			NR				
Bromomethane	ND	0.50			NR				
Carbon tetrachloride	ND	0.50			NR				
Chlorobenzene	ND	0.50			NR				
Chloroethane	ND	0.50			NR				
Chloroform	ND	0.50			NR				
Chloromethane	ND	0.50			NR				
cis-1,2-Dichloroethene	ND	0.50			NR				
cis-1,3-Dichloropropene	ND	0.50			NR				
Dibromochloromethane	ND	0.50			NR				
Dibromomethane	ND	0.50			NR				
Dichlorodifluoromethane	ND	0.50			NR				
Ethylbenzene	ND	0.50			NR				
Hexachlorobutadiene	ND	0.50			NR				



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Project Number : Raytheon Main; Fullerton Monthly, 532.1:

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Volatile Organic Compounds by EPA 8260 - Quality Control (cont'd)

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B2J0574 - MSVOAW_LL (continued)

Blank (B2J0574-BLK1) - Continued

Prepared: 10/22/2012 Analyzed: 10/22/2012

Isopropylbenzene	ND	0.50			NR				
m,p-Xylene	ND	1.0			NR				
Methylene chloride	ND	1.0			NR				
n-Butylbenzene	ND	0.50			NR				
n-Propylbenzene	ND	0.50			NR				
Naphthalene	ND	0.50			NR				
o-Xylene	ND	0.50			NR				
sec-Butylbenzene	ND	0.50			NR				
Styrene	ND	0.50			NR				
tert-Butylbenzene	ND	0.50			NR				
Tetrachloroethene	ND	0.50			NR				
Toluene	ND	0.50			NR				
trans-1,2-Dichloroethene	ND	0.50			NR				
Trichloroethene	ND	0.50			NR				
Trichlorofluoromethane	ND	0.50			NR				
Vinyl chloride	ND	0.50			NR				

<i>Surrogate: 1,2-Dichloroethane-d4</i>	27.31		25.0000		109	70 - 130			
<i>Surrogate: 4-Bromofluorobenzene</i>	28.18		25.0000		113	70 - 130			
<i>Surrogate: Dibromofluoromethane</i>	28.60		25.0000		114	70 - 130			
<i>Surrogate: Toluene-d8</i>	26.60		25.0000		106	70 - 130			

LCS (B2J0574-BS1)

Prepared: 10/22/2012 Analyzed: 10/22/2012

1,1-Dichloroethene	19.7400		20.0000		98.7	70 - 130			
Benzene	37.3800		40.0000		93.4	70 - 130			
Chlorobenzene	18.4500		20.0000		92.2	70 - 130			
MTBE	22.0300		20.0000		110	70 - 130			
Toluene	37.0000		40.0000		92.5	70 - 130			
Trichloroethene	17.7200		20.0000		88.6	70 - 130			

<i>Surrogate: 1,2-Dichloroethane-d4</i>	25.51		25.0000		102	70 - 130			
<i>Surrogate: 4-Bromofluorobenzene</i>	26.87		25.0000		107	70 - 130			
<i>Surrogate: Dibromofluoromethane</i>	26.25		25.0000		105	70 - 130			
<i>Surrogate: Toluene-d8</i>	25.98		25.0000		104	70 - 130			

LCS Dup (B2J0574-BSD1)

Prepared: 10/22/2012 Analyzed: 10/22/2012

1,1-Dichloroethene	17.9100		20.0000		89.6	70 - 130	9.72	20	
Benzene	36.7400		40.0000		91.8	70 - 130	1.73	20	
Chlorobenzene	18.0600		20.0000		90.3	70 - 130	2.14	20	
MTBE	21.2000		20.0000		106	70 - 130	3.84	20	
Toluene	36.5000		40.0000		91.2	70 - 130	1.36	20	
Trichloroethene	17.6400		20.0000		88.2	70 - 130	0.452	20	

<i>Surrogate: 1,2-Dichloroethane-d4</i>	23.80		25.0000		95.2	70 - 130			
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Project Number : Raytheon Main; Fullerton Monthly, 532.1:

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Volatile Organic Compounds by EPA 8260 - Quality Control (cont'd)

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B2J0574 - MSVOAW_LL (continued)

LCS Dup (B2J0574-BSD1) - Continued

Prepared: 10/22/2012 Analyzed: 10/22/2012

Surrogate: 4-Bromofluorobenzene	24.76		25.0000		99.0	70 - 130			
Surrogate: Dibromofluoromethane	24.60		25.0000		98.4	70 - 130			
Surrogate: Toluene-d8	24.59		25.0000		98.4	70 - 130			



Certificate of Analysis

Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : Raytheon Main; Fullerton Monthly, 532.1:

Report To : Steve Netto

Reported : 10/30/2012

1,4-Dioxane by EPA 8270: Isotope Dilution Technique - Quality Control

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec % Rec	% Rec Limits	RPD RPD	RPD Limit	Notes
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Batch B2J0513 - MSSEMI

Blank (B2J0513-BLK1)

Prepared: 10/18/2012 Analyzed: 10/18/2012

1,4-Dioxane	ND	2.0			NR				
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	72.92		100.000		72.9	37 - 93			
<i>Surrogate: 2-Fluorobiphenyl</i>	83.21		100.000		83.2	51 - 100			
<i>Surrogate: 4-Terphenyl-d14</i>	119.3		100.000		119	58 - 113			S1
<i>Surrogate: Nitrobenzene-d5</i>	83.57		100.000		83.6	39 - 95			

LCS (B2J0513-BS1)

Prepared: 10/18/2012 Analyzed: 10/18/2012

1,4-Dioxane	84.7100	2.0	100.000		84.7	70 - 130			
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	62.23		100.000		62.2	37 - 93			
<i>Surrogate: 2-Fluorobiphenyl</i>	78.08		100.000		78.1	51 - 100			
<i>Surrogate: 4-Terphenyl-d14</i>	98.19		100.000		98.2	58 - 113			
<i>Surrogate: Nitrobenzene-d5</i>	72.62		100.000		72.6	39 - 95			

LCS Dup (B2J0513-BSD1)

Prepared: 10/18/2012 Analyzed: 10/18/2012

1,4-Dioxane	82.8400	2.0	100.000		82.8	70 - 130	2.23	20	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	62.38		100.000		62.4	37 - 93			
<i>Surrogate: 2-Fluorobiphenyl</i>	78.01		100.000		78.0	51 - 100			
<i>Surrogate: 4-Terphenyl-d14</i>	97.08		100.000		97.1	58 - 113			
<i>Surrogate: Nitrobenzene-d5</i>	73.05		100.000		73.0	39 - 95			



Certificate of Analysis

Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego, CA 92122

Project Number : Raytheon Main; Fullerton Monthly, 532.1:

Report To : Steve Netto

Reported : 10/30/2012

1,4-Dioxane by EPA 8270/SIM: Isotope Dilution Technique - Quality Control

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec % Rec	% Rec Limits	RPD RPD	RPD Limit	Notes
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Batch B2J0599 - MSSEMI_ISOTOPEDILN

Blank (B2J0599-BLK1)

Prepared: 10/22/2012 Analyzed: 10/23/2012

1,4-Dioxane	ND	0.20			NR				
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	0.7925		1.00000		79.2	36 - 107			
<i>Surrogate: 2-Fluorobiphenyl</i>	0.9028		1.00000		90.3	42 - 120			
<i>Surrogate: 4-Terphenyl-d14</i>	1.359		1.00000		136	67 - 142			
<i>Surrogate: Nitrobenzene-d5</i>	0.6602		1.00000		66.0	36 - 130			

LCS (B2J0599-BS1)

Prepared: 10/22/2012 Analyzed: 10/23/2012

1,4-Dioxane	0.730620	0.20	1.00000		73.1	70 - 130			
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	0.8238		1.00000		82.4	36 - 107			
<i>Surrogate: 2-Fluorobiphenyl</i>	0.9100		1.00000		91.0	42 - 120			
<i>Surrogate: 4-Terphenyl-d14</i>	1.244		1.00000		124	67 - 142			
<i>Surrogate: Nitrobenzene-d5</i>	0.6788		1.00000		67.9	36 - 130			

LCS Dup (B2J0599-BSD1)

Prepared: 10/22/2012 Analyzed: 10/23/2012

1,4-Dioxane	0.719180	0.20	1.00000		71.9	70 - 130	1.58	20	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	0.8116		1.00000		81.2	36 - 107			
<i>Surrogate: 2-Fluorobiphenyl</i>	0.9452		1.00000		94.5	42 - 120			
<i>Surrogate: 4-Terphenyl-d14</i>	1.219		1.00000		122	67 - 142			
<i>Surrogate: Nitrobenzene-d5</i>	0.7064		1.00000		70.6	36 - 130			



Certificate of Analysis

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San Diego , CA 92122

Project Number : Raytheon Main; Fullerton Monthly, 532.1:

Report To : Steve Netto

Reported : 10/30/2012

Notes and Definitions

S8	Surrogate recovery was above laboratory acceptance limit. See Corrective Action Report for details.
S1	Surrogate recovery was above laboratory acceptance limit. No target analyte was detected in the sample.
ND	Analyte not detected at or above reporting limit
PQL	Practical Quantitation Limit
MDL	Method Detection Limit
NR	Not Reported
RPD	Relative Percent Difference
CA1	CA-NELAP (CDPH)
CA2	CA-ELAP (CDPH)
OR1	OR-NELAP (OSPHL)
TX1	TX-NELAP (TCEQ)

Notes:

(1) The reported MDL and PQL are based on prep ratio variation and analytical dilution.

Bromate by EPA 317
 Ion Chromatography with Post-Column Derivatization-Visible Absorption

Column: Dionex AS9-HC/AG9-HSC
 Eluent: 30 mM Na₂CO₃
 Flow: 1.0 mL/min
 Injection: 250 µL
 Detection: Post-column derivatization, Visible detection, 450 nm

Sample preparation: The undiluted samples were treated with a Dionex OnGuard II H cartridge to remove excess basic cations.

Parts Per Billion (µg/L)

Sample ID	Result
1203629-02H / EW-02	ND
1203629-04G / POX	7.7
1203629-06F / CEFF	8.4
Method Blank	ND
Detection Limit	0.5

Date Analyzed: 10-18-12

Quality Control Summary

Sample ID: Units:	Batch QC PPM				Spike Duplicate Result	Spike Duplicate % Rec	Spike RPD
<u>Analyte</u> Bromate	<u>Sample Result</u> ND	<u>Spike Conc</u> 1.00	<u>Spike Result</u> 1.02	<u>Spike % Rec</u> 102	1.05	105	3
QC Guidelines				75-125		75-125	NMT 10


ADVANCED TECHNOLOGY
 LABORATORIES
SUBCONTRACT ORDER

Work Order: 1203629

SENDING LABORATORY:

Advanced Technology Laboratories
 3275 Walnut Avenue
 Signal Hill, CA 90755
 Phone: 562.989.4045
 Fax: 562.989.6348
 Project Manager: Rachelle Arada

RECEIVING LABORATORY:

Exova Inc.
 9240 Santa Fe Springs Road
 Santa Fe Springs, CA 90670
 Phone: (562) 948-2225
 Fax: (562) 948-5850
 PO#: SC07660-Standard TAT

RA

IMPORTANT : Please include Work Order # and PO # in your invoice.

Analysis	Due	Expires	Sampled	Comments
ATL Lab#: 1203629-02 / EW-02 317.0 Poly Unpres - 125mL	10/29/12 17:00	10/16/12 09:15	Groundwater 10/15/12 09:15	Bromate by EPA 317
ATL Lab#: 1203629-04 / POX 317.0 Poly Unpres - 125mL	10/29/12 17:00	10/16/12 08:00	Groundwater 10/15/12 08:00	
ATL Lab#: 1203629-06 / CEFU 317.0 Poly Unpres - 125mL	10/29/12 17:00	10/16/12 08:15	Groundwater 10/15/12 08:15	

Released By <i>W</i>	Date <i>10/11/12</i>	879	Received By <i>Ellis</i>	Date <i>10/16/12</i>	8:30
Released By <i>Ellis</i>	Date <i>10/16/12</i>	9:42	Received By <i>[Signature]</i>	Date <i>10-16-12</i>	AT-41

PROJECT NAME				PROJECT No./TASK No.				SAMPLE CONTAINERS				ANALYSIS REQUESTED				ESTIMATED CONCENTRATION RANGE (ppb) FOR VOAS				SPECIAL HANDLING				LABORATORY INFORMATION														
Raytheon Main; Fullerton Monthly				532.15																				Advanced Technology Laboratories 3275 Walnut Ave. Signal Hill, CA 90755 Attn: Rachelle Arada														
PROJECT MANAGER Chris Ross				Phone No. 858-455-6500																																		
QA MANAGER Steve Netto				Fax No. 858-455-6533																																		
SAMPLER (SIGNATURE) 				SAMPLER (PRINTED) MARCOS RODRIGUEZ																																		
LAB ID	SAMPLE ID	SAMPLE COLLECTION		MATRIX			PRESERVATION				40 ml VOA	125 ml Poly	250 ml Poly	1L Amber	VOCs by EPA 8260B	1,4-Dioxane by EPA 8270S1M	1,4-Dioxane by EPA 8270M0D	Bromate by EPA 317	Bromide by EPA 300	TDS by EPA SM2540C	TSS by EPA SM2540D	0-10	10-100	100-1,000	>1,000	REMARKS												
		Date	Time	Soil	Ground-water	Surface water	Lab H2O	HCl	HNO3	NaOH																H2SO4	Ice											
12/09/24 - 1	TB-101512	10/15/12	08:00				X	X						X																								Please include
2	EW-02		09:15	X			X	X						X	X	X	X	X																			prodriguez@hargis.com	
3	PF		07:50	X			X	X	WER					X	X	X	X																				in lab report	
4	POX		08:00	X			X	X						X	X	X	X																				distribution list.	
5	CBT		08:05	X			X	X						X																							Set 1,4-Dioxane	
6	CEFF		08:15	X			X	X						X	X	X																					MDL to 1.0 ppm	
Total number of Containers per analysis:												14652				Total No. of Containers: 27																						
Relinquished by: 		Date 10/15/12	Received by: ABNER HINERHANS		Date 10/15/12	INSTRUCTIONS												Shipment Method: <u>DRIVE</u>																				
Company H+A		Time 10:20	Company ATL		Time 10:20 AM	<ol style="list-style-type: none"> Fill out form completely except for shaded areas (lab use only); sign only after verified for completeness. Complete in ballpoint pen. Draw one line through errors, initial and date correction. Indicate number of sample containers in analysis request space; indicate choice with \checkmark or x. Note applicable preservatives, special instructions, and deviations from typical environmental samples. Consult project QA documents for specific instructions. 												Send Results to: <u>Steve Netto</u>																				
Relinquished by:		Date:	Received by:		Date:	<input type="checkbox"/> 9171 TOWNE CENTRE DRIVE, SUITE 375 SAN DIEGO, CA 92122 (858) 455-6500 <input type="checkbox"/> 1640 SOUTH STAPLEY DRIVE, SUITE 124 MESA, AZ 85204 (480) 345-0888 <input type="checkbox"/> 1820 EAST RIVER ROAD, SUITE 220 TUCSON, AZ 85718 (520) 881-7300												Send invoice to San Diego, CA Attn: Accounts Payable																				
Company:		Time:	Company:		Time:	Sample Receipt: Temp. @ receipt <u>AV</u> °C <input type="checkbox"/> No. of containers correct <input type="checkbox"/> received good condition/cold <input type="checkbox"/> custody seals secure <input type="checkbox"/> conforms to COC document																																

November 16, 2012

Steve Netto
Hargis & Associates, Inc.
9171 Towne Centre Drive, Suite 375
San Diego, CA 92122
Tel: (619) 249-3166
Fax: (858) 455-6533



Re: ATL Work Order Number : 1203870
Client Reference : Raytheon Main: Fullerton Monthly, 532.15

Enclosed are the results for sample(s) received on November 05, 2012 by Advanced Technology Laboratories. The sample(s) are tested for the parameters as indicated on the enclosed chain of custody in accordance with applicable laboratory certifications. The laboratory results contained in this report specifically pertains to the sample(s) submitted.

Thank you for the opportunity to serve the needs of your company. If you have any questions, please feel free to contact me or your Project Manager.

Sincerely,

Eddie Rodriguez
Laboratory Director

The cover letter and the case narrative are an integral part of this analytical report and its absence renders the report invalid. Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Conference and/or applicable state-specific certification programs. The report cannot be reproduced without written permission from the client and Advanced Technology Laboratories.



Certificate of Analysis

Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : Raytheon Main: Fullerton Monthly, 532.1:

Report To : Steve Netto

Reported : 11/16/2012

SUMMARY OF SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
TB-110512	1203870-01	Lab H2O	11/05/12 7:30	11/05/12 17:02
EW-02	1203870-02	Groundwater	11/05/12 9:15	11/05/12 17:02
PF	1203870-03	Groundwater	11/05/12 8:53	11/05/12 17:02
POX	1203870-04	Groundwater	11/05/12 9:40	11/05/12 17:02
CBT	1203870-05	Groundwater	11/05/12 10:00	11/05/12 17:02
CEFF	1203870-06	Groundwater	11/05/12 10:10	11/05/12 17:02

CASE NARRATIVE

The samples for EPA 317 (Bromate) analysis were subcontracted to Exova, Inc. with ELAP Cert.# 2652.



Certificate of Analysis

Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego, CA 92122

Project Number : Raytheon Main: Fullerton Monthly, 532.1:

Report To : Steve Netto

Reported : 11/16/2012

Client Sample ID TB-110512

Lab ID: 1203870-01

Volatile Organic Compounds by EPA 8260

Analyst: SL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	0.50	NA	1	B2K0088	11/06/2012	11/06/12 12:01	
1,1,1-Trichloroethane	ND	0.50	NA	1	B2K0088	11/06/2012	11/06/12 12:01	
1,1,2,2-Tetrachloroethane	ND	0.50	NA	1	B2K0088	11/06/2012	11/06/12 12:01	
1,1,2-Trichloroethane	ND	0.50	NA	1	B2K0088	11/06/2012	11/06/12 12:01	
1,1-Dichloroethane	ND	0.50	NA	1	B2K0088	11/06/2012	11/06/12 12:01	
1,1-Dichloroethene	ND	0.50	NA	1	B2K0088	11/06/2012	11/06/12 12:01	
1,1-Dichloropropene	ND	0.50	NA	1	B2K0088	11/06/2012	11/06/12 12:01	
1,2,3-Trichloropropane	ND	0.50	NA	1	B2K0088	11/06/2012	11/06/12 12:01	
1,2,3-Trichlorobenzene	ND	0.50	NA	1	B2K0088	11/06/2012	11/06/12 12:01	
1,2,4-Trichlorobenzene	ND	0.50	NA	1	B2K0088	11/06/2012	11/06/12 12:01	
1,2,4-Trimethylbenzene	ND	0.50	NA	1	B2K0088	11/06/2012	11/06/12 12:01	
1,2-Dibromo-3-chloropropane	ND	0.50	NA	1	B2K0088	11/06/2012	11/06/12 12:01	
1,2-Dibromoethane	ND	0.50	NA	1	B2K0088	11/06/2012	11/06/12 12:01	
1,2-Dichlorobenzene	ND	0.50	NA	1	B2K0088	11/06/2012	11/06/12 12:01	
1,2-Dichloroethane	ND	0.50	NA	1	B2K0088	11/06/2012	11/06/12 12:01	
1,2-Dichloropropane	ND	0.50	NA	1	B2K0088	11/06/2012	11/06/12 12:01	
1,3,5-Trimethylbenzene	ND	0.50	NA	1	B2K0088	11/06/2012	11/06/12 12:01	
1,3-Dichlorobenzene	ND	0.50	NA	1	B2K0088	11/06/2012	11/06/12 12:01	
1,3-Dichloropropane	ND	0.50	NA	1	B2K0088	11/06/2012	11/06/12 12:01	
1,4-Dichlorobenzene	ND	0.50	NA	1	B2K0088	11/06/2012	11/06/12 12:01	
2,2-Dichloropropane	ND	0.50	NA	1	B2K0088	11/06/2012	11/06/12 12:01	
2-Chlorotoluene	ND	0.50	NA	1	B2K0088	11/06/2012	11/06/12 12:01	
4-Chlorotoluene	ND	0.50	NA	1	B2K0088	11/06/2012	11/06/12 12:01	
4-Isopropyltoluene	ND	0.50	NA	1	B2K0088	11/06/2012	11/06/12 12:01	
Benzene	ND	0.50	NA	1	B2K0088	11/06/2012	11/06/12 12:01	
Bromobenzene	ND	0.50	NA	1	B2K0088	11/06/2012	11/06/12 12:01	
Bromodichloromethane	ND	0.50	NA	1	B2K0088	11/06/2012	11/06/12 12:01	
Bromoform	ND	0.50	NA	1	B2K0088	11/06/2012	11/06/12 12:01	
Bromomethane	ND	0.50	NA	1	B2K0088	11/06/2012	11/06/12 12:01	
Carbon tetrachloride	ND	0.50	NA	1	B2K0088	11/06/2012	11/06/12 12:01	
Chlorobenzene	ND	0.50	NA	1	B2K0088	11/06/2012	11/06/12 12:01	
Chloroethane	ND	0.50	NA	1	B2K0088	11/06/2012	11/06/12 12:01	
Chloroform	ND	0.50	NA	1	B2K0088	11/06/2012	11/06/12 12:01	
Chloromethane	ND	0.50	NA	1	B2K0088	11/06/2012	11/06/12 12:01	
cis-1,2-Dichloroethene	ND	0.50	NA	1	B2K0088	11/06/2012	11/06/12 12:01	
cis-1,3-Dichloropropene	ND	0.50	NA	1	B2K0088	11/06/2012	11/06/12 12:01	
Dibromochloromethane	ND	0.50	NA	1	B2K0088	11/06/2012	11/06/12 12:01	



Certificate of Analysis

Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego, CA 92122

Project Number : Raytheon Main: Fullerton Monthly, 532.1:

Report To : Steve Netto

Reported : 11/16/2012

Client Sample ID TB-110512

Lab ID: 1203870-01

Volatile Organic Compounds by EPA 8260

Analyst: SL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Dibromomethane	ND	0.50	NA	1	B2K0088	11/06/2012	11/06/12 12:01	
Dichlorodifluoromethane	ND	0.50	NA	1	B2K0088	11/06/2012	11/06/12 12:01	
Ethylbenzene	ND	0.50	NA	1	B2K0088	11/06/2012	11/06/12 12:01	
Hexachlorobutadiene	ND	0.50	NA	1	B2K0088	11/06/2012	11/06/12 12:01	
Isopropylbenzene	ND	0.50	NA	1	B2K0088	11/06/2012	11/06/12 12:01	
m,p-Xylene	ND	1.0	NA	1	B2K0088	11/06/2012	11/06/12 12:01	
Methylene chloride	ND	1.0	NA	1	B2K0088	11/06/2012	11/06/12 12:01	
n-Butylbenzene	ND	0.50	NA	1	B2K0088	11/06/2012	11/06/12 12:01	
n-Propylbenzene	ND	0.50	NA	1	B2K0088	11/06/2012	11/06/12 12:01	
Naphthalene	ND	0.50	NA	1	B2K0088	11/06/2012	11/06/12 12:01	
o-Xylene	ND	0.50	NA	1	B2K0088	11/06/2012	11/06/12 12:01	
sec-Butylbenzene	ND	0.50	NA	1	B2K0088	11/06/2012	11/06/12 12:01	
Styrene	ND	0.50	NA	1	B2K0088	11/06/2012	11/06/12 12:01	
tert-Butylbenzene	ND	0.50	NA	1	B2K0088	11/06/2012	11/06/12 12:01	
Tetrachloroethene	ND	0.50	NA	1	B2K0088	11/06/2012	11/06/12 12:01	
Toluene	ND	0.50	NA	1	B2K0088	11/06/2012	11/06/12 12:01	
trans-1,2-Dichloroethene	ND	0.50	NA	1	B2K0088	11/06/2012	11/06/12 12:01	
Trichloroethene	ND	0.50	NA	1	B2K0088	11/06/2012	11/06/12 12:01	
Trichlorofluoromethane	ND	0.50	NA	1	B2K0088	11/06/2012	11/06/12 12:01	
Vinyl chloride	ND	0.50	NA	1	B2K0088	11/06/2012	11/06/12 12:01	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>82.2 %</i>		<i>70 - 130</i>		B2K0088	11/06/2012	<i>11/06/12 12:01</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>78.4 %</i>		<i>70 - 130</i>		B2K0088	11/06/2012	<i>11/06/12 12:01</i>	
<i>Surrogate: Dibromofluoromethane</i>	<i>83.5 %</i>		<i>70 - 130</i>		B2K0088	11/06/2012	<i>11/06/12 12:01</i>	
<i>Surrogate: Toluene-d8</i>	<i>81.2 %</i>		<i>70 - 130</i>		B2K0088	11/06/2012	<i>11/06/12 12:01</i>	



Certificate of Analysis

Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : Raytheon Main: Fullerton Monthly, 532.1:

Report To : Steve Netto

Reported : 11/16/2012

Client Sample ID EW-02

Lab ID: 1203870-02

Anions by Ion Chromatography EPA 300.0

Analyst: AG

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Bromide	0.20	0.05	NA	1	B2K0183	11/08/2012	11/08/12 14:06	

Total Dissolved Solids (Residue, Filterable) by SM 2540C

Analyst: AG/LA

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Residue, Dissolved	640	10	NA	1	B2K0295	11/08/2012	11/08/12 00:00	

Total Suspended Solids (Residue, Non-Filtrable) by SM 2540D

Analyst: LA

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Residue, Suspended	ND	10	NA	1	B2K0298	11/12/2012	11/12/12 00:00	

Volatile Organic Compounds by EPA 8260

Analyst: SL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	0.50	NA	1	B2K0088	11/06/2012	11/06/12 13:22	
1,1,1-Trichloroethane	ND	0.50	NA	1	B2K0088	11/06/2012	11/06/12 13:22	
1,1,2,2-Tetrachloroethane	ND	0.50	NA	1	B2K0088	11/06/2012	11/06/12 13:22	
1,1,2-Trichloroethane	ND	0.50	NA	1	B2K0088	11/06/2012	11/06/12 13:22	
1,1-Dichloroethane	0.52	0.50	NA	1	B2K0088	11/06/2012	11/06/12 13:22	
1,1-Dichloroethene	63	0.50	NA	1	B2K0088	11/06/2012	11/06/12 13:22	
1,1-Dichloropropene	ND	0.50	NA	1	B2K0088	11/06/2012	11/06/12 13:22	
1,2,3-Trichloropropane	ND	0.50	NA	1	B2K0088	11/06/2012	11/06/12 13:22	
1,2,3-Trichlorobenzene	ND	0.50	NA	1	B2K0088	11/06/2012	11/06/12 13:22	
1,2,4-Trichlorobenzene	ND	0.50	NA	1	B2K0088	11/06/2012	11/06/12 13:22	
1,2,4-Trimethylbenzene	ND	0.50	NA	1	B2K0088	11/06/2012	11/06/12 13:22	
1,2-Dibromo-3-chloropropane	ND	0.50	NA	1	B2K0088	11/06/2012	11/06/12 13:22	
1,2-Dibromoethane	ND	0.50	NA	1	B2K0088	11/06/2012	11/06/12 13:22	
1,2-Dichlorobenzene	ND	0.50	NA	1	B2K0088	11/06/2012	11/06/12 13:22	
1,2-Dichloroethane	ND	0.50	NA	1	B2K0088	11/06/2012	11/06/12 13:22	
1,2-Dichloropropane	ND	0.50	NA	1	B2K0088	11/06/2012	11/06/12 13:22	
1,3,5-Trimethylbenzene	ND	0.50	NA	1	B2K0088	11/06/2012	11/06/12 13:22	
1,3-Dichlorobenzene	ND	0.50	NA	1	B2K0088	11/06/2012	11/06/12 13:22	
1,3-Dichloropropane	ND	0.50	NA	1	B2K0088	11/06/2012	11/06/12 13:22	



Certificate of Analysis

Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : Raytheon Main: Fullerton Monthly, 532.1:

Report To : Steve Netto

Reported : 11/16/2012

Client Sample ID EW-02

Lab ID: 1203870-02

Volatile Organic Compounds by EPA 8260

Analyst: SL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,4-Dichlorobenzene	ND	0.50	NA	1	B2K0088	11/06/2012	11/06/12 13:22	
2,2-Dichloropropane	ND	0.50	NA	1	B2K0088	11/06/2012	11/06/12 13:22	
2-Chlorotoluene	ND	0.50	NA	1	B2K0088	11/06/2012	11/06/12 13:22	
4-Chlorotoluene	ND	0.50	NA	1	B2K0088	11/06/2012	11/06/12 13:22	
4-Isopropyltoluene	ND	0.50	NA	1	B2K0088	11/06/2012	11/06/12 13:22	
Benzene	ND	0.50	NA	1	B2K0088	11/06/2012	11/06/12 13:22	
Bromobenzene	ND	0.50	NA	1	B2K0088	11/06/2012	11/06/12 13:22	
Bromodichloromethane	ND	0.50	NA	1	B2K0088	11/06/2012	11/06/12 13:22	
Bromoform	ND	0.50	NA	1	B2K0088	11/06/2012	11/06/12 13:22	
Bromomethane	ND	0.50	NA	1	B2K0088	11/06/2012	11/06/12 13:22	
Carbon tetrachloride	ND	0.50	NA	1	B2K0088	11/06/2012	11/06/12 13:22	
Chlorobenzene	ND	0.50	NA	1	B2K0088	11/06/2012	11/06/12 13:22	
Chloroethane	ND	0.50	NA	1	B2K0088	11/06/2012	11/06/12 13:22	
Chloroform	ND	0.50	NA	1	B2K0088	11/06/2012	11/06/12 13:22	
Chloromethane	ND	0.50	NA	1	B2K0088	11/06/2012	11/06/12 13:22	
cis-1,2-Dichloroethene	ND	0.50	NA	1	B2K0088	11/06/2012	11/06/12 13:22	
cis-1,3-Dichloropropene	ND	0.50	NA	1	B2K0088	11/06/2012	11/06/12 13:22	
Dibromochloromethane	ND	0.50	NA	1	B2K0088	11/06/2012	11/06/12 13:22	
Dibromomethane	ND	0.50	NA	1	B2K0088	11/06/2012	11/06/12 13:22	
Dichlorodifluoromethane	ND	0.50	NA	1	B2K0088	11/06/2012	11/06/12 13:22	
Ethylbenzene	ND	0.50	NA	1	B2K0088	11/06/2012	11/06/12 13:22	
Hexachlorobutadiene	ND	0.50	NA	1	B2K0088	11/06/2012	11/06/12 13:22	
Isopropylbenzene	ND	0.50	NA	1	B2K0088	11/06/2012	11/06/12 13:22	
m,p-Xylene	ND	1.0	NA	1	B2K0088	11/06/2012	11/06/12 13:22	
Methylene chloride	ND	1.0	NA	1	B2K0088	11/06/2012	11/06/12 13:22	
n-Butylbenzene	ND	0.50	NA	1	B2K0088	11/06/2012	11/06/12 13:22	
n-Propylbenzene	ND	0.50	NA	1	B2K0088	11/06/2012	11/06/12 13:22	
Naphthalene	ND	0.50	NA	1	B2K0088	11/06/2012	11/06/12 13:22	
o-Xylene	ND	0.50	NA	1	B2K0088	11/06/2012	11/06/12 13:22	
sec-Butylbenzene	ND	0.50	NA	1	B2K0088	11/06/2012	11/06/12 13:22	
Styrene	ND	0.50	NA	1	B2K0088	11/06/2012	11/06/12 13:22	
tert-Butylbenzene	ND	0.50	NA	1	B2K0088	11/06/2012	11/06/12 13:22	
Tetrachloroethene	ND	0.50	NA	1	B2K0088	11/06/2012	11/06/12 13:22	
Toluene	ND	0.50	NA	1	B2K0088	11/06/2012	11/06/12 13:22	
trans-1,2-Dichloroethene	ND	0.50	NA	1	B2K0088	11/06/2012	11/06/12 13:22	
Trichloroethene	ND	0.50	NA	1	B2K0088	11/06/2012	11/06/12 13:22	
Trichlorofluoromethane	ND	0.50	NA	1	B2K0088	11/06/2012	11/06/12 13:22	



Certificate of Analysis

Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego, CA 92122

Project Number : Raytheon Main: Fullerton Monthly, 532.1:

Report To : Steve Netto

Reported : 11/16/2012

Client Sample ID EW-02

Lab ID: 1203870-02

Volatile Organic Compounds by EPA 8260

Analyst: SL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Vinyl chloride	ND	0.50	NA	1	B2K0088	11/06/2012	11/06/12 13:22	
Surrogate: 1,2-Dichloroethane-d4	86.7 %		70 - 130		B2K0088	11/06/2012	11/06/12 13:22	
Surrogate: 4-Bromofluorobenzene	79.0 %		70 - 130		B2K0088	11/06/2012	11/06/12 13:22	
Surrogate: Dibromofluoromethane	86.3 %		70 - 130		B2K0088	11/06/2012	11/06/12 13:22	
Surrogate: Toluene-d8	80.8 %		70 - 130		B2K0088	11/06/2012	11/06/12 13:22	

1,4-Dioxane by EPA 8270: Isotope Dilution Technique

Analyst: BB

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,4-Dioxane	12	2.0	NA	1	B2K0108	11/06/2012	11/06/12 17:36	
Surrogate: 1,2-Dichlorobenzene-d4	82.4 %		37 - 93		B2K0108	11/06/2012	11/06/12 17:36	
Surrogate: 2-Fluorobiphenyl	93.0 %		51 - 100		B2K0108	11/06/2012	11/06/12 17:36	
Surrogate: 4-Terphenyl-d14	132 %		58 - 113		B2K0108	11/06/2012	11/06/12 17:36	S8
Surrogate: Nitrobenzene-d5	86.9 %		39 - 95		B2K0108	11/06/2012	11/06/12 17:36	



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San Diego , CA 92122

Project Number : Raytheon Main: Fullerton Monthly, 532.1:

Report To : Steve Netto

Reported : 11/16/2012

Client Sample ID PF

Lab ID: 1203870-03

Total Suspended Solids (Residue, Non-Filtrable) by SM 2540D

Analyst: LA

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Residue, Suspended	ND	10	NA	1	B2K0298	11/12/2012	11/12/12 00:00	



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Project Number : Raytheon Main: Fullerton Monthly, 532.1:

Report To : Steve Netto

Reported : 11/16/2012

Client Sample ID POX

Lab ID: 1203870-04

Anions by Ion Chromatography EPA 300.0

Analyst: AG

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Bromide	0.20	0.05	NA	1	B2K0183	11/08/2012	11/08/12 14:17	

Total Dissolved Solids (Residue, Filterable) by SM 2540C

Analyst: AG/LA

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Residue, Dissolved	640	10	NA	1	B2K0295	11/08/2012	11/08/12 00:00	

Volatile Organic Compounds by EPA 8260

Analyst: SL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	0.50	NA	1	B2K0088	11/06/2012	11/06/12 13:02	
1,1,1-Trichloroethane	ND	0.50	NA	1	B2K0088	11/06/2012	11/06/12 13:02	
1,1,2,2-Tetrachloroethane	ND	0.50	NA	1	B2K0088	11/06/2012	11/06/12 13:02	
1,1,2-Trichloroethane	ND	0.50	NA	1	B2K0088	11/06/2012	11/06/12 13:02	
1,1-Dichloroethane	ND	0.50	NA	1	B2K0088	11/06/2012	11/06/12 13:02	
1,1-Dichloroethene	ND	0.50	NA	1	B2K0088	11/06/2012	11/06/12 13:02	
1,1-Dichloropropene	ND	0.50	NA	1	B2K0088	11/06/2012	11/06/12 13:02	
1,2,3-Trichloropropane	ND	0.50	NA	1	B2K0088	11/06/2012	11/06/12 13:02	
1,2,3-Trichlorobenzene	ND	0.50	NA	1	B2K0088	11/06/2012	11/06/12 13:02	
1,2,4-Trichlorobenzene	ND	0.50	NA	1	B2K0088	11/06/2012	11/06/12 13:02	
1,2,4-Trimethylbenzene	ND	0.50	NA	1	B2K0088	11/06/2012	11/06/12 13:02	
1,2-Dibromo-3-chloropropane	ND	0.50	NA	1	B2K0088	11/06/2012	11/06/12 13:02	
1,2-Dibromoethane	ND	0.50	NA	1	B2K0088	11/06/2012	11/06/12 13:02	
1,2-Dichlorobenzene	ND	0.50	NA	1	B2K0088	11/06/2012	11/06/12 13:02	
1,2-Dichloroethane	ND	0.50	NA	1	B2K0088	11/06/2012	11/06/12 13:02	
1,2-Dichloropropane	ND	0.50	NA	1	B2K0088	11/06/2012	11/06/12 13:02	
1,3,5-Trimethylbenzene	ND	0.50	NA	1	B2K0088	11/06/2012	11/06/12 13:02	
1,3-Dichlorobenzene	ND	0.50	NA	1	B2K0088	11/06/2012	11/06/12 13:02	
1,3-Dichloropropane	ND	0.50	NA	1	B2K0088	11/06/2012	11/06/12 13:02	
1,4-Dichlorobenzene	ND	0.50	NA	1	B2K0088	11/06/2012	11/06/12 13:02	
2,2-Dichloropropane	ND	0.50	NA	1	B2K0088	11/06/2012	11/06/12 13:02	
2-Chlorotoluene	ND	0.50	NA	1	B2K0088	11/06/2012	11/06/12 13:02	
4-Chlorotoluene	ND	0.50	NA	1	B2K0088	11/06/2012	11/06/12 13:02	
4-Isopropyltoluene	ND	0.50	NA	1	B2K0088	11/06/2012	11/06/12 13:02	
Benzene	ND	0.50	NA	1	B2K0088	11/06/2012	11/06/12 13:02	



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Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego, CA 92122

Project Number : Raytheon Main: Fullerton Monthly, 532.1:

Report To : Steve Netto

Reported : 11/16/2012

Client Sample ID POX

Lab ID: 1203870-04

Volatile Organic Compounds by EPA 8260

Analyst: SL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Bromobenzene	ND	0.50	NA	1	B2K0088	11/06/2012	11/06/12 13:02	
Bromodichloromethane	ND	0.50	NA	1	B2K0088	11/06/2012	11/06/12 13:02	
Bromoform	ND	0.50	NA	1	B2K0088	11/06/2012	11/06/12 13:02	
Bromomethane	ND	0.50	NA	1	B2K0088	11/06/2012	11/06/12 13:02	
Carbon tetrachloride	ND	0.50	NA	1	B2K0088	11/06/2012	11/06/12 13:02	
Chlorobenzene	ND	0.50	NA	1	B2K0088	11/06/2012	11/06/12 13:02	
Chloroethane	ND	0.50	NA	1	B2K0088	11/06/2012	11/06/12 13:02	
Chloroform	ND	0.50	NA	1	B2K0088	11/06/2012	11/06/12 13:02	
Chloromethane	ND	0.50	NA	1	B2K0088	11/06/2012	11/06/12 13:02	
cis-1,2-Dichloroethene	ND	0.50	NA	1	B2K0088	11/06/2012	11/06/12 13:02	
cis-1,3-Dichloropropene	ND	0.50	NA	1	B2K0088	11/06/2012	11/06/12 13:02	
Dibromochloromethane	ND	0.50	NA	1	B2K0088	11/06/2012	11/06/12 13:02	
Dibromomethane	ND	0.50	NA	1	B2K0088	11/06/2012	11/06/12 13:02	
Dichlorodifluoromethane	ND	0.50	NA	1	B2K0088	11/06/2012	11/06/12 13:02	
Ethylbenzene	ND	0.50	NA	1	B2K0088	11/06/2012	11/06/12 13:02	
Hexachlorobutadiene	ND	0.50	NA	1	B2K0088	11/06/2012	11/06/12 13:02	
Isopropylbenzene	ND	0.50	NA	1	B2K0088	11/06/2012	11/06/12 13:02	
m,p-Xylene	ND	1.0	NA	1	B2K0088	11/06/2012	11/06/12 13:02	
Methylene chloride	ND	1.0	NA	1	B2K0088	11/06/2012	11/06/12 13:02	
n-Butylbenzene	ND	0.50	NA	1	B2K0088	11/06/2012	11/06/12 13:02	
n-Propylbenzene	ND	0.50	NA	1	B2K0088	11/06/2012	11/06/12 13:02	
Naphthalene	ND	0.50	NA	1	B2K0088	11/06/2012	11/06/12 13:02	
o-Xylene	ND	0.50	NA	1	B2K0088	11/06/2012	11/06/12 13:02	
sec-Butylbenzene	ND	0.50	NA	1	B2K0088	11/06/2012	11/06/12 13:02	
Styrene	ND	0.50	NA	1	B2K0088	11/06/2012	11/06/12 13:02	
tert-Butylbenzene	ND	0.50	NA	1	B2K0088	11/06/2012	11/06/12 13:02	
Tetrachloroethene	ND	0.50	NA	1	B2K0088	11/06/2012	11/06/12 13:02	
Toluene	ND	0.50	NA	1	B2K0088	11/06/2012	11/06/12 13:02	
trans-1,2-Dichloroethene	ND	0.50	NA	1	B2K0088	11/06/2012	11/06/12 13:02	
Trichloroethene	ND	0.50	NA	1	B2K0088	11/06/2012	11/06/12 13:02	
Trichlorofluoromethane	ND	0.50	NA	1	B2K0088	11/06/2012	11/06/12 13:02	
Vinyl chloride	ND	0.50	NA	1	B2K0088	11/06/2012	11/06/12 13:02	

Surrogate: 1,2-Dichloroethane-d4	84.4 %	70 - 130	B2K0088	11/06/2012	11/06/12 13:02
Surrogate: 4-Bromofluorobenzene	77.7 %	70 - 130	B2K0088	11/06/2012	11/06/12 13:02
Surrogate: Dibromofluoromethane	84.2 %	70 - 130	B2K0088	11/06/2012	11/06/12 13:02
Surrogate: Toluene-d8	80.7 %	70 - 130	B2K0088	11/06/2012	11/06/12 13:02



Certificate of Analysis

Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego, CA 92122

Project Number : Raytheon Main: Fullerton Monthly, 532.1:

Report To : Steve Netto

Reported : 11/16/2012

Client Sample ID POX

Lab ID: 1203870-04

1,4-Dioxane by EPA 8270/SIM: Isotope Dilution Technique

Analyst: MR

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,4-Dioxane	ND	0.20	0.13	1	B2K0112	11/06/2012	11/07/12 17:17	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	70.8 %		36 - 107		B2K0112	11/06/2012	11/07/12 17:17	
<i>Surrogate: 2-Fluorobiphenyl</i>	92.3 %		42 - 120		B2K0112	11/06/2012	11/07/12 17:17	
<i>Surrogate: 4-Terphenyl-d14</i>	104 %		67 - 142		B2K0112	11/06/2012	11/07/12 17:17	
<i>Surrogate: Nitrobenzene-d5</i>	92.3 %		36 - 130		B2K0112	11/06/2012	11/07/12 17:17	



Certificate of Analysis

Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego, CA 92122

Project Number : Raytheon Main: Fullerton Monthly, 532.1:

Report To : Steve Netto

Reported : 11/16/2012

Client Sample ID CBT

Lab ID: 1203870-05

Volatile Organic Compounds by EPA 8260

Analyst: SL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	0.50	NA	1	B2K0088	11/06/2012	11/06/12 12:42	
1,1,1-Trichloroethane	ND	0.50	NA	1	B2K0088	11/06/2012	11/06/12 12:42	
1,1,2,2-Tetrachloroethane	ND	0.50	NA	1	B2K0088	11/06/2012	11/06/12 12:42	
1,1,2-Trichloroethane	ND	0.50	NA	1	B2K0088	11/06/2012	11/06/12 12:42	
1,1-Dichloroethane	ND	0.50	NA	1	B2K0088	11/06/2012	11/06/12 12:42	
1,1-Dichloroethene	ND	0.50	NA	1	B2K0088	11/06/2012	11/06/12 12:42	
1,1-Dichloropropene	ND	0.50	NA	1	B2K0088	11/06/2012	11/06/12 12:42	
1,2,3-Trichloropropane	ND	0.50	NA	1	B2K0088	11/06/2012	11/06/12 12:42	
1,2,3-Trichlorobenzene	ND	0.50	NA	1	B2K0088	11/06/2012	11/06/12 12:42	
1,2,4-Trichlorobenzene	ND	0.50	NA	1	B2K0088	11/06/2012	11/06/12 12:42	
1,2,4-Trimethylbenzene	ND	0.50	NA	1	B2K0088	11/06/2012	11/06/12 12:42	
1,2-Dibromo-3-chloropropane	ND	0.50	NA	1	B2K0088	11/06/2012	11/06/12 12:42	
1,2-Dibromoethane	ND	0.50	NA	1	B2K0088	11/06/2012	11/06/12 12:42	
1,2-Dichlorobenzene	ND	0.50	NA	1	B2K0088	11/06/2012	11/06/12 12:42	
1,2-Dichloroethane	ND	0.50	NA	1	B2K0088	11/06/2012	11/06/12 12:42	
1,2-Dichloropropane	ND	0.50	NA	1	B2K0088	11/06/2012	11/06/12 12:42	
1,3,5-Trimethylbenzene	ND	0.50	NA	1	B2K0088	11/06/2012	11/06/12 12:42	
1,3-Dichlorobenzene	ND	0.50	NA	1	B2K0088	11/06/2012	11/06/12 12:42	
1,3-Dichloropropane	ND	0.50	NA	1	B2K0088	11/06/2012	11/06/12 12:42	
1,4-Dichlorobenzene	ND	0.50	NA	1	B2K0088	11/06/2012	11/06/12 12:42	
2,2-Dichloropropane	ND	0.50	NA	1	B2K0088	11/06/2012	11/06/12 12:42	
2-Chlorotoluene	ND	0.50	NA	1	B2K0088	11/06/2012	11/06/12 12:42	
4-Chlorotoluene	ND	0.50	NA	1	B2K0088	11/06/2012	11/06/12 12:42	
4-Isopropyltoluene	ND	0.50	NA	1	B2K0088	11/06/2012	11/06/12 12:42	
Benzene	ND	0.50	NA	1	B2K0088	11/06/2012	11/06/12 12:42	
Bromobenzene	ND	0.50	NA	1	B2K0088	11/06/2012	11/06/12 12:42	
Bromodichloromethane	ND	0.50	NA	1	B2K0088	11/06/2012	11/06/12 12:42	
Bromoform	ND	0.50	NA	1	B2K0088	11/06/2012	11/06/12 12:42	
Bromomethane	ND	0.50	NA	1	B2K0088	11/06/2012	11/06/12 12:42	
Carbon tetrachloride	ND	0.50	NA	1	B2K0088	11/06/2012	11/06/12 12:42	
Chlorobenzene	ND	0.50	NA	1	B2K0088	11/06/2012	11/06/12 12:42	
Chloroethane	ND	0.50	NA	1	B2K0088	11/06/2012	11/06/12 12:42	
Chloroform	ND	0.50	NA	1	B2K0088	11/06/2012	11/06/12 12:42	
Chloromethane	0.66	0.50	NA	1	B2K0088	11/06/2012	11/06/12 12:42	
cis-1,2-Dichloroethene	ND	0.50	NA	1	B2K0088	11/06/2012	11/06/12 12:42	
cis-1,3-Dichloropropene	ND	0.50	NA	1	B2K0088	11/06/2012	11/06/12 12:42	
Dibromochloromethane	ND	0.50	NA	1	B2K0088	11/06/2012	11/06/12 12:42	



Certificate of Analysis

Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego, CA 92122

Project Number : Raytheon Main: Fullerton Monthly, 532.1:

Report To : Steve Netto

Reported : 11/16/2012

Client Sample ID CBT

Lab ID: 1203870-05

Volatile Organic Compounds by EPA 8260

Analyst: SL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Dibromomethane	ND	0.50	NA	1	B2K0088	11/06/2012	11/06/12 12:42	
Dichlorodifluoromethane	ND	0.50	NA	1	B2K0088	11/06/2012	11/06/12 12:42	
Ethylbenzene	ND	0.50	NA	1	B2K0088	11/06/2012	11/06/12 12:42	
Hexachlorobutadiene	ND	0.50	NA	1	B2K0088	11/06/2012	11/06/12 12:42	
Isopropylbenzene	ND	0.50	NA	1	B2K0088	11/06/2012	11/06/12 12:42	
m,p-Xylene	ND	1.0	NA	1	B2K0088	11/06/2012	11/06/12 12:42	
Methylene chloride	ND	1.0	NA	1	B2K0088	11/06/2012	11/06/12 12:42	
n-Butylbenzene	ND	0.50	NA	1	B2K0088	11/06/2012	11/06/12 12:42	
n-Propylbenzene	ND	0.50	NA	1	B2K0088	11/06/2012	11/06/12 12:42	
Naphthalene	ND	0.50	NA	1	B2K0088	11/06/2012	11/06/12 12:42	
o-Xylene	ND	0.50	NA	1	B2K0088	11/06/2012	11/06/12 12:42	
sec-Butylbenzene	ND	0.50	NA	1	B2K0088	11/06/2012	11/06/12 12:42	
Styrene	ND	0.50	NA	1	B2K0088	11/06/2012	11/06/12 12:42	
tert-Butylbenzene	ND	0.50	NA	1	B2K0088	11/06/2012	11/06/12 12:42	
Tetrachloroethene	ND	0.50	NA	1	B2K0088	11/06/2012	11/06/12 12:42	
Toluene	ND	0.50	NA	1	B2K0088	11/06/2012	11/06/12 12:42	
trans-1,2-Dichloroethene	ND	0.50	NA	1	B2K0088	11/06/2012	11/06/12 12:42	
Trichloroethene	ND	0.50	NA	1	B2K0088	11/06/2012	11/06/12 12:42	
Trichlorofluoromethane	ND	0.50	NA	1	B2K0088	11/06/2012	11/06/12 12:42	
Vinyl chloride	ND	0.50	NA	1	B2K0088	11/06/2012	11/06/12 12:42	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>84.6 %</i>		<i>70 - 130</i>		B2K0088	11/06/2012	<i>11/06/12 12:42</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>77.5 %</i>		<i>70 - 130</i>		B2K0088	11/06/2012	<i>11/06/12 12:42</i>	
<i>Surrogate: Dibromofluoromethane</i>	<i>84.2 %</i>		<i>70 - 130</i>		B2K0088	11/06/2012	<i>11/06/12 12:42</i>	
<i>Surrogate: Toluene-d8</i>	<i>81.8 %</i>		<i>70 - 130</i>		B2K0088	11/06/2012	<i>11/06/12 12:42</i>	



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9171 Towne Centre Drive, Suite 375

San Diego, CA 92122

Project Number : Raytheon Main: Fullerton Monthly, 532.1:

Report To : Steve Netto

Reported : 11/16/2012

Client Sample ID CEFF

Lab ID: 1203870-06

Anions by Ion Chromatography EPA 300.0

Analyst: AG

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Bromide	0.19	0.05	NA	1	B2K0183	11/08/2012	11/08/12 14:29	

Total Dissolved Solids (Residue, Filterable) by SM 2540C

Analyst: AG/LA

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Residue, Dissolved	610	10	NA	1	B2K0295	11/08/2012	11/08/12 00:00	

Volatile Organic Compounds by EPA 8260

Analyst: SL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	0.50	NA	1	B2K0088	11/06/2012	11/06/12 12:22	
1,1,1-Trichloroethane	ND	0.50	NA	1	B2K0088	11/06/2012	11/06/12 12:22	
1,1,2,2-Tetrachloroethane	ND	0.50	NA	1	B2K0088	11/06/2012	11/06/12 12:22	
1,1,2-Trichloroethane	ND	0.50	NA	1	B2K0088	11/06/2012	11/06/12 12:22	
1,1-Dichloroethane	ND	0.50	NA	1	B2K0088	11/06/2012	11/06/12 12:22	
1,1-Dichloroethene	ND	0.50	NA	1	B2K0088	11/06/2012	11/06/12 12:22	
1,1-Dichloropropene	ND	0.50	NA	1	B2K0088	11/06/2012	11/06/12 12:22	
1,2,3-Trichloropropane	ND	0.50	NA	1	B2K0088	11/06/2012	11/06/12 12:22	
1,2,3-Trichlorobenzene	ND	0.50	NA	1	B2K0088	11/06/2012	11/06/12 12:22	
1,2,4-Trichlorobenzene	ND	0.50	NA	1	B2K0088	11/06/2012	11/06/12 12:22	
1,2,4-Trimethylbenzene	ND	0.50	NA	1	B2K0088	11/06/2012	11/06/12 12:22	
1,2-Dibromo-3-chloropropane	ND	0.50	NA	1	B2K0088	11/06/2012	11/06/12 12:22	
1,2-Dibromoethane	ND	0.50	NA	1	B2K0088	11/06/2012	11/06/12 12:22	
1,2-Dichlorobenzene	ND	0.50	NA	1	B2K0088	11/06/2012	11/06/12 12:22	
1,2-Dichloroethane	ND	0.50	NA	1	B2K0088	11/06/2012	11/06/12 12:22	
1,2-Dichloropropane	ND	0.50	NA	1	B2K0088	11/06/2012	11/06/12 12:22	
1,3,5-Trimethylbenzene	ND	0.50	NA	1	B2K0088	11/06/2012	11/06/12 12:22	
1,3-Dichlorobenzene	ND	0.50	NA	1	B2K0088	11/06/2012	11/06/12 12:22	
1,3-Dichloropropane	ND	0.50	NA	1	B2K0088	11/06/2012	11/06/12 12:22	
1,4-Dichlorobenzene	ND	0.50	NA	1	B2K0088	11/06/2012	11/06/12 12:22	
2,2-Dichloropropane	ND	0.50	NA	1	B2K0088	11/06/2012	11/06/12 12:22	
2-Chlorotoluene	ND	0.50	NA	1	B2K0088	11/06/2012	11/06/12 12:22	
4-Chlorotoluene	ND	0.50	NA	1	B2K0088	11/06/2012	11/06/12 12:22	
4-Isopropyltoluene	ND	0.50	NA	1	B2K0088	11/06/2012	11/06/12 12:22	
Benzene	ND	0.50	NA	1	B2K0088	11/06/2012	11/06/12 12:22	



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Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego, CA 92122

Project Number : Raytheon Main: Fullerton Monthly, 532.1:

Report To : Steve Netto

Reported : 11/16/2012

Client Sample ID CEFF

Lab ID: 1203870-06

Volatile Organic Compounds by EPA 8260

Analyst: SL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Bromobenzene	ND	0.50	NA	1	B2K0088	11/06/2012	11/06/12 12:22	
Bromodichloromethane	ND	0.50	NA	1	B2K0088	11/06/2012	11/06/12 12:22	
Bromoform	ND	0.50	NA	1	B2K0088	11/06/2012	11/06/12 12:22	
Bromomethane	ND	0.50	NA	1	B2K0088	11/06/2012	11/06/12 12:22	
Carbon tetrachloride	ND	0.50	NA	1	B2K0088	11/06/2012	11/06/12 12:22	
Chlorobenzene	ND	0.50	NA	1	B2K0088	11/06/2012	11/06/12 12:22	
Chloroethane	ND	0.50	NA	1	B2K0088	11/06/2012	11/06/12 12:22	
Chloroform	ND	0.50	NA	1	B2K0088	11/06/2012	11/06/12 12:22	
Chloromethane	ND	0.50	NA	1	B2K0088	11/06/2012	11/06/12 12:22	
cis-1,2-Dichloroethene	ND	0.50	NA	1	B2K0088	11/06/2012	11/06/12 12:22	
cis-1,3-Dichloropropene	ND	0.50	NA	1	B2K0088	11/06/2012	11/06/12 12:22	
Dibromochloromethane	ND	0.50	NA	1	B2K0088	11/06/2012	11/06/12 12:22	
Dibromomethane	ND	0.50	NA	1	B2K0088	11/06/2012	11/06/12 12:22	
Dichlorodifluoromethane	ND	0.50	NA	1	B2K0088	11/06/2012	11/06/12 12:22	
Ethylbenzene	ND	0.50	NA	1	B2K0088	11/06/2012	11/06/12 12:22	
Hexachlorobutadiene	ND	0.50	NA	1	B2K0088	11/06/2012	11/06/12 12:22	
Isopropylbenzene	ND	0.50	NA	1	B2K0088	11/06/2012	11/06/12 12:22	
m,p-Xylene	ND	1.0	NA	1	B2K0088	11/06/2012	11/06/12 12:22	
Methylene chloride	ND	1.0	NA	1	B2K0088	11/06/2012	11/06/12 12:22	
n-Butylbenzene	ND	0.50	NA	1	B2K0088	11/06/2012	11/06/12 12:22	
n-Propylbenzene	ND	0.50	NA	1	B2K0088	11/06/2012	11/06/12 12:22	
Naphthalene	ND	0.50	NA	1	B2K0088	11/06/2012	11/06/12 12:22	
o-Xylene	ND	0.50	NA	1	B2K0088	11/06/2012	11/06/12 12:22	
sec-Butylbenzene	ND	0.50	NA	1	B2K0088	11/06/2012	11/06/12 12:22	
Styrene	ND	0.50	NA	1	B2K0088	11/06/2012	11/06/12 12:22	
tert-Butylbenzene	ND	0.50	NA	1	B2K0088	11/06/2012	11/06/12 12:22	
Tetrachloroethene	ND	0.50	NA	1	B2K0088	11/06/2012	11/06/12 12:22	
Toluene	ND	0.50	NA	1	B2K0088	11/06/2012	11/06/12 12:22	
trans-1,2-Dichloroethene	ND	0.50	NA	1	B2K0088	11/06/2012	11/06/12 12:22	
Trichloroethene	ND	0.50	NA	1	B2K0088	11/06/2012	11/06/12 12:22	
Trichlorofluoromethane	ND	0.50	NA	1	B2K0088	11/06/2012	11/06/12 12:22	
Vinyl chloride	ND	0.50	NA	1	B2K0088	11/06/2012	11/06/12 12:22	

Surrogate: 1,2-Dichloroethane-d4

84.4 %

70 - 130

B2K0088

11/06/2012

11/06/12 12:22

Surrogate: 4-Bromofluorobenzene

79.0 %

70 - 130

B2K0088

11/06/2012

11/06/12 12:22

Surrogate: Dibromofluoromethane

84.8 %

70 - 130

B2K0088

11/06/2012

11/06/12 12:22

Surrogate: Toluene-d8

80.1 %

70 - 130

B2K0088

11/06/2012

11/06/12 12:22



Certificate of Analysis

Hargis & Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego , CA 92122

Project Number : Raytheon Main: Fullerton Monthly, 532.1:
 Report To : Steve Netto
 Reported : 11/16/2012

QUALITY CONTROL SECTION

Anions by Ion Chromatography EPA 300.0 - Quality Control

Analyte	Result (mg/L)	PQL (mg/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B2K0183 - No_Prep_IC_1

Blank (B2K0183-BLK1)				Prepared: 11/8/2012 Analyzed: 11/8/2012					
Bromide	ND	0.05			NR				
LCS (B2K0183-BS1)				Prepared: 11/8/2012 Analyzed: 11/8/2012					
Bromide	0.963100	0.05	1.00000		96.3	90 - 110			
Duplicate (B2K0183-DUP1)				Source: 1203907-03 Prepared: 11/8/2012 Analyzed: 11/8/2012					
Bromide	ND	0.05		ND	NR			20	
Matrix Spike (B2K0183-MS1)				Source: 1203907-03 Prepared: 11/8/2012 Analyzed: 11/8/2012					
Bromide	2.37610	0.05	2.50000	ND	95.0	80 - 120			
Matrix Spike (B2K0183-MS2)				Source: 1203915-02 Prepared: 11/8/2012 Analyzed: 11/8/2012					
Bromide	3.37640	0.05	2.50000	0.638600	110	80 - 120			M1
Matrix Spike Dup (B2K0183-MSD1)				Source: 1203907-03 Prepared: 11/8/2012 Analyzed: 11/8/2012					
Bromide	2.34850	0.05	2.50000	ND	93.9	80 - 120	1.17	20	



Certificate of Analysis

Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : Raytheon Main: Fullerton Monthly, 532.1:

Report To : Steve Netto

Reported : 11/16/2012

Total Dissolved Solids (Residue, Filterable) by SM 2540C - Quality Control

Analyte	Result (mg/L)	PQL (mg/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B2K0295 - No_Prep_WC_1

Blank (B2K0295-BLK1)

Prepared: 11/8/2012 Analyzed: 11/8/2012

Residue, Dissolved

ND

10

NR

LCS (B2K0295-BS1)

Prepared: 11/8/2012 Analyzed: 11/8/2012

Residue, Dissolved

967.000

10

970.000

99.7

80 - 120

Duplicate (B2K0295-DUP1)

Source: 1203914-01

Prepared: 11/8/2012 Analyzed: 11/8/2012

Residue, Dissolved

1113.00

10

1098.00

NR

1.36

10



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Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : Raytheon Main: Fullerton Monthly, 532.1:

Report To : Steve Netto

Reported : 11/16/2012

Total Suspended Solids (Residue, Non-Filtrable) by SM 2540D - Quality Control

Analyte	Result (mg/L)	PQL (mg/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B2K0298 - No_Prep_WC_1

Blank (B2K0298-BLK1)

Residue, Suspended

ND 10

Prepared: 11/12/2012 Analyzed: 11/12/2012

NR

LCS (B2K0298-BS1)

Residue, Suspended

98.0000 10 96.6000

Prepared: 11/12/2012 Analyzed: 11/12/2012

101 80 - 120

Duplicate (B2K0298-DUP1)

Residue, Suspended

100.000 10

Source: 1203870-02

Prepared: 11/12/2012 Analyzed: 11/12/2012

ND NR

10



Certificate of Analysis

Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : Raytheon Main: Fullerton Monthly, 532.1:

Report To : Steve Netto

Reported : 11/16/2012

Volatile Organic Compounds by EPA 8260 - Quality Control

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec % Rec	Limits	RPD	RPD Limit	Notes
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Batch B2K0088 - MSVOAW_LL

Blank (B2K0088-BLK1)

Prepared: 11/6/2012 Analyzed: 11/6/2012

1,1,1,2-Tetrachloroethane	ND	0.50		NR
1,1,1-Trichloroethane	ND	0.50		NR
1,1,2,2-Tetrachloroethane	ND	0.50		NR
1,1,2-Trichloroethane	ND	0.50		NR
1,1-Dichloroethane	ND	0.50		NR
1,1-Dichloroethene	ND	0.50		NR
1,1-Dichloropropene	ND	0.50		NR
1,2,3-Trichloropropane	ND	0.50		NR
1,2,3-Trichlorobenzene	ND	0.50		NR
1,2,4-Trichlorobenzene	ND	0.50		NR
1,2,4-Trimethylbenzene	ND	0.50		NR
1,2-Dibromo-3-chloropropane	ND	0.50		NR
1,2-Dibromoethane	ND	0.50		NR
1,2-Dichlorobenzene	ND	0.50		NR
1,2-Dichloroethane	ND	0.50		NR
1,2-Dichloropropane	ND	0.50		NR
1,3,5-Trimethylbenzene	ND	0.50		NR
1,3-Dichlorobenzene	ND	0.50		NR
1,3-Dichloropropane	ND	0.50		NR
1,4-Dichlorobenzene	ND	0.50		NR
2,2-Dichloropropane	ND	0.50		NR
2-Chlorotoluene	ND	0.50		NR
4-Chlorotoluene	ND	0.50		NR
4-Isopropyltoluene	ND	0.50		NR
Benzene	ND	0.50		NR
Bromobenzene	ND	0.50		NR
Bromodichloromethane	ND	0.50		NR
Bromoform	ND	0.50		NR
Bromomethane	ND	0.50		NR
Carbon tetrachloride	ND	0.50		NR
Chlorobenzene	ND	0.50		NR
Chloroethane	ND	0.50		NR
Chloroform	ND	0.50		NR
Chloromethane	ND	0.50		NR
cis-1,2-Dichloroethene	ND	0.50		NR
cis-1,3-Dichloropropene	ND	0.50		NR
Dibromochloromethane	ND	0.50		NR
Dibromomethane	ND	0.50		NR
Dichlorodifluoromethane	ND	0.50		NR
Ethylbenzene	ND	0.50		NR
Hexachlorobutadiene	ND	0.50		NR



Certificate of Analysis

Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : Raytheon Main: Fullerton Monthly, 532.1:

Report To : Steve Netto

Reported : 11/16/2012

Volatile Organic Compounds by EPA 8260 - Quality Control (cont'd)

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec % Rec	% Rec Limits	RPD RPD	RPD Limit	Notes
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Batch B2K0088 - MSVOAW_LL (continued)

Blank (B2K0088-BLK1) - Continued

Prepared: 11/6/2012 Analyzed: 11/6/2012

Isopropylbenzene	ND	0.50			NR				
m,p-Xylene	ND	1.0			NR				
Methylene chloride	ND	1.0			NR				
n-Butylbenzene	ND	0.50			NR				
n-Propylbenzene	ND	0.50			NR				
Naphthalene	ND	0.50			NR				
o-Xylene	ND	0.50			NR				
sec-Butylbenzene	ND	0.50			NR				
Styrene	ND	0.50			NR				
tert-Butylbenzene	ND	0.50			NR				
Tetrachloroethene	ND	0.50			NR				
Toluene	ND	0.50			NR				
trans-1,2-Dichloroethene	ND	0.50			NR				
Trichloroethene	ND	0.50			NR				
Trichlorofluoromethane	ND	0.50			NR				
Vinyl chloride	ND	0.50			NR				

<i>Surrogate: 1,2-Dichloroethane-d4</i>	19.50		25.0000		78.0	70 - 130			
<i>Surrogate: 4-Bromofluorobenzene</i>	19.72		25.0000		78.9	70 - 130			
<i>Surrogate: Dibromofluoromethane</i>	20.45		25.0000		81.8	70 - 130			
<i>Surrogate: Toluene-d8</i>	20.21		25.0000		80.8	70 - 130			

LCS (B2K0088-BS1)

Prepared: 11/6/2012 Analyzed: 11/6/2012

1,1-Dichloroethene	19.6900		20.0000		98.4	70 - 130			
Benzene	35.9500		40.0000		89.9	70 - 130			
Chlorobenzene	18.4700		20.0000		92.4	70 - 130			
MTBE	18.2500		20.0000		91.2	70 - 130			
Toluene	36.6200		40.0000		91.6	70 - 130			
Trichloroethene	18.8000		20.0000		94.0	70 - 130			

<i>Surrogate: 1,2-Dichloroethane-d4</i>	19.22		25.0000		76.9	70 - 130			
<i>Surrogate: 4-Bromofluorobenzene</i>	20.40		25.0000		81.6	70 - 130			
<i>Surrogate: Dibromofluoromethane</i>	19.89		25.0000		79.6	70 - 130			
<i>Surrogate: Toluene-d8</i>	20.39		25.0000		81.6	70 - 130			

LCS Dup (B2K0088-BS1)

Prepared: 11/6/2012 Analyzed: 11/6/2012

1,1-Dichloroethene	20.0400		20.0000		100	70 - 130	1.76	20	
Benzene	37.3200		40.0000		93.3	70 - 130	3.74	20	
Chlorobenzene	19.0500		20.0000		95.2	70 - 130	3.09	20	
MTBE	19.1300		20.0000		95.6	70 - 130	4.71	20	
Toluene	38.0800		40.0000		95.2	70 - 130	3.91	20	
Trichloroethene	19.3100		20.0000		96.6	70 - 130	2.68	20	

<i>Surrogate: 1,2-Dichloroethane-d4</i>	19.03		25.0000		76.1	70 - 130			
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Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego, CA 92122

Project Number : Raytheon Main: Fullerton Monthly, 532.1:

Report To : Steve Netto

Reported : 11/16/2012

Volatile Organic Compounds by EPA 8260 - Quality Control (cont'd)

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B2K0088 - MSVOAW_LL (continued)

LCS Dup (B2K0088-BSD1) - Continued

Prepared: 11/6/2012 Analyzed: 11/6/2012

Surrogate: 4-Bromofluorobenzene	20.68		25.0000		82.7	70 - 130			
Surrogate: Dibromofluoromethane	19.86		25.0000		79.4	70 - 130			
Surrogate: Toluene-d8	20.43		25.0000		81.7	70 - 130			



Certificate of Analysis

Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : Raytheon Main: Fullerton Monthly, 532.1:

Report To : Steve Netto

Reported : 11/16/2012

1,4-Dioxane by EPA 8270: Isotope Dilution Technique - Quality Control

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec % Rec	% Rec Limits	RPD RPD	RPD Limit	Notes
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Batch B2K0108 - MSSEMI

Blank (B2K0108-BLK1)

Prepared: 11/6/2012 Analyzed: 11/6/2012

1,4-Dioxane	ND	2.0			NR				
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	85.51		100.000		85.5	37 - 93			
<i>Surrogate: 2-Fluorobiphenyl</i>	98.49		100.000		98.5	51 - 100			
<i>Surrogate: 4-Terphenyl-d14</i>	134.5		100.000		134	58 - 113			S1
<i>Surrogate: Nitrobenzene-d5</i>	89.41		100.000		89.4	39 - 95			

LCS (B2K0108-BS1)

Prepared: 11/6/2012 Analyzed: 11/6/2012

1,4-Dioxane	97.1900	2.0	100.000		97.2	70 - 130			
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	85.14		100.000		85.1	37 - 93			
<i>Surrogate: 2-Fluorobiphenyl</i>	91.38		100.000		91.4	51 - 100			
<i>Surrogate: 4-Terphenyl-d14</i>	90.08		100.000		90.1	58 - 113			
<i>Surrogate: Nitrobenzene-d5</i>	83.21		100.000		83.2	39 - 95			

LCS Dup (B2K0108-BSD1)

Prepared: 11/6/2012 Analyzed: 11/6/2012

1,4-Dioxane	93.1500	2.0	100.000		93.2	70 - 130	4.25	20	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	79.18		100.000		79.2	37 - 93			
<i>Surrogate: 2-Fluorobiphenyl</i>	90.51		100.000		90.5	51 - 100			
<i>Surrogate: 4-Terphenyl-d14</i>	89.58		100.000		89.6	58 - 113			
<i>Surrogate: Nitrobenzene-d5</i>	85.64		100.000		85.6	39 - 95			



Certificate of Analysis

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9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : Raytheon Main: Fullerton Monthly, 532.1:

Report To : Steve Netto

Reported : 11/16/2012

1,4-Dioxane by EPA 8270/SIM: Isotope Dilution Technique - Quality Control

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B2K0112 - MSEMI_ISOTOPEDILN

Blank (B2K0112-BLK1)

Prepared: 11/6/2012 Analyzed: 11/7/2012

1,4-Dioxane	ND	0.20			NR				
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	<i>0.5972</i>		<i>1.00000</i>		<i>59.7</i>	<i>36 - 107</i>			
<i>Surrogate: 2-Fluorobiphenyl</i>	<i>0.7130</i>		<i>1.00000</i>		<i>71.3</i>	<i>42 - 120</i>			
<i>Surrogate: 4-Terphenyl-d14</i>	<i>0.7951</i>		<i>1.00000</i>		<i>79.5</i>	<i>67 - 142</i>			
<i>Surrogate: Nitrobenzene-d5</i>	<i>0.9052</i>		<i>1.00000</i>		<i>90.5</i>	<i>36 - 130</i>			

LCS (B2K0112-BS1)

Prepared: 11/6/2012 Analyzed: 11/7/2012

1,4-Dioxane	0.779200	0.20	1.00000		77.9	70 - 130			
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	<i>0.5946</i>		<i>1.00000</i>		<i>59.5</i>	<i>36 - 107</i>			
<i>Surrogate: 2-Fluorobiphenyl</i>	<i>0.7564</i>		<i>1.00000</i>		<i>75.6</i>	<i>42 - 120</i>			
<i>Surrogate: 4-Terphenyl-d14</i>	<i>0.8213</i>		<i>1.00000</i>		<i>82.1</i>	<i>67 - 142</i>			
<i>Surrogate: Nitrobenzene-d5</i>	<i>0.8569</i>		<i>1.00000</i>		<i>85.7</i>	<i>36 - 130</i>			

LCS Dup (B2K0112-BS1)

Prepared: 11/6/2012 Analyzed: 11/7/2012

1,4-Dioxane	0.765130	0.20	1.00000		76.5	70 - 130	1.82	20	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	<i>0.5947</i>		<i>1.00000</i>		<i>59.5</i>	<i>36 - 107</i>			
<i>Surrogate: 2-Fluorobiphenyl</i>	<i>0.6874</i>		<i>1.00000</i>		<i>68.7</i>	<i>42 - 120</i>			
<i>Surrogate: 4-Terphenyl-d14</i>	<i>0.7621</i>		<i>1.00000</i>		<i>76.2</i>	<i>67 - 142</i>			
<i>Surrogate: Nitrobenzene-d5</i>	<i>0.8037</i>		<i>1.00000</i>		<i>80.4</i>	<i>36 - 130</i>			



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Project Number : Raytheon Main: Fullerton Monthly, 532.1:

Report To : Steve Netto

Reported : 11/16/2012

Notes and Definitions

S8	Surrogate recovery was above laboratory acceptance limit. See Corrective Action Report for details.
S1	Surrogate recovery was above laboratory acceptance limit. No target analyte was detected in the sample.
M1	Matrix spike recovery outside of acceptance limit. The analytical batch was validated by the laboratory control sample.
ND	Analyte not detected at or above reporting limit
PQL	Practical Quantitation Limit
MDL	Method Detection Limit
NR	Not Reported
RPD	Relative Percent Difference
CA1	CA-NELAP (CDPH)
CA2	CA-ELAP (CDPH)
OR1	OR-NELAP (OSPHL)
TX1	TX-NELAP (TCEQ)

Notes:

(1) The reported MDL and PQL are based on prep ratio variation and analytical dilution.

Bromate by EPA 317
 Ion Chromatography with Post-Column Derivatization-Visible Absorption

Column: Dionex AS9-HC/AG9-HSC
 Eluent: 30 mM Na₂CO₃
 Flow: 1.0 mL/min
 Injection: 250 µL
 Detection: Post-column derivatization, Visible detection, 450 nm

Sample preparation: The undiluted samples were treated with a Dionex OnGuard II H cartridge to remove excess basic cations.

Parts Per Billion (µg/L)

<u>Sample ID</u>	<u>Result</u>
1203870-02 / EW-02	ND
1203870-04 / POX	5.4
1203870-06 / CEFF	6.7
Method Blank	ND
Detection Limit	0.5

Date Analyzed: 11-12-12

Quality Control Summary

Sample ID:	Batch QC						
<u>Analyte</u>	<u>Sample Result</u>	<u>Spike Conc</u>	<u>Spike Result</u>	<u>Spike % Rec</u>	<u>Spike Duplicate Result</u>	<u>Spike Duplicate % Rec</u>	<u>Spike RPD</u>
Bromate	11200	40000	54600	109	54200	108	1
QC Guidelines				75-125		75-125	NMT 10

SUBCONTRACT ORDER

Work Order: 1203870

SENDING LABORATORY:

Advanced Technology Laboratories
 3275 Walnut Avenue
 Signal Hill, CA 90755
 Phone: 562.989.4045
 Fax: 562.989.6348
 Project Manager: Rachelle Arada

RECEIVING LABORATORY:

Exova Inc.
 9240 Santa Fe Springs Road
 Santa Fe Springs, CA 90670
 Phone : (562) 948-2225
 Fax: (562) 948-5850
 PO#: SC07695 - STANDARD TAT 

IMPORTANT : Please include Work Order # and PO # in your invoice.

Analysis	Due	Expires	Sampled	Comments
ATL Lab#: 1203870-02 / EW-02 317.0 1-Poly Unpres - 125mL	11/20/12 17:00	11/06/12 09:15	Groundwater 11/05/12 09:15	Bromate
ATL Lab#: 1203870-04 / POX 317.0 1-Poly Unpres - 125mL	11/20/12 17:00	11/06/12 09:40	Groundwater 11/05/12 09:40	
ATL Lab#: 1203870-06 / CEFF 317.0 1-Poly Unpres - 125mL	11/20/12 17:00	11/06/12 10:10	Groundwater 11/05/12 10:10	

Released By	Date	Received By	Date

CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST FORM

PROJECT NAME Raytheon Main: Fullerton Monthly				PROJECT No./TASK No. 532.15				SAMPLE CONTAINERS				ANALYSIS REQUESTED				ESTIMATED CONCENTRATION RANGE (ppb) FOR VOA'S		SPECIAL HANDLING		LABORATORY INFORMATION	
PROJECT MANAGER Chris Ross				Phone No. 858-455-6500								VOCs by EPA 8260B 1,4-Dioxane by EPA 8270SIM 1,4-Dioxane by EPA 8270M0D Bromate by EPA 317 Bromide by EPA 300 TDS by EPA SM2540C TSS by EPA SM2540D								Advanced Technology Laboratories 3275 Walnut Ave Signal Hill, CA 90755 Attn: Rachelle Araca	
QA MANAGER Steve Netto				Fax No. 853-455-6533																	
SAMPLER (SIGNATURE) 				SAMPLER (PRINTED) MARCO RODRIGUEZ																	
LAB ID	SAMPLE ID	SAMPLE COLLECTION		MATRIX			PRESERVATION														
		Date	Time	Soil	Ground-water	Surface water	Lab H2O	HCl	HNO3	NaOH	H2SO4	Ice	40 ml VOA	125 ml Poly	250 ml Poly	1 L Amber	0-10	10-100	100-1,000	>1,000	REMARKS
1203870-01	TB-110512	11/5/12	07:30				X	X			X										Please include
-2	EM-02		09:15	X				X			X										mmrodriguez@hargis.com
-3	PF		08:53	X							X										in lab report
-4	POX		09:40	X				X			X										distribution list
-5	CBT		10:00	X				X			X										
-6	CBFF		10:10	X				X			X										Set 1,4-Dioxane MDL to 1.0 ppm
Total number of Containers per analysis:											14651				Total No. of Containers: 27						

Relinquished by: HHA Company		Date 11/5/12	Received by: Advanced Tech Labs Company	Date 11/5/12	INSTRUCTIONS 1. Fill out form completely except for shaded areas (lab use only); sign only after verified for completeness. 2. Complete in ballpoint pen. Draw one line through errors, initial and date correction. 3. Indicate number of sample containers in analysis request space; indicate choice with ✓ or x. 4. Note applicable preservatives, special instructions, and deviations from typical environmental samples. 5. Consult project QA documents for specific instructions.	Shipment Method: <u>COURIER</u>	
Time 15:40			Time 15:40			Send Results to: <u>Steve Netto</u>	
Relinquished by: Advanced Tech Labs Company		Date 11/5/12	Received by: Advanced Tech Labs Company	Date 11/5/12	Sample Receipt: <input type="checkbox"/> No. of containers correct <input type="checkbox"/> custody seals secure	<input checked="" type="checkbox"/> 9171 TOWNE CENTRE DRIVE, SUITE 375 SAN DIEGO, CA 92122 (858) 455-6500 <input type="checkbox"/> 1640 SOUTH STAPLEY DRIVE, SUITE 124 MESA, AZ 85204 (480) 345-0888 <input type="checkbox"/> 1820 EAST RIVER ROAD, SUITE 220 TUCSON, AZ 85718 (520) 881-7300	
Time 1702			Time 1702			Temp. @ receipt _____ °C <input type="checkbox"/> received good condition/cold <input type="checkbox"/> conforms to COC document	
						Send invoice to San Diego, CA Attn: Accounts Payable	

December 20, 2012

Steve Netto
Hargis & Associates, Inc.
9171 Towne Centre Drive, Suite 375
San Diego, CA 92122
Tel: (619) 249-3166
Fax: (858) 455-6533



Re: ATL Work Order Number : 1204366
Client Reference : Raytheon Main: Fullerton Quarterly, 532.15

Enclosed are the results for sample(s) received on December 10, 2012 by Advanced Technology Laboratories. The sample(s) are tested for the parameters as indicated on the enclosed chain of custody in accordance with applicable laboratory certifications. The laboratory results contained in this report specifically pertains to the sample(s) submitted.

Thank you for the opportunity to serve the needs of your company. If you have any questions, please feel free to contact me or your Project Manager.

Sincerely,

Eddie Rodriguez
Laboratory Director

The cover letter and the case narrative are an integral part of this analytical report and its absence renders the report invalid. Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Conference and/or applicable state-specific certification programs. The report cannot be reproduced without written permission from the client and Advanced Technology Laboratories.



Certificate of Analysis

Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : Raytheon Main: Fullerton Quarterly, 532.1

Report To : Steve Netto

Reported : 12/20/2012

SUMMARY OF SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
EW-02	1204366-01	Groundwater	12/10/12 9:35	12/10/12 13:30
POX	1204366-02	Groundwater	12/10/12 8:30	12/10/12 13:30

CASE NARRATIVE

The sample for SM 2320B (Alkalinity) analysis was subcontracted to AETL with DOHS Cert.#1541.



Certificate of Analysis

Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : Raytheon Main: Fullerton Quarterly, 532.1

Report To : Steve Netto

Reported : 12/20/2012

Client Sample ID EW-02

Lab ID: 1204366-01

Anions Scan by Ion Chromatography EPA 300.0

Analyst: AG

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Chloride	98	5.0	NA	10	B2L0271	12/11/2012	12/11/12 16:40	
Nitrate as N	4.8	0.10	NA	1	B2L0271	12/11/2012	12/11/12 13:04	
Nitrite, as N	ND	0.10	NA	1	B2L0271	12/11/2012	12/11/12 13:04	
ortho-Phosphate (As P)	ND	0.05	NA	1	B2L0271	12/11/2012	12/11/12 13:04	
Sulfate	140	10	NA	10	B2L0271	12/11/2012	12/11/12 16:40	

Total Organic Carbon by SM 5310B

Analyst: AG

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Organic Carbon, Total	ND	3.0	NA	1	B2L0388	12/17/2012	12/17/12 10:57	

Chemical Oxygen Demand by EPA 410.4

Analyst: LA

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Chemical Oxygen Demand	14	5.0	NA	1	B2L0397	12/17/2012	12/17/12 02:14	

Total Metals by ICP-AES EPA 6010B

Analyst: PT

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Selenium	ND	0.010	NA	1	B2L0345	12/14/2012	12/17/12 10:14	

Dissolved Metals by ICP-AES EPA 6010B

Analyst: PT

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Calcium	89	0.50	NA	1	B2L0347	12/14/2012	12/17/12 10:29	
Iron	ND	0.50	NA	1	B2L0347	12/14/2012	12/17/12 10:29	
Magnesium	29	0.10	NA	1	B2L0347	12/14/2012	12/17/12 10:29	
Manganese	ND	0.50	NA	1	B2L0347	12/14/2012	12/17/12 10:29	
Selenium	ND	0.010	NA	1	B2L0347	12/14/2012	12/17/12 10:29	
Sodium	78	1.0	NA	1	B2L0347	12/14/2012	12/17/12 10:29	



Certificate of Analysis

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9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : Raytheon Main: Fullerton Quarterly, 532.1

Report To : Steve Netto

Reported : 12/20/2012

Client Sample ID POX

Lab ID: 1204366-02

Anions Scan by Ion Chromatography EPA 300.0

Analyst: AG

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Chloride	97	5.0	NA	10	B2L0271	12/11/2012	12/11/12 17:37	
Nitrate as N	4.8	0.10	NA	1	B2L0271	12/11/2012	12/11/12 13:26	
Nitrite, as N	ND	0.10	NA	1	B2L0271	12/11/2012	12/11/12 13:26	
ortho-Phosphate (As P)	ND	0.05	NA	1	B2L0271	12/11/2012	12/11/12 13:26	
Sulfate	140	10	NA	10	B2L0271	12/11/2012	12/11/12 17:37	

Total Organic Carbon by SM 5310B

Analyst: AG

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Organic Carbon, Total	ND	3.0	NA	1	B2L0388	12/17/2012	12/17/12 11:51	

Chemical Oxygen Demand by EPA 410.4

Analyst: LA

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Chemical Oxygen Demand	31	5.0	NA	1	B2L0397	12/17/2012	12/17/12 02:14	



Certificate of Analysis

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Project Number : Raytheon Main: Fullerton Quarterly, 532.1

Report To : Steve Netto

Reported : 12/20/2012

QUALITY CONTROL SECTION

Anions Scan by Ion Chromatography EPA 300.0 - Quality Control

Analyte	Result (mg/L)	PQL (mg/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B2L0271 - No_Prep_IC_1

Blank (B2L0271-BLK1)

Prepared: 12/11/2012 Analyzed: 12/11/2012

Chloride	ND	0.50			NR				
Nitrate as N	ND	0.10			NR				
Nitrite, as N	ND	0.10			NR				
ortho-Phosphate (As P)	ND	0.05			NR				
Sulfate	ND	1.0			NR				

LCS (B2L0271-BS1)

Prepared: 12/11/2012 Analyzed: 12/11/2012

Chloride	0.961400	0.50	1.00000		96.1	90 - 110			
Nitrate as N	0.963300	0.10	1.00000		96.3	90 - 110			
Nitrite, as N	0.962800	0.10	1.00000		96.3	90 - 110			
ortho-Phosphate (As P)	0.911500	0.05	1.00000		91.2	90 - 110			
Sulfate	1.92660	1.0	2.00000		96.3	90 - 110			

Duplicate (B2L0271-DUP1)

Source: 1204368-01

Prepared: 12/11/2012 Analyzed: 12/11/2012

Chloride	115.822	5.0		115.961	NR		0.120	20	
Nitrate as N	2.19260	0.10		2.21500	NR		1.02	20	
Nitrite, as N	ND	0.10		ND	NR			20	
ortho-Phosphate (As P)	ND	0.05		ND	NR			20	
Sulfate	163.290	10		163.465	NR		0.107	20	

Matrix Spike (B2L0271-MS1)

Source: 1204368-01

Prepared: 12/11/2012 Analyzed: 12/11/2012

Chloride	116.181	5.0	2.50000	115.961	8.80	80 - 120			M3
Nitrate as N	4.38070	0.10	2.50000	2.21500	86.6	80 - 120			
Nitrite, as N	3.41770	0.10	2.50000	ND	137	80 - 120			M2
ortho-Phosphate (As P)	0.794800	0.05	2.50000	ND	31.8	80 - 120			M1
Sulfate	168.130	10	5.00000	163.465	93.3	80 - 120			

Matrix Spike (B2L0271-MS2)

Source: 1204366-01

Prepared: 12/11/2012 Analyzed: 12/11/2012

Chloride	98.2110	5.0	2.50000	97.7420	18.8	80 - 120			M3
Nitrate as N	7.15570	0.10	2.50000	4.84380	92.5	80 - 120			
Nitrite, as N	3.36330	0.10	2.50000	ND	135	80 - 120			M2
ortho-Phosphate (As P)	1.08160	0.05	2.50000	ND	43.3	80 - 120			M1
Sulfate	141.445	10	5.00000	136.577	97.4	80 - 120			

Matrix Spike Dup (B2L0271-MSD1)

Source: 1204368-01

Prepared: 12/11/2012 Analyzed: 12/11/2012

Chloride	115.598	5.0	2.50000	115.961	-14.5	80 - 120	0.503	20	M3
Nitrate as N	4.37200	0.10	2.50000	2.21500	86.3	80 - 120	0.199	20	
Nitrite, as N	3.40830	0.10	2.50000	ND	136	80 - 120	0.275	20	M2
ortho-Phosphate (As P)	1.00340	0.05	2.50000	ND	40.1	80 - 120	23.2	20	M1
Sulfate	167.503	10	5.00000	163.465	80.8	80 - 120	0.374	20	



Certificate of Analysis

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9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : Raytheon Main: Fullerton Quarterly, 532.1

Report To : Steve Netto

Reported : 12/20/2012

Total Organic Carbon by SM 5310B - Quality Control

Analyte	Result (mg/L)	PQL (mg/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B2L0388 - No_Prep_II_W

Blank (B2L0388-BLK1)

Prepared: 12/17/2012 Analyzed: 12/17/2012

Organic Carbon, Total	ND	3.0			NR			
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LCS (B2L0388-BS1)

Prepared: 12/17/2012 Analyzed: 12/17/2012

Organic Carbon, Total	19.5900	3.0	20.0000		98.0	80 - 120		
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Matrix Spike (B2L0388-MS1)

Source: 1204366-01

Prepared: 12/17/2012 Analyzed: 12/17/2012

Organic Carbon, Total	21.8100	3.0	20.0000	ND	109	80 - 120		
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Matrix Spike Dup (B2L0388-MSD1)

Source: 1204366-01

Prepared: 12/17/2012 Analyzed: 12/17/2012

Organic Carbon, Total	20.8400	3.0	20.0000	ND	104	80 - 120	4.55	20
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Certificate of Analysis

Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : Raytheon Main: Fullerton Quarterly, 532.1

Report To : Steve Netto

Reported : 12/20/2012

Chemical Oxygen Demand by EPA 410.4 - Quality Control

Analyte	Result (mg/L)	PQL (mg/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B2L0397 - Prep_WC_1_W

Blank (B2L0397-BLK1)

Prepared: 12/17/2012 Analyzed: 12/17/2012

Chemical Oxygen Demand

ND

5.0

NR

LCS (B2L0397-BS1)

Prepared: 12/17/2012 Analyzed: 12/17/2012

Chemical Oxygen Demand

495.962

5.0

500.000

99.2

80 - 120

Matrix Spike (B2L0397-MS1)

Source: 1204423-01

Prepared: 12/17/2012 Analyzed: 12/17/2012

Chemical Oxygen Demand

584.394

5.0

502.000

6.61400

115

80 - 120

Matrix Spike Dup (B2L0397-MSD1)

Source: 1204423-01

Prepared: 12/17/2012 Analyzed: 12/17/2012

Chemical Oxygen Demand

545.126

5.0

502.000

6.61400

107

80 - 120

6.95

20



Certificate of Analysis

Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : Raytheon Main: Fullerton Quarterly, 532.1

Report To : Steve Netto

Reported : 12/20/2012

Total Metals by ICP-AES EPA 6010B - Quality Control

Analyte	Result (mg/L)	PQL (mg/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B2L0345 - EPA 3010A

Blank (B2L0345-BLK1)

Prepared: 12/14/2012 Analyzed: 12/17/2012

Selenium	ND	0.010			NR				
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LCS (B2L0345-BS1)

Prepared: 12/14/2012 Analyzed: 12/17/2012

Selenium	0.913156	0.010	1.00000		91.3	80 - 120			
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Matrix Spike (B2L0345-MS1)

Source: 1204366-01

Prepared: 12/14/2012 Analyzed: 12/17/2012

Selenium	2.31546	0.010	2.50000	0.009316	92.2	69 - 123			
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Matrix Spike Dup (B2L0345-MSD1)

Source: 1204366-01

Prepared: 12/14/2012 Analyzed: 12/17/2012

Selenium	2.30044	0.010	2.50000	0.009316	91.6	69 - 123	0.651	20	
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Certificate of Analysis

Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : Raytheon Main: Fullerton Quarterly, 532.1

Report To : Steve Netto

Reported : 12/20/2012

Dissolved Metals by ICP-AES EPA 6010B - Quality Control

Analyte	Result (mg/L)	PQL (mg/L)	Spike Level	Source Result	% Rec % Rec	Limits Limits	RPD RPD	RPD Limit	Notes
---------	------------------	---------------	----------------	------------------	----------------	------------------	------------	--------------	-------

Batch B2L0347 - EPA 3010A

Blank (B2L0347-BLK1)

Prepared: 12/14/2012 Analyzed: 12/17/2012

Calcium	ND	0.50			NR				
Iron	ND	0.50			NR				
Magnesium	ND	0.10			NR				
Manganese	ND	0.50			NR				
Selenium	ND	0.010			NR				
Sodium	ND	1.0			NR				

LCS (B2L0347-BS1)

Prepared: 12/14/2012 Analyzed: 12/17/2012

Calcium	20.0084	0.50	20.0000		100	80 - 120			
Iron	19.5660	0.50	20.0000		97.8	80 - 120			
Magnesium	20.0301	0.10	20.0000		100	80 - 120			
Manganese	18.7683	0.50	20.0000		93.8	80 - 120			
Selenium	0.904895	0.010	1.00000		90.5	80 - 120			
Sodium	20.4024	1.0	20.0000		102	80 - 120			

Matrix Spike (B2L0347-MS1)

Source: 1204366-01

Prepared: 12/14/2012 Analyzed: 12/17/2012

Calcium	107.689	0.50	20.0000	89.0493	93.2	28 - 159			
Iron	19.5657	0.50	20.0000	ND	97.8	69 - 121			
Magnesium	45.6186	0.10	20.0000	28.5403	85.4	39 - 145			
Manganese	18.2114	0.50	20.0000	ND	91.1	68 - 115			
Selenium	2.30162	0.010	2.50000	0.009468	91.7	69 - 123			
Sodium	96.8132	1.0	19.7000	77.8165	96.4	37 - 175			

Matrix Spike Dup (B2L0347-MSD1)

Source: 1204366-01

Prepared: 12/14/2012 Analyzed: 12/17/2012

Calcium	107.540	0.50	20.0000	89.0493	92.5	28 - 159	0.138	20
Iron	19.8124	0.50	20.0000	ND	99.1	69 - 121	1.25	20
Magnesium	45.4670	0.10	20.0000	28.5403	84.6	39 - 145	0.333	20
Manganese	18.3149	0.50	20.0000	ND	91.6	68 - 115	0.567	20
Selenium	2.32336	0.010	2.50000	0.009468	92.6	69 - 123	0.940	20
Sodium	96.0149	1.0	19.7000	77.8165	92.4	37 - 175	0.828	20



Certificate of Analysis

Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : Raytheon Main: Fullerton Quarterly, 532.1

Report To : Steve Netto

Reported : 12/20/2012

Notes and Definitions

M3	Matrix spike recovery outside of acceptance limit due to disproportionate concentration of the analyte to spike level. The analytical batch was validated by the laboratory control sample.
M2	Matrix spike recovery outside of acceptance limit due to possible matrix interference. The analytical batch was validated by the laboratory control sample.
M1	Matrix spike recovery outside of acceptance limit. The analytical batch was validated by the laboratory control sample.
ND	Analyte not detected at or above reporting limit
PQL	Practical Quantitation Limit
MDL	Method Detection Limit
NR	Not Reported
RPD	Relative Percent Difference
CA1	CA-NELAP (CDPH)
CA2	CA-ELAP (CDPH)
OR1	OR-NELAP (OSPHL)
TX1	TX-NELAP (TCEQ)

Notes:

- (1) The reported MDL and PQL are based on prep ratio variation and analytical dilution.
- (2) The suffix [2C] of specific analytes signifies that the reported result is taken from the instrument's second column.



American Environmental Testing Laboratory Inc.

2834 & 2908 North Naomi Street Burbank, CA 91504 • DOHS NO: 1541, LACSD NO: 10181
Tel: (888) 288-AETL • (818) 845-8200 • Fax: (818) 845-8840 • www.aetlab.com

Ordered By

Advanced Technology Laboratories
3275 Walnut Street
Signal Hill, CA 90755-5225

Number of Pages 2
Date Received 12/11/2012
Date Reported 12/20/2012

Telephone: (562)989-4045
Attention: Rachelle Arada

Job Number	Order Date	Client
67776	12/11/2012	ATL

Project ID: 1204366
Project Name: PO# SC07747

Enclosed please find results of analyses of 1 water sample which was analyzed as specified on the attached chain of custody. If there are any questions, please do not hesitate to call.

Checked By: 

Approved By: 

Cyrus Razmara, Ph.D.
Laboratory Director



American Environmental Testing Laboratory Inc.

2834 & 2908 North Naomi Street Burbank, CA 91504 • DOHS NO: 1541, LACSD NO: 10181

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Page: 1 A

Ordered By

Advanced Technology Laboratories
3275 Walnut Street
Signal Hill, CA 90755-5225

Project ID: 1204366
Date Received 12/11/2012
Date Reported 12/20/2012

Telephone: (562)989-4045
Attention: Rachelle Arada

Job Number	Order Date	Client
67776	12/11/2012	ATL

CERTIFICATE OF ANALYSIS CASE NARRATIVE

AETL received 1 samples with the following specification on 12/11/2012.

Lab ID	Sample ID	Sample Date	Matrix	QTY of Containers
67776.01	1204366-01	12/10/2012	Aqueous	1

The samples were analyzed as specified on the enclosed chain of custody.
No analytical non-conformances were encountered.

Checked By: _____

Approved By: _____

Cyrus Razmara, Ph.D.
Laboratory Director



American Environmental Testing Laboratory Inc.

2834 & 2908 North Naomi Street Burbank, CA 91504 • DOHS NO: 1541, LACSD NO: 10181
 Tel: (888) 288-AETL • (818) 845-8200 • Fax: (818) 845-8840 • www.aetlab.com

ANALYTICAL RESULTS

Ordered By

Advanced Technology Laboratories
 3275 Walnut Street
 Signal Hill, CA 90755-5225

Telephone: (562)989-4045

Attn: Rachelle Arada

Page: 2

Project ID: 1204366
 Project Name: PO# SC07747

AETL Job Number	Submitted	Client
67776	12/11/2012	ATL

Method: 310.1, Alkalinity, Titrimetric (pH 4.5), (EPA/600/4-79-020)

QC Batch No: 121212-1

Our Lab I.D.		Method Blank	67776.01			
Client Sample I.D.			1204366-01			
Date Sampled			12/10/2012			
Date Prepared		12/12/2012	12/12/2012			
Preparation Method		310.1	310.1			
Date Analyzed		12/12/2012	12/12/2012			
Matrix		Aqueous	Aqueous			
Units		mg/L	mg/L			
Dilution Factor		1	1			
Analytes	MDL	PQL	Results	Results		
Alkalinity, Bicarbonate	2.0	2.0	ND	242		
Alkalinity, Carbonate	2.0	2.0	ND	ND		
Alkalinity, Hydroxide	2.0	2.0	ND	ND		
Alkalinity, Total	2.0	2.0	ND	242		

QUALITY CONTROL REPORT

QC Batch No: 121212-1; Dup or Spiked Sample: 67776.01; LCS: Clean Water; QC Prepared: 12/12/2012; QC Analyzed: 12/12/2012;
 Units: mg/L

Analytes	Sample Result	MS Concn	MS Recov	MS % REC	MS DUP Concn	MS DUP Recov	MS DUP % REC	RPD %	MS/MSD % Limit	MS RPD % Limit
Alkalinity, Bicarbonate	242	20.0	262	98.5	20.0	262	98.5	<1	80-120	<15
Alkalinity, Total	242	20.0	262	98.5	20.0	262	98.5	<1	80-120	<15

QC Batch No: 121212-1; Dup or Spiked Sample: 67776.01; LCS: Clean Water; QC Prepared: 12/12/2012; QC Analyzed: 12/12/2012;
 Units: mg/L

Analytes	SM Result	SM DUP Result	RPD %	SM RPD % Limit	LCS Concn	LCS Recov	LCS % REC	LCS/LCSD % Limit		
Alkalinity, Bicarbonate	242	242	<1	<15	20.0	21.6	108	80-120		
Alkalinity, Total	242	242	<1	<15	20.0	21.6	108	80-120		



American Environmental Testing Laboratory Inc.

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Data Qualifiers and Descriptors

Data Qualifier:

- #: Recovery is not within acceptable control limits.
- *: In the QC section, sample results have been taken directly from the ICP reading. No preparation factor has been applied.
- B: Analyte was present in the Method Blank.
- D: Result is from a diluted analysis.
- E: Result is beyond calibration limits and is estimated.
- H: Analysis was performed over the allowed holding time due to circumstances which were beyond laboratory control.
- J: Analyte was detected. However, the analyte concentration is an estimated value, which is between the Method Detection Limit (MDL) and the Practical Quantitation Limit (PQL).
- M: Matrix spike recovery is outside control limits due to matrix interference. Laboratory Control Sample recovery was acceptable.
- MCL: Maximum Contaminant Level
- NS: No Standard Available
- S6: Surrogate recovery is outside control limits due to matrix interference.
- S8: The analysis of the sample required a dilution such that the surrogate concentration was diluted below the method acceptance criteria.
- X: Results represent LCS and LCSD data.

Definition:

- %Limi: Percent acceptable limits.
- %REC: Percent recovery.
- Con.L: Acceptable Control Limits
- Conce: Added concentration to the sample.
- LCS: Laboratory Control Sample
- MDL: Method Detection Limit is a statistically derived number which is specific for each instrument, each method, and each compound. It indicates a distinctively detectable quantity with 99% probability.



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Data Qualifiers and Descriptors

MS:	Matrix Spike
MS DU:	Matrix Spike Duplicate
ND:	Analyte was not detected in the sample at or above MDL.
PQL:	Practical Quantitation Limit or ML (Minimum Level as per RWQCB) is the minimum concentration that can be quantified with more than 99% confidence. Taking into account all aspects of the entire analytical instrumentation and practice.
Recov:	Recovered concentration in the sample.
RPD:	Relative Percent Difference

67776

ADVANCED TECHNOLOGY
LABORATORIES
SUBCONTRACT ORDER

Work Order: 1204366

SENDING LABORATORY:

Advanced Technology Laboratories
3275 Walnut Avenue
Signal Hill, CA 90755
Phone: 562.989.4045
Fax: 562.989.6348
Project Manager: Rachelle Arada

RECEIVING LABORATORY:

AETL
2834 North Naomi Street
Burbank, CA 91504
Phone : (818) 845-8200
Fax: (818) 845-8840
PO#: SC07747-STANDARD TAT (RA)

IMPORTANT : Please include Work Order # and PO # in your invoice.

Analysis	Due	Expires		Sampled
ATL Lab#: 1204366-01 / EW-02				
310.1_2320B_Total_SUB	12/17/12 17:00	12/24/12 09:35	67776.d Groundwater	12/10/12 09:35
1-Poly Unpres - 250mL				

Comments: Speciated (hydroxide,bicarbonate,carbonate and total)

Released By	<i>[Signature]</i>	Date	12/17/12 11:30	Received By	<i>[Signature]</i>	Date	12/11/12 1130
Released By	<i>[Signature]</i>	Date	12/11/12 1245	Received By	<i>[Signature]</i>	Date	12/11/12 1245

CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST FORM

PROJECT NAME Raytheon Main: Fullerton Quarterly		PROJECT No./TASK No. 532.15		SAMPLE CONTAINERS		ANALYSIS REQUESTED						ESTIMATED CONCENTRATION RANGE (ppb) FOR VOA'S		SPECIAL HANDLING			LABORATORY INFORMATION								
PROJECT MANAGER Chris Ross		Phone No. 858-455-6500		40 mL VOA	125 mL Poly	250 mL Poly	500 mL Poly	Total Se by EPA 6010B	Dissolved Se, Fe, Mn, Ca, Na & Mg by EPA 6010B	Alkalinity (OH, HCO ₃ , CO ₃ & total) by EPA SM2320B	TOC by EPA SM5310B	COD by EPA 410.4	Anions (Cl, S0 ₄ , NO ₃ , NO ₂ , PO ₄) by EPA 300	0 - 10	10 - 100	Lab to filter and acidity	Dissolved metals	Lab to filter Anions	Advanced Technology Laboratories						
QA MANAGER Steve Netto		Fax No. 858-455-6533																	REMARKS				3275 Walnut Ave. Signal Hill CA 90755 Attn: Rachelle Arada		
SAMPLER (SIGNATURE)		SAMPLER (PRINTED)		SAMPLE COLLECTION		MATRIX			PRESER-VATION																
LAB ID	SAMPLE ID	Date	Time	Soil	Ground water	Surface water	Lab H2O	HCl	HNO ₃	NaOH	H ₂ SO ₄	Ice													
	EW-02	12/10/12	09:35	X				X	X	X	X					X	X		Please include						
	POX	↓	08:30	X				X		X	X						X		mrodriquez@hargis.com on lab report distribution list						
Total number of Containers per analysis:				6214										Total No. of Containers:			13								
Relinquished by:		Date	Received by:	Date	INSTRUCTIONS																				
		12/10/12		12/10/12	<ol style="list-style-type: none"> Fill out form completely except for shaded areas (lab use only); sign only after verified for completeness. Complete in ballpoint pen. Draw one line through errors, initial and date correction. Indicate number of sample containers in analysis request space; indicate choice with ✓ or x. Note applicable preservatives, special instructions, and deviations from typical environmental samples. Consult project QA documents for specific instructions. 																				
Company HHA		Time 11:20	Company HHA	Time 11:20	Sample Receipt:		Temp. @ receipt <u>3.8</u> °C											Shipment Method: <u>DELIVER</u>			Send Results to: <u>Steve Netto</u>				
Relinquished by:		Date	Received by:	Date	<input type="checkbox"/> No. of containers correct				<input type="checkbox"/> received good condition/cold				<input type="checkbox"/> 9171 TOWNE CENTRE DRIVE, SUITE 375 SAN DIEGO, CA 92122 (858) 455-6500				<input type="checkbox"/> 1640 SOUTH STAPLEY DRIVE, SUITE 124 MESA, AZ 85204 (480) 345-0888								
		12/10/12		12/10/12	<input type="checkbox"/> custody seals secure				<input type="checkbox"/> conforms to COC document				<input type="checkbox"/> 1820 EAST RIVER ROAD, SUITE 220 TUCSON, AZ 85718 (520) 881-7300				Send invoice to San Diego, CA Attn: Accounts Payable								
Company HHA		Time 12:39	Company ATL	Time 12:39																					

December 28, 2012

Steve Netto
Hargis & Associates, Inc.
9171 Towne Centre Drive, Suite 375
San Diego, CA 92122
Tel: (619) 249-3166
Fax: (858) 455-6533



Re: ATL Work Order Number : 1204375
Client Reference : Raytheon Main: Fullerton Monthly, 532.15

Enclosed are the results for sample(s) received on December 10, 2012 by Advanced Technology Laboratories. The sample(s) are tested for the parameters as indicated on the enclosed chain of custody in accordance with applicable laboratory certifications. The laboratory results contained in this report specifically pertains to the sample(s) submitted.

Thank you for the opportunity to serve the needs of your company. If you have any questions, please feel free to contact me or your Project Manager.

Sincerely,

Eddie Rodriguez
Laboratory Director

The cover letter and the case narrative are an integral part of this analytical report and its absence renders the report invalid. Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Conference and/or applicable state-specific certification programs. The report cannot be reproduced without written permission from the client and Advanced Technology Laboratories.



Certificate of Analysis

Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : Raytheon Main: Fullerton Monthly, 532.1:

Report To : Steve Netto

Reported : 12/28/2012

SUMMARY OF SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
TB-121012	1204375-01	Lab H2O	12/10/12 7:30	12/10/12 12:39
EW-02	1204375-02	Groundwater	12/10/12 9:35	12/10/12 12:39
PF	1204375-03	Groundwater	12/10/12 8:25	12/10/12 12:39
POX	1204375-04	Groundwater	12/10/12 8:30	12/10/12 12:39
CBT	1204375-05	Groundwater	12/10/12 8:45	12/10/12 12:39
CEFF	1204375-06	Groundwater	12/10/12 8:50	12/10/12 12:39

CASE NARRATIVE

The samples for EPA 317 (Bromate) analysis were subcontracted to Exova, Inc. with ELAP Cert.# 2652.



Certificate of Analysis

Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : Raytheon Main: Fullerton Monthly, 532.1:

Report To : Steve Netto

Reported : 12/28/2012

Client Sample ID TB-121012

Lab ID: 1204375-01

Volatile Organic Compounds by EPA 8260

Analyst: SL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	0.50	NA	1	B2L0265	12/12/2012	12/12/12 16:14	
1,1,1-Trichloroethane	ND	0.50	NA	1	B2L0265	12/12/2012	12/12/12 16:14	
1,1,2,2-Tetrachloroethane	ND	0.50	NA	1	B2L0265	12/12/2012	12/12/12 16:14	
1,1,2-Trichloroethane	ND	0.50	NA	1	B2L0265	12/12/2012	12/12/12 16:14	
1,1-Dichloroethane	ND	0.50	NA	1	B2L0265	12/12/2012	12/12/12 16:14	
1,1-Dichloroethene	ND	0.50	NA	1	B2L0265	12/12/2012	12/12/12 16:14	
1,1-Dichloropropene	ND	0.50	NA	1	B2L0265	12/12/2012	12/12/12 16:14	
1,2,3-Trichloropropane	ND	0.50	NA	1	B2L0265	12/12/2012	12/12/12 16:14	
1,2,3-Trichlorobenzene	ND	0.50	NA	1	B2L0265	12/12/2012	12/12/12 16:14	
1,2,4-Trichlorobenzene	ND	0.50	NA	1	B2L0265	12/12/2012	12/12/12 16:14	
1,2,4-Trimethylbenzene	ND	0.50	NA	1	B2L0265	12/12/2012	12/12/12 16:14	
1,2-Dibromo-3-chloropropane	ND	0.50	NA	1	B2L0265	12/12/2012	12/12/12 16:14	
1,2-Dibromoethane	ND	0.50	NA	1	B2L0265	12/12/2012	12/12/12 16:14	
1,2-Dichlorobenzene	ND	0.50	NA	1	B2L0265	12/12/2012	12/12/12 16:14	
1,2-Dichloroethane	ND	0.50	NA	1	B2L0265	12/12/2012	12/12/12 16:14	
1,2-Dichloropropane	ND	0.50	NA	1	B2L0265	12/12/2012	12/12/12 16:14	
1,3,5-Trimethylbenzene	ND	0.50	NA	1	B2L0265	12/12/2012	12/12/12 16:14	
1,3-Dichlorobenzene	ND	0.50	NA	1	B2L0265	12/12/2012	12/12/12 16:14	
1,3-Dichloropropane	ND	0.50	NA	1	B2L0265	12/12/2012	12/12/12 16:14	
1,4-Dichlorobenzene	ND	0.50	NA	1	B2L0265	12/12/2012	12/12/12 16:14	
2,2-Dichloropropane	ND	0.50	NA	1	B2L0265	12/12/2012	12/12/12 16:14	
2-Chlorotoluene	ND	0.50	NA	1	B2L0265	12/12/2012	12/12/12 16:14	
4-Chlorotoluene	ND	0.50	NA	1	B2L0265	12/12/2012	12/12/12 16:14	
4-Isopropyltoluene	ND	0.50	NA	1	B2L0265	12/12/2012	12/12/12 16:14	
Benzene	ND	0.50	NA	1	B2L0265	12/12/2012	12/12/12 16:14	
Bromobenzene	ND	0.50	NA	1	B2L0265	12/12/2012	12/12/12 16:14	
Bromodichloromethane	ND	0.50	NA	1	B2L0265	12/12/2012	12/12/12 16:14	
Bromoform	ND	0.50	NA	1	B2L0265	12/12/2012	12/12/12 16:14	
Bromomethane	ND	0.50	NA	1	B2L0265	12/12/2012	12/12/12 16:14	
Carbon tetrachloride	ND	0.50	NA	1	B2L0265	12/12/2012	12/12/12 16:14	
Chlorobenzene	ND	0.50	NA	1	B2L0265	12/12/2012	12/12/12 16:14	
Chloroethane	ND	0.50	NA	1	B2L0265	12/12/2012	12/12/12 16:14	
Chloroform	ND	0.50	NA	1	B2L0265	12/12/2012	12/12/12 16:14	
Chloromethane	ND	0.50	NA	1	B2L0265	12/12/2012	12/12/12 16:14	
cis-1,2-Dichloroethene	ND	0.50	NA	1	B2L0265	12/12/2012	12/12/12 16:14	
cis-1,3-Dichloropropene	ND	0.50	NA	1	B2L0265	12/12/2012	12/12/12 16:14	
Dibromochloromethane	ND	0.50	NA	1	B2L0265	12/12/2012	12/12/12 16:14	



Certificate of Analysis

Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : Raytheon Main: Fullerton Monthly, 532.1:

Report To : Steve Netto

Reported : 12/28/2012

Client Sample ID TB-121012

Lab ID: 1204375-01

Volatile Organic Compounds by EPA 8260

Analyst: SL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Dibromomethane	ND	0.50	NA	1	B2L0265	12/12/2012	12/12/12 16:14	
Dichlorodifluoromethane	ND	0.50	NA	1	B2L0265	12/12/2012	12/12/12 16:14	
Ethylbenzene	ND	0.50	NA	1	B2L0265	12/12/2012	12/12/12 16:14	
Hexachlorobutadiene	ND	0.50	NA	1	B2L0265	12/12/2012	12/12/12 16:14	
Isopropylbenzene	ND	0.50	NA	1	B2L0265	12/12/2012	12/12/12 16:14	
m,p-Xylene	ND	1.0	NA	1	B2L0265	12/12/2012	12/12/12 16:14	
Methylene chloride	ND	1.0	NA	1	B2L0265	12/12/2012	12/12/12 16:14	
n-Butylbenzene	ND	0.50	NA	1	B2L0265	12/12/2012	12/12/12 16:14	
n-Propylbenzene	ND	0.50	NA	1	B2L0265	12/12/2012	12/12/12 16:14	
Naphthalene	ND	0.50	NA	1	B2L0265	12/12/2012	12/12/12 16:14	
o-Xylene	ND	0.50	NA	1	B2L0265	12/12/2012	12/12/12 16:14	
sec-Butylbenzene	ND	0.50	NA	1	B2L0265	12/12/2012	12/12/12 16:14	
Styrene	ND	0.50	NA	1	B2L0265	12/12/2012	12/12/12 16:14	
tert-Butylbenzene	ND	0.50	NA	1	B2L0265	12/12/2012	12/12/12 16:14	
Tetrachloroethene	ND	0.50	NA	1	B2L0265	12/12/2012	12/12/12 16:14	
Toluene	ND	0.50	NA	1	B2L0265	12/12/2012	12/12/12 16:14	
trans-1,2-Dichloroethene	ND	0.50	NA	1	B2L0265	12/12/2012	12/12/12 16:14	
Trichloroethene	ND	0.50	NA	1	B2L0265	12/12/2012	12/12/12 16:14	
Trichlorofluoromethane	ND	0.50	NA	1	B2L0265	12/12/2012	12/12/12 16:14	
Vinyl chloride	ND	0.50	NA	1	B2L0265	12/12/2012	12/12/12 16:14	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>75.8 %</i>		<i>70 - 130</i>		B2L0265	12/12/2012	<i>12/12/12 16:14</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>92.5 %</i>		<i>70 - 130</i>		B2L0265	12/12/2012	<i>12/12/12 16:14</i>	
<i>Surrogate: Dibromofluoromethane</i>	<i>95.2 %</i>		<i>70 - 130</i>		B2L0265	12/12/2012	<i>12/12/12 16:14</i>	
<i>Surrogate: Toluene-d8</i>	<i>87.9 %</i>		<i>70 - 130</i>		B2L0265	12/12/2012	<i>12/12/12 16:14</i>	



Certificate of Analysis

Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : Raytheon Main: Fullerton Monthly, 532.1:

Report To : Steve Netto

Reported : 12/28/2012

Client Sample ID EW-02

Lab ID: 1204375-02

Anions by Ion Chromatography EPA 300.0

Analyst: AG

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Bromide	0.18	0.05	NA	1	B2L0332	12/13/2012	12/13/12 14:23	

Total Dissolved Solids (Residue, Filterable) by SM 2540C

Analyst: AG

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Residue, Dissolved	620	10	NA	1	B2L0430	12/17/2012	12/17/12 15:00	

Total Suspended Solids (Residue, Non-Filtrable) by SM 2540D

Analyst: AG

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Residue, Suspended	ND	10	NA	1	B2L0360	12/14/2012	12/14/12 13:12	

Volatile Organic Compounds by EPA 8260

Analyst: SL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	0.50	NA	1	B2L0265	12/12/2012	12/12/12 16:34	
1,1,1-Trichloroethane	ND	0.50	NA	1	B2L0265	12/12/2012	12/12/12 16:34	
1,1,2,2-Tetrachloroethane	ND	0.50	NA	1	B2L0265	12/12/2012	12/12/12 16:34	
1,1,2-Trichloroethane	ND	0.50	NA	1	B2L0265	12/12/2012	12/12/12 16:34	
1,1-Dichloroethane	0.68	0.50	NA	1	B2L0265	12/12/2012	12/12/12 16:34	
1,1-Dichloroethene	72	0.50	NA	1	B2L0265	12/12/2012	12/12/12 16:34	
1,1-Dichloropropene	ND	0.50	NA	1	B2L0265	12/12/2012	12/12/12 16:34	
1,2,3-Trichloropropane	ND	0.50	NA	1	B2L0265	12/12/2012	12/12/12 16:34	
1,2,3-Trichlorobenzene	ND	0.50	NA	1	B2L0265	12/12/2012	12/12/12 16:34	
1,2,4-Trichlorobenzene	ND	0.50	NA	1	B2L0265	12/12/2012	12/12/12 16:34	
1,2,4-Trimethylbenzene	ND	0.50	NA	1	B2L0265	12/12/2012	12/12/12 16:34	
1,2-Dibromo-3-chloropropane	ND	0.50	NA	1	B2L0265	12/12/2012	12/12/12 16:34	
1,2-Dibromoethane	ND	0.50	NA	1	B2L0265	12/12/2012	12/12/12 16:34	
1,2-Dichlorobenzene	ND	0.50	NA	1	B2L0265	12/12/2012	12/12/12 16:34	
1,2-Dichloroethane	ND	0.50	NA	1	B2L0265	12/12/2012	12/12/12 16:34	
1,2-Dichloropropane	ND	0.50	NA	1	B2L0265	12/12/2012	12/12/12 16:34	
1,3,5-Trimethylbenzene	ND	0.50	NA	1	B2L0265	12/12/2012	12/12/12 16:34	
1,3-Dichlorobenzene	ND	0.50	NA	1	B2L0265	12/12/2012	12/12/12 16:34	
1,3-Dichloropropane	ND	0.50	NA	1	B2L0265	12/12/2012	12/12/12 16:34	



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Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego, CA 92122

Project Number : Raytheon Main: Fullerton Monthly, 532.1:

Report To : Steve Netto

Reported : 12/28/2012

Client Sample ID EW-02

Lab ID: 1204375-02

Volatile Organic Compounds by EPA 8260

Analyst: SL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,4-Dichlorobenzene	ND	0.50	NA	1	B2L0265	12/12/2012	12/12/12 16:34	
2,2-Dichloropropane	ND	0.50	NA	1	B2L0265	12/12/2012	12/12/12 16:34	
2-Chlorotoluene	ND	0.50	NA	1	B2L0265	12/12/2012	12/12/12 16:34	
4-Chlorotoluene	ND	0.50	NA	1	B2L0265	12/12/2012	12/12/12 16:34	
4-Isopropyltoluene	ND	0.50	NA	1	B2L0265	12/12/2012	12/12/12 16:34	
Benzene	ND	0.50	NA	1	B2L0265	12/12/2012	12/12/12 16:34	
Bromobenzene	ND	0.50	NA	1	B2L0265	12/12/2012	12/12/12 16:34	
Bromodichloromethane	ND	0.50	NA	1	B2L0265	12/12/2012	12/12/12 16:34	
Bromoform	ND	0.50	NA	1	B2L0265	12/12/2012	12/12/12 16:34	
Bromomethane	ND	0.50	NA	1	B2L0265	12/12/2012	12/12/12 16:34	
Carbon tetrachloride	ND	0.50	NA	1	B2L0265	12/12/2012	12/12/12 16:34	
Chlorobenzene	ND	0.50	NA	1	B2L0265	12/12/2012	12/12/12 16:34	
Chloroethane	ND	0.50	NA	1	B2L0265	12/12/2012	12/12/12 16:34	
Chloroform	ND	0.50	NA	1	B2L0265	12/12/2012	12/12/12 16:34	
Chloromethane	1.2	0.50	NA	1	B2L0265	12/12/2012	12/12/12 16:34	
cis-1,2-Dichloroethene	ND	0.50	NA	1	B2L0265	12/12/2012	12/12/12 16:34	
cis-1,3-Dichloropropene	ND	0.50	NA	1	B2L0265	12/12/2012	12/12/12 16:34	
Dibromochloromethane	ND	0.50	NA	1	B2L0265	12/12/2012	12/12/12 16:34	
Dibromomethane	ND	0.50	NA	1	B2L0265	12/12/2012	12/12/12 16:34	
Dichlorodifluoromethane	ND	0.50	NA	1	B2L0265	12/12/2012	12/12/12 16:34	
Ethylbenzene	ND	0.50	NA	1	B2L0265	12/12/2012	12/12/12 16:34	
Hexachlorobutadiene	ND	0.50	NA	1	B2L0265	12/12/2012	12/12/12 16:34	
Isopropylbenzene	ND	0.50	NA	1	B2L0265	12/12/2012	12/12/12 16:34	
m,p-Xylene	ND	1.0	NA	1	B2L0265	12/12/2012	12/12/12 16:34	
Methylene chloride	ND	1.0	NA	1	B2L0265	12/12/2012	12/12/12 16:34	
n-Butylbenzene	ND	0.50	NA	1	B2L0265	12/12/2012	12/12/12 16:34	
n-Propylbenzene	ND	0.50	NA	1	B2L0265	12/12/2012	12/12/12 16:34	
Naphthalene	ND	0.50	NA	1	B2L0265	12/12/2012	12/12/12 16:34	
o-Xylene	ND	0.50	NA	1	B2L0265	12/12/2012	12/12/12 16:34	
sec-Butylbenzene	ND	0.50	NA	1	B2L0265	12/12/2012	12/12/12 16:34	
Styrene	ND	0.50	NA	1	B2L0265	12/12/2012	12/12/12 16:34	
tert-Butylbenzene	ND	0.50	NA	1	B2L0265	12/12/2012	12/12/12 16:34	
Tetrachloroethene	ND	0.50	NA	1	B2L0265	12/12/2012	12/12/12 16:34	
Toluene	ND	0.50	NA	1	B2L0265	12/12/2012	12/12/12 16:34	
trans-1,2-Dichloroethene	ND	0.50	NA	1	B2L0265	12/12/2012	12/12/12 16:34	
Trichloroethene	ND	0.50	NA	1	B2L0265	12/12/2012	12/12/12 16:34	
Trichlorofluoromethane	ND	0.50	NA	1	B2L0265	12/12/2012	12/12/12 16:34	



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Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego, CA 92122

Project Number : Raytheon Main: Fullerton Monthly, 532.1:

Report To : Steve Netto

Reported : 12/28/2012

Client Sample ID EW-02

Lab ID: 1204375-02

Volatile Organic Compounds by EPA 8260

Analyst: SL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Vinyl chloride	ND	0.50	NA	1	B2L0265	12/12/2012	12/12/12 16:34	
Surrogate: 1,2-Dichloroethane-d4	75.2 %		70 - 130		B2L0265	12/12/2012	12/12/12 16:34	
Surrogate: 4-Bromofluorobenzene	92.0 %		70 - 130		B2L0265	12/12/2012	12/12/12 16:34	
Surrogate: Dibromofluoromethane	93.6 %		70 - 130		B2L0265	12/12/2012	12/12/12 16:34	
Surrogate: Toluene-d8	84.5 %		70 - 130		B2L0265	12/12/2012	12/12/12 16:34	

1,4-Dioxane by EPA 8270: Isotope Dilution Technique

Analyst: BB

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,4-Dioxane	17	2.0	NA	1	B2L0305	12/13/2012	12/14/12 15:02	
Surrogate: 1,2-Dichlorobenzene-d4	81.6 %		37 - 93		B2L0305	12/13/2012	12/14/12 15:02	
Surrogate: 2-Fluorobiphenyl	98.3 %		51 - 100		B2L0305	12/13/2012	12/14/12 15:02	
Surrogate: 4-Terphenyl-d14	147 %		58 - 113		B2L0305	12/13/2012	12/14/12 15:02	S10
Surrogate: Nitrobenzene-d5	91.8 %		39 - 95		B2L0305	12/13/2012	12/14/12 15:02	



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9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : Raytheon Main: Fullerton Monthly, 532.1:

Report To : Steve Netto

Reported : 12/28/2012

Client Sample ID PF

Lab ID: 1204375-03

Total Suspended Solids (Residue, Non-Filtrable) by SM 2540D

Analyst: AG

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Residue, Suspended	ND	10	NA	1	B2L0360	12/14/2012	12/14/12 13:14	



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San Diego , CA 92122

Project Number : Raytheon Main: Fullerton Monthly, 532.1:

Report To : Steve Netto

Reported : 12/28/2012

Client Sample ID POX

Lab ID: 1204375-04

Anions by Ion Chromatography EPA 300.0

Analyst: AG

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Bromide	0.17	0.05	NA	1	B2L0332	12/13/2012	12/13/12 10:31	

Total Dissolved Solids (Residue, Filterable) by SM 2540C

Analyst: AG

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Residue, Dissolved	600	10	NA	1	B2L0430	12/17/2012	12/17/12 15:02	

Volatile Organic Compounds by EPA 8260

Analyst: SL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	0.50	NA	1	B2L0265	12/12/2012	12/12/12 16:54	
1,1,1-Trichloroethane	ND	0.50	NA	1	B2L0265	12/12/2012	12/12/12 16:54	
1,1,2,2-Tetrachloroethane	ND	0.50	NA	1	B2L0265	12/12/2012	12/12/12 16:54	
1,1,2-Trichloroethane	ND	0.50	NA	1	B2L0265	12/12/2012	12/12/12 16:54	
1,1-Dichloroethane	ND	0.50	NA	1	B2L0265	12/12/2012	12/12/12 16:54	
1,1-Dichloroethene	ND	0.50	NA	1	B2L0265	12/12/2012	12/12/12 16:54	
1,1-Dichloropropene	ND	0.50	NA	1	B2L0265	12/12/2012	12/12/12 16:54	
1,2,3-Trichloropropane	ND	0.50	NA	1	B2L0265	12/12/2012	12/12/12 16:54	
1,2,3-Trichlorobenzene	ND	0.50	NA	1	B2L0265	12/12/2012	12/12/12 16:54	
1,2,4-Trichlorobenzene	ND	0.50	NA	1	B2L0265	12/12/2012	12/12/12 16:54	
1,2,4-Trimethylbenzene	ND	0.50	NA	1	B2L0265	12/12/2012	12/12/12 16:54	
1,2-Dibromo-3-chloropropane	ND	0.50	NA	1	B2L0265	12/12/2012	12/12/12 16:54	
1,2-Dibromoethane	ND	0.50	NA	1	B2L0265	12/12/2012	12/12/12 16:54	
1,2-Dichlorobenzene	ND	0.50	NA	1	B2L0265	12/12/2012	12/12/12 16:54	
1,2-Dichloroethane	ND	0.50	NA	1	B2L0265	12/12/2012	12/12/12 16:54	
1,2-Dichloropropane	ND	0.50	NA	1	B2L0265	12/12/2012	12/12/12 16:54	
1,3,5-Trimethylbenzene	ND	0.50	NA	1	B2L0265	12/12/2012	12/12/12 16:54	
1,3-Dichlorobenzene	ND	0.50	NA	1	B2L0265	12/12/2012	12/12/12 16:54	
1,3-Dichloropropane	ND	0.50	NA	1	B2L0265	12/12/2012	12/12/12 16:54	
1,4-Dichlorobenzene	ND	0.50	NA	1	B2L0265	12/12/2012	12/12/12 16:54	
2,2-Dichloropropane	ND	0.50	NA	1	B2L0265	12/12/2012	12/12/12 16:54	
2-Chlorotoluene	ND	0.50	NA	1	B2L0265	12/12/2012	12/12/12 16:54	
4-Chlorotoluene	ND	0.50	NA	1	B2L0265	12/12/2012	12/12/12 16:54	
4-Isopropyltoluene	ND	0.50	NA	1	B2L0265	12/12/2012	12/12/12 16:54	
Benzene	ND	0.50	NA	1	B2L0265	12/12/2012	12/12/12 16:54	



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Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego, CA 92122

Project Number : Raytheon Main: Fullerton Monthly, 532.1:

Report To : Steve Netto

Reported : 12/28/2012

Client Sample ID POX

Lab ID: 1204375-04

Volatile Organic Compounds by EPA 8260

Analyst: SL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Bromobenzene	ND	0.50	NA	1	B2L0265	12/12/2012	12/12/12 16:54	
Bromodichloromethane	ND	0.50	NA	1	B2L0265	12/12/2012	12/12/12 16:54	
Bromoform	ND	0.50	NA	1	B2L0265	12/12/2012	12/12/12 16:54	
Bromomethane	ND	0.50	NA	1	B2L0265	12/12/2012	12/12/12 16:54	
Carbon tetrachloride	ND	0.50	NA	1	B2L0265	12/12/2012	12/12/12 16:54	
Chlorobenzene	ND	0.50	NA	1	B2L0265	12/12/2012	12/12/12 16:54	
Chloroethane	ND	0.50	NA	1	B2L0265	12/12/2012	12/12/12 16:54	
Chloroform	ND	0.50	NA	1	B2L0265	12/12/2012	12/12/12 16:54	
Chloromethane	1.0	0.50	NA	1	B2L0265	12/12/2012	12/12/12 16:54	
cis-1,2-Dichloroethene	ND	0.50	NA	1	B2L0265	12/12/2012	12/12/12 16:54	
cis-1,3-Dichloropropene	ND	0.50	NA	1	B2L0265	12/12/2012	12/12/12 16:54	
Dibromochloromethane	ND	0.50	NA	1	B2L0265	12/12/2012	12/12/12 16:54	
Dibromomethane	ND	0.50	NA	1	B2L0265	12/12/2012	12/12/12 16:54	
Dichlorodifluoromethane	ND	0.50	NA	1	B2L0265	12/12/2012	12/12/12 16:54	
Ethylbenzene	ND	0.50	NA	1	B2L0265	12/12/2012	12/12/12 16:54	
Hexachlorobutadiene	ND	0.50	NA	1	B2L0265	12/12/2012	12/12/12 16:54	
Isopropylbenzene	ND	0.50	NA	1	B2L0265	12/12/2012	12/12/12 16:54	
m,p-Xylene	ND	1.0	NA	1	B2L0265	12/12/2012	12/12/12 16:54	
Methylene chloride	ND	1.0	NA	1	B2L0265	12/12/2012	12/12/12 16:54	
n-Butylbenzene	ND	0.50	NA	1	B2L0265	12/12/2012	12/12/12 16:54	
n-Propylbenzene	ND	0.50	NA	1	B2L0265	12/12/2012	12/12/12 16:54	
Naphthalene	ND	0.50	NA	1	B2L0265	12/12/2012	12/12/12 16:54	
o-Xylene	ND	0.50	NA	1	B2L0265	12/12/2012	12/12/12 16:54	
sec-Butylbenzene	ND	0.50	NA	1	B2L0265	12/12/2012	12/12/12 16:54	
Styrene	ND	0.50	NA	1	B2L0265	12/12/2012	12/12/12 16:54	
tert-Butylbenzene	ND	0.50	NA	1	B2L0265	12/12/2012	12/12/12 16:54	
Tetrachloroethene	ND	0.50	NA	1	B2L0265	12/12/2012	12/12/12 16:54	
Toluene	ND	0.50	NA	1	B2L0265	12/12/2012	12/12/12 16:54	
trans-1,2-Dichloroethene	ND	0.50	NA	1	B2L0265	12/12/2012	12/12/12 16:54	
Trichloroethene	ND	0.50	NA	1	B2L0265	12/12/2012	12/12/12 16:54	
Trichlorofluoromethane	ND	0.50	NA	1	B2L0265	12/12/2012	12/12/12 16:54	
Vinyl chloride	ND	0.50	NA	1	B2L0265	12/12/2012	12/12/12 16:54	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>73.9 %</i>		<i>70 - 130</i>		B2L0265	12/12/2012	<i>12/12/12 16:54</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>89.9 %</i>		<i>70 - 130</i>		B2L0265	12/12/2012	<i>12/12/12 16:54</i>	
<i>Surrogate: Dibromofluoromethane</i>	<i>92.0 %</i>		<i>70 - 130</i>		B2L0265	12/12/2012	<i>12/12/12 16:54</i>	
<i>Surrogate: Toluene-d8</i>	<i>82.8 %</i>		<i>70 - 130</i>		B2L0265	12/12/2012	<i>12/12/12 16:54</i>	



Certificate of Analysis

Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego, CA 92122

Project Number : Raytheon Main: Fullerton Monthly, 532.1:

Report To : Steve Netto

Reported : 12/28/2012

Client Sample ID POX

Lab ID: 1204375-04

1,4-Dioxane by EPA 8270/SIM: Isotope Dilution Technique

Analyst: BB

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,4-Dioxane	ND	0.20	0.13	1	B2L0376	12/17/2012	12/17/12 11:03	
Surrogate: 1,2-Dichlorobenzene-d4	78.3 %		36 - 107		B2L0376	12/17/2012	12/17/12 11:03	
Surrogate: 2-Fluorobiphenyl	81.2 %		42 - 120		B2L0376	12/17/2012	12/17/12 11:03	
Surrogate: 4-Terphenyl-d14	108 %		67 - 142		B2L0376	12/17/2012	12/17/12 11:03	
Surrogate: Nitrobenzene-d5	92.1 %		36 - 130		B2L0376	12/17/2012	12/17/12 11:03	



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Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego, CA 92122

Project Number : Raytheon Main: Fullerton Monthly, 532.1:

Report To : Steve Netto

Reported : 12/28/2012

Client Sample ID CBT

Lab ID: 1204375-05

Volatile Organic Compounds by EPA 8260

Analyst: SL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	0.50	NA	1	B2L0265	12/12/2012	12/12/12 17:14	
1,1,1-Trichloroethane	ND	0.50	NA	1	B2L0265	12/12/2012	12/12/12 17:14	
1,1,2,2-Tetrachloroethane	ND	0.50	NA	1	B2L0265	12/12/2012	12/12/12 17:14	
1,1,2-Trichloroethane	ND	0.50	NA	1	B2L0265	12/12/2012	12/12/12 17:14	
1,1-Dichloroethane	0.50	0.50	NA	1	B2L0265	12/12/2012	12/12/12 17:14	
1,1-Dichloroethene	ND	0.50	NA	1	B2L0265	12/12/2012	12/12/12 17:14	
1,1-Dichloropropene	ND	0.50	NA	1	B2L0265	12/12/2012	12/12/12 17:14	
1,2,3-Trichloropropane	ND	0.50	NA	1	B2L0265	12/12/2012	12/12/12 17:14	
1,2,3-Trichlorobenzene	ND	0.50	NA	1	B2L0265	12/12/2012	12/12/12 17:14	
1,2,4-Trichlorobenzene	ND	0.50	NA	1	B2L0265	12/12/2012	12/12/12 17:14	
1,2,4-Trimethylbenzene	ND	0.50	NA	1	B2L0265	12/12/2012	12/12/12 17:14	
1,2-Dibromo-3-chloropropane	ND	0.50	NA	1	B2L0265	12/12/2012	12/12/12 17:14	
1,2-Dibromoethane	ND	0.50	NA	1	B2L0265	12/12/2012	12/12/12 17:14	
1,2-Dichlorobenzene	ND	0.50	NA	1	B2L0265	12/12/2012	12/12/12 17:14	
1,2-Dichloroethane	ND	0.50	NA	1	B2L0265	12/12/2012	12/12/12 17:14	
1,2-Dichloropropane	ND	0.50	NA	1	B2L0265	12/12/2012	12/12/12 17:14	
1,3,5-Trimethylbenzene	ND	0.50	NA	1	B2L0265	12/12/2012	12/12/12 17:14	
1,3-Dichlorobenzene	ND	0.50	NA	1	B2L0265	12/12/2012	12/12/12 17:14	
1,3-Dichloropropane	ND	0.50	NA	1	B2L0265	12/12/2012	12/12/12 17:14	
1,4-Dichlorobenzene	ND	0.50	NA	1	B2L0265	12/12/2012	12/12/12 17:14	
2,2-Dichloropropane	ND	0.50	NA	1	B2L0265	12/12/2012	12/12/12 17:14	
2-Chlorotoluene	ND	0.50	NA	1	B2L0265	12/12/2012	12/12/12 17:14	
4-Chlorotoluene	ND	0.50	NA	1	B2L0265	12/12/2012	12/12/12 17:14	
4-Isopropyltoluene	ND	0.50	NA	1	B2L0265	12/12/2012	12/12/12 17:14	
Benzene	ND	0.50	NA	1	B2L0265	12/12/2012	12/12/12 17:14	
Bromobenzene	ND	0.50	NA	1	B2L0265	12/12/2012	12/12/12 17:14	
Bromodichloromethane	ND	0.50	NA	1	B2L0265	12/12/2012	12/12/12 17:14	
Bromoform	ND	0.50	NA	1	B2L0265	12/12/2012	12/12/12 17:14	
Bromomethane	ND	0.50	NA	1	B2L0265	12/12/2012	12/12/12 17:14	
Carbon tetrachloride	ND	0.50	NA	1	B2L0265	12/12/2012	12/12/12 17:14	
Chlorobenzene	ND	0.50	NA	1	B2L0265	12/12/2012	12/12/12 17:14	
Chloroethane	ND	0.50	NA	1	B2L0265	12/12/2012	12/12/12 17:14	
Chloroform	ND	0.50	NA	1	B2L0265	12/12/2012	12/12/12 17:14	
Chloromethane	0.70	0.50	NA	1	B2L0265	12/12/2012	12/12/12 17:14	
cis-1,2-Dichloroethene	ND	0.50	NA	1	B2L0265	12/12/2012	12/12/12 17:14	
cis-1,3-Dichloropropene	ND	0.50	NA	1	B2L0265	12/12/2012	12/12/12 17:14	
Dibromochloromethane	ND	0.50	NA	1	B2L0265	12/12/2012	12/12/12 17:14	



Certificate of Analysis

Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : Raytheon Main: Fullerton Monthly, 532.1:

Report To : Steve Netto

Reported : 12/28/2012

Client Sample ID CBT

Lab ID: 1204375-05

Volatile Organic Compounds by EPA 8260

Analyst: SL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Dibromomethane	ND	0.50	NA	1	B2L0265	12/12/2012	12/12/12 17:14	
Dichlorodifluoromethane	ND	0.50	NA	1	B2L0265	12/12/2012	12/12/12 17:14	
Ethylbenzene	ND	0.50	NA	1	B2L0265	12/12/2012	12/12/12 17:14	
Hexachlorobutadiene	ND	0.50	NA	1	B2L0265	12/12/2012	12/12/12 17:14	
Isopropylbenzene	ND	0.50	NA	1	B2L0265	12/12/2012	12/12/12 17:14	
m,p-Xylene	ND	1.0	NA	1	B2L0265	12/12/2012	12/12/12 17:14	
Methylene chloride	ND	1.0	NA	1	B2L0265	12/12/2012	12/12/12 17:14	
n-Butylbenzene	ND	0.50	NA	1	B2L0265	12/12/2012	12/12/12 17:14	
n-Propylbenzene	ND	0.50	NA	1	B2L0265	12/12/2012	12/12/12 17:14	
Naphthalene	ND	0.50	NA	1	B2L0265	12/12/2012	12/12/12 17:14	
o-Xylene	ND	0.50	NA	1	B2L0265	12/12/2012	12/12/12 17:14	
sec-Butylbenzene	ND	0.50	NA	1	B2L0265	12/12/2012	12/12/12 17:14	
Styrene	ND	0.50	NA	1	B2L0265	12/12/2012	12/12/12 17:14	
tert-Butylbenzene	ND	0.50	NA	1	B2L0265	12/12/2012	12/12/12 17:14	
Tetrachloroethene	ND	0.50	NA	1	B2L0265	12/12/2012	12/12/12 17:14	
Toluene	ND	0.50	NA	1	B2L0265	12/12/2012	12/12/12 17:14	
trans-1,2-Dichloroethene	ND	0.50	NA	1	B2L0265	12/12/2012	12/12/12 17:14	
Trichloroethene	ND	0.50	NA	1	B2L0265	12/12/2012	12/12/12 17:14	
Trichlorofluoromethane	ND	0.50	NA	1	B2L0265	12/12/2012	12/12/12 17:14	
Vinyl chloride	ND	0.50	NA	1	B2L0265	12/12/2012	12/12/12 17:14	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>77.0 %</i>		<i>70 - 130</i>		B2L0265	12/12/2012	<i>12/12/12 17:14</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>90.0 %</i>		<i>70 - 130</i>		B2L0265	12/12/2012	<i>12/12/12 17:14</i>	
<i>Surrogate: Dibromofluoromethane</i>	<i>94.4 %</i>		<i>70 - 130</i>		B2L0265	12/12/2012	<i>12/12/12 17:14</i>	
<i>Surrogate: Toluene-d8</i>	<i>82.2 %</i>		<i>70 - 130</i>		B2L0265	12/12/2012	<i>12/12/12 17:14</i>	



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Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : Raytheon Main: Fullerton Monthly, 532.1:

Report To : Steve Netto

Reported : 12/28/2012

Client Sample ID CEFF

Lab ID: 1204375-06

Anions by Ion Chromatography EPA 300.0

Analyst: AG

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Bromide	0.17	0.05	NA	1	B2L0332	12/13/2012	12/13/12 10:43	

Total Dissolved Solids (Residue, Filterable) by SM 2540C

Analyst: AG

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Residue, Dissolved	600	10	NA	1	B2L0430	12/17/2012	12/17/12 15:04	

Volatile Organic Compounds by EPA 8260

Analyst: SL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	0.50	NA	1	B2L0265	12/12/2012	12/12/12 17:35	
1,1,1-Trichloroethane	ND	0.50	NA	1	B2L0265	12/12/2012	12/12/12 17:35	
1,1,2,2-Tetrachloroethane	ND	0.50	NA	1	B2L0265	12/12/2012	12/12/12 17:35	
1,1,2-Trichloroethane	ND	0.50	NA	1	B2L0265	12/12/2012	12/12/12 17:35	
1,1-Dichloroethane	0.56	0.50	NA	1	B2L0265	12/12/2012	12/12/12 17:35	
1,1-Dichloroethene	ND	0.50	NA	1	B2L0265	12/12/2012	12/12/12 17:35	
1,1-Dichloropropene	ND	0.50	NA	1	B2L0265	12/12/2012	12/12/12 17:35	
1,2,3-Trichloropropane	ND	0.50	NA	1	B2L0265	12/12/2012	12/12/12 17:35	
1,2,3-Trichlorobenzene	ND	0.50	NA	1	B2L0265	12/12/2012	12/12/12 17:35	
1,2,4-Trichlorobenzene	ND	0.50	NA	1	B2L0265	12/12/2012	12/12/12 17:35	
1,2,4-Trimethylbenzene	ND	0.50	NA	1	B2L0265	12/12/2012	12/12/12 17:35	
1,2-Dibromo-3-chloropropane	ND	0.50	NA	1	B2L0265	12/12/2012	12/12/12 17:35	
1,2-Dibromoethane	ND	0.50	NA	1	B2L0265	12/12/2012	12/12/12 17:35	
1,2-Dichlorobenzene	ND	0.50	NA	1	B2L0265	12/12/2012	12/12/12 17:35	
1,2-Dichloroethane	ND	0.50	NA	1	B2L0265	12/12/2012	12/12/12 17:35	
1,2-Dichloropropane	ND	0.50	NA	1	B2L0265	12/12/2012	12/12/12 17:35	
1,3,5-Trimethylbenzene	ND	0.50	NA	1	B2L0265	12/12/2012	12/12/12 17:35	
1,3-Dichlorobenzene	ND	0.50	NA	1	B2L0265	12/12/2012	12/12/12 17:35	
1,3-Dichloropropane	ND	0.50	NA	1	B2L0265	12/12/2012	12/12/12 17:35	
1,4-Dichlorobenzene	ND	0.50	NA	1	B2L0265	12/12/2012	12/12/12 17:35	
2,2-Dichloropropane	ND	0.50	NA	1	B2L0265	12/12/2012	12/12/12 17:35	
2-Chlorotoluene	ND	0.50	NA	1	B2L0265	12/12/2012	12/12/12 17:35	
4-Chlorotoluene	ND	0.50	NA	1	B2L0265	12/12/2012	12/12/12 17:35	
4-Isopropyltoluene	ND	0.50	NA	1	B2L0265	12/12/2012	12/12/12 17:35	
Benzene	ND	0.50	NA	1	B2L0265	12/12/2012	12/12/12 17:35	



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Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : Raytheon Main: Fullerton Monthly, 532.1:

Report To : Steve Netto

Reported : 12/28/2012

Client Sample ID CEFF

Lab ID: 1204375-06

Volatile Organic Compounds by EPA 8260

Analyst: SL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Bromobenzene	ND	0.50	NA	1	B2L0265	12/12/2012	12/12/12 17:35	
Bromodichloromethane	ND	0.50	NA	1	B2L0265	12/12/2012	12/12/12 17:35	
Bromoform	ND	0.50	NA	1	B2L0265	12/12/2012	12/12/12 17:35	
Bromomethane	ND	0.50	NA	1	B2L0265	12/12/2012	12/12/12 17:35	
Carbon tetrachloride	ND	0.50	NA	1	B2L0265	12/12/2012	12/12/12 17:35	
Chlorobenzene	ND	0.50	NA	1	B2L0265	12/12/2012	12/12/12 17:35	
Chloroethane	ND	0.50	NA	1	B2L0265	12/12/2012	12/12/12 17:35	
Chloroform	ND	0.50	NA	1	B2L0265	12/12/2012	12/12/12 17:35	
Chloromethane	1.0	0.50	NA	1	B2L0265	12/12/2012	12/12/12 17:35	
cis-1,2-Dichloroethene	ND	0.50	NA	1	B2L0265	12/12/2012	12/12/12 17:35	
cis-1,3-Dichloropropene	ND	0.50	NA	1	B2L0265	12/12/2012	12/12/12 17:35	
Dibromochloromethane	ND	0.50	NA	1	B2L0265	12/12/2012	12/12/12 17:35	
Dibromomethane	ND	0.50	NA	1	B2L0265	12/12/2012	12/12/12 17:35	
Dichlorodifluoromethane	ND	0.50	NA	1	B2L0265	12/12/2012	12/12/12 17:35	
Ethylbenzene	ND	0.50	NA	1	B2L0265	12/12/2012	12/12/12 17:35	
Hexachlorobutadiene	ND	0.50	NA	1	B2L0265	12/12/2012	12/12/12 17:35	
Isopropylbenzene	ND	0.50	NA	1	B2L0265	12/12/2012	12/12/12 17:35	
m,p-Xylene	ND	1.0	NA	1	B2L0265	12/12/2012	12/12/12 17:35	
Methylene chloride	ND	1.0	NA	1	B2L0265	12/12/2012	12/12/12 17:35	
n-Butylbenzene	ND	0.50	NA	1	B2L0265	12/12/2012	12/12/12 17:35	
n-Propylbenzene	ND	0.50	NA	1	B2L0265	12/12/2012	12/12/12 17:35	
Naphthalene	ND	0.50	NA	1	B2L0265	12/12/2012	12/12/12 17:35	
o-Xylene	ND	0.50	NA	1	B2L0265	12/12/2012	12/12/12 17:35	
sec-Butylbenzene	ND	0.50	NA	1	B2L0265	12/12/2012	12/12/12 17:35	
Styrene	ND	0.50	NA	1	B2L0265	12/12/2012	12/12/12 17:35	
tert-Butylbenzene	ND	0.50	NA	1	B2L0265	12/12/2012	12/12/12 17:35	
Tetrachloroethene	ND	0.50	NA	1	B2L0265	12/12/2012	12/12/12 17:35	
Toluene	ND	0.50	NA	1	B2L0265	12/12/2012	12/12/12 17:35	
trans-1,2-Dichloroethene	ND	0.50	NA	1	B2L0265	12/12/2012	12/12/12 17:35	
Trichloroethene	ND	0.50	NA	1	B2L0265	12/12/2012	12/12/12 17:35	
Trichlorofluoromethane	ND	0.50	NA	1	B2L0265	12/12/2012	12/12/12 17:35	
Vinyl chloride	ND	0.50	NA	1	B2L0265	12/12/2012	12/12/12 17:35	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>75.9 %</i>		<i>70 - 130</i>		B2L0265	12/12/2012	<i>12/12/12 17:35</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>88.9 %</i>		<i>70 - 130</i>		B2L0265	12/12/2012	<i>12/12/12 17:35</i>	
<i>Surrogate: Dibromofluoromethane</i>	<i>92.6 %</i>		<i>70 - 130</i>		B2L0265	12/12/2012	<i>12/12/12 17:35</i>	
<i>Surrogate: Toluene-d8</i>	<i>81.0 %</i>		<i>70 - 130</i>		B2L0265	12/12/2012	<i>12/12/12 17:35</i>	



Certificate of Analysis

Hargis & Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego , CA 92122

Project Number : Raytheon Main: Fullerton Monthly, 532.1:
 Report To : Steve Netto
 Reported : 12/28/2012

QUALITY CONTROL SECTION

Anions by Ion Chromatography EPA 300.0 - Quality Control

Analyte	Result (mg/L)	PQL (mg/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B2L0332 - No_Prep_IC_1									
Blank (B2L0332-BLK1)				Prepared: 12/13/2012 Analyzed: 12/13/2012					
Bromide	ND	0.05			NR				
LCS (B2L0332-BS1)				Prepared: 12/13/2012 Analyzed: 12/13/2012					
Bromide	0.921500	0.05	1.00000		92.2	90 - 110			
Duplicate (B2L0332-DUP1)				Source: 1204375-02 Prepared: 12/13/2012 Analyzed: 12/13/2012					
Bromide	0.170500	0.05		0.180200	NR		5.53	20	
Matrix Spike (B2L0332-MS1)				Source: 1204375-02 Prepared: 12/13/2012 Analyzed: 12/13/2012					
Bromide	2.47920	0.05	2.50000	0.180200	92.0	80 - 120			
Matrix Spike Dup (B2L0332-MSD1)				Source: 1204375-02 Prepared: 12/13/2012 Analyzed: 12/13/2012					
Bromide	2.51250	0.05	2.50000	0.180200	93.3	80 - 120	1.33	20	



Certificate of Analysis

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9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : Raytheon Main: Fullerton Monthly, 532.1:

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Total Dissolved Solids (Residue, Filterable) by SM 2540C - Quality Control

Analyte	Result (mg/L)	PQL (mg/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B2L0430 - No_Prep_WC_1

Blank (B2L0430-BLK1)

Prepared: 12/17/2012 Analyzed: 12/17/2012

Residue, Dissolved

ND

10

NR

LCS (B2L0430-BS1)

Prepared: 12/17/2012 Analyzed: 12/17/2012

Residue, Dissolved

944.000

10

970.000

97.3

80 - 120

Duplicate (B2L0430-DUP1)

Source: 1204383-01

Prepared: 12/17/2012 Analyzed: 12/17/2012

Residue, Dissolved

479.000

10

475.000

NR

0.839

10



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Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : Raytheon Main: Fullerton Monthly, 532.1:

Report To : Steve Netto

Reported : 12/28/2012

Total Suspended Solids (Residue, Non-Filtrable) by SM 2540D - Quality Control

Analyte	Result (mg/L)	PQL (mg/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B2L0360 - No_Prep_WC_1

Blank (B2L0360-BLK1)

Prepared: 12/14/2012 Analyzed: 12/14/2012

Residue, Suspended

ND

10

NR

LCS (B2L0360-BS1)

Prepared: 12/14/2012 Analyzed: 12/14/2012

Residue, Suspended

90.0000

10

96.6000

93.2

80 - 120

Duplicate (B2L0360-DUP1)

Source: 1204425-02

Prepared: 12/14/2012 Analyzed: 12/14/2012

Residue, Suspended

ND

10

ND

NR

10



Certificate of Analysis

Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : Raytheon Main: Fullerton Monthly, 532.1:

Report To : Steve Netto

Reported : 12/28/2012

Volatile Organic Compounds by EPA 8260 - Quality Control

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec % Rec	% Rec Limits	RPD RPD	RPD Limit	Notes
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Batch B2L0265 - MSVOAW_LL

Blank (B2L0265-BLK1)

Prepared: 12/12/2012 Analyzed: 12/12/2012

1,1,1,2-Tetrachloroethane	ND	0.50			NR				
1,1,1-Trichloroethane	ND	0.50			NR				
1,1,2,2-Tetrachloroethane	ND	0.50			NR				
1,1,2-Trichloroethane	ND	0.50			NR				
1,1-Dichloroethane	ND	0.50			NR				
1,1-Dichloroethene	ND	0.50			NR				
1,1-Dichloropropene	ND	0.50			NR				
1,2,3-Trichloropropane	ND	0.50			NR				
1,2,3-Trichlorobenzene	ND	0.50			NR				
1,2,4-Trichlorobenzene	ND	0.50			NR				
1,2,4-Trimethylbenzene	ND	0.50			NR				
1,2-Dibromo-3-chloropropane	ND	0.50			NR				
1,2-Dibromoethane	ND	0.50			NR				
1,2-Dichlorobenzene	ND	0.50			NR				
1,2-Dichloroethane	ND	0.50			NR				
1,2-Dichloropropane	ND	0.50			NR				
1,3,5-Trimethylbenzene	ND	0.50			NR				
1,3-Dichlorobenzene	ND	0.50			NR				
1,3-Dichloropropane	ND	0.50			NR				
1,4-Dichlorobenzene	ND	0.50			NR				
2,2-Dichloropropane	ND	0.50			NR				
2-Chlorotoluene	ND	0.50			NR				
4-Chlorotoluene	ND	0.50			NR				
4-Isopropyltoluene	ND	0.50			NR				
Benzene	ND	0.50			NR				
Bromobenzene	ND	0.50			NR				
Bromodichloromethane	ND	0.50			NR				
Bromoform	ND	0.50			NR				
Bromomethane	ND	0.50			NR				
Carbon tetrachloride	ND	0.50			NR				
Chlorobenzene	ND	0.50			NR				
Chloroethane	ND	0.50			NR				
Chloroform	ND	0.50			NR				
Chloromethane	ND	0.50			NR				
cis-1,2-Dichloroethene	ND	0.50			NR				
cis-1,3-Dichloropropene	ND	0.50			NR				
Dibromochloromethane	ND	0.50			NR				
Dibromomethane	ND	0.50			NR				
Dichlorodifluoromethane	ND	0.50			NR				
Ethylbenzene	ND	0.50			NR				
Hexachlorobutadiene	ND	0.50			NR				



Certificate of Analysis

Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : Raytheon Main: Fullerton Monthly, 532.1:

Report To : Steve Netto

Reported : 12/28/2012

Volatile Organic Compounds by EPA 8260 - Quality Control (cont'd)

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B2L0265 - MSVOAW_LL (continued)

Blank (B2L0265-BLK1) - Continued

Prepared: 12/12/2012 Analyzed: 12/12/2012

Isopropylbenzene	ND	0.50				NR			
m,p-Xylene	ND	1.0				NR			
Methylene chloride	ND	1.0				NR			
n-Butylbenzene	ND	0.50				NR			
n-Propylbenzene	ND	0.50				NR			
Naphthalene	ND	0.50				NR			
o-Xylene	ND	0.50				NR			
sec-Butylbenzene	ND	0.50				NR			
Styrene	ND	0.50				NR			
tert-Butylbenzene	ND	0.50				NR			
Tetrachloroethene	ND	0.50				NR			
Toluene	ND	0.50				NR			
trans-1,2-Dichloroethene	ND	0.50				NR			
Trichloroethene	ND	0.50				NR			
Trichlorofluoromethane	ND	0.50				NR			
Vinyl chloride	ND	0.50				NR			

<i>Surrogate: 1,2-Dichloroethane-d4</i>	26.77		25.0000		107	70 - 130			
<i>Surrogate: 4-Bromofluorobenzene</i>	24.77		25.0000		99.1	70 - 130			
<i>Surrogate: Dibromofluoromethane</i>	28.32		25.0000		113	70 - 130			
<i>Surrogate: Toluene-d8</i>	23.60		25.0000		94.4	70 - 130			

LCS (B2L0265-BS1)

Prepared: 12/12/2012 Analyzed: 12/12/2012

1,1-Dichloroethene	20.4100		20.0000		102	70 - 130			
Benzene	43.3100		40.0000		108	70 - 130			
Chlorobenzene	19.7300		20.0000		98.6	70 - 130			
MTBE	18.8500		20.0000		94.2	70 - 130			
Toluene	40.8500		40.0000		102	70 - 130			
Trichloroethene	18.2000		20.0000		91.0	70 - 130			

<i>Surrogate: 1,2-Dichloroethane-d4</i>	22.41		25.0000		89.6	70 - 130			
<i>Surrogate: 4-Bromofluorobenzene</i>	22.58		25.0000		90.3	70 - 130			
<i>Surrogate: Dibromofluoromethane</i>	23.61		25.0000		94.4	70 - 130			
<i>Surrogate: Toluene-d8</i>	23.81		25.0000		95.2	70 - 130			

LCS Dup (B2L0265-BSD1)

Prepared: 12/12/2012 Analyzed: 12/12/2012

1,1-Dichloroethene	23.0400		20.0000		115	70 - 130	12.1	20	
Benzene	43.3300		40.0000		108	70 - 130	0.0462	20	
Chlorobenzene	18.8000		20.0000		94.0	70 - 130	4.83	20	
MTBE	18.1000		20.0000		90.5	70 - 130	4.06	20	
Toluene	41.0900		40.0000		103	70 - 130	0.586	20	
Trichloroethene	18.6400		20.0000		93.2	70 - 130	2.39	20	

<i>Surrogate: 1,2-Dichloroethane-d4</i>	22.82		25.0000		91.3	70 - 130			
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Certificate of Analysis

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San Diego, CA 92122

Project Number : Raytheon Main: Fullerton Monthly, 532.1:

Report To : Steve Netto

Reported : 12/28/2012

Volatile Organic Compounds by EPA 8260 - Quality Control (cont'd)

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B2L0265 - MSVOAW_LL (continued)

LCS Dup (B2L0265-BS1) - Continued

Prepared: 12/12/2012 Analyzed: 12/12/2012

Surrogate: 4-Bromofluorobenzene	21.86		25.0000		87.4	70 - 130			
Surrogate: Dibromofluoromethane	23.77		25.0000		95.1	70 - 130			
Surrogate: Toluene-d8	24.03		25.0000		96.1	70 - 130			



Certificate of Analysis

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9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : Raytheon Main: Fullerton Monthly, 532.1:

Report To : Steve Netto

Reported : 12/28/2012

1,4-Dioxane by EPA 8270: Isotope Dilution Technique - Quality Control

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec % Rec	% Rec Limits	RPD RPD	RPD Limit	Notes
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Batch B2L0305 - MSSEMI_ISOTOPEDILN

Blank (B2L0305-BLK1)

Prepared: 12/13/2012 Analyzed: 12/13/2012

1,4-Dioxane	ND	2.0			NR				
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	89.78		100.000		89.8	37 - 93			
<i>Surrogate: 2-Fluorobiphenyl</i>	107.3		100.000		107	51 - 100			S1
<i>Surrogate: 4-Terphenyl-d14</i>	140.9		100.000		141	58 - 113			S1
<i>Surrogate: Nitrobenzene-d5</i>	101.3		100.000		101	39 - 95			S1

LCS (B2L0305-BS1)

Prepared: 12/13/2012 Analyzed: 12/14/2012

1,4-Dioxane	82.0500	2.0	100.000		82.0	70 - 130			
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	77.26		100.000		77.3	37 - 93			
<i>Surrogate: 2-Fluorobiphenyl</i>	100.2		100.000		100	51 - 100			S5
<i>Surrogate: 4-Terphenyl-d14</i>	103.3		100.000		103	58 - 113			
<i>Surrogate: Nitrobenzene-d5</i>	89.75		100.000		89.8	39 - 95			

LCS Dup (B2L0305-BSD1)

Prepared: 12/13/2012 Analyzed: 12/14/2012

1,4-Dioxane	82.9800	2.0	100.000		83.0	70 - 130	1.13	20	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	76.72		100.000		76.7	37 - 93			
<i>Surrogate: 2-Fluorobiphenyl</i>	100.3		100.000		100	51 - 100			S5
<i>Surrogate: 4-Terphenyl-d14</i>	104.1		100.000		104	58 - 113			
<i>Surrogate: Nitrobenzene-d5</i>	90.59		100.000		90.6	39 - 95			



Certificate of Analysis

Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : Raytheon Main: Fullerton Monthly, 532.1:

Report To : Steve Netto

Reported : 12/28/2012

1,4-Dioxane by EPA 8270/SIM: Isotope Dilution Technique - Quality Control

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec % Rec	% Rec Limits	RPD RPD	RPD Limit	Notes
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Batch B2L0376 - MSSEMI_ISOTOPEDILN

Blank (B2L0376-BLK1)

Prepared: 12/17/2012 Analyzed: 12/17/2012

1,4-Dioxane	ND	0.20			NR				
Surrogate: 1,2-Dichlorobenzene-d4	0.7592		1.00000		75.9	36 - 107			
Surrogate: 2-Fluorobiphenyl	0.7793		1.00000		77.9	42 - 120			
Surrogate: 4-Terphenyl-d14	1.058		1.00000		106	67 - 142			
Surrogate: Nitrobenzene-d5	0.8274		1.00000		82.7	36 - 130			

LCS (B2L0376-BS1)

Prepared: 12/17/2012 Analyzed: 12/17/2012

1,4-Dioxane	0.948060	0.20	1.00000		94.8	70 - 130			
Surrogate: 1,2-Dichlorobenzene-d4	0.5064		1.00000		50.6	36 - 107			
Surrogate: 2-Fluorobiphenyl	0.7712		1.00000		77.1	42 - 120			
Surrogate: 4-Terphenyl-d14	0.9884		1.00000		98.8	67 - 142			
Surrogate: Nitrobenzene-d5	0.6902		1.00000		69.0	36 - 130			

LCS Dup (B2L0376-BSD1)

Prepared: 12/17/2012 Analyzed: 12/17/2012

1,4-Dioxane	0.947360	0.20	1.00000		94.7	70 - 130	0.0739	20	
Surrogate: 1,2-Dichlorobenzene-d4	0.7064		1.00000		70.6	36 - 107			
Surrogate: 2-Fluorobiphenyl	0.7896		1.00000		79.0	42 - 120			
Surrogate: 4-Terphenyl-d14	0.9695		1.00000		97.0	67 - 142			
Surrogate: Nitrobenzene-d5	0.7233		1.00000		72.3	36 - 130			



Certificate of Analysis

Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : Raytheon Main: Fullerton Monthly, 532.1:

Report To : Steve Netto

Reported : 12/28/2012

Notes and Definitions

S5	Surrogate recovery was above laboratory acceptance limit. Sample reanalysis showed the same high recovery.
S10	Surrogate recovery outside of laboratory acceptance limit possibly due to matrix interference.
S1	Surrogate recovery was above laboratory acceptance limit. No target analyte was detected in the sample.
ND	Analyte not detected at or above reporting limit
PQL	Practical Quantitation Limit
MDL	Method Detection Limit
NR	Not Reported
RPD	Relative Percent Difference
CA1	CA-NELAP (CDPH)
CA2	CA-ELAP (CDPH)
OR1	OR-NELAP (OSPHL)
TX1	TX-NELAP (TCEQ)

Notes:

- (1) The reported MDL and PQL are based on prep ratio variation and analytical dilution.
- (2) The suffix [2C] of specific analytes signifies that the reported result is taken from the instrument's second column.

Bromate by EPA 317
 Ion Chromatography with Post-Column Derivatization-Visible Absorption

Column: Dionex AS9-HC/AG9-HSC
 Eluent: 10 mM Na₂CO₃
 Flow: 1.5 mL/min
 Injection: 250 µL
 Detection: Post-column derivatization, Visible detection, 450 nm

Sample preparation: The undiluted samples were treated with a Dionex OnGuard II H cartridge to remove excess basic cations. One sample required dilution with water by 1:5 for analysis. The detection limit is adjusted for the dilution.

Parts Per Billion (µg/L)

<u>Sample ID</u>	<u>Result</u>	<u>Detection Limit</u>
1204375-02 / EW-02	ND	0.5
1204375-04 / POX	8	3
1204375-06 / CEFF	5.5	0.5
Method Blank	ND	0.5

Date Analyzed: 12-26-12

Quality Control Summary

Sample ID: 1204375-06 / CEFF

<u>Analyte</u>	<u>Sample Result</u>	<u>Spike Conc</u>	<u>Spike Result</u>	<u>Spike % Rec</u>	<u>Spike Duplicate Result</u>	<u>Spike Duplicate % Rec</u>	<u>Spike RPD</u>
Bromate	5.5	20.0	22.9	87	20.9	77	9
QC Guidelines				75-125		75-125	NMT 10


ADVANCED TECHNOLOGY
 LABORATORIES

SUBCONTRACT ORDER

Work Order: 1204375

SENDING LABORATORY:


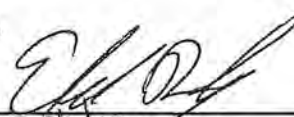
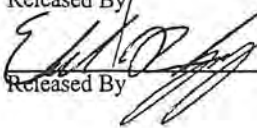
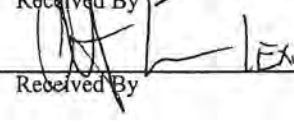
Advanced Technology Laboratories
 3275 Walnut Avenue
 Signal Hill, CA 90755
 Phone: 562.989.4045
 Fax: 562.989.6348
 Project Manager: Rachele Arada

RECEIVING LABORATORY:

Exova Inc.
 9240 Santa Fe Springs Road
 Santa Fe Springs, CA 90670
 Phone : (562) 948-2225
 Fax: (562) 948-5850
 PO#: SC07751 - STANDARD TAT *RT*

IMPORTANT : Please include Work Order # and PO # in your invoice.

Analysis	Due	Expires	Sampled	Comments
ATL Lab#: 1204375-02 / EW-02 317.0 1-Poly Unpres - 125mL	12/26/12 17:00	12/11/12 09:35	Groundwater 12/10/12 09:35	BROMATE
ATL Lab#: 1204375-04 / POX 317.0 1-Poly Unpres - 125mL	12/26/12 17:00	12/11/12 08:30	Groundwater 12/10/12 08:30	
ATL Lab#: 1204375-06 / CEFF 317.0 1-Poly Unpres - 125mL	12/26/12 17:00	12/11/12 08:50	Groundwater 12/10/12 08:50	

 Released By	12/11/12 09:25 Date	 Received By	12/11/12 9:26 Date
 Released By	12/11/12 11:55 Date	 Received By	12-11-12 11:58am Date

CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST FORM

PROJECT NAME		PROJECT No./TASK No.		SAMPLE CONTAINERS				ANALYSIS REQUESTED				ESTIMATED CONCENTRATION RANGE (ppb) FOR VOAS	SPECIAL HANDLING	LABORATORY INFORMATION															
Raytheon Main: Fullerton Monthly		532.15												Advanced Technology Laboratories															
PROJECT MANAGER Chris Ross		Phone No. 858-455-6500												3275 Walnut Ave															
QA MANAGER Steve Netto		Fax No. 858-455-6533												Signal Hill CA 90755															
SAMPLER (SIGNATURE)		SAMPLER (PRINTED)												Attn: Racheille Araga															
		MARCOS RODRIGUEZ																											
LAB ID	SAMPLE ID	SAMPLE COLLECTION		MATRIX			PRESERVATION				40 ml VOA	125 ml Poly	250 ml Poly	1 L Amber	VOCS by EPA 8260B	1,4-Dioxane by EPA 8270SIM	1,4-Dioxane by EPA 8270MOD	Bromate by EPA 317	Bromide by EPA 300	TDS by EPA SM2540C	TSS by EPA SM2540D	0-10	10-100	100-1,000	>1,000	REMARKS			
		Date	Time	Soil	Ground-water	Surface-water	Lab H2O	HCl	HNO3	NaOH																	H2SO4	Ice	
124078-1	TB-121012	12/10/12	07:30				X	X			X																		Please include
-2	EW-02		09:35	X			X				X	22	1	X	X	X	X	X	X	X	X	X							mrodriguez@hargis.com
-3	PF		08:25	X								1								X								in lab report	
-4	POX		08:30	X			X				X	2	1	X	X	X												distribution list	
-5	CBT		08:45	X			X				X																		
-6	CEFF		08:50	X			X				X	2	1	X	X	X													Set 1,4-Dioxane
																													MDL to 1.0 ppm

Total number of Containers per analysis: 4652 Total No. of Containers: 27

Relinquished by:	Date	Received by:	Date
	12/10/12		12/10/12
Company	Time	Company	Time
HNA	11:20	HNA	11:20
Relinquished by:	Date	Received by:	Date
	12/10/12		12/10/12
Company	Time	Company	Time
HNA	12:39	ATL	12:39

INSTRUCTIONS

- Fill out form completely except for shaded areas (lab use only); sign only after verified for completeness.
- Complete in ballpoint pen. Draw one line through errors, initial and date correction.
- Indicate number of sample containers in analysis request space; indicate choice with ✓ or x.
- Note applicable preservatives, special instructions, and deviations from typical environmental samples.
- Consult project QA documents for specific instructions.

Sample Receipt:

No. of containers correct received good condition/cold

custody seals secure conforms to COC document

Temp. @ receipt 3.8 °C

Shipment Method: DELIVER

Send Results to: Steve Netto

9171 TOWNE CENTRE DRIVE, SUITE 375
SAN DIEGO, CA 92122 (858) 455-8500

1640 SOUTH STAPLEY DRIVE, SUITE 124
MESA, AZ 85204 (480) 345-0888

1820 EAST RIVER ROAD, SUITE 220
TUCSON, AZ 85718 (520) 881-7300

Send invoice to San Diego, CA
Attn: Accounts Payable

December 19, 2012

Steve Netto
Hargis & Associates, Inc.
9171 Towne Centre Drive, Suite 375
San Diego, CA 92122
Tel: (619) 249-3166
Fax: (858) 455-6533



Re: ATL Work Order Number : 1204376
Client Reference : Raytheon Main: Fullerton OCSD, 532.15

Enclosed are the results for sample(s) received on December 10, 2012 by Advanced Technology Laboratories. The sample(s) are tested for the parameters as indicated on the enclosed chain of custody in accordance with applicable laboratory certifications. The laboratory results contained in this report specifically pertains to the sample(s) submitted.

Thank you for the opportunity to serve the needs of your company. If you have any questions, please feel free to contact me or your Project Manager.

Sincerely,

Eddie Rodriguez
Laboratory Director

The cover letter and the case narrative are an integral part of this analytical report and its absence renders the report invalid. Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Conference and/or applicable state-specific certification programs. The report cannot be reproduced without written permission from the client and Advanced Technology Laboratories.



Certificate of Analysis

Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : Raytheon Main: Fullerton OCSD, 532.15

Report To : Steve Netto

Reported : 12/19/2012

SUMMARY OF SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
TB-121012	1204376-01	Lab H2O	12/10/12 7:30	12/10/12 12:39
CEFF	1204376-02	Groundwater	12/10/12 8:50	12/10/12 12:39



Certificate of Analysis

Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego, CA 92122

Project Number : Raytheon Main: Fullerton OCSD, 532.15

Report To : Steve Netto

Reported : 12/19/2012

Client Sample ID TB-121012

Lab ID: 1204376-01

Volatile Organic Compounds by EPA 624

Analyst: SL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1-Trichloroethane	ND	5.0	NA	1	B2L0265	12/12/2012	12/12/12 16:14	
1,1,2,2-Tetrachloroethane	ND	5.0	NA	1	B2L0265	12/12/2012	12/12/12 16:14	
1,1,2-Trichloroethane	ND	5.0	NA	1	B2L0265	12/12/2012	12/12/12 16:14	
1,1-Dichloroethane	ND	5.0	NA	1	B2L0265	12/12/2012	12/12/12 16:14	
1,1-Dichloroethene	ND	5.0	NA	1	B2L0265	12/12/2012	12/12/12 16:14	
1,2-Dichlorobenzene	ND	5.0	NA	1	B2L0265	12/12/2012	12/12/12 16:14	
1,2-Dichloroethane	ND	5.0	NA	1	B2L0265	12/12/2012	12/12/12 16:14	
1,2-Dichloropropane	ND	5.0	NA	1	B2L0265	12/12/2012	12/12/12 16:14	
1,3-Dichlorobenzene	ND	5.0	NA	1	B2L0265	12/12/2012	12/12/12 16:14	
1,4-Dichlorobenzene	ND	5.0	NA	1	B2L0265	12/12/2012	12/12/12 16:14	
2-Chloroethyl vinyl ether	ND	5.0	NA	1	B2L0265	12/12/2012	12/12/12 16:14	
Acrolein	ND	50	NA	1	B2L0265	12/12/2012	12/12/12 16:14	
Acrylonitrile	ND	50	NA	1	B2L0265	12/12/2012	12/12/12 16:14	
Benzene	ND	5.0	NA	1	B2L0265	12/12/2012	12/12/12 16:14	
Bromodichloromethane	ND	5.0	NA	1	B2L0265	12/12/2012	12/12/12 16:14	
Bromoform	ND	5.0	NA	1	B2L0265	12/12/2012	12/12/12 16:14	
Bromomethane	ND	5.0	NA	1	B2L0265	12/12/2012	12/12/12 16:14	
Carbon tetrachloride	ND	5.0	NA	1	B2L0265	12/12/2012	12/12/12 16:14	
Chlorobenzene	ND	5.0	NA	1	B2L0265	12/12/2012	12/12/12 16:14	
Chloroethane	ND	5.0	NA	1	B2L0265	12/12/2012	12/12/12 16:14	
Chloroform	ND	5.0	NA	1	B2L0265	12/12/2012	12/12/12 16:14	
Chloromethane	ND	5.0	NA	1	B2L0265	12/12/2012	12/12/12 16:14	
cis-1,3-Dichloropropene	ND	5.0	NA	1	B2L0265	12/12/2012	12/12/12 16:14	
Dibromochloromethane	ND	5.0	NA	1	B2L0265	12/12/2012	12/12/12 16:14	
Ethylbenzene	ND	5.0	NA	1	B2L0265	12/12/2012	12/12/12 16:14	
m,p-Xylene	ND	10	NA	1	B2L0265	12/12/2012	12/12/12 16:14	
Methylene chloride	ND	5.0	NA	1	B2L0265	12/12/2012	12/12/12 16:14	
o-Xylene	ND	5.0	NA	1	B2L0265	12/12/2012	12/12/12 16:14	
Tetrachloroethene	ND	5.0	NA	1	B2L0265	12/12/2012	12/12/12 16:14	
Toluene	ND	5.0	NA	1	B2L0265	12/12/2012	12/12/12 16:14	
trans-1,2-Dichloroethene	ND	5.0	NA	1	B2L0265	12/12/2012	12/12/12 16:14	
trans-1,3-Dichloropropene	ND	50	NA	1	B2L0265	12/12/2012	12/12/12 16:14	
Trichloroethene	ND	5.0	NA	1	B2L0265	12/12/2012	12/12/12 16:14	
Trichlorofluoromethane	ND	5.0	NA	1	B2L0265	12/12/2012	12/12/12 16:14	
Vinyl chloride	ND	5.0	NA	1	B2L0265	12/12/2012	12/12/12 16:14	
Surrogate: 1,2-Dichloroethane-d4	75.8 %		70 - 130		B2L0265	12/12/2012	12/12/12 16:14	
Surrogate: 4-Bromofluorobenzene	92.5 %		70 - 130		B2L0265	12/12/2012	12/12/12 16:14	



Certificate of Analysis

Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego, CA 92122

Project Number : Raytheon Main: Fullerton OCSD, 532.15

Report To : Steve Netto

Reported : 12/19/2012

Client Sample ID TB-121012

Lab ID: 1204376-01

Volatile Organic Compounds by EPA 624

Analyst: SL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
<i>Surrogate: Dibromofluoromethane</i>	95.2 %	70 - 130			B2L0265	12/12/2012	12/12/12 16:14	
<i>Surrogate: Toluene-d8</i>	87.9 %	70 - 130			B2L0265	12/12/2012	12/12/12 16:14	



Certificate of Analysis

Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego, CA 92122

Project Number : Raytheon Main: Fullerton OCSD, 532.15

Report To : Steve Netto

Reported : 12/19/2012

Client Sample ID CEFF

Lab ID: 1204376-02

Volatile Organic Compounds by EPA 624

Analyst: SL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1-Trichloroethane	ND	5.0	NA	1	B2L0265	12/12/2012	12/12/12 17:55	
1,1,2,2-Tetrachloroethane	ND	5.0	NA	1	B2L0265	12/12/2012	12/12/12 17:55	
1,1,2-Trichloroethane	ND	5.0	NA	1	B2L0265	12/12/2012	12/12/12 17:55	
1,1-Dichloroethane	ND	5.0	NA	1	B2L0265	12/12/2012	12/12/12 17:55	
1,1-Dichloroethene	ND	5.0	NA	1	B2L0265	12/12/2012	12/12/12 17:55	
1,2-Dichlorobenzene	ND	5.0	NA	1	B2L0265	12/12/2012	12/12/12 17:55	
1,2-Dichloroethane	ND	5.0	NA	1	B2L0265	12/12/2012	12/12/12 17:55	
1,2-Dichloropropane	ND	5.0	NA	1	B2L0265	12/12/2012	12/12/12 17:55	
1,3-Dichlorobenzene	ND	5.0	NA	1	B2L0265	12/12/2012	12/12/12 17:55	
1,4-Dichlorobenzene	ND	5.0	NA	1	B2L0265	12/12/2012	12/12/12 17:55	
2-Chloroethyl vinyl ether	ND	5.0	NA	1	B2L0265	12/12/2012	12/12/12 17:55	
Acrolein	ND	50	NA	1	B2L0265	12/12/2012	12/12/12 17:55	
Acrylonitrile	ND	50	NA	1	B2L0265	12/12/2012	12/12/12 17:55	
Benzene	ND	5.0	NA	1	B2L0265	12/12/2012	12/12/12 17:55	
Bromodichloromethane	ND	5.0	NA	1	B2L0265	12/12/2012	12/12/12 17:55	
Bromoform	ND	5.0	NA	1	B2L0265	12/12/2012	12/12/12 17:55	
Bromomethane	ND	5.0	NA	1	B2L0265	12/12/2012	12/12/12 17:55	
Carbon tetrachloride	ND	5.0	NA	1	B2L0265	12/12/2012	12/12/12 17:55	
Chlorobenzene	ND	5.0	NA	1	B2L0265	12/12/2012	12/12/12 17:55	
Chloroethane	ND	5.0	NA	1	B2L0265	12/12/2012	12/12/12 17:55	
Chloroform	ND	5.0	NA	1	B2L0265	12/12/2012	12/12/12 17:55	
Chloromethane	ND	5.0	NA	1	B2L0265	12/12/2012	12/12/12 17:55	
cis-1,3-Dichloropropene	ND	5.0	NA	1	B2L0265	12/12/2012	12/12/12 17:55	
Dibromochloromethane	ND	5.0	NA	1	B2L0265	12/12/2012	12/12/12 17:55	
Ethylbenzene	ND	5.0	NA	1	B2L0265	12/12/2012	12/12/12 17:55	
m,p-Xylene	ND	10	NA	1	B2L0265	12/12/2012	12/12/12 17:55	
Methylene chloride	ND	5.0	NA	1	B2L0265	12/12/2012	12/12/12 17:55	
o-Xylene	ND	5.0	NA	1	B2L0265	12/12/2012	12/12/12 17:55	
Tetrachloroethene	ND	5.0	NA	1	B2L0265	12/12/2012	12/12/12 17:55	
Toluene	ND	5.0	NA	1	B2L0265	12/12/2012	12/12/12 17:55	
trans-1,2-Dichloroethene	ND	5.0	NA	1	B2L0265	12/12/2012	12/12/12 17:55	
trans-1,3-Dichloropropene	ND	50	NA	1	B2L0265	12/12/2012	12/12/12 17:55	
Trichloroethene	ND	5.0	NA	1	B2L0265	12/12/2012	12/12/12 17:55	
Trichlorofluoromethane	ND	5.0	NA	1	B2L0265	12/12/2012	12/12/12 17:55	
Vinyl chloride	ND	5.0	NA	1	B2L0265	12/12/2012	12/12/12 17:55	
Surrogate: 1,2-Dichloroethane-d4	80.1 %		70 - 130		B2L0265	12/12/2012	12/12/12 17:55	
Surrogate: 4-Bromofluorobenzene	93.4 %		70 - 130		B2L0265	12/12/2012	12/12/12 17:55	



Certificate of Analysis

Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : Raytheon Main: Fullerton OCSD, 532.15

Report To : Steve Netto

Reported : 12/19/2012

Client Sample ID CEFF

Lab ID: 1204376-02

Volatile Organic Compounds by EPA 624

Analyst: SL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
<i>Surrogate: Dibromofluoromethane</i>	99.1 %		70 - 130		B2L0265	12/12/2012	12/12/12 17:55	
<i>Surrogate: Toluene-d8</i>	83.4 %		70 - 130		B2L0265	12/12/2012	12/12/12 17:55	

Total Dissolved Solids (Residue, Filterable) by SM 2540C

Analyst: AG

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Residue, Dissolved	610	10	NA	1	B2L0430	12/17/2012	12/17/12 15:06	

Total Metals by ICP-AES EPA 6010B

Analyst: PT

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Selenium	ND	0.010	NA	1	B2L0345	12/14/2012	12/17/12 10:19	

1,4-Dioxane by EPA 8270/SIM: Isotope Dilution Technique

Analyst: BB

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,4-Dioxane	0.13	0.20	0.13	1	B2L0376	12/17/2012	12/17/12 11:29	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	84.4 %		36 - 107		B2L0376	12/17/2012	12/17/12 11:29	
<i>Surrogate: 2-Fluorobiphenyl</i>	88.1 %		42 - 120		B2L0376	12/17/2012	12/17/12 11:29	
<i>Surrogate: 4-Terphenyl-d14</i>	106 %		67 - 142		B2L0376	12/17/2012	12/17/12 11:29	
<i>Surrogate: Nitrobenzene-d5</i>	93.3 %		36 - 130		B2L0376	12/17/2012	12/17/12 11:29	



Certificate of Analysis

Hargis & Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego , CA 92122

Project Number : Raytheon Main: Fullerton OCSD, 532.15
 Report To : Steve Netto
 Reported : 12/19/2012

QUALITY CONTROL SECTION

Volatile Organic Compounds by EPA 624 - Quality Control

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B2L0265 - MSVOAW_LL

Blank (B2L0265-BLK1)

Prepared: 12/12/2012 Analyzed: 12/12/2012

1,1,1-Trichloroethane	ND	5.0				NR			
1,1,2,2-Tetrachloroethane	ND	5.0				NR			
1,1,2-Trichloroethane	ND	5.0				NR			
1,1-Dichloroethane	ND	5.0				NR			
1,1-Dichloroethene	ND	5.0				NR			
1,2-Dichlorobenzene	ND	5.0				NR			
1,2-Dichloroethane	ND	5.0				NR			
1,2-Dichloropropane	ND	5.0				NR			
1,3-Dichlorobenzene	ND	5.0				NR			
1,4-Dichlorobenzene	ND	5.0				NR			
2-Chloroethyl vinyl ether	ND	5.0				NR			
Acrolein	ND	50				NR			
Acrylonitrile	ND	50				NR			
Benzene	ND	5.0				NR			
Bromodichloromethane	ND	5.0				NR			
Bromoform	ND	5.0				NR			
Bromomethane	ND	5.0				NR			
Carbon tetrachloride	ND	5.0				NR			
Chlorobenzene	ND	5.0				NR			
Chloroethane	ND	5.0				NR			
Chloroform	ND	5.0				NR			
Chloromethane	ND	5.0				NR			
cis-1,3-Dichloropropene	ND	5.0				NR			
Dibromochloromethane	ND	5.0				NR			
Ethylbenzene	ND	5.0				NR			
m,p-Xylene	ND	10				NR			
Methylene chloride	ND	5.0				NR			
o-Xylene	ND	5.0				NR			
Tetrachloroethene	ND	5.0				NR			
Toluene	ND	5.0				NR			
trans-1,2-Dichloroethene	ND	5.0				NR			
trans-1,3-Dichloropropene	ND	50				NR			
Trichloroethene	ND	5.0				NR			
Trichlorofluoromethane	ND	5.0				NR			
Vinyl chloride	ND	5.0				NR			

<i>Surrogate: 1,2-Dichloroethane-d4</i>	26.77		25.0000		107	70 - 130			
<i>Surrogate: 4-Bromofluorobenzene</i>	24.77		25.0000		99.1	70 - 130			
<i>Surrogate: Dibromofluoromethane</i>	28.32		25.0000		113	70 - 130			
<i>Surrogate: Toluene-d8</i>	23.60		25.0000		94.4	70 - 130			



Certificate of Analysis

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9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : Raytheon Main: Fullerton OCSD, 532.15

Report To : Steve Netto

Reported : 12/19/2012

Volatile Organic Compounds by EPA 624 - Quality Control (cont'd)

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B2L0265 - MSVOAW_LL (continued)

LCS (B2L0265-BS1)

Prepared: 12/12/2012 Analyzed: 12/12/2012

1,1-Dichloroethene	20.4100		20.0000		102	70 - 130			
Benzene	43.3100		40.0000		108	70 - 130			
Chlorobenzene	19.7300		20.0000		98.6	70 - 130			
Toluene	40.8500		40.0000		102	70 - 130			
Trichloroethene	18.2000		20.0000		91.0	70 - 130			
<hr/>									
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>22.41</i>		<i>25.0000</i>		<i>89.6</i>	<i>70 - 130</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>22.58</i>		<i>25.0000</i>		<i>90.3</i>	<i>70 - 130</i>			
<i>Surrogate: Dibromofluoromethane</i>	<i>23.61</i>		<i>25.0000</i>		<i>94.4</i>	<i>70 - 130</i>			
<i>Surrogate: Toluene-d8</i>	<i>23.81</i>		<i>25.0000</i>		<i>95.2</i>	<i>70 - 130</i>			

LCS Dup (B2L0265-BS1)

Prepared: 12/12/2012 Analyzed: 12/12/2012

1,1-Dichloroethene	23.0400		20.0000		115	70 - 130	12.1	20	
Benzene	43.3300		40.0000		108	70 - 130	0.0462	20	
Chlorobenzene	18.8000		20.0000		94.0	70 - 130	4.83	20	
Toluene	41.0900		40.0000		103	70 - 130	0.586	20	
Trichloroethene	18.6400		20.0000		93.2	70 - 130	2.39	20	
<hr/>									
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>22.82</i>		<i>25.0000</i>		<i>91.3</i>	<i>70 - 130</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>21.86</i>		<i>25.0000</i>		<i>87.4</i>	<i>70 - 130</i>			
<i>Surrogate: Dibromofluoromethane</i>	<i>23.77</i>		<i>25.0000</i>		<i>95.1</i>	<i>70 - 130</i>			
<i>Surrogate: Toluene-d8</i>	<i>24.03</i>		<i>25.0000</i>		<i>96.1</i>	<i>70 - 130</i>			



Certificate of Analysis

Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : Raytheon Main: Fullerton OCSD, 532.15

Report To : Steve Netto

Reported : 12/19/2012

Total Dissolved Solids (Residue, Filterable) by SM 2540C - Quality Control

Analyte	Result (mg/L)	PQL (mg/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B2L0430 - No_Prep_WC_1

Blank (B2L0430-BLK1)

Prepared: 12/17/2012 Analyzed: 12/17/2012

Residue, Dissolved

ND

10

NR

LCS (B2L0430-BS1)

Prepared: 12/17/2012 Analyzed: 12/17/2012

Residue, Dissolved

944.000

10

970.000

97.3

80 - 120

Duplicate (B2L0430-DUP1)

Source: 1204383-01

Prepared: 12/17/2012 Analyzed: 12/17/2012

Residue, Dissolved

479.000

10

475.000

NR

0.839

10



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 San Diego , CA 92122

Project Number : Raytheon Main: Fullerton OCSD, 532.15
 Report To : Steve Netto
 Reported : 12/19/2012

Total Metals by ICP-AES EPA 6010B - Quality Control

Analyte	Result (mg/L)	PQL (mg/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B2L0345 - EPA 3010A

Blank (B2L0345-BLK1)

Prepared: 12/14/2012 Analyzed: 12/17/2012

Selenium	ND	0.010				NR		
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LCS (B2L0345-BS1)

Prepared: 12/14/2012 Analyzed: 12/17/2012

Selenium	0.913156	0.010	1.00000		91.3	80 - 120		
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Matrix Spike (B2L0345-MS1)

Source: 1204366-01

Prepared: 12/14/2012 Analyzed: 12/17/2012

Selenium	2.31546	0.010	2.50000	0.009316	92.2	69 - 123		
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Matrix Spike Dup (B2L0345-MSD1)

Source: 1204366-01

Prepared: 12/14/2012 Analyzed: 12/17/2012

Selenium	2.30044	0.010	2.50000	0.009316	91.6	69 - 123	0.651	20
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San Diego , CA 92122

Project Number : Raytheon Main: Fullerton OCSD, 532.15

Report To : Steve Netto

Reported : 12/19/2012

1,4-Dioxane by EPA 8270/SIM: Isotope Dilution Technique - Quality Control

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec Limits	RPD	RPD Limit	Notes
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Batch B2L0376 - MSSEMI_ISOTOPEDILN

Blank (B2L0376-BLK1)

Prepared: 12/17/2012 Analyzed: 12/17/2012

1,4-Dioxane	ND	0.20		NR				
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	<i>0.7592</i>		<i>1.00000</i>		<i>75.9</i>	<i>36 - 107</i>		
<i>Surrogate: 2-Fluorobiphenyl</i>	<i>0.7793</i>		<i>1.00000</i>		<i>77.9</i>	<i>42 - 120</i>		
<i>Surrogate: 4-Terphenyl-d14</i>	<i>1.058</i>		<i>1.00000</i>		<i>106</i>	<i>67 - 142</i>		
<i>Surrogate: Nitrobenzene-d5</i>	<i>0.8274</i>		<i>1.00000</i>		<i>82.7</i>	<i>36 - 130</i>		

LCS (B2L0376-BS1)

Prepared: 12/17/2012 Analyzed: 12/17/2012

1,4-Dioxane	0.948060	0.20	1.00000		94.8	70 - 130		
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	<i>0.5064</i>		<i>1.00000</i>		<i>50.6</i>	<i>36 - 107</i>		
<i>Surrogate: 2-Fluorobiphenyl</i>	<i>0.7712</i>		<i>1.00000</i>		<i>77.1</i>	<i>42 - 120</i>		
<i>Surrogate: 4-Terphenyl-d14</i>	<i>0.9884</i>		<i>1.00000</i>		<i>98.8</i>	<i>67 - 142</i>		
<i>Surrogate: Nitrobenzene-d5</i>	<i>0.6902</i>		<i>1.00000</i>		<i>69.0</i>	<i>36 - 130</i>		

LCS Dup (B2L0376-BSD1)

Prepared: 12/17/2012 Analyzed: 12/17/2012

1,4-Dioxane	0.947360	0.20	1.00000		94.7	70 - 130	0.0739	20
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	<i>0.7064</i>		<i>1.00000</i>		<i>70.6</i>	<i>36 - 107</i>		
<i>Surrogate: 2-Fluorobiphenyl</i>	<i>0.7896</i>		<i>1.00000</i>		<i>79.0</i>	<i>42 - 120</i>		
<i>Surrogate: 4-Terphenyl-d14</i>	<i>0.9695</i>		<i>1.00000</i>		<i>97.0</i>	<i>67 - 142</i>		
<i>Surrogate: Nitrobenzene-d5</i>	<i>0.7233</i>		<i>1.00000</i>		<i>72.3</i>	<i>36 - 130</i>		



Certificate of Analysis

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9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : Raytheon Main: Fullerton OCSD, 532.15

Report To : Steve Netto

Reported : 12/19/2012


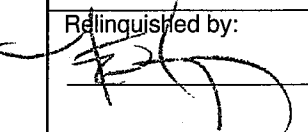
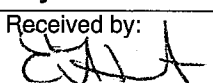
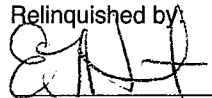
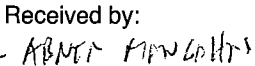
Notes and Definitions

ND	Analyte not detected at or above reporting limit
PQL	Practical Quantitation Limit
MDL	Method Detection Limit
NR	Not Reported
RPD	Relative Percent Difference
CA1	CA-NELAP (CDPH)
CA2	CA-ELAP (CDPH)
OR1	OR-NELAP (OSPHL)
TX1	TX-NELAP (TCEQ)

Notes:

- (1) The reported MDL and PQL are based on prep ratio variation and analytical dilution.
- (2) The suffix [2C] of specific analytes signifies that the reported result is taken from the instrument's second column.

CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST FORM

PROJECT NAME Raytheon Main: Fullerton OCSO		PROJECT No./TASK No. 532.15		SAMPLE CONTAINERS		ANALYSIS REQUESTED		ESTIMATED CONCENTRATION RANGE (ppb) FOR VOAS		SPECIAL HANDLING		LABORATORY INFORMATION			
PROJECT MANAGER CHRIS ROSS		Phone No. 858-455-6500		40 ml VOA 250 ml Poly 500 ml Poly 1 liter Amber VOCs by EPA 624 1,4-dioxane by EPA 8270 SIM Total Se by EPA 6010B TDS by EPA SW2540C		0 - 10		SAME AS OTHER COC		Advanced Technology Laboratories 3275 Walnut Ave. Signal Hill CA 90755 Attn: Rachelle Arada		REMARKS Please include rrodriguez@hargis.com on lab report distribution list Set 1,4-dioxane MDL to 1.0 ppm			
QA MANAGER Steve Netto		Fax No. 858-455-6533													
SAMPLER (SIGNATURE) 		SAMPLER (PRINTED) MARCO RODRIGUEZ													
LAB ID	SAMPLE ID	SAMPLE COLLECTION		MATRIX			PRESERVATION								
		Date	Time	Soil	Ground water	Surface water	Lab H2O	HCl	HNO3	NaOH	H2SO4	Ice			
1204376 - 1	TB-121012	12/10/12	07:30				X	X				X			
1	CEFF	↓	08:50	X			X	X	X	X		X			
Total number of Containers per analysis:				5		1		1		1		Total No. of Containers: <u>8</u>			
Relinquished by:  HAA Company		Date 12/10/12	Received by:  HAA Company		Date 12/10/12	INSTRUCTIONS 1. Fill out form completely except for shaded areas (lab use only); sign only after verified for completeness. 2. Complete in ballpoint pen. Draw one line through errors, initial and date correction. 3. Indicate number of sample containers in analysis request space; indicate choice with ✓ or x. 4. Note applicable preservatives, special instructions, and deviations from typical environmental samples. 5. Consult project QA documents for specific instructions.						Shipment Method: <u>DELIVER</u>			
Time 11:20		Time 11:20		Send Results to: <u>Steve Netto</u> <input checked="" type="checkbox"/> 9171 TOWNE CENTRE DRIVE, SUITE 375 SAN DIEGO, CA 92122 (858) 455-6500 <input type="checkbox"/> 1640 SOUTH STAPLEY DRIVE, SUITE 124 MESA, AZ 85204 (480) 345-0888 <input type="checkbox"/> 1820 EAST RIVER ROAD, SUITE 220 TUCSON, AZ 85718 (520) 881-7300											
Relinquished by:  HAA Company		Date 12/10/12	Received by:  AT L Company		Date 12/10/12	Time 12:39		Sample Receipt: <input type="checkbox"/> No. of containers correct <input type="checkbox"/> custody seals secure		Temp. @ receipt <u>3.8</u> °C <input type="checkbox"/> received good condition/cold <input type="checkbox"/> conforms to COC document		Send invoice to San Diego, CA Attn: Accounts Payable			

APPENDIX A
LABORATORY ANALYTICAL REPORTS
(FIRST QUARTER 2013)

January 21, 2013

Steve Netto
Hargis & Associates, Inc.
9171 Towne Centre Drive, Suite 375
San Diego, CA 92122
Tel: (619) 249-3166
Fax: (858) 455-6533



Re: ATL Work Order Number : 1300023
Client Reference : Raytheon Main: Fullerton Monthly, 532.15

Enclosed are the results for sample(s) received on January 04, 2013 by Advanced Technology Laboratories. The sample(s) are tested for the parameters as indicated on the enclosed chain of custody in accordance with applicable laboratory certifications. The laboratory results contained in this report specifically pertains to the sample(s) submitted.

Thank you for the opportunity to serve the needs of your company. If you have any questions, please feel free to contact me or your Project Manager.

Sincerely,

Eddie Rodriguez
Laboratory Director

The cover letter and the case narrative are an integral part of this analytical report and its absence renders the report invalid. Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Conference and/or applicable state-specific certification programs. The report cannot be reproduced without written permission from the client and Advanced Technology Laboratories.



Certificate of Analysis

Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : Raytheon Main: Fullerton Monthly, 532.1:

Report To : Steve Netto

Reported : 01/21/2013

SUMMARY OF SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
TB-010413	1300023-01	Lab H2O	1/04/13 7:30	1/04/13 9:50
EW-02	1300023-02	Groundwater	1/04/13 8:25	1/04/13 9:50
PF	1300023-03	Groundwater	1/04/13 7:38	1/04/13 9:50
POX	1300023-04	Groundwater	1/04/13 7:46	1/04/13 9:50
CBT	1300023-05	Groundwater	1/04/13 7:55	1/04/13 9:50
CEFF	1300023-06	Groundwater	1/04/13 8:00	1/04/13 9:50

CASE NARRATIVE

The samples for EPA 317 (Bromate) analysis were subcontracted to Exova, Inc. with ELAP Cert.# 2652.



Certificate of Analysis

Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego, CA 92122

Project Number : Raytheon Main: Fullerton Monthly, 532.1:

Report To : Steve Netto

Reported : 01/21/2013

Client Sample ID TB-010413

Lab ID: 1300023-01

Volatile Organic Compounds by EPA 8260

Analyst: SL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 15:02	
1,1,1-Trichloroethane	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 15:02	
1,1,2,2-Tetrachloroethane	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 15:02	
1,1,2-Trichloroethane	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 15:02	
1,1-Dichloroethane	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 15:02	
1,1-Dichloroethene	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 15:02	
1,1-Dichloropropene	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 15:02	
1,2,3-Trichloropropane	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 15:02	
1,2,3-Trichlorobenzene	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 15:02	
1,2,4-Trichlorobenzene	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 15:02	
1,2,4-Trimethylbenzene	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 15:02	
1,2-Dibromo-3-chloropropane	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 15:02	
1,2-Dibromoethane	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 15:02	
1,2-Dichlorobenzene	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 15:02	
1,2-Dichloroethane	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 15:02	
1,2-Dichloropropane	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 15:02	
1,3,5-Trimethylbenzene	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 15:02	
1,3-Dichlorobenzene	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 15:02	
1,3-Dichloropropane	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 15:02	
1,4-Dichlorobenzene	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 15:02	
2,2-Dichloropropane	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 15:02	
2-Chlorotoluene	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 15:02	
4-Chlorotoluene	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 15:02	
4-Isopropyltoluene	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 15:02	
Benzene	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 15:02	
Bromobenzene	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 15:02	
Bromodichloromethane	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 15:02	
Bromoform	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 15:02	
Bromomethane	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 15:02	
Carbon tetrachloride	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 15:02	
Chlorobenzene	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 15:02	
Chloroethane	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 15:02	
Chloroform	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 15:02	
Chloromethane	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 15:02	
cis-1,2-Dichloroethene	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 15:02	
cis-1,3-Dichloropropene	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 15:02	
Dibromochloromethane	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 15:02	



Certificate of Analysis

Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : Raytheon Main: Fullerton Monthly, 532.1:

Report To : Steve Netto

Reported : 01/21/2013

Client Sample ID TB-010413

Lab ID: 1300023-01

Volatile Organic Compounds by EPA 8260

Analyst: SL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Dibromomethane	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 15:02	
Dichlorodifluoromethane	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 15:02	
Ethylbenzene	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 15:02	
Hexachlorobutadiene	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 15:02	
Isopropylbenzene	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 15:02	
m,p-Xylene	ND	1.0	NA	1	B3A0110	01/07/2013	01/07/13 15:02	
Methylene chloride	ND	1.0	NA	1	B3A0110	01/07/2013	01/07/13 15:02	
n-Butylbenzene	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 15:02	
n-Propylbenzene	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 15:02	
Naphthalene	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 15:02	
o-Xylene	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 15:02	
sec-Butylbenzene	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 15:02	
Styrene	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 15:02	
tert-Butylbenzene	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 15:02	
Tetrachloroethene	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 15:02	
Toluene	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 15:02	
trans-1,2-Dichloroethene	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 15:02	
Trichloroethene	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 15:02	
Trichlorofluoromethane	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 15:02	
Vinyl chloride	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 15:02	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>108 %</i>		<i>70 - 130</i>		B3A0110	01/07/2013	<i>01/07/13 15:02</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>103 %</i>		<i>70 - 130</i>		B3A0110	01/07/2013	<i>01/07/13 15:02</i>	
<i>Surrogate: Dibromofluoromethane</i>	<i>108 %</i>		<i>70 - 130</i>		B3A0110	01/07/2013	<i>01/07/13 15:02</i>	
<i>Surrogate: Toluene-d8</i>	<i>110 %</i>		<i>70 - 130</i>		B3A0110	01/07/2013	<i>01/07/13 15:02</i>	



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9171 Towne Centre Drive, Suite 375

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Project Number : Raytheon Main: Fullerton Monthly, 532.1:

Report To : Steve Netto

Reported : 01/21/2013

Client Sample ID EW-02

Lab ID: 1300023-02

Anions by Ion Chromatography EPA 300.0

Analyst: AG

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Bromide	0.07	0.05	NA	1	B3A0180	01/08/2013	01/08/13 11:26	

Total Dissolved Solids (Residue, Filterable) by SM 2540C

Analyst: AG

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Residue, Dissolved	560	10	NA	1	B3A0143	01/07/2013	01/07/13 17:42	

Total Suspended Solids (Residue, Non-Filtrable) by SM 2540D

Analyst: AG

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Residue, Suspended	ND	10	NA	1	B3A0224	01/09/2013	01/09/13 12:20	

Volatile Organic Compounds by EPA 8260

Analyst: SL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 14:22	
1,1,1-Trichloroethane	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 14:22	
1,1,2,2-Tetrachloroethane	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 14:22	
1,1,2-Trichloroethane	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 14:22	
1,1-Dichloroethane	0.60	0.50	NA	1	B3A0110	01/07/2013	01/07/13 14:22	
1,1-Dichloroethene	63	0.50	NA	1	B3A0110	01/07/2013	01/07/13 14:22	
1,1-Dichloropropene	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 14:22	
1,2,3-Trichloropropane	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 14:22	
1,2,3-Trichlorobenzene	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 14:22	
1,2,4-Trichlorobenzene	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 14:22	
1,2,4-Trimethylbenzene	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 14:22	
1,2-Dibromo-3-chloropropane	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 14:22	
1,2-Dibromoethane	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 14:22	
1,2-Dichlorobenzene	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 14:22	
1,2-Dichloroethane	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 14:22	
1,2-Dichloropropane	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 14:22	
1,3,5-Trimethylbenzene	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 14:22	
1,3-Dichlorobenzene	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 14:22	
1,3-Dichloropropane	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 14:22	



Certificate of Analysis

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San Diego , CA 92122

Project Number : Raytheon Main: Fullerton Monthly, 532.1:

Report To : Steve Netto

Reported : 01/21/2013

Client Sample ID EW-02

Lab ID: 1300023-02

Volatile Organic Compounds by EPA 8260

Analyst: SL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,4-Dichlorobenzene	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 14:22	
2,2-Dichloropropane	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 14:22	
2-Chlorotoluene	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 14:22	
4-Chlorotoluene	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 14:22	
4-Isopropyltoluene	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 14:22	
Benzene	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 14:22	
Bromobenzene	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 14:22	
Bromodichloromethane	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 14:22	
Bromoform	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 14:22	
Bromomethane	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 14:22	
Carbon tetrachloride	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 14:22	
Chlorobenzene	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 14:22	
Chloroethane	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 14:22	
Chloroform	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 14:22	
Chloromethane	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 14:22	
cis-1,2-Dichloroethene	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 14:22	
cis-1,3-Dichloropropene	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 14:22	
Dibromochloromethane	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 14:22	
Dibromomethane	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 14:22	
Dichlorodifluoromethane	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 14:22	
Ethylbenzene	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 14:22	
Hexachlorobutadiene	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 14:22	
Isopropylbenzene	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 14:22	
m,p-Xylene	ND	1.0	NA	1	B3A0110	01/07/2013	01/07/13 14:22	
Methylene chloride	ND	1.0	NA	1	B3A0110	01/07/2013	01/07/13 14:22	
n-Butylbenzene	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 14:22	
n-Propylbenzene	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 14:22	
Naphthalene	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 14:22	
o-Xylene	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 14:22	
sec-Butylbenzene	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 14:22	
Styrene	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 14:22	
tert-Butylbenzene	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 14:22	
Tetrachloroethene	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 14:22	
Toluene	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 14:22	
trans-1,2-Dichloroethene	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 14:22	
Trichloroethene	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 14:22	
Trichlorofluoromethane	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 14:22	



Certificate of Analysis

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San Diego, CA 92122

Project Number : Raytheon Main: Fullerton Monthly, 532.1:

Report To : Steve Netto

Reported : 01/21/2013

Client Sample ID EW-02

Lab ID: 1300023-02

Volatile Organic Compounds by EPA 8260

Analyst: SL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Vinyl chloride	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 14:22	
Surrogate: 1,2-Dichloroethane-d4	99.5 %		70 - 130		B3A0110	01/07/2013	01/07/13 14:22	
Surrogate: 4-Bromofluorobenzene	94.2 %		70 - 130		B3A0110	01/07/2013	01/07/13 14:22	
Surrogate: Dibromofluoromethane	101 %		70 - 130		B3A0110	01/07/2013	01/07/13 14:22	
Surrogate: Toluene-d8	101 %		70 - 130		B3A0110	01/07/2013	01/07/13 14:22	

1,4-Dioxane by EPA 8270: Isotope Dilution Technique

Analyst: BB

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,4-Dioxane	10	2.0	NA	1	B3A0287	01/11/2013	01/11/13 19:20	
Surrogate: 1,2-Dichlorobenzene-d4	69.4 %		37 - 93		B3A0287	01/11/2013	01/11/13 19:20	
Surrogate: 2-Fluorobiphenyl	84.4 %		51 - 100		B3A0287	01/11/2013	01/11/13 19:20	
Surrogate: 4-Terphenyl-d14	127 %		58 - 113		B3A0287	01/11/2013	01/11/13 19:20	S10
Surrogate: Nitrobenzene-d5	72.1 %		39 - 95		B3A0287	01/11/2013	01/11/13 19:20	



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Project Number : Raytheon Main: Fullerton Monthly, 532.1:

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Reported : 01/21/2013

Client Sample ID PF

Lab ID: 1300023-03

Total Suspended Solids (Residue, Non-Filtrable) by SM 2540D

Analyst: AG

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Residue, Suspended	ND	10	NA	1	B3A0224	01/09/2013	01/09/13 12:22	



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Reported : 01/21/2013

Client Sample ID POX

Lab ID: 1300023-04

Anions by Ion Chromatography EPA 300.0

Analyst: AG

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Bromide	0.21	0.05	NA	1	B3A0180	01/08/2013	01/08/13 11:38	

Total Dissolved Solids (Residue, Filterable) by SM 2540C

Analyst: AG

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Residue, Dissolved	560	10	NA	1	B3A0143	01/07/2013	01/07/13 17:44	

Volatile Organic Compounds by EPA 8260

Analyst: SL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 14:02	
1,1,1-Trichloroethane	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 14:02	
1,1,2,2-Tetrachloroethane	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 14:02	
1,1,2-Trichloroethane	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 14:02	
1,1-Dichloroethane	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 14:02	
1,1-Dichloroethene	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 14:02	
1,1-Dichloropropene	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 14:02	
1,2,3-Trichloropropane	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 14:02	
1,2,3-Trichlorobenzene	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 14:02	
1,2,4-Trichlorobenzene	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 14:02	
1,2,4-Trimethylbenzene	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 14:02	
1,2-Dibromo-3-chloropropane	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 14:02	
1,2-Dibromoethane	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 14:02	
1,2-Dichlorobenzene	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 14:02	
1,2-Dichloroethane	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 14:02	
1,2-Dichloropropane	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 14:02	
1,3,5-Trimethylbenzene	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 14:02	
1,3-Dichlorobenzene	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 14:02	
1,3-Dichloropropane	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 14:02	
1,4-Dichlorobenzene	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 14:02	
2,2-Dichloropropane	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 14:02	
2-Chlorotoluene	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 14:02	
4-Chlorotoluene	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 14:02	
4-Isopropyltoluene	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 14:02	
Benzene	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 14:02	



Certificate of Analysis

Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego, CA 92122

Project Number : Raytheon Main: Fullerton Monthly, 532.1:

Report To : Steve Netto

Reported : 01/21/2013

Client Sample ID POX

Lab ID: 1300023-04

Volatile Organic Compounds by EPA 8260

Analyst: SL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Bromobenzene	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 14:02	
Bromodichloromethane	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 14:02	
Bromoform	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 14:02	
Bromomethane	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 14:02	
Carbon tetrachloride	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 14:02	
Chlorobenzene	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 14:02	
Chloroethane	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 14:02	
Chloroform	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 14:02	
Chloromethane	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 14:02	
cis-1,2-Dichloroethene	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 14:02	
cis-1,3-Dichloropropene	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 14:02	
Dibromochloromethane	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 14:02	
Dibromomethane	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 14:02	
Dichlorodifluoromethane	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 14:02	
Ethylbenzene	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 14:02	
Hexachlorobutadiene	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 14:02	
Isopropylbenzene	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 14:02	
m,p-Xylene	ND	1.0	NA	1	B3A0110	01/07/2013	01/07/13 14:02	
Methylene chloride	ND	1.0	NA	1	B3A0110	01/07/2013	01/07/13 14:02	
n-Butylbenzene	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 14:02	
n-Propylbenzene	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 14:02	
Naphthalene	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 14:02	
o-Xylene	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 14:02	
sec-Butylbenzene	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 14:02	
Styrene	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 14:02	
tert-Butylbenzene	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 14:02	
Tetrachloroethene	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 14:02	
Toluene	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 14:02	
trans-1,2-Dichloroethene	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 14:02	
Trichloroethene	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 14:02	
Trichlorofluoromethane	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 14:02	
Vinyl chloride	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 14:02	
Surrogate: 1,2-Dichloroethane-d4	113 %		70 - 130		B3A0110	01/07/2013	01/07/13 14:02	
Surrogate: 4-Bromofluorobenzene	108 %		70 - 130		B3A0110	01/07/2013	01/07/13 14:02	
Surrogate: Dibromofluoromethane	114 %		70 - 130		B3A0110	01/07/2013	01/07/13 14:02	
Surrogate: Toluene-d8	116 %		70 - 130		B3A0110	01/07/2013	01/07/13 14:02	



Certificate of Analysis

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San Diego, CA 92122

Project Number : Raytheon Main: Fullerton Monthly, 532.1:

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Reported : 01/21/2013

Client Sample ID POX

Lab ID: 1300023-04

1,4-Dioxane by EPA 8270/SIM: Isotope Dilution Technique

Analyst: BB

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,4-Dioxane	ND	0.20	0.13	1	B3A0092	01/04/2013	01/04/13 21:50	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	<i>98.5 %</i>		<i>36 - 107</i>		B3A0092	01/04/2013	<i>01/04/13 21:50</i>	
<i>Surrogate: 2-Fluorobiphenyl</i>	<i>86.7 %</i>		<i>42 - 120</i>		B3A0092	01/04/2013	<i>01/04/13 21:50</i>	
<i>Surrogate: 4-Terphenyl-d14</i>	<i>99.5 %</i>		<i>67 - 142</i>		B3A0092	01/04/2013	<i>01/04/13 21:50</i>	
<i>Surrogate: Nitrobenzene-d5</i>	<i>115 %</i>		<i>36 - 130</i>		B3A0092	01/04/2013	<i>01/04/13 21:50</i>	



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Project Number : Raytheon Main: Fullerton Monthly, 532.1:

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Reported : 01/21/2013

Client Sample ID CBT

Lab ID: 1300023-05

Volatile Organic Compounds by EPA 8260

Analyst: SL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 13:42	
1,1,1-Trichloroethane	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 13:42	
1,1,2,2-Tetrachloroethane	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 13:42	
1,1,2-Trichloroethane	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 13:42	
1,1-Dichloroethane	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 13:42	
1,1-Dichloroethene	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 13:42	
1,1-Dichloropropene	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 13:42	
1,2,3-Trichloropropane	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 13:42	
1,2,3-Trichlorobenzene	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 13:42	
1,2,4-Trichlorobenzene	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 13:42	
1,2,4-Trimethylbenzene	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 13:42	
1,2-Dibromo-3-chloropropane	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 13:42	
1,2-Dibromoethane	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 13:42	
1,2-Dichlorobenzene	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 13:42	
1,2-Dichloroethane	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 13:42	
1,2-Dichloropropane	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 13:42	
1,3,5-Trimethylbenzene	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 13:42	
1,3-Dichlorobenzene	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 13:42	
1,3-Dichloropropane	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 13:42	
1,4-Dichlorobenzene	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 13:42	
2,2-Dichloropropane	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 13:42	
2-Chlorotoluene	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 13:42	
4-Chlorotoluene	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 13:42	
4-Isopropyltoluene	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 13:42	
Benzene	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 13:42	
Bromobenzene	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 13:42	
Bromodichloromethane	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 13:42	
Bromoform	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 13:42	
Bromomethane	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 13:42	
Carbon tetrachloride	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 13:42	
Chlorobenzene	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 13:42	
Chloroethane	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 13:42	
Chloroform	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 13:42	
Chloromethane	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 13:42	
cis-1,2-Dichloroethene	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 13:42	
cis-1,3-Dichloropropene	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 13:42	
Dibromochloromethane	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 13:42	



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San Diego , CA 92122

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Reported : 01/21/2013

Client Sample ID CBT

Lab ID: 1300023-05

Volatile Organic Compounds by EPA 8260

Analyst: SL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Dibromomethane	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 13:42	
Dichlorodifluoromethane	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 13:42	
Ethylbenzene	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 13:42	
Hexachlorobutadiene	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 13:42	
Isopropylbenzene	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 13:42	
m,p-Xylene	ND	1.0	NA	1	B3A0110	01/07/2013	01/07/13 13:42	
Methylene chloride	ND	1.0	NA	1	B3A0110	01/07/2013	01/07/13 13:42	
n-Butylbenzene	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 13:42	
n-Propylbenzene	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 13:42	
Naphthalene	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 13:42	
o-Xylene	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 13:42	
sec-Butylbenzene	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 13:42	
Styrene	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 13:42	
tert-Butylbenzene	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 13:42	
Tetrachloroethene	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 13:42	
Toluene	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 13:42	
trans-1,2-Dichloroethene	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 13:42	
Trichloroethene	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 13:42	
Trichlorofluoromethane	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 13:42	
Vinyl chloride	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 13:42	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>103 %</i>		<i>70 - 130</i>		B3A0110	01/07/2013	<i>01/07/13 13:42</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>100 %</i>		<i>70 - 130</i>		B3A0110	01/07/2013	<i>01/07/13 13:42</i>	
<i>Surrogate: Dibromofluoromethane</i>	<i>105 %</i>		<i>70 - 130</i>		B3A0110	01/07/2013	<i>01/07/13 13:42</i>	
<i>Surrogate: Toluene-d8</i>	<i>106 %</i>		<i>70 - 130</i>		B3A0110	01/07/2013	<i>01/07/13 13:42</i>	



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Project Number : Raytheon Main: Fullerton Monthly, 532.1:

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Reported : 01/21/2013

Client Sample ID CEFF

Lab ID: 1300023-06

Anions by Ion Chromatography EPA 300.0

Analyst: AG

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Bromide	0.22	0.05	NA	1	B3A0180	01/08/2013	01/08/13 11:49	

Total Dissolved Solids (Residue, Filterable) by SM 2540C

Analyst: AG

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Residue, Dissolved	600	10	NA	1	B3A0337	01/11/2013	01/11/13 15:02	

Volatile Organic Compounds by EPA 8260

Analyst: SL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 13:22	
1,1,1-Trichloroethane	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 13:22	
1,1,2,2-Tetrachloroethane	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 13:22	
1,1,2-Trichloroethane	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 13:22	
1,1-Dichloroethane	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 13:22	
1,1-Dichloroethene	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 13:22	
1,1-Dichloropropene	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 13:22	
1,2,3-Trichloropropane	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 13:22	
1,2,3-Trichlorobenzene	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 13:22	
1,2,4-Trichlorobenzene	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 13:22	
1,2,4-Trimethylbenzene	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 13:22	
1,2-Dibromo-3-chloropropane	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 13:22	
1,2-Dibromoethane	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 13:22	
1,2-Dichlorobenzene	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 13:22	
1,2-Dichloroethane	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 13:22	
1,2-Dichloropropane	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 13:22	
1,3,5-Trimethylbenzene	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 13:22	
1,3-Dichlorobenzene	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 13:22	
1,3-Dichloropropane	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 13:22	
1,4-Dichlorobenzene	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 13:22	
2,2-Dichloropropane	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 13:22	
2-Chlorotoluene	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 13:22	
4-Chlorotoluene	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 13:22	
4-Isopropyltoluene	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 13:22	
Benzene	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 13:22	



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Client Sample ID CEFF

Lab ID: 1300023-06

Volatile Organic Compounds by EPA 8260

Analyst: SL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Bromobenzene	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 13:22	
Bromodichloromethane	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 13:22	
Bromoform	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 13:22	
Bromomethane	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 13:22	
Carbon tetrachloride	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 13:22	
Chlorobenzene	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 13:22	
Chloroethane	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 13:22	
Chloroform	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 13:22	
Chloromethane	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 13:22	
cis-1,2-Dichloroethene	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 13:22	
cis-1,3-Dichloropropene	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 13:22	
Dibromochloromethane	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 13:22	
Dibromomethane	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 13:22	
Dichlorodifluoromethane	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 13:22	
Ethylbenzene	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 13:22	
Hexachlorobutadiene	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 13:22	
Isopropylbenzene	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 13:22	
m,p-Xylene	ND	1.0	NA	1	B3A0110	01/07/2013	01/07/13 13:22	
Methylene chloride	ND	1.0	NA	1	B3A0110	01/07/2013	01/07/13 13:22	
n-Butylbenzene	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 13:22	
n-Propylbenzene	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 13:22	
Naphthalene	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 13:22	
o-Xylene	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 13:22	
sec-Butylbenzene	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 13:22	
Styrene	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 13:22	
tert-Butylbenzene	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 13:22	
Tetrachloroethene	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 13:22	
Toluene	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 13:22	
trans-1,2-Dichloroethene	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 13:22	
Trichloroethene	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 13:22	
Trichlorofluoromethane	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 13:22	
Vinyl chloride	ND	0.50	NA	1	B3A0110	01/07/2013	01/07/13 13:22	

Surrogate: 1,2-Dichloroethane-d4

110 %

70 - 130

B3A0110

01/07/2013

01/07/13 13:22

Surrogate: 4-Bromofluorobenzene

107 %

70 - 130

B3A0110

01/07/2013

01/07/13 13:22

Surrogate: Dibromofluoromethane

111 %

70 - 130

B3A0110

01/07/2013

01/07/13 13:22

Surrogate: Toluene-d8

114 %

70 - 130

B3A0110

01/07/2013

01/07/13 13:22



Certificate of Analysis

Hargis & Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego , CA 92122

Project Number : Raytheon Main: Fullerton Monthly, 532.1:
 Report To : Steve Netto
 Reported : 01/21/2013

QUALITY CONTROL SECTION

Anions by Ion Chromatography EPA 300.0 - Quality Control

Analyte	Result (mg/L)	PQL (mg/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B3A0180 - No_Prep_IC_1									
Blank (B3A0180-BLK1)				Prepared: 1/8/2013 Analyzed: 1/8/2013					
Bromide	ND	0.05			NR				
LCS (B3A0180-BS1)				Prepared: 1/8/2013 Analyzed: 1/8/2013					
Bromide	1.03600	0.05	1.00000		104	90 - 110			
Duplicate (B3A0180-DUP1)				Source: 1300044-02 Prepared: 1/8/2013 Analyzed: 1/8/2013					
Bromide	ND	0.10		ND	NR			20	D7
Matrix Spike (B3A0180-MS1)				Source: 1300044-02 Prepared: 1/8/2013 Analyzed: 1/8/2013					
Bromide	2.56760	0.10	2.50000	ND	103	80 - 120			D7
Matrix Spike (B3A0180-MS2)				Source: 1300044-01 Prepared: 1/8/2013 Analyzed: 1/8/2013					
Bromide	2.84120	0.10	2.50000	0.434800	96.3	80 - 120			D7
Matrix Spike Dup (B3A0180-MSD1)				Source: 1300044-02 Prepared: 1/8/2013 Analyzed: 1/8/2013					
Bromide	2.54940	0.10	2.50000	ND	102	80 - 120	0.711	20	D7



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San Diego , CA 92122

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Total Dissolved Solids (Residue, Filterable) by SM 2540C - Quality Control

Analyte	Result (mg/L)	PQL (mg/L)	Spike Level	Source Result	% Rec % Rec	% Rec Limits	RPD RPD	RPD Limit	Notes
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Batch B3A0143 - No_Prep_WC_1

Blank (B3A0143-BLK1)

Prepared: 1/7/2013 Analyzed: 1/7/2013

Residue, Dissolved

ND

10

NR

LCS (B3A0143-BS1)

Prepared: 1/7/2013 Analyzed: 1/7/2013

Residue, Dissolved

973.000

10

970.000

100

80 - 120

Duplicate (B3A0143-DUP1)

Source: 1300025-03

Prepared: 1/7/2013 Analyzed: 1/7/2013

Residue, Dissolved

388.000

10

380.000

NR

2.08

10

Batch B3A0337 - No_Prep_WC_1

Blank (B3A0337-BLK1)

Prepared: 1/11/2013 Analyzed: 1/11/2013

Residue, Dissolved

ND

10

NR

LCS (B3A0337-BS1)

Prepared: 1/11/2013 Analyzed: 1/11/2013

Residue, Dissolved

989.000

10

970.000

102

80 - 120

Duplicate (B3A0337-DUP1)

Source: 1300088-01

Prepared: 1/11/2013 Analyzed: 1/11/2013

Residue, Dissolved

ND

10

ND

NR

10



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Project Number : Raytheon Main: Fullerton Monthly, 532.1:

Report To : Steve Netto

Reported : 01/21/2013

Total Suspended Solids (Residue, Non-Filtrable) by SM 2540D - Quality Control

Analyte	Result (mg/L)	PQL (mg/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B3A0224 - No_Prep_WC_1

Blank (B3A0224-BLK1)

Prepared: 1/9/2013 Analyzed: 1/9/2013

Residue, Suspended

ND

10

NR

LCS (B3A0224-BS1)

Prepared: 1/9/2013 Analyzed: 1/9/2013

Residue, Suspended

94.0000

10

96.6000

97.3

80 - 120

Duplicate (B3A0224-DUP1)

Source: 1300039-01

Prepared: 1/9/2013 Analyzed: 1/9/2013

Residue, Suspended

28.0000

10

26.0000

NR

7.41

10



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San Diego , CA 92122

Project Number : Raytheon Main: Fullerton Monthly, 532.1:

Report To : Steve Netto

Reported : 01/21/2013

Volatile Organic Compounds by EPA 8260 - Quality Control

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec % Rec	Limits	RPD	RPD Limit	Notes
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Batch B3A0110 - MSVOAW_LL

Blank (B3A0110-BLK1)

Prepared: 1/7/2013 Analyzed: 1/7/2013

1,1,1,2-Tetrachloroethane	ND	0.50		NR
1,1,1-Trichloroethane	ND	0.50		NR
1,1,2,2-Tetrachloroethane	ND	0.50		NR
1,1,2-Trichloroethane	ND	0.50		NR
1,1-Dichloroethane	ND	0.50		NR
1,1-Dichloroethene	ND	0.50		NR
1,1-Dichloropropene	ND	0.50		NR
1,2,3-Trichloropropane	ND	0.50		NR
1,2,3-Trichlorobenzene	ND	0.50		NR
1,2,4-Trichlorobenzene	ND	0.50		NR
1,2,4-Trimethylbenzene	ND	0.50		NR
1,2-Dibromo-3-chloropropane	ND	0.50		NR
1,2-Dibromoethane	ND	0.50		NR
1,2-Dichlorobenzene	ND	0.50		NR
1,2-Dichloroethane	ND	0.50		NR
1,2-Dichloropropane	ND	0.50		NR
1,3,5-Trimethylbenzene	ND	0.50		NR
1,3-Dichlorobenzene	ND	0.50		NR
1,3-Dichloropropane	ND	0.50		NR
1,4-Dichlorobenzene	ND	0.50		NR
2,2-Dichloropropane	ND	0.50		NR
2-Chlorotoluene	ND	0.50		NR
4-Chlorotoluene	ND	0.50		NR
4-Isopropyltoluene	ND	0.50		NR
Benzene	ND	0.50		NR
Bromobenzene	ND	0.50		NR
Bromodichloromethane	ND	0.50		NR
Bromoform	ND	0.50		NR
Bromomethane	ND	0.50		NR
Carbon tetrachloride	ND	0.50		NR
Chlorobenzene	ND	0.50		NR
Chloroethane	ND	0.50		NR
Chloroform	ND	0.50		NR
Chloromethane	ND	0.50		NR
cis-1,2-Dichloroethene	ND	0.50		NR
cis-1,3-Dichloropropene	ND	0.50		NR
Dibromochloromethane	ND	0.50		NR
Dibromomethane	ND	0.50		NR
Dichlorodifluoromethane	ND	0.50		NR
Ethylbenzene	ND	0.50		NR
Hexachlorobutadiene	ND	0.50		NR



Certificate of Analysis

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9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : Raytheon Main: Fullerton Monthly, 532.1:

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Reported : 01/21/2013

Volatile Organic Compounds by EPA 8260 - Quality Control (cont'd)

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec Limits	RPD	RPD Limit	Notes
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Batch B3A0110 - MSVOAW_LL (continued)

Blank (B3A0110-BLK1) - Continued

Prepared: 1/7/2013 Analyzed: 1/7/2013

Isopropylbenzene	ND	0.50			NR			
m,p-Xylene	ND	1.0			NR			
Methylene chloride	ND	1.0			NR			
n-Butylbenzene	ND	0.50			NR			
n-Propylbenzene	ND	0.50			NR			
Naphthalene	ND	0.50			NR			
o-Xylene	ND	0.50			NR			
sec-Butylbenzene	ND	0.50			NR			
Styrene	ND	0.50			NR			
tert-Butylbenzene	ND	0.50			NR			
Tetrachloroethene	ND	0.50			NR			
Toluene	ND	0.50			NR			
trans-1,2-Dichloroethene	ND	0.50			NR			
Trichloroethene	ND	0.50			NR			
Trichlorofluoromethane	ND	0.50			NR			
Vinyl chloride	ND	0.50			NR			

<i>Surrogate: 1,2-Dichloroethane-d4</i>	24.65		25.0000		98.6	70 - 130		
<i>Surrogate: 4-Bromofluorobenzene</i>	25.76		25.0000		103	70 - 130		
<i>Surrogate: Dibromofluoromethane</i>	26.27		25.0000		105	70 - 130		
<i>Surrogate: Toluene-d8</i>	27.14		25.0000		109	70 - 130		

LCS (B3A0110-BS1)

Prepared: 1/7/2013 Analyzed: 1/7/2013

1,1-Dichloroethene	18.1500		20.0000		90.8	70 - 130		
Benzene	36.8400		40.0000		92.1	70 - 130		
Chlorobenzene	20.5400		20.0000		103	70 - 130		
MTBE	17.5200		20.0000		87.6	70 - 130		
Toluene	38.7500		40.0000		96.9	70 - 130		
Trichloroethene	18.8900		20.0000		94.4	70 - 130		

<i>Surrogate: 1,2-Dichloroethane-d4</i>	26.42		25.0000		106	70 - 130		
<i>Surrogate: 4-Bromofluorobenzene</i>	26.43		25.0000		106	70 - 130		
<i>Surrogate: Dibromofluoromethane</i>	26.64		25.0000		107	70 - 130		
<i>Surrogate: Toluene-d8</i>	27.25		25.0000		109	70 - 130		

LCS Dup (B3A0110-BSD1)

Prepared: 1/7/2013 Analyzed: 1/7/2013

1,1-Dichloroethene	17.5500		20.0000		87.8	70 - 130	3.36	20
Benzene	36.6900		40.0000		91.7	70 - 130	0.408	20
Chlorobenzene	20.0400		20.0000		100	70 - 130	2.46	20
MTBE	17.6500		20.0000		88.2	70 - 130	0.739	20
Toluene	38.5000		40.0000		96.2	70 - 130	0.647	20
Trichloroethene	18.7900		20.0000		94.0	70 - 130	0.531	20

<i>Surrogate: 1,2-Dichloroethane-d4</i>	26.83		25.0000		107	70 - 130		
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San Diego, CA 92122

Project Number : Raytheon Main: Fullerton Monthly, 532.1:

Report To : Steve Netto

Reported : 01/21/2013

Volatile Organic Compounds by EPA 8260 - Quality Control (cont'd)

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B3A0110 - MSVOAW_LL (continued)

LCS Dup (B3A0110-BSD1) - Continued

Prepared: 1/7/2013 Analyzed: 1/7/2013

Surrogate: 4-Bromofluorobenzene	26.37		25.0000		105	70 - 130			
Surrogate: Dibromofluoromethane	27.00		25.0000		108	70 - 130			
Surrogate: Toluene-d8	27.65		25.0000		111	70 - 130			



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Project Number : Raytheon Main: Fullerton Monthly, 532.1:

Report To : Steve Netto

Reported : 01/21/2013

1,4-Dioxane by EPA 8270: Isotope Dilution Technique - Quality Control

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec % Rec	% Rec Limits	RPD RPD	RPD Limit	Notes
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Batch B3A0287 - MSSEMI

Blank (B3A0287-BLK1)

Prepared: 1/11/2013 Analyzed: 1/11/2013

1,4-Dioxane	ND	2.0				NR			
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	75.17		100.000		75.2	37 - 93			
<i>Surrogate: 2-Fluorobiphenyl</i>	89.64		100.000		89.6	51 - 100			
<i>Surrogate: 4-Terphenyl-d14</i>	110.5		100.000		110	58 - 113			
<i>Surrogate: Nitrobenzene-d5</i>	77.97		100.000		78.0	39 - 95			

LCS (B3A0287-BS1)

Prepared: 1/11/2013 Analyzed: 1/11/2013

1,4-Dioxane	116.990	2.0	100.000		117	70 - 130			
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	72.22		100.000		72.2	37 - 93			
<i>Surrogate: 2-Fluorobiphenyl</i>	94.26		100.000		94.3	51 - 100			
<i>Surrogate: 4-Terphenyl-d14</i>	103.2		100.000		103	58 - 113			
<i>Surrogate: Nitrobenzene-d5</i>	76.49		100.000		76.5	39 - 95			

LCS Dup (B3A0287-BSD1)

Prepared: 1/11/2013 Analyzed: 1/11/2013

1,4-Dioxane	111.340	2.0	100.000		111	70 - 130	4.95	20	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	71.43		100.000		71.4	37 - 93			
<i>Surrogate: 2-Fluorobiphenyl</i>	92.52		100.000		92.5	51 - 100			
<i>Surrogate: 4-Terphenyl-d14</i>	102.6		100.000		103	58 - 113			
<i>Surrogate: Nitrobenzene-d5</i>	76.07		100.000		76.1	39 - 95			



Certificate of Analysis

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9171 Towne Centre Drive, Suite 375

San Diego, CA 92122

Project Number : Raytheon Main: Fullerton Monthly, 532.1:

Report To : Steve Netto

Reported : 01/21/2013

1,4-Dioxane by EPA 8270/SIM: Isotope Dilution Technique - Quality Control

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec % Rec	% Rec Limits	RPD RPD	RPD Limit	Notes
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Batch B3A0092 - MSSEMI

Blank (B3A0092-BLK1)

Prepared: 1/4/2013 Analyzed: 1/4/2013

1,4-Dioxane	ND	0.20			NR				
Surrogate: 1,2-Dichlorobenzene-d4	0.7080		1.00000		70.8	36 - 107			
Surrogate: 2-Fluorobiphenyl	0.9568		1.00000		95.7	42 - 120			
Surrogate: 4-Terphenyl-d14	0.9663		1.00000		96.6	67 - 142			
Surrogate: Nitrobenzene-d5	0.9839		1.00000		98.4	36 - 130			

LCS (B3A0092-BS1)

Prepared: 1/4/2013 Analyzed: 1/4/2013

1,4-Dioxane	0.704690	0.20	1.00000		70.5	70 - 130			
Surrogate: 1,2-Dichlorobenzene-d4	0.9135		1.00000		91.4	36 - 107			
Surrogate: 2-Fluorobiphenyl	0.9484		1.00000		94.8	42 - 120			
Surrogate: 4-Terphenyl-d14	0.9832		1.00000		98.3	67 - 142			
Surrogate: Nitrobenzene-d5	1.061		1.00000		106	36 - 130			

Matrix Spike (B3A0092-MS1)

Source: 1300018-02

Prepared: 1/4/2013 Analyzed: 1/4/2013

1,4-Dioxane	0.925100	0.20	1.00000	ND	92.5	70 - 130			
Surrogate: 1,2-Dichlorobenzene-d4	0.9103		1.00000		91.0	36 - 107			
Surrogate: 2-Fluorobiphenyl	0.8194		1.00000		81.9	42 - 120			
Surrogate: 4-Terphenyl-d14	0.8884		1.00000		88.8	67 - 142			
Surrogate: Nitrobenzene-d5	0.9373		1.00000		93.7	36 - 130			

Matrix Spike Dup (B3A0092-MSD1)

Source: 1300018-02

Prepared: 1/4/2013 Analyzed: 1/4/2013

1,4-Dioxane	0.977660	0.20	1.00000	ND	97.8	70 - 130	5.52	20	
Surrogate: 1,2-Dichlorobenzene-d4	0.8162		1.00000		81.6	36 - 107			
Surrogate: 2-Fluorobiphenyl	0.7530		1.00000		75.3	42 - 120			
Surrogate: 4-Terphenyl-d14	0.8309		1.00000		83.1	67 - 142			
Surrogate: Nitrobenzene-d5	0.8651		1.00000		86.5	36 - 130			



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Project Number : Raytheon Main: Fullerton Monthly, 532.1:

Report To : Steve Netto

Reported : 01/21/2013

Notes and Definitions

S10	Surrogate recovery outside of laboratory acceptance limit possibly due to matrix interference.
D7	A lesser amount of sample was analyzed due to matrix.
ND	Analyte not detected at or above reporting limit
PQL	Practical Quantitation Limit
MDL	Method Detection Limit
NR	Not Reported
RPD	Relative Percent Difference
CA1	CA-NELAP (CDPH)
CA2	CA-ELAP (CDPH)
OR1	OR-NELAP (OSPHL)
TX1	TX-NELAP (TCEQ)

Notes:

- (1) The reported MDL and PQL are based on prep ratio variation and analytical dilution.
- (2) The suffix [2C] of specific analytes signifies that the reported result is taken from the instrument's second column.

Bromate by EPA 317.0
 Ion Chromatography/Post-Column Reaction-Visible Absorption Spectroscopy

Column: Dionex AS9-HC/AG9-HSC
 Eluent: 10 mM Na₂CO₃
 Flow: 1.2 mL/min
 Injection: 250 µL
 Detection: Visible, 450 nm

Sample preparation: The undiluted samples were treated with a Dionex OnGuard II H cartridge to remove excess basic cations. One sample required dilution with water by 1:5 for analysis. The detection limit is adjusted for the dilution. The current detection limit reflects a lower value than that previously reported, based on a recent study performed on a system with an improved post-column reagent delivery system.

Parts Per Billion (µg/L)

Sample ID	Result	Detection Limit
1300023-02 / EW-02	0.3	0.3
1300023-04 / POX	9	2
1300023-06 / CEFF	7.5	0.3
Method Blank	ND	0.3

Date Analyzed: 01-11-13

Quality Control Summary

Parts Per Million (mg/L)

Sample ID:	Batch QC						
Analyte	Sample Result	Spike Conc	Spike Result	Spike % Rec	Spike Duplicate Result	Spike Duplicate % Rec	Spike RPD
Bromate	15.8	40.0	56.4	102	56.9	103	1
QC Guidelines				75-125		75-125	NMT 10


ADVANCED TECHNOLOGY
 LABORATORIES

SUBCONTRACT ORDER

Work Order: 1300023

SENDING LABORATORY:

Advanced Technology Laboratories
 3275 Walnut Avenue
 Signal Hill, CA 90755
 Phone: 562.989.4045
 Fax: 562.989.6348
 Project Manager: Rachele Arada


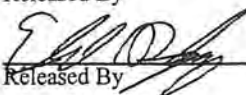

RECEIVING LABORATORY:

Exova Inc.
 9240 Santa Fe Springs Road
 Santa Fe Springs, CA 90670
 Phone : (562) 948-2225
 Fax: (562) 948-5850
 PO#: SC07788 - STANDARD TAT

(RA)

IMPORTANT : Please include Work Order # and PO # in your invoice.

Analysis	Due	Expires	Sampled	Comments
ATL Lab#: 1300023-02 317.0 1-Poly Unpres - 125mL	/ EW-02 01/18/13 17:00	Groundwater 01/05/13 08:25	01/04/13 08:25	BROMATE
ATL Lab#: 1300023-04 317.0 1-Poly Unpres - 125mL	/ POX 01/18/13 17:00	Groundwater 01/05/13 07:46	01/04/13 07:46	
ATL Lab#: 1300023-06 317.0 1-Poly Unpres - 125mL	/ CEFF 01/18/13 17:00	Groundwater 01/05/13 08:00	01/04/13 08:00	

ASMER MANBATHS	1/7/13		1/7/13	9:15
Released By	Date	Received By	Date	Date
	1/7/13		Exam	01-07-13
Released By	Date	Received By	Date	Date
	9:49			9:44 AM

PROJECT NAME		PROJECT No./TASK No.		SAMPLE CONTAINERS				ANALYSIS REQUESTED				ESTIMATED CONCENTRATION RANGE (ppb) FOR VOAS		SPECIAL HANDLING		LABORATORY INFORMATION									
Raytheon Main: Fullerton Monthly		532.15														Advanced Technology Laboratories									
PROJECT MANAGER Chris Ross		Phone No. 858-455-6500						VOCs by EPA 8260B 1,4-Dioxane by EPA 8270SIM 1,4-Dioxane by EPA 8270MOD Bromate by EPA 317 Bromide by EPA 300 TDS by EPA SM2540C TSS by EPA SM2540D								3275 Walnut Ave									
QA MANAGER Steve Netto		Fax No. 858-455-6500														Signal Hill CA 90755									
SAMPLER (SIGNATURE)		SAMPLER (PRINTED)														Attn: Rachelle Araca									
LAB ID	SAMPLE ID	SAMPLE COLLECTION		MATRIX			PRESERVATION									REMARKS									
		Date	Time	Soil	Ground water	Surface water	Lab H2O	HCl	HNO ₃	NaOH	H ₂ SO ₄	Ice	40 ml VDA	125 ml Poly	250 ml Poly		1 L Amber	0-10	10-100	100-1,000	>1,000				
1300023 - 1	TB-010413	1/4/13	07:30				X	X					X										Please include		
	EW-02		08:25	X			X						3	2	2	1	X	X	X	X	X			inrodriguez@hargis.com	
	PF		07:38	X									1											in lab report	
	POX		07:46	X			X						3	2	1	1	X	X	X					distribution list	
	CBT		07:55	X			X						3				X								
	CEFF		08:00	X			X						3	2	1		X	X	X						Set 1,4-Dioxane MDL to 1.0 ppm
Total number of Containers per analysis:													4742				Total No. of Containers: 27								

Relinquished by:		Date	Received by:	Date	INSTRUCTIONS 1. Fill out form completely except for shaded areas (lab use only); sign only after verified for completeness. 2. Complete in ballpoint pen. Draw one line through errors, initial and date correction. 3. Indicate number of sample containers in analysis request space; indicate choice with ✓ or x. 4. Note applicable preservatives, special instructions, and deviations from typical environmental samples. 5. Consult project QA documents for specific instructions.	Shipment Method: <u>DELIVER</u>	
		1/4/13	ABNIR MANGHANI	1/4/13		Send Results to: <u>Steve Netto</u>	
HTA		Time	ATL	Time		<input checked="" type="checkbox"/> 9171 TOWNE CENTRE DRIVE, SUITE 375 SAN DIEGO, CA 92122 (858) 455-6500	
Company		09:50	Company	09:50		<input type="checkbox"/> 1640 SOUTH STAPLEY DRIVE, SUITE 124 MESA, AZ 85204 (480) 345-0888	
						<input type="checkbox"/> 1820 EAST RIVER ROAD, SUITE 220 TUCSON, AZ 85718 (520) 881-7300	
Relinquished by:		Date	Received by:	Date	Sample Receipt: <input type="checkbox"/> No. of containers correct <input type="checkbox"/> received good condition/cold <input type="checkbox"/> custody seals secure <input type="checkbox"/> conforms to COC document	Send invoice to San Diego, CA Attn: Accounts Payable	
		Time		Time			
Company			Company				

February 28, 2013

Steve Netto
Hargis & Associates, Inc.
9171 Towne Centre Drive, Suite 375
San Diego, CA 92122
Tel: (619) 249-3166
Fax: (858) 455-6533



Re: ATL Work Order Number : 1300459

Client Reference : RAYTHEON MAIN: FULLERTON MONTHLY, 532.15

Enclosed are the results for sample(s) received on February 09, 2013 by Advanced Technology Laboratories. The sample(s) are tested for the parameters as indicated on the enclosed chain of custody in accordance with applicable laboratory certifications. The laboratory results contained in this report specifically pertains to the sample(s) submitted.

Thank you for the opportunity to serve the needs of your company. If you have any questions, please feel free to contact me or your Project Manager.

Sincerely,

Eddie Rodriguez
Laboratory Director

The cover letter and the case narrative are an integral part of this analytical report and its absence renders the report invalid. Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Conference and/or applicable state-specific certification programs. The report cannot be reproduced without written permission from the client and Advanced Technology Laboratories.



Certificate of Analysis

Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : RAYTHEON MAIN: FULLERTON MON

Report To : Steve Netto

Reported : 02/28/2013

SUMMARY OF SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
TB-020913	1300459-01	Lab H2O	2/09/13 9:30	2/09/13 12:05
EW-02	1300459-02	Groundwater	2/09/13 10:35	2/09/13 12:05
PF	1300459-03	Groundwater	2/09/13 9:50	2/09/13 12:05
POX	1300459-04	Groundwater	2/09/13 9:55	2/09/13 12:05
CBT	1300459-05	Groundwater	2/09/13 10:05	2/09/13 12:05
CEFF	1300459-06	Groundwater	2/09/13 10:15	2/09/13 12:05

CASE NARRATIVE

The samples for EPA 317 (Bromate) analysis were subcontracted to Exova, Inc. with ELAP Cert.# 2652.



Certificate of Analysis

Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego, CA 92122

Project Number : RAYTHEON MAIN: FULLERTON MON

Report To : Steve Netto

Reported : 02/28/2013

Client Sample ID TB-020913

Lab ID: 1300459-01

Volatile Organic Compounds by EPA 8260

Analyst: SL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 10:27	
1,1,1-Trichloroethane	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 10:27	
1,1,2,2-Tetrachloroethane	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 10:27	
1,1,2-Trichloroethane	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 10:27	
1,1-Dichloroethane	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 10:27	
1,1-Dichloroethene	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 10:27	
1,1-Dichloropropene	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 10:27	
1,2,3-Trichloropropane	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 10:27	
1,2,3-Trichlorobenzene	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 10:27	
1,2,4-Trichlorobenzene	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 10:27	
1,2,4-Trimethylbenzene	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 10:27	
1,2-Dibromo-3-chloropropane	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 10:27	
1,2-Dibromoethane	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 10:27	
1,2-Dichlorobenzene	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 10:27	
1,2-Dichloroethane	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 10:27	
1,2-Dichloropropane	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 10:27	
1,3,5-Trimethylbenzene	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 10:27	
1,3-Dichlorobenzene	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 10:27	
1,3-Dichloropropane	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 10:27	
1,4-Dichlorobenzene	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 10:27	
2,2-Dichloropropane	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 10:27	
2-Chlorotoluene	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 10:27	
4-Chlorotoluene	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 10:27	
4-Isopropyltoluene	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 10:27	
Benzene	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 10:27	
Bromobenzene	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 10:27	
Bromodichloromethane	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 10:27	
Bromoform	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 10:27	
Bromomethane	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 10:27	
Carbon tetrachloride	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 10:27	
Chlorobenzene	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 10:27	
Chloroethane	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 10:27	
Chloroform	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 10:27	
Chloromethane	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 10:27	
cis-1,2-Dichloroethene	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 10:27	
cis-1,3-Dichloropropene	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 10:27	
Dibromochloromethane	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 10:27	



Certificate of Analysis

Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego, CA 92122

Project Number : RAYTHEON MAIN: FULLERTON MON

Report To : Steve Netto

Reported : 02/28/2013

Client Sample ID TB-020913

Lab ID: 1300459-01

Volatile Organic Compounds by EPA 8260

Analyst: SL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Dibromomethane	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 10:27	
Dichlorodifluoromethane	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 10:27	
Ethylbenzene	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 10:27	
Hexachlorobutadiene	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 10:27	
Isopropylbenzene	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 10:27	
m,p-Xylene	ND	1.0	NA	1	B3B0217	02/12/2013	02/12/13 10:27	
Methylene chloride	ND	1.0	NA	1	B3B0217	02/12/2013	02/12/13 10:27	
n-Butylbenzene	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 10:27	
n-Propylbenzene	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 10:27	
Naphthalene	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 10:27	
o-Xylene	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 10:27	
sec-Butylbenzene	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 10:27	
Styrene	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 10:27	
tert-Butylbenzene	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 10:27	
Tetrachloroethene	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 10:27	
Toluene	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 10:27	
trans-1,2-Dichloroethene	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 10:27	
Trichloroethene	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 10:27	
Trichlorofluoromethane	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 10:27	
Vinyl chloride	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 10:27	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>121 %</i>		<i>70 - 130</i>		B3B0217	02/12/2013	<i>02/12/13 10:27</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>90.4 %</i>		<i>70 - 130</i>		B3B0217	02/12/2013	<i>02/12/13 10:27</i>	
<i>Surrogate: Dibromofluoromethane</i>	<i>86.4 %</i>		<i>70 - 130</i>		B3B0217	02/12/2013	<i>02/12/13 10:27</i>	
<i>Surrogate: Toluene-d8</i>	<i>104 %</i>		<i>70 - 130</i>		B3B0217	02/12/2013	<i>02/12/13 10:27</i>	



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Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : RAYTHEON MAIN: FULLERTON MON

Report To : Steve Netto

Reported : 02/28/2013

Client Sample ID EW-02

Lab ID: 1300459-02

Anions by Ion Chromatography EPA 300.0

Analyst: AG

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Bromide	0.19	0.05	NA	1	B3B0276	02/13/2013	02/13/13 11:53	

Total Dissolved Solids (Residue, Filterable) by SM 2540C

Analyst: AG

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Residue, Dissolved	600	10	NA	1	B3B0308	02/13/2013	02/13/13 14:00	

Total Suspended Solids (Residue, Non-Filtrable) by SM 2540D

Analyst: AG

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Residue, Suspended	ND	3.8	NA	1	B3B0321	02/13/2013	02/13/13 13:12	

Volatile Organic Compounds by EPA 8260

Analyst: SL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 14:22	
1,1,1-Trichloroethane	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 14:22	
1,1,2,2-Tetrachloroethane	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 14:22	
1,1,2-Trichloroethane	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 14:22	
1,1-Dichloroethane	0.52	0.50	NA	1	B3B0217	02/12/2013	02/12/13 14:22	
1,1-Dichloroethene	39	0.50	NA	1	B3B0217	02/12/2013	02/12/13 14:22	
1,1-Dichloropropene	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 14:22	
1,2,3-Trichloropropane	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 14:22	
1,2,3-Trichlorobenzene	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 14:22	
1,2,4-Trichlorobenzene	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 14:22	
1,2,4-Trimethylbenzene	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 14:22	
1,2-Dibromo-3-chloropropane	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 14:22	
1,2-Dibromoethane	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 14:22	
1,2-Dichlorobenzene	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 14:22	
1,2-Dichloroethane	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 14:22	
1,2-Dichloropropane	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 14:22	
1,3,5-Trimethylbenzene	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 14:22	
1,3-Dichlorobenzene	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 14:22	
1,3-Dichloropropane	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 14:22	



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Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : RAYTHEON MAIN: FULLERTON MON

Report To : Steve Netto

Reported : 02/28/2013

Client Sample ID EW-02

Lab ID: 1300459-02

Volatile Organic Compounds by EPA 8260

Analyst: SL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,4-Dichlorobenzene	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 14:22	
2,2-Dichloropropane	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 14:22	
2-Chlorotoluene	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 14:22	
4-Chlorotoluene	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 14:22	
4-Isopropyltoluene	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 14:22	
Benzene	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 14:22	
Bromobenzene	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 14:22	
Bromodichloromethane	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 14:22	
Bromoform	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 14:22	
Bromomethane	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 14:22	
Carbon tetrachloride	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 14:22	
Chlorobenzene	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 14:22	
Chloroethane	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 14:22	
Chloroform	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 14:22	
Chloromethane	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 14:22	
cis-1,2-Dichloroethene	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 14:22	
cis-1,3-Dichloropropene	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 14:22	
Dibromochloromethane	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 14:22	
Dibromomethane	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 14:22	
Dichlorodifluoromethane	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 14:22	
Ethylbenzene	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 14:22	
Hexachlorobutadiene	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 14:22	
Isopropylbenzene	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 14:22	
m,p-Xylene	ND	1.0	NA	1	B3B0217	02/12/2013	02/12/13 14:22	
Methylene chloride	ND	1.0	NA	1	B3B0217	02/12/2013	02/12/13 14:22	
n-Butylbenzene	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 14:22	
n-Propylbenzene	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 14:22	
Naphthalene	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 14:22	
o-Xylene	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 14:22	
sec-Butylbenzene	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 14:22	
Styrene	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 14:22	
tert-Butylbenzene	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 14:22	
Tetrachloroethene	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 14:22	
Toluene	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 14:22	
trans-1,2-Dichloroethene	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 14:22	
Trichloroethene	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 14:22	
Trichlorofluoromethane	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 14:22	



Certificate of Analysis

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9171 Towne Centre Drive, Suite 375

San Diego, CA 92122

Project Number : RAYTHEON MAIN: FULLERTON MON

Report To : Steve Netto

Reported : 02/28/2013

Client Sample ID EW-02

Lab ID: 1300459-02

Volatile Organic Compounds by EPA 8260

Analyst: SL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Vinyl chloride	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 14:22	
Surrogate: 1,2-Dichloroethane-d4	129 %		70 - 130		B3B0217	02/12/2013	02/12/13 14:22	
Surrogate: 4-Bromofluorobenzene	89.1 %		70 - 130		B3B0217	02/12/2013	02/12/13 14:22	
Surrogate: Dibromofluoromethane	96.6 %		70 - 130		B3B0217	02/12/2013	02/12/13 14:22	
Surrogate: Toluene-d8	103 %		70 - 130		B3B0217	02/12/2013	02/12/13 14:22	

1,4-Dioxane by EPA 8270: Isotope Dilution Technique

Analyst: BB

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,4-Dioxane	25	2.0	NA	1	B3B0206	02/11/2013	02/12/13 12:00	
Surrogate: 1,2-Dichlorobenzene-d4	62.3 %		37 - 93		B3B0206	02/11/2013	02/12/13 12:00	
Surrogate: 2-Fluorobiphenyl	73.2 %		51 - 100		B3B0206	02/11/2013	02/12/13 12:00	
Surrogate: 4-Terphenyl-d14	91.0 %		58 - 113		B3B0206	02/11/2013	02/12/13 12:00	
Surrogate: Nitrobenzene-d5	77.1 %		39 - 95		B3B0206	02/11/2013	02/12/13 12:00	



Certificate of Analysis

Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : RAYTHEON MAIN: FULLERTON MON

Report To : Steve Netto

Reported : 02/28/2013

Client Sample ID PF

Lab ID: 1300459-03

Total Suspended Solids (Residue, Non-Filtrable) by SM 2540D

Analyst: AG

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Residue, Suspended	ND	4.0	NA	1	B3B0321	02/13/2013	02/13/13 13:14	



Certificate of Analysis

Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : RAYTHEON MAIN: FULLERTON MON

Report To : Steve Netto

Reported : 02/28/2013

Client Sample ID POX

Lab ID: 1300459-04

Anions by Ion Chromatography EPA 300.0

Analyst: AG

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Bromide	0.21	0.05	NA	1	B3B0276	02/13/2013	02/13/13 12:05	

Total Dissolved Solids (Residue, Filterable) by SM 2540C

Analyst: AG

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Residue, Dissolved	600	10	NA	1	B3B0308	02/13/2013	02/13/13 14:02	

Volatile Organic Compounds by EPA 8260

Analyst: SL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 12:24	
1,1,1-Trichloroethane	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 12:24	
1,1,2,2-Tetrachloroethane	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 12:24	
1,1,2-Trichloroethane	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 12:24	
1,1-Dichloroethane	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 12:24	
1,1-Dichloroethene	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 12:24	
1,1-Dichloropropene	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 12:24	
1,2,3-Trichloropropane	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 12:24	
1,2,3-Trichlorobenzene	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 12:24	
1,2,4-Trichlorobenzene	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 12:24	
1,2,4-Trimethylbenzene	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 12:24	
1,2-Dibromo-3-chloropropane	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 12:24	
1,2-Dibromoethane	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 12:24	
1,2-Dichlorobenzene	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 12:24	
1,2-Dichloroethane	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 12:24	
1,2-Dichloropropane	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 12:24	
1,3,5-Trimethylbenzene	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 12:24	
1,3-Dichlorobenzene	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 12:24	
1,3-Dichloropropane	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 12:24	
1,4-Dichlorobenzene	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 12:24	
2,2-Dichloropropane	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 12:24	
2-Chlorotoluene	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 12:24	
4-Chlorotoluene	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 12:24	
4-Isopropyltoluene	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 12:24	
Benzene	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 12:24	



Certificate of Analysis

Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : RAYTHEON MAIN: FULLERTON MON

Report To : Steve Netto

Reported : 02/28/2013

Client Sample ID POX

Lab ID: 1300459-04

Volatile Organic Compounds by EPA 8260

Analyst: SL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Bromobenzene	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 12:24	
Bromodichloromethane	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 12:24	
Bromoform	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 12:24	
Bromomethane	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 12:24	
Carbon tetrachloride	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 12:24	
Chlorobenzene	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 12:24	
Chloroethane	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 12:24	
Chloroform	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 12:24	
Chloromethane	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 12:24	
cis-1,2-Dichloroethene	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 12:24	
cis-1,3-Dichloropropene	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 12:24	
Dibromochloromethane	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 12:24	
Dibromomethane	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 12:24	
Dichlorodifluoromethane	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 12:24	
Ethylbenzene	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 12:24	
Hexachlorobutadiene	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 12:24	
Isopropylbenzene	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 12:24	
m,p-Xylene	ND	1.0	NA	1	B3B0217	02/12/2013	02/12/13 12:24	
Methylene chloride	ND	1.0	NA	1	B3B0217	02/12/2013	02/12/13 12:24	
n-Butylbenzene	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 12:24	
n-Propylbenzene	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 12:24	
Naphthalene	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 12:24	
o-Xylene	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 12:24	
sec-Butylbenzene	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 12:24	
Styrene	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 12:24	
tert-Butylbenzene	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 12:24	
Tetrachloroethene	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 12:24	
Toluene	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 12:24	
trans-1,2-Dichloroethene	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 12:24	
Trichloroethene	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 12:24	
Trichlorofluoromethane	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 12:24	
Vinyl chloride	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 12:24	
Surrogate: 1,2-Dichloroethane-d4	114 %		70 - 130		B3B0217	02/12/2013	02/12/13 12:24	
Surrogate: 4-Bromofluorobenzene	87.2 %		70 - 130		B3B0217	02/12/2013	02/12/13 12:24	
Surrogate: Dibromofluoromethane	113 %		70 - 130		B3B0217	02/12/2013	02/12/13 12:24	
Surrogate: Toluene-d8	99.6 %		70 - 130		B3B0217	02/12/2013	02/12/13 12:24	



Certificate of Analysis

Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego, CA 92122

Project Number : RAYTHEON MAIN: FULLERTON MON

Report To : Steve Netto

Reported : 02/28/2013

Client Sample ID POX

Lab ID: 1300459-04

1,4-Dioxane by EPA 8270/SIM: Isotope Dilution Technique

Analyst: BB

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,4-Dioxane	ND	0.20	0.13	1	B3B0222	02/12/2013	02/12/13 18:11	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	<i>114 %</i>		<i>36 - 107</i>		B3B0222	02/12/2013	<i>02/12/13 18:11</i>	<i>S1</i>
<i>Surrogate: 2-Fluorobiphenyl</i>	<i>108 %</i>		<i>42 - 120</i>		B3B0222	02/12/2013	<i>02/12/13 18:11</i>	
<i>Surrogate: 4-Terphenyl-d14</i>	<i>79.2 %</i>		<i>67 - 142</i>		B3B0222	02/12/2013	<i>02/12/13 18:11</i>	
<i>Surrogate: Nitrobenzene-d5</i>	<i>142 %</i>		<i>36 - 130</i>		B3B0222	02/12/2013	<i>02/12/13 18:11</i>	<i>S1</i>



Certificate of Analysis

Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego, CA 92122

Project Number : RAYTHEON MAIN: FULLERTON MON

Report To : Steve Netto

Reported : 02/28/2013

Client Sample ID CBT

Lab ID: 1300459-05

Volatile Organic Compounds by EPA 8260

Analyst: SL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 12:01	
1,1,1-Trichloroethane	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 12:01	
1,1,2,2-Tetrachloroethane	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 12:01	
1,1,2-Trichloroethane	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 12:01	
1,1-Dichloroethane	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 12:01	
1,1-Dichloroethene	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 12:01	
1,1-Dichloropropene	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 12:01	
1,2,3-Trichloropropane	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 12:01	
1,2,3-Trichlorobenzene	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 12:01	
1,2,4-Trichlorobenzene	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 12:01	
1,2,4-Trimethylbenzene	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 12:01	
1,2-Dibromo-3-chloropropane	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 12:01	
1,2-Dibromoethane	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 12:01	
1,2-Dichlorobenzene	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 12:01	
1,2-Dichloroethane	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 12:01	
1,2-Dichloropropane	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 12:01	
1,3,5-Trimethylbenzene	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 12:01	
1,3-Dichlorobenzene	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 12:01	
1,3-Dichloropropane	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 12:01	
1,4-Dichlorobenzene	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 12:01	
2,2-Dichloropropane	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 12:01	
2-Chlorotoluene	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 12:01	
4-Chlorotoluene	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 12:01	
4-Isopropyltoluene	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 12:01	
Benzene	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 12:01	
Bromobenzene	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 12:01	
Bromodichloromethane	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 12:01	
Bromoform	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 12:01	
Bromomethane	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 12:01	
Carbon tetrachloride	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 12:01	
Chlorobenzene	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 12:01	
Chloroethane	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 12:01	
Chloroform	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 12:01	
Chloromethane	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 12:01	
cis-1,2-Dichloroethene	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 12:01	
cis-1,3-Dichloropropene	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 12:01	
Dibromochloromethane	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 12:01	



Certificate of Analysis

Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : RAYTHEON MAIN: FULLERTON MON

Report To : Steve Netto

Reported : 02/28/2013

Client Sample ID CBT

Lab ID: 1300459-05

Volatile Organic Compounds by EPA 8260

Analyst: SL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Dibromomethane	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 12:01	
Dichlorodifluoromethane	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 12:01	
Ethylbenzene	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 12:01	
Hexachlorobutadiene	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 12:01	
Isopropylbenzene	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 12:01	
m,p-Xylene	ND	1.0	NA	1	B3B0217	02/12/2013	02/12/13 12:01	
Methylene chloride	ND	1.0	NA	1	B3B0217	02/12/2013	02/12/13 12:01	
n-Butylbenzene	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 12:01	
n-Propylbenzene	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 12:01	
Naphthalene	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 12:01	
o-Xylene	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 12:01	
sec-Butylbenzene	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 12:01	
Styrene	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 12:01	
tert-Butylbenzene	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 12:01	
Tetrachloroethene	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 12:01	
Toluene	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 12:01	
trans-1,2-Dichloroethene	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 12:01	
Trichloroethene	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 12:01	
Trichlorofluoromethane	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 12:01	
Vinyl chloride	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 12:01	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>119 %</i>		<i>70 - 130</i>		B3B0217	02/12/2013	<i>02/12/13 12:01</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>90.9 %</i>		<i>70 - 130</i>		B3B0217	02/12/2013	<i>02/12/13 12:01</i>	
<i>Surrogate: Dibromofluoromethane</i>	<i>118 %</i>		<i>70 - 130</i>		B3B0217	02/12/2013	<i>02/12/13 12:01</i>	
<i>Surrogate: Toluene-d8</i>	<i>104 %</i>		<i>70 - 130</i>		B3B0217	02/12/2013	<i>02/12/13 12:01</i>	



Certificate of Analysis

Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : RAYTHEON MAIN: FULLERTON MON

Report To : Steve Netto

Reported : 02/28/2013

Client Sample ID CEFF

Lab ID: 1300459-06

Anions by Ion Chromatography EPA 300.0

Analyst: AG

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Bromide	0.19	0.05	NA	1	B3B0276	02/13/2013	02/13/13 12:16	

Total Dissolved Solids (Residue, Filterable) by SM 2540C

Analyst: AG

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Residue, Dissolved	610	10	NA	1	B3B0308	02/13/2013	02/13/13 14:04	

Volatile Organic Compounds by EPA 8260

Analyst: SL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 11:14	
1,1,1-Trichloroethane	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 11:14	
1,1,2,2-Tetrachloroethane	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 11:14	
1,1,2-Trichloroethane	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 11:14	
1,1-Dichloroethane	0.53	0.50	NA	1	B3B0217	02/12/2013	02/12/13 11:14	
1,1-Dichloroethene	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 11:14	
1,1-Dichloropropene	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 11:14	
1,2,3-Trichloropropane	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 11:14	
1,2,3-Trichlorobenzene	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 11:14	
1,2,4-Trichlorobenzene	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 11:14	
1,2,4-Trimethylbenzene	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 11:14	
1,2-Dibromo-3-chloropropane	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 11:14	
1,2-Dibromoethane	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 11:14	
1,2-Dichlorobenzene	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 11:14	
1,2-Dichloroethane	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 11:14	
1,2-Dichloropropane	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 11:14	
1,3,5-Trimethylbenzene	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 11:14	
1,3-Dichlorobenzene	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 11:14	
1,3-Dichloropropane	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 11:14	
1,4-Dichlorobenzene	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 11:14	
2,2-Dichloropropane	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 11:14	
2-Chlorotoluene	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 11:14	
4-Chlorotoluene	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 11:14	
4-Isopropyltoluene	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 11:14	
Benzene	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 11:14	



Certificate of Analysis

Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego, CA 92122

Project Number : RAYTHEON MAIN: FULLERTON MON

Report To : Steve Netto

Reported : 02/28/2013

Client Sample ID CEFF

Lab ID: 1300459-06

Volatile Organic Compounds by EPA 8260

Analyst: SL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Bromobenzene	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 11:14	
Bromodichloromethane	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 11:14	
Bromoform	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 11:14	
Bromomethane	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 11:14	
Carbon tetrachloride	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 11:14	
Chlorobenzene	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 11:14	
Chloroethane	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 11:14	
Chloroform	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 11:14	
Chloromethane	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 11:14	
cis-1,2-Dichloroethene	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 11:14	
cis-1,3-Dichloropropene	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 11:14	
Dibromochloromethane	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 11:14	
Dibromomethane	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 11:14	
Dichlorodifluoromethane	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 11:14	
Ethylbenzene	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 11:14	
Hexachlorobutadiene	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 11:14	
Isopropylbenzene	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 11:14	
m,p-Xylene	ND	1.0	NA	1	B3B0217	02/12/2013	02/12/13 11:14	
Methylene chloride	ND	1.0	NA	1	B3B0217	02/12/2013	02/12/13 11:14	
n-Butylbenzene	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 11:14	
n-Propylbenzene	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 11:14	
Naphthalene	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 11:14	
o-Xylene	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 11:14	
sec-Butylbenzene	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 11:14	
Styrene	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 11:14	
tert-Butylbenzene	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 11:14	
Tetrachloroethene	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 11:14	
Toluene	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 11:14	
trans-1,2-Dichloroethene	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 11:14	
Trichloroethene	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 11:14	
Trichlorofluoromethane	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 11:14	
Vinyl chloride	ND	0.50	NA	1	B3B0217	02/12/2013	02/12/13 11:14	
Surrogate: 1,2-Dichloroethane-d4	111 %		70 - 130		B3B0217	02/12/2013	02/12/13 11:14	
Surrogate: 4-Bromofluorobenzene	84.6 %		70 - 130		B3B0217	02/12/2013	02/12/13 11:14	
Surrogate: Dibromofluoromethane	111 %		70 - 130		B3B0217	02/12/2013	02/12/13 11:14	
Surrogate: Toluene-d8	96.9 %		70 - 130		B3B0217	02/12/2013	02/12/13 11:14	



Certificate of Analysis

Hargis & Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego , CA 92122

Project Number : RAYTHEON MAIN: FULLERTON MON
 Report To : Steve Netto
 Reported : 02/28/2013

QUALITY CONTROL SECTION

Anions by Ion Chromatography EPA 300.0 - Quality Control

Analyte	Result (mg/L)	PQL (mg/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B3B0276 - No_Prep_IC_1									
Blank (B3B0276-BLK1)				Prepared: 2/13/2013 Analyzed: 2/13/2013					
Bromide	ND	0.05			NR				
LCS (B3B0276-BS1)				Prepared: 2/13/2013 Analyzed: 2/13/2013					
Bromide	0.952300	0.05	1.00000		95.2	90 - 110			
Duplicate (B3B0276-DUP1)				Source: 1300459-02 Prepared: 2/13/2013 Analyzed: 2/13/2013					
Bromide	0.198500	0.05		0.193800	NR		2.40	20	
Matrix Spike (B3B0276-MS1)				Source: 1300459-02 Prepared: 2/13/2013 Analyzed: 2/13/2013					
Bromide	3.47520	0.05	2.50000	0.193800	131	80 - 120			M1
Matrix Spike Dup (B3B0276-MSD1)				Source: 1300459-02 Prepared: 2/13/2013 Analyzed: 2/13/2013					
Bromide	3.46070	0.05	2.50000	0.193800	131	80 - 120	0.418	20	M1



Certificate of Analysis

Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : RAYTHEON MAIN: FULLERTON MON

Report To : Steve Netto

Reported : 02/28/2013

Total Dissolved Solids (Residue, Filterable) by SM 2540C - Quality Control

Analyte	Result (mg/L)	PQL (mg/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B3B0308 - No_Prep_WC_1

Blank (B3B0308-BLK1)

Prepared: 2/13/2013 Analyzed: 2/13/2013

Residue, Dissolved

ND

10

NR

LCS (B3B0308-BS1)

Prepared: 2/13/2013 Analyzed: 2/13/2013

Residue, Dissolved

974.000

10

970.000

100

80 - 120

Duplicate (B3B0308-DUP1)

Source: 1300487-04

Prepared: 2/13/2013 Analyzed: 2/13/2013

Residue, Dissolved

1131.00

10

1126.00

NR

0.443

10



Certificate of Analysis

Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : RAYTHEON MAIN: FULLERTON MON

Report To : Steve Netto

Reported : 02/28/2013

Total Suspended Solids (Residue, Non-Filtrable) by SM 2540D - Quality Control

Analyte	Result (mg/L)	PQL (mg/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B3B0321 - No_Prep_WC_1

Blank (B3B0321-BLK1)

Prepared: 2/13/2013 Analyzed: 2/13/2013

Residue, Suspended

ND

10

NR

LCS (B3B0321-BS1)

Prepared: 2/13/2013 Analyzed: 2/13/2013

Residue, Suspended

93.0000

10

96.6000

96.3

80 - 120

Duplicate (B3B0321-DUP1)

Source: 1300435-01

Prepared: 2/13/2013 Analyzed: 2/13/2013

Residue, Suspended

131.000

10

133.000

NR

1.52

10



Certificate of Analysis

Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : RAYTHEON MAIN: FULLERTON MON

Report To : Steve Netto

Reported : 02/28/2013

Volatile Organic Compounds by EPA 8260 - Quality Control

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec % Rec	% Rec Limits	RPD RPD	RPD Limit	Notes
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Batch B3B0217 - MSVOAW_LL

Blank (B3B0217-BLK1)

Prepared: 2/12/2013 Analyzed: 2/12/2013

1,1,1,2-Tetrachloroethane	ND	0.50			NR
1,1,1-Trichloroethane	ND	0.50			NR
1,1,2,2-Tetrachloroethane	ND	0.50			NR
1,1,2-Trichloroethane	ND	0.50			NR
1,1-Dichloroethane	ND	0.50			NR
1,1-Dichloroethene	ND	0.50			NR
1,1-Dichloropropene	ND	0.50			NR
1,2,3-Trichloropropane	ND	0.50			NR
1,2,3-Trichlorobenzene	ND	0.50			NR
1,2,4-Trichlorobenzene	ND	0.50			NR
1,2,4-Trimethylbenzene	ND	0.50			NR
1,2-Dibromo-3-chloropropane	ND	0.50			NR
1,2-Dibromoethane	ND	0.50			NR
1,2-Dichlorobenzene	ND	0.50			NR
1,2-Dichloroethane	ND	0.50			NR
1,2-Dichloropropane	ND	0.50			NR
1,3,5-Trimethylbenzene	ND	0.50			NR
1,3-Dichlorobenzene	ND	0.50			NR
1,3-Dichloropropane	ND	0.50			NR
1,4-Dichlorobenzene	ND	0.50			NR
2,2-Dichloropropane	ND	0.50			NR
2-Chlorotoluene	ND	0.50			NR
4-Chlorotoluene	ND	0.50			NR
4-Isopropyltoluene	ND	0.50			NR
Benzene	ND	0.50			NR
Bromobenzene	ND	0.50			NR
Bromodichloromethane	ND	0.50			NR
Bromoform	ND	0.50			NR
Bromomethane	ND	0.50			NR
Carbon tetrachloride	ND	0.50			NR
Chlorobenzene	ND	0.50			NR
Chloroethane	ND	0.50			NR
Chloroform	ND	0.50			NR
Chloromethane	ND	0.50			NR
cis-1,2-Dichloroethene	ND	0.50			NR
cis-1,3-Dichloropropene	ND	0.50			NR
Dibromochloromethane	ND	0.50			NR
Dibromomethane	ND	0.50			NR
Dichlorodifluoromethane	ND	0.50			NR
Ethylbenzene	ND	0.50			NR
Hexachlorobutadiene	ND	0.50			NR



Certificate of Analysis

Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : RAYTHEON MAIN: FULLERTON MON

Report To : Steve Netto

Reported : 02/28/2013

Volatile Organic Compounds by EPA 8260 - Quality Control (cont'd)

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec % Rec	% Rec Limits	RPD RPD	RPD Limit	Notes
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Batch B3B0217 - MSVOAW_LL (continued)

Blank (B3B0217-BLK1) - Continued

Prepared: 2/12/2013 Analyzed: 2/12/2013

Isopropylbenzene	ND	0.50			NR				
m,p-Xylene	ND	1.0			NR				
Methylene chloride	ND	1.0			NR				
n-Butylbenzene	ND	0.50			NR				
n-Propylbenzene	ND	0.50			NR				
Naphthalene	ND	0.50			NR				
o-Xylene	ND	0.50			NR				
sec-Butylbenzene	ND	0.50			NR				
Styrene	ND	0.50			NR				
tert-Butylbenzene	ND	0.50			NR				
Tetrachloroethene	ND	0.50			NR				
Toluene	ND	0.50			NR				
trans-1,2-Dichloroethene	ND	0.50			NR				
Trichloroethene	ND	0.50			NR				
Trichlorofluoromethane	ND	0.50			NR				
Vinyl chloride	ND	0.50			NR				

<i>Surrogate: 1,2-Dichloroethane-d4</i>	27.63		25.0000		111	70 - 130			
<i>Surrogate: 4-Bromofluorobenzene</i>	22.80		25.0000		91.2	70 - 130			
<i>Surrogate: Dibromofluoromethane</i>	19.76		25.0000		79.0	70 - 130			
<i>Surrogate: Toluene-d8</i>	26.43		25.0000		106	70 - 130			

LCS (B3B0217-BS1)

Prepared: 2/12/2013 Analyzed: 2/12/2013

1,1-Dichloroethene	20.4100		20.0000		102	70 - 130			
Benzene	40.3300		40.0000		101	70 - 130			
Chlorobenzene	19.6000		20.0000		98.0	70 - 130			
MTBE	18.5300		20.0000		92.6	70 - 130			
Toluene	39.1700		40.0000		97.9	70 - 130			
Trichloroethene	19.3700		20.0000		96.8	70 - 130			

<i>Surrogate: 1,2-Dichloroethane-d4</i>	28.89		25.0000		116	70 - 130			
<i>Surrogate: 4-Bromofluorobenzene</i>	22.24		25.0000		89.0	70 - 130			
<i>Surrogate: Dibromofluoromethane</i>	28.27		25.0000		113	70 - 130			
<i>Surrogate: Toluene-d8</i>	24.62		25.0000		98.5	70 - 130			

LCS Dup (B3B0217-BSD1)

Prepared: 2/12/2013 Analyzed: 2/12/2013

1,1-Dichloroethene	18.4000		20.0000		92.0	70 - 130	10.4	20	
Benzene	38.9200		40.0000		97.3	70 - 130	3.56	20	
Chlorobenzene	19.5700		20.0000		97.8	70 - 130	0.153	20	
MTBE	18.5900		20.0000		93.0	70 - 130	0.323	20	
Toluene	38.5200		40.0000		96.3	70 - 130	1.67	20	
Trichloroethene	18.6500		20.0000		93.2	70 - 130	3.79	20	

<i>Surrogate: 1,2-Dichloroethane-d4</i>	30.20		25.0000		121	70 - 130			
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Certificate of Analysis

Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego, CA 92122

Project Number : RAYTHEON MAIN: FULLERTON MON

Report To : Steve Netto

Reported : 02/28/2013

Volatile Organic Compounds by EPA 8260 - Quality Control (cont'd)

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B3B0217 - MSVOAW_LL (continued)

LCS Dup (B3B0217-BSD1) - Continued

Prepared: 2/12/2013 Analyzed: 2/12/2013

Surrogate: 4-Bromofluorobenzene	24.15		25.0000		96.6	70 - 130			
Surrogate: Dibromofluoromethane	29.84		25.0000		119	70 - 130			
Surrogate: Toluene-d8	26.56		25.0000		106	70 - 130			



Certificate of Analysis

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9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : RAYTHEON MAIN: FULLERTON MON

Report To : Steve Netto

Reported : 02/28/2013

1,4-Dioxane by EPA 8270: Isotope Dilution Technique - Quality Control

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec % Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B3B0206 - MSSEMI_ISOTOPEDILN

Blank (B3B0206-BLK1)

Prepared: 2/11/2013 Analyzed: 2/11/2013

1,4-Dioxane	ND	2.0			NR				
Surrogate: 1,2-Dichlorobenzene-d4	73.27		100.000		73.3	37 - 93			
Surrogate: 2-Fluorobiphenyl	83.74		100.000		83.7	51 - 100			
Surrogate: 4-Terphenyl-d14	96.93		100.000		96.9	58 - 113			
Surrogate: Nitrobenzene-d5	91.39		100.000		91.4	39 - 95			

LCS (B3B0206-BS1)

Prepared: 2/11/2013 Analyzed: 2/11/2013

1,4-Dioxane	100.400	2.0	100.000		100	70 - 130			
Surrogate: 1,2-Dichlorobenzene-d4	66.53		100.000		66.5	37 - 93			
Surrogate: 2-Fluorobiphenyl	85.67		100.000		85.7	51 - 100			
Surrogate: 4-Terphenyl-d14	99.33		100.000		99.3	58 - 113			
Surrogate: Nitrobenzene-d5	86.55		100.000		86.6	39 - 95			

Matrix Spike (B3B0206-MS1)

Source: 1300389-02

Prepared: 2/11/2013 Analyzed: 2/11/2013

1,4-Dioxane	154.900	2.0	100.000	58.4200	96.5	70 - 130			
Surrogate: 1,2-Dichlorobenzene-d4	66.27		100.000		66.3	37 - 93			
Surrogate: 2-Fluorobiphenyl	82.42		100.000		82.4	51 - 100			
Surrogate: 4-Terphenyl-d14	97.40		100.000		97.4	58 - 113			
Surrogate: Nitrobenzene-d5	86.13		100.000		86.1	39 - 95			

Matrix Spike (B3B0206-MS2)

Source: 1300409-11

Prepared: 2/11/2013 Analyzed: 2/11/2013

1,4-Dioxane	154.870	2.0	100.000	49.0300	106	70 - 130			
Surrogate: 1,2-Dichlorobenzene-d4	72.30		100.000		72.3	37 - 93			
Surrogate: 2-Fluorobiphenyl	87.96		100.000		88.0	51 - 100			
Surrogate: 4-Terphenyl-d14	100.8		100.000		101	58 - 113			
Surrogate: Nitrobenzene-d5	93.85		100.000		93.8	39 - 95			

Matrix Spike Dup (B3B0206-MSD1)

Source: 1300389-02

Prepared: 2/11/2013 Analyzed: 2/11/2013

1,4-Dioxane	158.270	2.0	100.000	58.4200	99.9	70 - 130	2.15	20	
Surrogate: 1,2-Dichlorobenzene-d4	67.92		100.000		67.9	37 - 93			
Surrogate: 2-Fluorobiphenyl	86.40		100.000		86.4	51 - 100			
Surrogate: 4-Terphenyl-d14	98.56		100.000		98.6	58 - 113			
Surrogate: Nitrobenzene-d5	90.22		100.000		90.2	39 - 95			

Matrix Spike Dup (B3B0206-MSD2)

Source: 1300409-11

Prepared: 2/11/2013 Analyzed: 2/11/2013

1,4-Dioxane	152.130	2.0	100.000	49.0300	103	70 - 130	1.79	20	
Surrogate: 1,2-Dichlorobenzene-d4	68.66		100.000		68.7	37 - 93			
Surrogate: 2-Fluorobiphenyl	83.68		100.000		83.7	51 - 100			
Surrogate: 4-Terphenyl-d14	98.37		100.000		98.4	58 - 113			
Surrogate: Nitrobenzene-d5	90.16		100.000		90.2	39 - 95			



Certificate of Analysis

Hargis & Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego , CA 92122

Project Number : RAYTHEON MAIN: FULLERTON MON
 Report To : Steve Netto
 Reported : 02/28/2013

1,4-Dioxane by EPA 8270/SIM: Isotope Dilution Technique - Quality Control

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec % Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B3B0222 - MSSEMI

Blank (B3B0222-BLK1)

Prepared: 2/12/2013 Analyzed: 2/12/2013

1,4-Dioxane	ND	0.20			NR				
Surrogate: 1,2-Dichlorobenzene-d4	1.185		1.00000		119	36 - 107			S1
Surrogate: 2-Fluorobiphenyl	1.149		1.00000		115	42 - 120			
Surrogate: 4-Terphenyl-d14	0.8541		1.00000		85.4	67 - 142			
Surrogate: Nitrobenzene-d5	1.329		1.00000		133	36 - 130			S1

LCS (B3B0222-BS1)

Prepared: 2/12/2013 Analyzed: 2/12/2013

1,4-Dioxane	0.727860	0.20	1.00000		72.8	70 - 130			
Surrogate: 1,2-Dichlorobenzene-d4	0.7483		1.00000		74.8	36 - 107			
Surrogate: 2-Fluorobiphenyl	1.076		1.00000		108	42 - 120			
Surrogate: 4-Terphenyl-d14	0.8147		1.00000		81.5	67 - 142			
Surrogate: Nitrobenzene-d5	1.227		1.00000		123	36 - 130			

LCS Dup (B3B0222-BSD1)

Prepared: 2/12/2013 Analyzed: 2/12/2013

1,4-Dioxane	0.780660	0.20	1.00000		78.1	70 - 130	7.00	20	
Surrogate: 1,2-Dichlorobenzene-d4	0.9206		1.00000		92.1	36 - 107			
Surrogate: 2-Fluorobiphenyl	1.063		1.00000		106	42 - 120			
Surrogate: 4-Terphenyl-d14	0.7900		1.00000		79.0	67 - 142			
Surrogate: Nitrobenzene-d5	1.150		1.00000		115	36 - 130			

Matrix Spike (B3B0222-MS1)

Source: 1300426-05

Prepared: 2/12/2013 Analyzed: 2/12/2013

1,4-Dioxane	0.801830	0.20	1.00000	ND	80.2	70 - 130			
Surrogate: 1,2-Dichlorobenzene-d4	1.001		1.00000		100	36 - 107			
Surrogate: 2-Fluorobiphenyl	1.022		1.00000		102	42 - 120			
Surrogate: 4-Terphenyl-d14	0.8100		1.00000		81.0	67 - 142			
Surrogate: Nitrobenzene-d5	1.219		1.00000		122	36 - 130			

Matrix Spike Dup (B3B0222-MSD1)

Source: 1300426-05

Prepared: 2/12/2013 Analyzed: 2/12/2013

1,4-Dioxane	0.861170	0.20	1.00000	ND	86.1	70 - 130	7.14	20	
Surrogate: 1,2-Dichlorobenzene-d4	1.037		1.00000		104	36 - 107			
Surrogate: 2-Fluorobiphenyl	1.017		1.00000		102	42 - 120			
Surrogate: 4-Terphenyl-d14	0.7984		1.00000		79.8	67 - 142			
Surrogate: Nitrobenzene-d5	1.240		1.00000		124	36 - 130			



Certificate of Analysis

Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : RAYTHEON MAIN: FULLERTON MON

Report To : Steve Netto

Reported : 02/28/2013

Notes and Definitions

S1	Surrogate recovery was above laboratory acceptance limit. No target analyte was detected in the sample.
M1	Matrix spike recovery outside of acceptance limit. The analytical batch was validated by the laboratory control sample.
ND	Analyte not detected at or above reporting limit
PQL	Practical Quantitation Limit
MDL	Method Detection Limit
NR	Not Reported
RPD	Relative Percent Difference
CA1	CA-NELAP (CDPH)
CA2	CA-ELAP (CDPH)
OR1	OR-NELAP (OSPHL)
TX1	TX-NELAP (TCEQ)

Notes:

- (1) The reported MDL and PQL are based on prep ratio variation and analytical dilution.
- (2) The suffix [2C] of specific analytes signifies that the reported result is taken from the instrument's second column.

Client: Advanced Technology Laboratories
 Job No.: 145961

Bromate by EPA 317.0
 Ion Chromatography/Post-Column Reaction-Visible Absorption Spectroscopy

Column: Dionex AS9-HC/AG9-HSC
 Eluent: 10 mM Na₂CO₃
 Flow: 1.2 mL/min
 Injection: 250 µL
 Detection: Visible, 450 nm

Sample preparation: The undiluted samples were treated with a Dionex OnGuard II H cartridge to remove excess basic cations. One sample required dilution with water by 1:5 for analysis. The detection limit is adjusted for the dilution.

Parts Per Billion (µg/L)

<u>Sample ID</u>	<u>Result</u>	<u>Detection Limit</u>
1300459-02/ EW-02	0.4	0.3
1300459-04/ POX	9	2
1300459-06/ CEFF	6.5	0.3
1300459-06/ CEFF Duplicate	6.6	0.3
Method Blank	ND	0.3

Date Analyzed: 02-26-13

Quality Control Summary

Sample ID: 1300459-06/ CEFF

<u>Analyte</u>	<u>Sample Result</u>	<u>Duplicate Result</u>	<u>Sample RPD</u>	<u>Spike Conc</u>	<u>Spike Result</u>	<u>Spike % Rec</u>
Bromate	6.5	6.6	2	20.0	23.2	83
QC Guidelines			NMT 10			75-125

Exova Inc – Santa Fe Springs – 562-948-2225
 The above data is considered preliminary and may not reflect final reported values.
 A final signed report will be mailed to you.


ADVANCED TECHNOLOGY
 LABORATORIES
SUBCONTRACT ORDER

Work Order: 1300459

SENDING LABORATORY:

Advanced Technology Laboratories
 3275 Walnut Avenue
 Signal Hill, CA 90755
 Phone: 562.989.4045
 Fax: 562.989.6348
 Project Manager: Rachelle Arada

RECEIVING LABORATORY:

Exova Inc.
 9240 Santa Fe Springs Road
 Santa Fe Springs, CA 90670
 Phone : (562) 948-2225
 Fax: (562) 948-5850
 PO#: SC07846 - STANDARD TAT RP

IMPORTANT : Please include Work Order # and PO # in your invoice.

Analysis	Due	Expires	Sampled	Comments
ATL Lab#: 1300459-02 317.0 Poly Unpres - 125mL	/ EW-02 02/25/13 17:00	Groundwater 02/10/13 10:35	02/09/13 10:35	BROMATE
ATL Lab#: 1300459-04 317.0 1-Poly Unpres - 125mL	/ POX 02/25/13 17:00	Groundwater 02/10/13 09:55	02/09/13 09:55	
ATL Lab#: 1300459-06 317.0 1-Poly Unpres - 125mL	/ CEFF 02/25/13 17:00	Groundwater 02/10/13 10:15	02/09/13 10:15	

Released By <i>MA</i>	Date <i>2/11/13</i>	Received By <i>[Signature]</i>	Date <i>2/11/13 9:28</i>
Released By <i>[Signature]</i>	Date <i>2/14/13 13:54</i>	Received By <i>[Signature]</i> - EXOVA	Date <i>02-11-13 11:54</i>

CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST FORM

PROJECT NAME		PROJECT No./TASK No.				SAMPLE CONTAINERS				ANALYSIS REQUESTED				ESTIMATED CONCENTRATION RANGE (ppb) FOR VOAs		SPECIAL HANDLING		LABORATORY INFORMATION																						
RAYTHEON MAIN: FULLERTON MONTHLY		532.15																Advanced Technology Laboratories																						
PROJECT MANAGER CHRIS ROSS		Phone No. 858-455-6500																3275 Walnut Ave																						
QA MANAGER STEVE NETTO		Fax No. 858-455-6533																Signal Hill, CA 90755																						
SAMPLER (SIGNATURE)		SAMPLER (PRINTED)																Attn: Rachelle Arada																						
LAB ID	SAMPLE ID	SAMPLE COLLECTION		MATRIX		PRESERVATION		40 ml VOA	125 ml Poly	250 ml Poly	1 L Amber	VOCS by EPA 8260B	1,4-Dioxane by EPA 8270S1M	1,4-Dioxane by EPA 8270M03	Bromate by EPA 317	Bromide by EPA 300	TDS by EPA SM2540C	TSS by EPA SM2540D	0-10	10-100	100-1,000	>1,000								REMARKS										
		Date	Time	Soil	Ground Water	Surface Water	Lab H2O																								HCl	HNO3	NaOH	H2SO4	Ice					
1300459-1	TB-020913	2/9/13	09:30			X	X					X																												
	-2 EM-02		10:35	X		X		X	X	X		X	X	X	X	X			X																			Please include		
	-3 PF		09:50	X												X																						in lab report		
	-4 POX		09:55	X		X		X	X	X		X	X	X	X				X																			distribution list.		
	-5 CBT		10:05	X		X		X				X							X																					
	-6 CEFF		10:15	X		X		X	X	X		X							X																					Set 1,4-Dioxane
Total number of Containers per analysis:								14/652								Total No. of Containers: 27																								
Relinquished by:		Date	Received by:		Date	INSTRUCTIONS																				Shipment Method:														
		2/9/13	TPD/MS		2/9/13	<ol style="list-style-type: none"> Fill out form completely except for shaded areas (lab use only); sign only after verified for completeness. Complete in ballpoint pen. Draw one line through errors, initial and date correction. Indicate number of sample containers in analysis request space; indicate choice with ✓ or x. Note applicable preservatives, special instructions, and deviations from typical environmental samples. Consult project QA documents for specific instructions. 																				Send Results to: Steve Netto														
Company		Time	Company		Time																					<input checked="" type="checkbox"/> 9171 TOWNE CENTRE DRIVE, SUITE 375 SAN DIEGO, CA 92122 (858) 455-6500														
Company		Time	Company		Time																					<input type="checkbox"/> 1640 SOUTH STAPLEY DRIVE, SUITE 124 MESA, AZ 85204 (480) 345-0888														
Company		Time	Company		Time																					<input type="checkbox"/> 1820 EAST RIVER ROAD, SUITE 220 TUCSON, AZ 85718 (520) 881-7300														
Company		Time	Company		Time	Sample Receipt:										Temp. @ receipt <u>1.7</u> °C										Send invoice to San Diego, CA														
Company		Time	Company		Time	<input type="checkbox"/> No. of containers correct <input type="checkbox"/> custody seals secure										<input checked="" type="checkbox"/> received good condition/cold <input type="checkbox"/> conforms to COC document										Attn: Accounts Payable														

March 20, 2013

Steve Netto
Hargis & Associates, Inc.
9171 Towne Centre Drive, Suite 375
San Diego, CA 92122
Tel: (619) 249-3166
Fax: (858) 455-6533



Re: ATL Work Order Number : 1300729

Client Reference : Raytheon Main: Fullerton Quarterly, 532.15

Enclosed are the results for sample(s) received on March 09, 2013 by Advanced Technology Laboratories. The sample(s) are tested for the parameters as indicated on the enclosed chain of custody in accordance with applicable laboratory certifications. The laboratory results contained in this report specifically pertains to the sample(s) submitted.

Thank you for the opportunity to serve the needs of your company. If you have any questions, please feel free to contact me or your Project Manager.

Sincerely,

Eddie Rodriguez
Laboratory Director

The cover letter and the case narrative are an integral part of this analytical report and its absence renders the report invalid. Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Conference and/or applicable state-specific certification programs. The report cannot be reproduced without written permission from the client and Advanced Technology Laboratories.



Certificate of Analysis

Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : Raytheon Main: Fullerton Quarterly, 532.1

Report To : Steve Netto

Reported : 03/20/2013

SUMMARY OF SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
EW-02	1300729-01	Groundwater	3/09/13 13:15	3/09/12 14:27
POX	1300729-02	Groundwater	3/09/13 12:00	3/09/12 14:27

CASE NARRATIVE

The sample for SM 2320B (Alkalinity) analysis was subcontracted to AETL with DOHS Cert.#1541.



Certificate of Analysis

Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : Raytheon Main: Fullerton Quarterly, 532.1

Report To : Steve Netto

Reported : 03/20/2013

Client Sample ID EW-02

Lab ID: 1300729-01

Anions Scan by Ion Chromatography EPA 300.0

Analyst: AG

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Chloride	92	5.0	NA	10	B3C0130	03/11/2013	03/11/13 09:04	
Nitrate as N	4.2	0.10	NA	1	B3C0130	03/11/2013	03/11/13 07:55	
Nitrite, as N	ND	0.10	NA	1	B3C0130	03/11/2013	03/11/13 07:55	
ortho-Phosphate (As P)	ND	0.05	NA	1	B3C0130	03/11/2013	03/11/13 07:55	
Sulfate	130	10	NA	10	B3C0130	03/11/2013	03/11/13 09:04	

Total Organic Carbon by SM 5310B

Analyst: AG

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Organic Carbon, Total	ND	3.0	NA	1	B3C0145	03/12/2013	03/12/13 10:31	

Chemical Oxygen Demand by EPA 410.4

Analyst: LA

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Chemical Oxygen Demand	ND	5.0	NA	1	B3C0204	03/14/2013	03/14/13 12:49	

Total Metals by ICP-AES EPA 6010B

Analyst: PT

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Selenium	ND	0.010	NA	1	B3C0136	03/11/2013	03/12/13 10:48	

Dissolved Metals by ICP-AES EPA 6010B

Analyst: PT

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Calcium	87	0.50	NA	1	B3C0155	03/12/2013	03/12/13 15:33	
Iron	ND	0.50	NA	1	B3C0155	03/12/2013	03/12/13 15:33	
Magnesium	27	0.10	NA	1	B3C0155	03/12/2013	03/12/13 15:33	
Manganese	ND	0.50	NA	1	B3C0155	03/12/2013	03/12/13 15:34	
Selenium	ND	0.010	NA	1	B3C0155	03/12/2013	03/12/13 15:34	
Sodium	76	1.0	NA	1	B3C0155	03/12/2013	03/13/13 08:08	



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9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : Raytheon Main: Fullerton Quarterly, 532.1

Report To : Steve Netto

Reported : 03/20/2013

Client Sample ID POX

Lab ID: 1300729-02

Anions Scan by Ion Chromatography EPA 300.0

Analyst: AG

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Chloride	92	5.0	NA	10	B3C0130	03/11/2013	03/11/13 10:34	
Nitrate as N	4.4	0.10	NA	1	B3C0130	03/11/2013	03/11/13 08:41	
Nitrite, as N	ND	0.10	NA	1	B3C0130	03/11/2013	03/11/13 08:41	
ortho-Phosphate (As P)	ND	0.05	NA	1	B3C0130	03/11/2013	03/11/13 08:41	
Sulfate	130	10	NA	10	B3C0130	03/11/2013	03/11/13 10:34	

Total Organic Carbon by SM 5310B

Analyst: AG

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Organic Carbon, Total	ND	3.0	NA	1	B3C0145	03/12/2013	03/12/13 11:22	

Chemical Oxygen Demand by EPA 410.4

Analyst: LA

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Chemical Oxygen Demand	ND	5.0	NA	1	B3C0204	03/14/2013	03/14/13 12:49	



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9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : Raytheon Main: Fullerton Quarterly, 532.1

Report To : Steve Netto

Reported : 03/20/2013

QUALITY CONTROL SECTION

Anions Scan by Ion Chromatography EPA 300.0 - Quality Control

Analyte	Result (mg/L)	PQL (mg/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B3C0130 - No_Prep_IC_1

Blank (B3C0130-BLK1)

Prepared: 3/11/2013 Analyzed: 3/11/2013

Chloride	ND	0.50			NR				
Nitrate as N	ND	0.10			NR				
Nitrite, as N	ND	0.10			NR				
ortho-Phosphate (As P)	ND	0.05			NR				
Sulfate	ND	1.0			NR				

LCS (B3C0130-BS1)

Prepared: 3/11/2013 Analyzed: 3/11/2013

Chloride	1.01610	0.50	1.00000		102	90 - 110			
Nitrate as N	0.995500	0.10	1.00000		99.6	90 - 110			
Nitrite, as N	1.01500	0.10	1.00000		102	90 - 110			
ortho-Phosphate (As P)	1.06900	0.05	1.00000		107	90 - 110			
Sulfate	2.10450	1.0	2.00000		105	90 - 110			

Duplicate (B3C0130-DUP1)

Source: 1300729-01

Prepared: 3/11/2013 Analyzed: 3/11/2013

Chloride	93.5260	5.0		91.8900	NR		1.76	20	
Nitrate as N	4.38140	0.10		4.22380	NR		3.66	20	
Nitrite, as N	ND	0.10		ND	NR			20	
ortho-Phosphate (As P)	ND	0.05		ND	NR			20	
Sulfate	132.158	10		131.043	NR		0.847	20	

Matrix Spike (B3C0130-MS1)

Source: 1300729-01

Prepared: 3/11/2013 Analyzed: 3/11/2013

Chloride	92.4410	5.0	2.50000	91.8900	22.0	80 - 120			M3
Nitrate as N	6.80340	0.10	2.50000	4.22380	103	80 - 120			
Nitrite, as N	3.44390	0.10	2.50000	ND	138	80 - 120			M2
ortho-Phosphate (As P)	0.272400	0.05	2.50000	ND	10.9	80 - 120			M1
Sulfate	135.662	10	5.00000	131.043	92.4	80 - 120			

Matrix Spike Dup (B3C0130-MSD1)

Source: 1300729-01

Prepared: 3/11/2013 Analyzed: 3/11/2013

Chloride	92.3280	5.0	2.50000	91.8900	17.5	80 - 120	0.122	20	M3
Nitrate as N	6.77960	0.10	2.50000	4.22380	102	80 - 120	0.350	20	
Nitrite, as N	3.44620	0.10	2.50000	ND	138	80 - 120	0.0668	20	M2
ortho-Phosphate (As P)	2.61150	0.05	2.50000	ND	104	80 - 120	162	20	M1
Sulfate	137.234	10	5.00000	131.043	124	80 - 120	1.15	20	M3



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9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : Raytheon Main: Fullerton Quarterly, 532.1

Report To : Steve Netto

Reported : 03/20/2013

Total Organic Carbon by SM 5310B - Quality Control

Analyte	Result (mg/L)	PQL (mg/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B3C0145 - No_Prep_II_W

Blank (B3C0145-BLK1)

Prepared: 3/12/2013 Analyzed: 3/12/2013

Organic Carbon, Total

ND

3.0

NR

LCS (B3C0145-BS1)

Prepared: 3/12/2013 Analyzed: 3/12/2013

Organic Carbon, Total

21.0900

3.0

20.0000

105

80 - 120

Matrix Spike (B3C0145-MS1)

Source: 1300729-01

Prepared: 3/12/2013 Analyzed: 3/12/2013

Organic Carbon, Total

21.5100

3.0

20.0000

2.28000

96.2

80 - 120

Matrix Spike Dup (B3C0145-MSD1)

Source: 1300729-01

Prepared: 3/12/2013 Analyzed: 3/12/2013

Organic Carbon, Total

24.7000

3.0

20.0000

2.28000

112

80 - 120

13.8

20



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 San Diego , CA 92122

Project Number : Raytheon Main: Fullerton Quarterly, 532.1
 Report To : Steve Netto
 Reported : 03/20/2013

Chemical Oxygen Demand by EPA 410.4 - Quality Control

Analyte	Result (mg/L)	PQL (mg/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B3C0204 - Prep_WC_1_W

Blank (B3C0204-BLK1)

Prepared: 3/14/2013 Analyzed: 3/14/2013

Chemical Oxygen Demand	ND	5.0			NR			
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LCS (B3C0204-BS1)

Prepared: 3/14/2013 Analyzed: 3/14/2013

Chemical Oxygen Demand	481.455	5.0	501.500		96.0	80 - 120		
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Matrix Spike (B3C0204-MS1)

Source: 1300760-01

Prepared: 3/14/2013 Analyzed: 3/14/2013

Chemical Oxygen Demand	532.396	5.0		6.23700	NR	80 - 120		
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Matrix Spike Dup (B3C0204-MSD1)

Source: 1300760-01

Prepared: 3/14/2013 Analyzed: 3/14/2013

Chemical Oxygen Demand	533.947	5.0		6.23700	NR	80 - 120	0.291	20
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Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : Raytheon Main: Fullerton Quarterly, 532.1

Report To : Steve Netto

Reported : 03/20/2013

Total Metals by ICP-AES EPA 6010B - Quality Control

Analyte	Result (mg/L)	PQL (mg/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B3C0136 - EPA 3010A

Blank (B3C0136-BLK1)

Prepared: 3/11/2013 Analyzed: 3/12/2013

Selenium	ND	0.010			NR			
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LCS (B3C0136-BS1)

Prepared: 3/11/2013 Analyzed: 3/12/2013

Selenium	0.904746	0.010	1.00000		90.5	80 - 120		
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Duplicate (B3C0136-DUP1)

Source: 1300723-13

Prepared: 3/11/2013 Analyzed: 3/12/2013

Selenium	ND	0.010		ND	NR			20
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Matrix Spike (B3C0136-MS1)

Source: 1300723-13

Prepared: 3/11/2013 Analyzed: 3/12/2013

Selenium	2.20010	0.010	2.50000	ND	88.0	69 - 123		
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Matrix Spike Dup (B3C0136-MSD1)

Source: 1300723-13

Prepared: 3/11/2013 Analyzed: 3/12/2013

Selenium	2.16858	0.010	2.50000	ND	86.7	69 - 123	1.44	20
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Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego, CA 92122

Project Number : Raytheon Main: Fullerton Quarterly, 532.1

Report To : Steve Netto

Reported : 03/20/2013

Dissolved Metals by ICP-AES EPA 6010B - Quality Control

Analyte	Result (mg/L)	PQL (mg/L)	Spike Level	Source Result	% Rec % Rec	% Rec Limits	RPD RPD	RPD Limit	Notes
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Batch B3C0155 - EPA 3010A

Blank (B3C0155-BLK1)

Prepared: 3/12/2013 Analyzed: 3/12/2013

Calcium	ND	0.50			NR				
Iron	ND	0.50			NR				
Magnesium	ND	0.10			NR				
Manganese	ND	0.50			NR				
Selenium	ND	0.010			NR				
Sodium	ND	1.0			NR				

Blank (B3C0155-BLK2)

Prepared: 3/12/2013 Analyzed: 3/13/2013

Calcium	ND	0.50			NR				
Iron	ND	0.50			NR				
Magnesium	ND	0.10			NR				
Manganese	ND	0.50			NR				
Selenium	ND	0.010			NR				
Sodium	ND	1.0			NR				

LCS (B3C0155-BS1)

Prepared: 3/12/2013 Analyzed: 3/12/2013

Calcium	19.5830	0.50	20.0000		97.9	80 - 120			
Iron	19.5062	0.50	20.0000		97.5	80 - 120			
Magnesium	19.5013	0.10	20.0000		97.5	80 - 120			
Manganese	18.8409	1.0	20.0000		94.2	80 - 120			
Selenium	0.928328	0.010	1.00000		92.8	80 - 120			
Sodium	18.4048	1.0	20.0000		92.0	80 - 120			

LCS (B3C0155-BS2)

Prepared: 3/12/2013 Analyzed: 3/13/2013

Calcium	19.5461	1.0	20.0000		97.7	80 - 120			
Iron	19.4296	1.0	20.0000		97.1	80 - 120			
Magnesium	19.6375	0.20	20.0000		98.2	80 - 120			
Manganese	18.9149	1.0	20.0000		94.6	80 - 120			
Selenium	0.921708	0.020	1.00000		92.2	80 - 120			
Sodium	20.1298	2.0	20.0000		101	80 - 120			

Matrix Spike (B3C0155-MS1)

Source: 1300729-01

Prepared: 3/12/2013 Analyzed: 3/12/2013

Calcium	109.699	0.50	20.0000	86.9582	114	28 - 159			
Iron	19.2402	0.50	20.0000	ND	96.2	69 - 121			
Magnesium	46.5415	0.10	20.0000	26.7646	98.9	39 - 145			
Manganese	18.7655	1.0	20.0000	ND	93.8	68 - 115			
Selenium	2.26893	0.010	2.50000	0.006264	90.5	69 - 123			
Sodium	80.6124	1.0	19.7000	68.7609	60.2	37 - 175			

Matrix Spike (B3C0155-MS2)

Source: 1300729-01RE1

Prepared: 3/12/2013 Analyzed: 3/13/2013

Calcium	108.408	1.0	20.0000	86.3721	110	28 - 159			
Iron	19.6471	1.0	20.0000	ND	98.2	69 - 121			



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San Diego , CA 92122

Project Number : Raytheon Main: Fullerton Quarterly, 532.1

Report To : Steve Netto

Reported : 03/20/2013

Dissolved Metals by ICP-AES EPA 6010B - Quality Control (cont'd)

Analyte	Result (mg/L)	PQL (mg/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B3C0155 - EPA 3010A (continued)

Matrix Spike (B3C0155-MS2) - Continued

Source: 1300729-01RE1

Prepared: 3/12/2013 Analyzed: 3/13/2013

Magnesium	46.9062	0.20	20.0000	27.2425	98.3	39 - 145			
Manganese	19.2620	1.0	20.0000	ND	96.3	68 - 115			
Selenium	2.33816	0.020	2.50000	ND	93.5	69 - 123			
Sodium	81.6287	2.0	19.7000	75.8368	29.4	37 - 175			R

Matrix Spike Dup (B3C0155-MSD1)

Source: 1300729-01

Prepared: 3/12/2013 Analyzed: 3/12/2013

Calcium	110.301	0.50	20.0000	86.9582	117	28 - 159	0.548	20	
Iron	20.3742	0.50	20.0000	ND	102	69 - 121	5.73	20	
Magnesium	46.8092	0.10	20.0000	26.7646	100	39 - 145	0.574	20	
Manganese	18.9092	1.0	20.0000	ND	94.5	68 - 115	0.763	20	
Selenium	2.34387	0.010	2.50000	0.006264	93.5	69 - 123	3.25	20	
Sodium	81.9050	1.0	19.7000	68.7609	66.7	37 - 175	1.59	20	

Matrix Spike Dup (B3C0155-MSD2)

Source: 1300729-01RE1

Prepared: 3/12/2013 Analyzed: 3/13/2013

Calcium	109.761	1.0	20.0000	86.3721	117	28 - 159	1.24	20	
Iron	20.7084	1.0	20.0000	ND	104	69 - 121	5.26	20	
Magnesium	47.3227	0.20	20.0000	27.2425	100	39 - 145	0.884	20	
Manganese	19.4801	1.0	20.0000	ND	97.4	68 - 115	1.13	20	
Selenium	2.34258	0.020	2.50000	ND	93.7	69 - 123	0.189	20	
Sodium	81.9712	2.0	19.7000	75.8368	31.1	37 - 175	0.419	20	R



Certificate of Analysis

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San Diego, CA 92122

Project Number : Raytheon Main: Fullerton Quarterly, 532.1

Report To : Steve Netto

Reported : 03/20/2013

Notes and Definitions

R	RPD value outside acceptance criteria. Calculation is based on raw values.
M3	Matrix spike recovery outside of acceptance limit due to disproportionate concentration of the analyte to spike level. The analytical batch was validated by the laboratory control sample.
M2	Matrix spike recovery outside of acceptance limit due to possible matrix interference. The analytical batch was validated by the laboratory control sample.
M1	Matrix spike recovery outside of acceptance limit. The analytical batch was validated by the laboratory control sample.
ND	Analyte not detected at or above reporting limit
PQL	Practical Quantitation Limit
MDL	Method Detection Limit
NR	Not Reported
RPD	Relative Percent Difference
CA1	CA-NELAP (CDPH)
CA2	CA-ELAP (CDPH)
OR1	OR-NELAP (OSPHL)
TX1	TX-NELAP (TCEQ)

Notes:

- (1) The reported MDL and PQL are based on prep ratio variation and analytical dilution.
- (2) The suffix [2C] of specific analytes signifies that the reported result is taken from the instrument's second column.



American Environmental Testing Laboratory Inc.

2834 & 2908 North Naomi Street Burbank, CA 91504 • DOHS NO: 1541, LACSD NO: 10181
Tel: (888) 288-AETL • (818) 845-8200 • Fax: (818) 845-8840 • www.aetlab.com

Ordered By

Advanced Technology Laboratories
3275 Walnut Avenue
Signal Hill, CA 90755-5225

Number of Pages 2
Date Received 03/11/2013
Date Reported 03/18/2013

Telephone: (562)989-4045
Attention: Rachelle Arada

Job Number	Order Date	Client
68837	03/11/2013	ATL

Project ID: 1300729
Project Name: PO# SC07891

Enclosed please find results of analyses of 1 water sample which was analyzed as specified on the attached chain of custody. If there are any questions, please do not hesitate to call.

Checked By: _____

Approved By: _____

Cyrus Razmara, Ph.D.
Laboratory Director



American Environmental Testing Laboratory Inc.

2834 & 2908 North Naomi Street Burbank, CA 91504 • DOHS NO: 1541, LACSD NO: 10181

Tel: (888) 288-AETL • (818) 845-8200 • Fax: (818) 845-8840 • www.aetlab.com

Page: 1 A

Ordered By

Advanced Technology Laboratories
3275 Walnut Avenue
Signal Hill, CA 90755-5225

Project ID: 1300729
Date Received 03/11/2013
Date Reported 03/18/2013

Telephone: (562)989-4045
Attention: Rachelle Arada

Job Number	Order Date	Client
68837	03/11/2013	ATL

CERTIFICATE OF ANALYSIS CASE NARRATIVE

AETL received 1 samples with the following specification on 03/11/2013.

Lab ID	Sample ID	Sample Date	Matrix	QTY of Containers
68837.01	1300729-01	03/09/2013	Aqueous	1

The samples were analyzed as specified on the enclosed chain of custody. No analytical non-conformances were encountered.

Checked By: 

Approved By: 

Cyrus Razmara, Ph.D.
Laboratory Director



American Environmental Testing Laboratory Inc.

2834 & 2908 North Naomi Street Burbank, CA 91504 • DOHS NO: 1541, LACSD NO: 10181
 Tel: (888) 288-AETL • (818) 845-8200 • Fax: (818) 845-8840 • www.aetlab.com

ANALYTICAL RESULTS

Ordered By

Advanced Technology Laboratories
 3275 Walnut Avenue
 Signal Hill, CA 90755-5225

Telephone: (562)989-4045

Attn: Rachelle Arada

Page: 2

Project ID: 1300729

Project Name: PO# SC07891

AETL Job Number	Submitted	Client
68837	03/11/2013	ATL

Method: 310.1, Alkalinity, Titrimetric (pH 4.5), (EPA/600/4-79-020)

QC Batch No: 03132013

Our Lab I.D.		Method Blank	68837.01			
Client Sample I.D.			1300729-01			
Date Sampled			03/09/2013			
Date Prepared		03/13/2013	03/13/2013			
Preparation Method		310.1	310.1			
Date Analyzed		03/13/2013	03/13/2013			
Matrix		Aqueous	Aqueous			
Units		mg/L	mg/L			
Dilution Factor		1	1			
Analytes	MDL	PQL	Results	Results		
Alkalinity, Bicarbonate	2.0	2.0	ND	226		
Alkalinity, Carbonate	2.0	2.0	ND	ND		
Alkalinity, Hydroxide	2.0	2.0	ND	ND		
Alkalinity, Total	2.0	2.0	ND	226		

QUALITY CONTROL REPORT

QC Batch No: 03132013; Dup or Spiked Sample: 68837.01; LCS: Clean Water; QC Prepared: 03/13/2013; QC Analyzed: 03/13/2013;
 Units: mg/L

Analytes	Sample Result	MS Concen	MS Recov	MS % REC	MS DUP Concen	MS DUP Recov	MS DUP % REC	RPD %	MS/MSD % Limit	MS RPD % Limit
Alkalinity, Bicarbonate	226	20.0	244	89.5	20.0	244	89.5	<1	80-120	<15
Alkalinity, Total	226	20.0	244	89.5	20.0	244	89.5	<1	80-120	<15

QC Batch No: 03132013; Dup or Spiked Sample: 68837.01; LCS: Clean Water; QC Prepared: 03/13/2013; QC Analyzed: 03/13/2013;
 Units: mg/L

Analytes	SM Result	SM DUP Result	RPD %	SM RPD % Limit	LCS Concen	LCS Recov	LCS % REC	LCS/LCSD % Limit		
Alkalinity, Bicarbonate	226	226	<1	<15	20.0	17.9	89.5	80-120		
Alkalinity, Total	226	226	<1	<15	20.0	17.9	89.5	80-120		



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Data Qualifiers and Descriptors

Data Qualifier:

- #: Recovery is not within acceptable control limits.
- *: In the QC section, sample results have been taken directly from the ICP reading. No preparation factor has been applied.
- B: Analyte was present in the Method Blank.
- D: Result is from a diluted analysis.
- E: Result is beyond calibration limits and is estimated.
- H: Analysis was performed over the allowed holding time due to circumstances which were beyond laboratory control.
- J: Analyte was detected . However, the analyte concentration is an estimated value, which is between the Method Detection Limit (MDL) and the Practical Quantitation Limit (PQL).
- M: Matrix spike recovery is outside control limits due to matrix interference. Laboratory Control Sample recovery was acceptable.
- MCL: Maximum Contaminant Level
- NS: No Standard Available
- S6: Surrogate recovery is outside control limits due to matrix interference.
- S8: The analysis of the sample required a dilution such that the surrogate concentration was diluted below the method acceptance criteria.
- X: Results represent LCS and LCSD data.

Definition:

- %Limi: Percent acceptable limits.
- %REC: Percent recovery.
- Con.L: Acceptable Control Limits
- Conce: Added concentration to the sample.
- LCS: Laboratory Control Sample
- MDL: Method Detection Limit is a statistically derived number which is specific for each instrument, each method, and each compound. It indicates a distinctively detectable quantity with 99% probability.



American Environmental Testing Laboratory Inc.

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Data Qualifiers and Descriptors

MS:	Matrix Spike
MS DU:	Matrix Spike Duplicate
ND:	Analyte was not detected in the sample at or above MDL.
PQL:	Practical Quantitation Limit or ML (Minimum Level as per RWQCB) is the minimum concentration that can be quantified with more than 99% confidence. Taking into account all aspects of the entire analytical instrumentation and practice.
Recov:	Recovered concentration in the sample.
RPD:	Relative Percent Difference


ADVANCED TECHNOLOGY
 LABORATORIES

SUBCONTRACT ORDER

Job # 68837

Work Order: 1300729

SENDING LABORATORY:

Advanced Technology Laboratories
 3275 Walnut Avenue
 Signal Hill, CA 90755
 Phone: 562.989.4045
 Fax: 562.989.6348
 Project Manager: Rachelle Arada


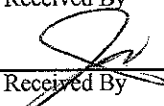
RECEIVING LABORATORY:

AETL
 2834 North Naomi Street
 Burbank, CA 91504
 Phone : (818) 845-8200
 Fax: (818) 845-8840
 PO#: SC07891 - STANDARD TAT PA

IMPORTANT : Please include Work Order # and PO # in your invoice.

Analysis	Due	Expires	Sampled
ATL Lab#: 1300729-01 / EW-02			Groundwater 03/09/13 13:15
310.1_2320B_Total_SUB	03/18/13 17:00	03/23/13 13:15	68837-01
1-Poly Unpres - 250mL			

Comments: Speciated (hydroxide, bicarbonate, carbonate, and total)

 Released By	3/11/13 1234 Date	Herman Received By	3-11-13 1234 Date
Herman Released By	3-11-13 1545 Date	 Received By	03/11/13 1545 Date

CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST FORM

PROJECT NAME Raytheon Main: Fullerton Quarterly				PROJECT No./TASK No. 532.15				SAMPLE CONTAINERS			ANALYSIS REQUESTED			ESTIMATED CONCENTRATION RANGE (ppb) FOR VOAs		SPECIAL HANDLING		LABORATORY INFORMATION	
PROJECT MANAGER Chris Ross				Phone No. 858-455-6500				40 ml Poly 125 ml Poly 250 ml Poly 500 ml Poly Total Se by EPA 6010B Dissolved Se, Fe, Mn, Ca, Na & Mg by EPA 6010B Alkalinity (OH, HCO3, CO3 & total) by EPA 812320B TOC by EPA 815310B COD by EPA 410.4 Anions (Cl, SO4, NO3, NO2, PO4) by EPA 300			0 - 10 10 - 100			Lab to filter and acidify dissolved metals Lab to filter Anions		Advanced Technology Laboratories 3275 Walnut Ave. Signal Hill CA 90755 Attn: Rachele Arada			
QA MANAGER Steve Netto				Fax No. 858-455-6533															
SAMPLER (SIGNATURE) 				SAMPLER (PRINTED) MARLOS RODRIGUEZ															
LAB ID	SAMPLE ID	SAMPLE COLLECTION		MATRIX			PRESERVATION										REMARKS		
		Date	Time	Soil	Ground water	Surface water	Lab H2O	HCl	HNO3									NaOH	H2SO4	Ice
1300729-01	EH-02	3/9/13	13:15	X				XX	XX							X	X	Please include mrodriguez@hargis.com on Lab Report distribution list	
↓ = 02	POX	↓	12:00	X				X	X							X	X		
Total number of Containers per analysis:										6214					Total No. of Containers: 13				
Relinquished by:		Date	Received by:		Date	INSTRUCTIONS 1. Fill out form completely except for shaded areas (lab use only); sign only after verified for completeness. 2. Complete in ballpoint pen. Draw one line through errors, initial and date correction. 3. Indicate number of sample containers in analysis request space; indicate choice with ✓ or x. 4. Note applicable preservatives, special instructions, and deviations from typical environmental samples. 5. Consult project QA documents for specific instructions.												Shipment Method: <u>DELIVER</u>	
		3/9/13			3/9/13													Send Results to: <u>Steve Netto</u>	
Company		Time	Company		Time	Sample Receipt: <input type="checkbox"/> No. of containers correct <input type="checkbox"/> custody seals secure <input type="checkbox"/> received good condition/cold <input type="checkbox"/> conforms to COC document												<input checked="" type="checkbox"/> 9171 TOWNE CENTRE DRIVE, SUITE 375 SAN DIEGO, CA 92122 (858) 455-6500 <input type="checkbox"/> 1640 SOUTH STAPLEY DRIVE, SUITE 124 MESA, AZ 85204 (480) 345-0888 <input type="checkbox"/> 1820 EAST RIVER ROAD, SUITE 220 TUCSON, AZ 85718 (520) 881-7300	
Company		Time	Company		Time													Send invoice to San Diego, CA Attn: Accounts Payable	

March 25, 2013

Steve Netto
Hargis & Associates, Inc.
9171 Towne Centre Drive, Suite 375
San Diego, CA 92122
Tel: (619) 249-3166
Fax: (858) 455-6533

ACCREDITED IN ACCORDANCE WITH

ELAP No.: 1838
NELAP No.: 02107CA
CSDLAC No.: 10196
ORELAP No.: CA300003
TCEQ No.: T104704502

Re: ATL Work Order Number : 1300730
Client Reference : Raytheon Main: Fullerton Monthly, 532.15

Enclosed are the results for sample(s) received on March 09, 2013 by Advanced Technology Laboratories. The sample(s) are tested for the parameters as indicated on the enclosed chain of custody in accordance with applicable laboratory certifications. The laboratory results contained in this report specifically pertains to the sample(s) submitted.

Thank you for the opportunity to serve the needs of your company. If you have any questions, please feel free to contact me or your Project Manager.

Sincerely,



Eddie Rodriguez
Laboratory Director

The cover letter and the case narrative are an integral part of this analytical report and its absence renders the report invalid. Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Conference and/or applicable state-specific certification programs. The report cannot be reproduced without written permission from the client and Advanced Technology Laboratories.



Certificate of Analysis

Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : Raytheon Main: Fullerton Monthly, 532.1:

Report To : Steve Netto

Reported : 03/25/2013

SUMMARY OF SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
TB-030913	1300730-01	Lab H2O	3/09/13 11:30	3/09/13 14:27
EW-02	1300730-02	Groundwater	3/09/13 13:15	3/09/13 14:27
PF	1300730-03	Groundwater	3/09/13 11:50	3/09/13 14:27
POX	1300730-04	Groundwater	3/09/13 12:00	3/09/13 14:27
CBT	1300730-05	Groundwater	3/09/13 12:15	3/09/13 14:27
CEFF	1300730-06	Groundwater	3/09/13 12:35	3/09/13 14:27

CASE NARRATIVE

The samples for EPA 317 (Bromate) analysis were subcontracted to Exova, Inc. with ELAP Cert.# 2652.



Certificate of Analysis

Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego, CA 92122

Project Number : Raytheon Main: Fullerton Monthly, 532.1:

Report To : Steve Netto

Reported : 03/25/2013

Client Sample ID TB-030913

Lab ID: 1300730-01

Volatile Organic Compounds by EPA 8260

Analyst: SL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	0.50	NA	1	B3C0172	03/13/2013	03/13/13 11:19	
1,1,1-Trichloroethane	ND	0.50	NA	1	B3C0172	03/13/2013	03/13/13 11:19	
1,1,2,2-Tetrachloroethane	ND	0.50	NA	1	B3C0172	03/13/2013	03/13/13 11:19	
1,1,2-Trichloroethane	ND	0.50	NA	1	B3C0172	03/13/2013	03/13/13 11:19	
1,1-Dichloroethane	ND	0.50	NA	1	B3C0172	03/13/2013	03/13/13 11:19	
1,1-Dichloroethene	ND	0.50	NA	1	B3C0172	03/13/2013	03/13/13 11:19	
1,1-Dichloropropene	ND	0.50	NA	1	B3C0172	03/13/2013	03/13/13 11:19	
1,2,3-Trichloropropane	ND	0.50	NA	1	B3C0172	03/13/2013	03/13/13 11:19	
1,2,3-Trichlorobenzene	ND	0.50	NA	1	B3C0172	03/13/2013	03/13/13 11:19	
1,2,4-Trichlorobenzene	ND	0.50	NA	1	B3C0172	03/13/2013	03/13/13 11:19	
1,2,4-Trimethylbenzene	ND	0.50	NA	1	B3C0172	03/13/2013	03/13/13 11:19	
1,2-Dibromo-3-chloropropane	ND	0.50	NA	1	B3C0172	03/13/2013	03/13/13 11:19	
1,2-Dibromoethane	ND	0.50	NA	1	B3C0172	03/13/2013	03/13/13 11:19	
1,2-Dichlorobenzene	ND	0.50	NA	1	B3C0172	03/13/2013	03/13/13 11:19	
1,2-Dichloroethane	ND	0.50	NA	1	B3C0172	03/13/2013	03/13/13 11:19	
1,2-Dichloropropane	ND	0.50	NA	1	B3C0172	03/13/2013	03/13/13 11:19	
1,3,5-Trimethylbenzene	ND	0.50	NA	1	B3C0172	03/13/2013	03/13/13 11:19	
1,3-Dichlorobenzene	ND	0.50	NA	1	B3C0172	03/13/2013	03/13/13 11:19	
1,3-Dichloropropane	ND	0.50	NA	1	B3C0172	03/13/2013	03/13/13 11:19	
1,4-Dichlorobenzene	ND	0.50	NA	1	B3C0172	03/13/2013	03/13/13 11:19	
2,2-Dichloropropane	ND	0.50	NA	1	B3C0172	03/13/2013	03/13/13 11:19	
2-Chlorotoluene	ND	0.50	NA	1	B3C0172	03/13/2013	03/13/13 11:19	
4-Chlorotoluene	ND	0.50	NA	1	B3C0172	03/13/2013	03/13/13 11:19	
4-Isopropyltoluene	ND	0.50	NA	1	B3C0172	03/13/2013	03/13/13 11:19	
Benzene	ND	0.50	NA	1	B3C0172	03/13/2013	03/13/13 11:19	
Bromobenzene	ND	0.50	NA	1	B3C0172	03/13/2013	03/13/13 11:19	
Bromodichloromethane	ND	0.50	NA	1	B3C0172	03/13/2013	03/13/13 11:19	
Bromoform	ND	0.50	NA	1	B3C0172	03/13/2013	03/13/13 11:19	
Bromomethane	ND	0.50	NA	1	B3C0172	03/13/2013	03/13/13 11:19	
Carbon tetrachloride	ND	0.50	NA	1	B3C0172	03/13/2013	03/13/13 11:19	
Chlorobenzene	ND	0.50	NA	1	B3C0172	03/13/2013	03/13/13 11:19	
Chloroethane	ND	0.50	NA	1	B3C0172	03/13/2013	03/13/13 11:19	
Chloroform	ND	0.50	NA	1	B3C0172	03/13/2013	03/13/13 11:19	
Chloromethane	ND	0.50	NA	1	B3C0172	03/13/2013	03/13/13 11:19	
cis-1,2-Dichloroethene	ND	0.50	NA	1	B3C0172	03/13/2013	03/13/13 11:19	
cis-1,3-Dichloropropene	ND	0.50	NA	1	B3C0172	03/13/2013	03/13/13 11:19	
Dibromochloromethane	ND	0.50	NA	1	B3C0172	03/13/2013	03/13/13 11:19	



Certificate of Analysis

Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : Raytheon Main: Fullerton Monthly, 532.1:

Report To : Steve Netto

Reported : 03/25/2013

Client Sample ID TB-030913

Lab ID: 1300730-01

Volatile Organic Compounds by EPA 8260

Analyst: SL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Dibromomethane	ND	0.50	NA	1	B3C0172	03/13/2013	03/13/13 11:19	
Dichlorodifluoromethane	ND	0.50	NA	1	B3C0172	03/13/2013	03/13/13 11:19	
Ethylbenzene	ND	0.50	NA	1	B3C0172	03/13/2013	03/13/13 11:19	
Hexachlorobutadiene	ND	0.50	NA	1	B3C0172	03/13/2013	03/13/13 11:19	
Isopropylbenzene	ND	0.50	NA	1	B3C0172	03/13/2013	03/13/13 11:19	
m,p-Xylene	ND	1.0	NA	1	B3C0172	03/13/2013	03/13/13 11:19	
Methylene chloride	ND	1.0	NA	1	B3C0172	03/13/2013	03/13/13 11:19	
n-Butylbenzene	ND	0.50	NA	1	B3C0172	03/13/2013	03/13/13 11:19	
n-Propylbenzene	ND	0.50	NA	1	B3C0172	03/13/2013	03/13/13 11:19	
Naphthalene	ND	0.50	NA	1	B3C0172	03/13/2013	03/13/13 11:19	
o-Xylene	ND	0.50	NA	1	B3C0172	03/13/2013	03/13/13 11:19	
sec-Butylbenzene	ND	0.50	NA	1	B3C0172	03/13/2013	03/13/13 11:19	
Styrene	ND	0.50	NA	1	B3C0172	03/13/2013	03/13/13 11:19	
tert-Butylbenzene	ND	0.50	NA	1	B3C0172	03/13/2013	03/13/13 11:19	
Tetrachloroethene	ND	0.50	NA	1	B3C0172	03/13/2013	03/13/13 11:19	
Toluene	ND	0.50	NA	1	B3C0172	03/13/2013	03/13/13 11:19	
trans-1,2-Dichloroethene	ND	0.50	NA	1	B3C0172	03/13/2013	03/13/13 11:19	
Trichloroethene	ND	0.50	NA	1	B3C0172	03/13/2013	03/13/13 11:19	
Trichlorofluoromethane	ND	0.50	NA	1	B3C0172	03/13/2013	03/13/13 11:19	
Vinyl chloride	ND	0.50	NA	1	B3C0172	03/13/2013	03/13/13 11:19	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>111 %</i>		<i>70 - 130</i>		B3C0172	03/13/2013	<i>03/13/13 11:19</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>89.3 %</i>		<i>70 - 130</i>		B3C0172	03/13/2013	<i>03/13/13 11:19</i>	
<i>Surrogate: Dibromofluoromethane</i>	<i>85.6 %</i>		<i>70 - 130</i>		B3C0172	03/13/2013	<i>03/13/13 11:19</i>	
<i>Surrogate: Toluene-d8</i>	<i>101 %</i>		<i>70 - 130</i>		B3C0172	03/13/2013	<i>03/13/13 11:19</i>	



Certificate of Analysis

Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : Raytheon Main: Fullerton Monthly, 532.1:

Report To : Steve Netto

Reported : 03/25/2013

Client Sample ID EW-02

Lab ID: 1300730-02

Anions by Ion Chromatography EPA 300.0

Analyst: AG

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Bromide	0.21	0.05	NA	1	B3C0133	03/11/2013	03/11/13 15:40	

Total Dissolved Solids (Residue, Filterable) by SM 2540C

Analyst: CB

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Residue, Dissolved	620	10	NA	1	B3C0134	03/13/2013	03/14/13 08:14	

Total Suspended Solids (Residue, Non-Filtrable) by SM 2540D

Analyst: AG

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Residue, Suspended	ND	4.0	NA	1	B3C0188	03/12/2013	03/12/13 12:14	

Volatile Organic Compounds by EPA 8260

Analyst: SL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	0.50	NA	1	B3C0172	03/13/2013	03/13/13 13:17	
1,1,1-Trichloroethane	ND	0.50	NA	1	B3C0172	03/13/2013	03/13/13 13:17	
1,1,2,2-Tetrachloroethane	ND	0.50	NA	1	B3C0172	03/13/2013	03/13/13 13:17	
1,1,2-Trichloroethane	ND	0.50	NA	1	B3C0172	03/13/2013	03/13/13 13:17	
1,1-Dichloroethane	0.60	0.50	NA	1	B3C0172	03/13/2013	03/13/13 13:17	
1,1-Dichloroethene	50	0.50	NA	1	B3C0172	03/13/2013	03/13/13 13:17	
1,1-Dichloropropene	ND	0.50	NA	1	B3C0172	03/13/2013	03/13/13 13:17	
1,2,3-Trichloropropane	ND	0.50	NA	1	B3C0172	03/13/2013	03/13/13 13:17	
1,2,3-Trichlorobenzene	ND	0.50	NA	1	B3C0172	03/13/2013	03/13/13 13:17	
1,2,4-Trichlorobenzene	ND	0.50	NA	1	B3C0172	03/13/2013	03/13/13 13:17	
1,2,4-Trimethylbenzene	ND	0.50	NA	1	B3C0172	03/13/2013	03/13/13 13:17	
1,2-Dibromo-3-chloropropane	ND	0.50	NA	1	B3C0172	03/13/2013	03/13/13 13:17	
1,2-Dibromoethane	ND	0.50	NA	1	B3C0172	03/13/2013	03/13/13 13:17	
1,2-Dichlorobenzene	ND	0.50	NA	1	B3C0172	03/13/2013	03/13/13 13:17	
1,2-Dichloroethane	ND	0.50	NA	1	B3C0172	03/13/2013	03/13/13 13:17	
1,2-Dichloropropane	ND	0.50	NA	1	B3C0172	03/13/2013	03/13/13 13:17	
1,3,5-Trimethylbenzene	ND	0.50	NA	1	B3C0172	03/13/2013	03/13/13 13:17	
1,3-Dichlorobenzene	ND	0.50	NA	1	B3C0172	03/13/2013	03/13/13 13:17	
1,3-Dichloropropane	ND	0.50	NA	1	B3C0172	03/13/2013	03/13/13 13:17	



Certificate of Analysis

Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : Raytheon Main: Fullerton Monthly, 532.1:

Report To : Steve Netto

Reported : 03/25/2013

Client Sample ID EW-02

Lab ID: 1300730-02

Volatile Organic Compounds by EPA 8260

Analyst: SL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,4-Dichlorobenzene	ND	0.50	NA	1	B3C0172	03/13/2013	03/13/13 13:17	
2,2-Dichloropropane	ND	0.50	NA	1	B3C0172	03/13/2013	03/13/13 13:17	
2-Chlorotoluene	ND	0.50	NA	1	B3C0172	03/13/2013	03/13/13 13:17	
4-Chlorotoluene	ND	0.50	NA	1	B3C0172	03/13/2013	03/13/13 13:17	
4-Isopropyltoluene	ND	0.50	NA	1	B3C0172	03/13/2013	03/13/13 13:17	
Benzene	ND	0.50	NA	1	B3C0172	03/13/2013	03/13/13 13:17	
Bromobenzene	ND	0.50	NA	1	B3C0172	03/13/2013	03/13/13 13:17	
Bromodichloromethane	ND	0.50	NA	1	B3C0172	03/13/2013	03/13/13 13:17	
Bromoform	ND	0.50	NA	1	B3C0172	03/13/2013	03/13/13 13:17	
Bromomethane	ND	0.50	NA	1	B3C0172	03/13/2013	03/13/13 13:17	
Carbon tetrachloride	ND	0.50	NA	1	B3C0172	03/13/2013	03/13/13 13:17	
Chlorobenzene	ND	0.50	NA	1	B3C0172	03/13/2013	03/13/13 13:17	
Chloroethane	ND	0.50	NA	1	B3C0172	03/13/2013	03/13/13 13:17	
Chloroform	ND	0.50	NA	1	B3C0172	03/13/2013	03/13/13 13:17	
Chloromethane	ND	0.50	NA	1	B3C0172	03/13/2013	03/13/13 13:17	
cis-1,2-Dichloroethene	ND	0.50	NA	1	B3C0172	03/13/2013	03/13/13 13:17	
cis-1,3-Dichloropropene	ND	0.50	NA	1	B3C0172	03/13/2013	03/13/13 13:17	
Dibromochloromethane	ND	0.50	NA	1	B3C0172	03/13/2013	03/13/13 13:17	
Dibromomethane	ND	0.50	NA	1	B3C0172	03/13/2013	03/13/13 13:17	
Dichlorodifluoromethane	ND	0.50	NA	1	B3C0172	03/13/2013	03/13/13 13:17	
Ethylbenzene	ND	0.50	NA	1	B3C0172	03/13/2013	03/13/13 13:17	
Hexachlorobutadiene	ND	0.50	NA	1	B3C0172	03/13/2013	03/13/13 13:17	
Isopropylbenzene	ND	0.50	NA	1	B3C0172	03/13/2013	03/13/13 13:17	
m,p-Xylene	ND	1.0	NA	1	B3C0172	03/13/2013	03/13/13 13:17	
Methylene chloride	ND	1.0	NA	1	B3C0172	03/13/2013	03/13/13 13:17	
n-Butylbenzene	ND	0.50	NA	1	B3C0172	03/13/2013	03/13/13 13:17	
n-Propylbenzene	ND	0.50	NA	1	B3C0172	03/13/2013	03/13/13 13:17	
Naphthalene	ND	0.50	NA	1	B3C0172	03/13/2013	03/13/13 13:17	
o-Xylene	ND	0.50	NA	1	B3C0172	03/13/2013	03/13/13 13:17	
sec-Butylbenzene	ND	0.50	NA	1	B3C0172	03/13/2013	03/13/13 13:17	
Styrene	ND	0.50	NA	1	B3C0172	03/13/2013	03/13/13 13:17	
tert-Butylbenzene	ND	0.50	NA	1	B3C0172	03/13/2013	03/13/13 13:17	
Tetrachloroethene	ND	0.50	NA	1	B3C0172	03/13/2013	03/13/13 13:17	
Toluene	ND	0.50	NA	1	B3C0172	03/13/2013	03/13/13 13:17	
trans-1,2-Dichloroethene	ND	0.50	NA	1	B3C0172	03/13/2013	03/13/13 13:17	
Trichloroethene	ND	0.50	NA	1	B3C0172	03/13/2013	03/13/13 13:17	
Trichlorofluoromethane	ND	0.50	NA	1	B3C0172	03/13/2013	03/13/13 13:17	



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Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego, CA 92122

Project Number : Raytheon Main: Fullerton Monthly, 532.1:

Report To : Steve Netto

Reported : 03/25/2013

Client Sample ID EW-02

Lab ID: 1300730-02

Volatile Organic Compounds by EPA 8260

Analyst: SL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Vinyl chloride	ND	0.50	NA	1	B3C0172	03/13/2013	03/13/13 13:17	
Surrogate: 1,2-Dichloroethane-d4	128 %		70 - 130		B3C0172	03/13/2013	03/13/13 13:17	
Surrogate: 4-Bromofluorobenzene	87.6 %		70 - 130		B3C0172	03/13/2013	03/13/13 13:17	
Surrogate: Dibromofluoromethane	123 %		70 - 130		B3C0172	03/13/2013	03/13/13 13:17	
Surrogate: Toluene-d8	97.3 %		70 - 130		B3C0172	03/13/2013	03/13/13 13:17	

1,4-Dioxane by EPA 8270: Isotope Dilution Technique

Analyst: BB

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,4-Dioxane	18	2.0	NA	1	B3C0254	03/15/2013	03/18/13 11:24	
Surrogate: 1,2-Dichlorobenzene-d4	88.9 %		37 - 93		B3C0254	03/15/2013	03/18/13 11:24	
Surrogate: 2-Fluorobiphenyl	101 %		51 - 100		B3C0254	03/15/2013	03/18/13 11:24	S3
Surrogate: 4-Terphenyl-d14	90.8 %		58 - 113		B3C0254	03/15/2013	03/18/13 11:24	
Surrogate: Nitrobenzene-d5	94.0 %		39 - 95		B3C0254	03/15/2013	03/18/13 11:24	



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Project Number : Raytheon Main: Fullerton Monthly, 532.1:

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Client Sample ID PF

Lab ID: 1300730-03

Total Suspended Solids (Residue, Non-Filtrable) by SM 2540D

Analyst: AG

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Residue, Suspended	ND	4.0	NA	1	B3C0188	03/12/2013	03/12/13 12:16	



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Project Number : Raytheon Main: Fullerton Monthly, 532.1:

Report To : Steve Netto

Reported : 03/25/2013

Client Sample ID POX

Lab ID: 1300730-04

Anions by Ion Chromatography EPA 300.0

Analyst: AG

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Bromide	0.23	0.05	NA	1	B3C0133	03/11/2013	03/11/13 16:25	

Total Dissolved Solids (Residue, Filterable) by SM 2540C

Analyst: CB

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Residue, Dissolved	640	10	NA	1	B3C0134	03/13/2013	03/14/13 08:16	

Volatile Organic Compounds by EPA 8260

Analyst: SL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	0.50	NA	1	B3C0172	03/13/2013	03/13/13 12:54	
1,1,1-Trichloroethane	ND	0.50	NA	1	B3C0172	03/13/2013	03/13/13 12:54	
1,1,2,2-Tetrachloroethane	ND	0.50	NA	1	B3C0172	03/13/2013	03/13/13 12:54	
1,1,2-Trichloroethane	ND	0.50	NA	1	B3C0172	03/13/2013	03/13/13 12:54	
1,1-Dichloroethane	ND	0.50	NA	1	B3C0172	03/13/2013	03/13/13 12:54	
1,1-Dichloroethene	ND	0.50	NA	1	B3C0172	03/13/2013	03/13/13 12:54	
1,1-Dichloropropene	ND	0.50	NA	1	B3C0172	03/13/2013	03/13/13 12:54	
1,2,3-Trichloropropane	ND	0.50	NA	1	B3C0172	03/13/2013	03/13/13 12:54	
1,2,3-Trichlorobenzene	ND	0.50	NA	1	B3C0172	03/13/2013	03/13/13 12:54	
1,2,4-Trichlorobenzene	ND	0.50	NA	1	B3C0172	03/13/2013	03/13/13 12:54	
1,2,4-Trimethylbenzene	ND	0.50	NA	1	B3C0172	03/13/2013	03/13/13 12:54	
1,2-Dibromo-3-chloropropane	ND	0.50	NA	1	B3C0172	03/13/2013	03/13/13 12:54	
1,2-Dibromoethane	ND	0.50	NA	1	B3C0172	03/13/2013	03/13/13 12:54	
1,2-Dichlorobenzene	ND	0.50	NA	1	B3C0172	03/13/2013	03/13/13 12:54	
1,2-Dichloroethane	ND	0.50	NA	1	B3C0172	03/13/2013	03/13/13 12:54	
1,2-Dichloropropane	ND	0.50	NA	1	B3C0172	03/13/2013	03/13/13 12:54	
1,3,5-Trimethylbenzene	ND	0.50	NA	1	B3C0172	03/13/2013	03/13/13 12:54	
1,3-Dichlorobenzene	ND	0.50	NA	1	B3C0172	03/13/2013	03/13/13 12:54	
1,3-Dichloropropane	ND	0.50	NA	1	B3C0172	03/13/2013	03/13/13 12:54	
1,4-Dichlorobenzene	ND	0.50	NA	1	B3C0172	03/13/2013	03/13/13 12:54	
2,2-Dichloropropane	ND	0.50	NA	1	B3C0172	03/13/2013	03/13/13 12:54	
2-Chlorotoluene	ND	0.50	NA	1	B3C0172	03/13/2013	03/13/13 12:54	
4-Chlorotoluene	ND	0.50	NA	1	B3C0172	03/13/2013	03/13/13 12:54	
4-Isopropyltoluene	ND	0.50	NA	1	B3C0172	03/13/2013	03/13/13 12:54	
Benzene	ND	0.50	NA	1	B3C0172	03/13/2013	03/13/13 12:54	



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Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego, CA 92122

Project Number : Raytheon Main: Fullerton Monthly, 532.1:

Report To : Steve Netto

Reported : 03/25/2013

Client Sample ID POX

Lab ID: 1300730-04

Volatile Organic Compounds by EPA 8260

Analyst: SL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Bromobenzene	ND	0.50	NA	1	B3C0172	03/13/2013	03/13/13 12:54	
Bromodichloromethane	ND	0.50	NA	1	B3C0172	03/13/2013	03/13/13 12:54	
Bromoform	ND	0.50	NA	1	B3C0172	03/13/2013	03/13/13 12:54	
Bromomethane	ND	0.50	NA	1	B3C0172	03/13/2013	03/13/13 12:54	
Carbon tetrachloride	ND	0.50	NA	1	B3C0172	03/13/2013	03/13/13 12:54	
Chlorobenzene	ND	0.50	NA	1	B3C0172	03/13/2013	03/13/13 12:54	
Chloroethane	ND	0.50	NA	1	B3C0172	03/13/2013	03/13/13 12:54	
Chloroform	ND	0.50	NA	1	B3C0172	03/13/2013	03/13/13 12:54	
Chloromethane	ND	0.50	NA	1	B3C0172	03/13/2013	03/13/13 12:54	
cis-1,2-Dichloroethene	ND	0.50	NA	1	B3C0172	03/13/2013	03/13/13 12:54	
cis-1,3-Dichloropropene	ND	0.50	NA	1	B3C0172	03/13/2013	03/13/13 12:54	
Dibromochloromethane	ND	0.50	NA	1	B3C0172	03/13/2013	03/13/13 12:54	
Dibromomethane	ND	0.50	NA	1	B3C0172	03/13/2013	03/13/13 12:54	
Dichlorodifluoromethane	ND	0.50	NA	1	B3C0172	03/13/2013	03/13/13 12:54	
Ethylbenzene	ND	0.50	NA	1	B3C0172	03/13/2013	03/13/13 12:54	
Hexachlorobutadiene	ND	0.50	NA	1	B3C0172	03/13/2013	03/13/13 12:54	
Isopropylbenzene	ND	0.50	NA	1	B3C0172	03/13/2013	03/13/13 12:54	
m,p-Xylene	ND	1.0	NA	1	B3C0172	03/13/2013	03/13/13 12:54	
Methylene chloride	ND	1.0	NA	1	B3C0172	03/13/2013	03/13/13 12:54	
n-Butylbenzene	ND	0.50	NA	1	B3C0172	03/13/2013	03/13/13 12:54	
n-Propylbenzene	ND	0.50	NA	1	B3C0172	03/13/2013	03/13/13 12:54	
Naphthalene	ND	0.50	NA	1	B3C0172	03/13/2013	03/13/13 12:54	
o-Xylene	ND	0.50	NA	1	B3C0172	03/13/2013	03/13/13 12:54	
sec-Butylbenzene	ND	0.50	NA	1	B3C0172	03/13/2013	03/13/13 12:54	
Styrene	ND	0.50	NA	1	B3C0172	03/13/2013	03/13/13 12:54	
tert-Butylbenzene	ND	0.50	NA	1	B3C0172	03/13/2013	03/13/13 12:54	
Tetrachloroethene	ND	0.50	NA	1	B3C0172	03/13/2013	03/13/13 12:54	
Toluene	ND	0.50	NA	1	B3C0172	03/13/2013	03/13/13 12:54	
trans-1,2-Dichloroethene	ND	0.50	NA	1	B3C0172	03/13/2013	03/13/13 12:54	
Trichloroethene	ND	0.50	NA	1	B3C0172	03/13/2013	03/13/13 12:54	
Trichlorofluoromethane	ND	0.50	NA	1	B3C0172	03/13/2013	03/13/13 12:54	
Vinyl chloride	ND	0.50	NA	1	B3C0172	03/13/2013	03/13/13 12:54	
Surrogate: 1,2-Dichloroethane-d4	125 %		70 - 130		B3C0172	03/13/2013	03/13/13 12:54	
Surrogate: 4-Bromofluorobenzene	88.1 %		70 - 130		B3C0172	03/13/2013	03/13/13 12:54	
Surrogate: Dibromofluoromethane	121 %		70 - 130		B3C0172	03/13/2013	03/13/13 12:54	
Surrogate: Toluene-d8	100 %		70 - 130		B3C0172	03/13/2013	03/13/13 12:54	



Certificate of Analysis

Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego, CA 92122

Project Number : Raytheon Main: Fullerton Monthly, 532.1:

Report To : Steve Netto

Reported : 03/25/2013

Client Sample ID POX

Lab ID: 1300730-04

1,4-Dioxane by EPA 8270/SIM: Isotope Dilution Technique

Analyst: BB

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,4-Dioxane	ND	0.20	0.13	1	B3C0255	03/15/2013	03/18/13 10:34	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	<i>100 %</i>		<i>36 - 107</i>		B3C0255	03/15/2013	<i>03/18/13 10:34</i>	
<i>Surrogate: 2-Fluorobiphenyl</i>	<i>83.0 %</i>		<i>42 - 120</i>		B3C0255	03/15/2013	<i>03/18/13 10:34</i>	
<i>Surrogate: 4-Terphenyl-d14</i>	<i>90.2 %</i>		<i>67 - 142</i>		B3C0255	03/15/2013	<i>03/18/13 10:34</i>	
<i>Surrogate: Nitrobenzene-d5</i>	<i>72.4 %</i>		<i>36 - 130</i>		B3C0255	03/15/2013	<i>03/18/13 10:34</i>	



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Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : Raytheon Main: Fullerton Monthly, 532.1:

Report To : Steve Netto

Reported : 03/25/2013

Client Sample ID CBT

Lab ID: 1300730-05

Volatile Organic Compounds by EPA 8260

Analyst: SL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	0.50	NA	1	B3C0172	03/13/2013	03/13/13 12:06	
1,1,1-Trichloroethane	ND	0.50	NA	1	B3C0172	03/13/2013	03/13/13 12:06	
1,1,2,2-Tetrachloroethane	ND	0.50	NA	1	B3C0172	03/13/2013	03/13/13 12:06	
1,1,2-Trichloroethane	ND	0.50	NA	1	B3C0172	03/13/2013	03/13/13 12:06	
1,1-Dichloroethane	ND	0.50	NA	1	B3C0172	03/13/2013	03/13/13 12:06	
1,1-Dichloroethene	ND	0.50	NA	1	B3C0172	03/13/2013	03/13/13 12:06	
1,1-Dichloropropene	ND	0.50	NA	1	B3C0172	03/13/2013	03/13/13 12:06	
1,2,3-Trichloropropane	ND	0.50	NA	1	B3C0172	03/13/2013	03/13/13 12:06	
1,2,3-Trichlorobenzene	ND	0.50	NA	1	B3C0172	03/13/2013	03/13/13 12:06	
1,2,4-Trichlorobenzene	ND	0.50	NA	1	B3C0172	03/13/2013	03/13/13 12:06	
1,2,4-Trimethylbenzene	ND	0.50	NA	1	B3C0172	03/13/2013	03/13/13 12:06	
1,2-Dibromo-3-chloropropane	ND	0.50	NA	1	B3C0172	03/13/2013	03/13/13 12:06	
1,2-Dibromoethane	ND	0.50	NA	1	B3C0172	03/13/2013	03/13/13 12:06	
1,2-Dichlorobenzene	ND	0.50	NA	1	B3C0172	03/13/2013	03/13/13 12:06	
1,2-Dichloroethane	ND	0.50	NA	1	B3C0172	03/13/2013	03/13/13 12:06	
1,2-Dichloropropane	ND	0.50	NA	1	B3C0172	03/13/2013	03/13/13 12:06	
1,3,5-Trimethylbenzene	ND	0.50	NA	1	B3C0172	03/13/2013	03/13/13 12:06	
1,3-Dichlorobenzene	ND	0.50	NA	1	B3C0172	03/13/2013	03/13/13 12:06	
1,3-Dichloropropane	ND	0.50	NA	1	B3C0172	03/13/2013	03/13/13 12:06	
1,4-Dichlorobenzene	ND	0.50	NA	1	B3C0172	03/13/2013	03/13/13 12:06	
2,2-Dichloropropane	ND	0.50	NA	1	B3C0172	03/13/2013	03/13/13 12:06	
2-Chlorotoluene	ND	0.50	NA	1	B3C0172	03/13/2013	03/13/13 12:06	
4-Chlorotoluene	ND	0.50	NA	1	B3C0172	03/13/2013	03/13/13 12:06	
4-Isopropyltoluene	ND	0.50	NA	1	B3C0172	03/13/2013	03/13/13 12:06	
Benzene	ND	0.50	NA	1	B3C0172	03/13/2013	03/13/13 12:06	
Bromobenzene	ND	0.50	NA	1	B3C0172	03/13/2013	03/13/13 12:06	
Bromodichloromethane	ND	0.50	NA	1	B3C0172	03/13/2013	03/13/13 12:06	
Bromoform	ND	0.50	NA	1	B3C0172	03/13/2013	03/13/13 12:06	
Bromomethane	ND	0.50	NA	1	B3C0172	03/13/2013	03/13/13 12:06	
Carbon tetrachloride	ND	0.50	NA	1	B3C0172	03/13/2013	03/13/13 12:06	
Chlorobenzene	ND	0.50	NA	1	B3C0172	03/13/2013	03/13/13 12:06	
Chloroethane	ND	0.50	NA	1	B3C0172	03/13/2013	03/13/13 12:06	
Chloroform	ND	0.50	NA	1	B3C0172	03/13/2013	03/13/13 12:06	
Chloromethane	ND	0.50	NA	1	B3C0172	03/13/2013	03/13/13 12:06	
cis-1,2-Dichloroethene	ND	0.50	NA	1	B3C0172	03/13/2013	03/13/13 12:06	
cis-1,3-Dichloropropene	ND	0.50	NA	1	B3C0172	03/13/2013	03/13/13 12:06	
Dibromochloromethane	ND	0.50	NA	1	B3C0172	03/13/2013	03/13/13 12:06	



Certificate of Analysis

Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : Raytheon Main: Fullerton Monthly, 532.1:

Report To : Steve Netto

Reported : 03/25/2013

Client Sample ID CBT

Lab ID: 1300730-05

Volatile Organic Compounds by EPA 8260

Analyst: SL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Dibromomethane	ND	0.50	NA	1	B3C0172	03/13/2013	03/13/13 12:06	
Dichlorodifluoromethane	ND	0.50	NA	1	B3C0172	03/13/2013	03/13/13 12:06	
Ethylbenzene	ND	0.50	NA	1	B3C0172	03/13/2013	03/13/13 12:06	
Hexachlorobutadiene	ND	0.50	NA	1	B3C0172	03/13/2013	03/13/13 12:06	
Isopropylbenzene	ND	0.50	NA	1	B3C0172	03/13/2013	03/13/13 12:06	
m,p-Xylene	ND	1.0	NA	1	B3C0172	03/13/2013	03/13/13 12:06	
Methylene chloride	ND	1.0	NA	1	B3C0172	03/13/2013	03/13/13 12:06	
n-Butylbenzene	ND	0.50	NA	1	B3C0172	03/13/2013	03/13/13 12:06	
n-Propylbenzene	ND	0.50	NA	1	B3C0172	03/13/2013	03/13/13 12:06	
Naphthalene	ND	0.50	NA	1	B3C0172	03/13/2013	03/13/13 12:06	
o-Xylene	ND	0.50	NA	1	B3C0172	03/13/2013	03/13/13 12:06	
sec-Butylbenzene	ND	0.50	NA	1	B3C0172	03/13/2013	03/13/13 12:06	
Styrene	ND	0.50	NA	1	B3C0172	03/13/2013	03/13/13 12:06	
tert-Butylbenzene	ND	0.50	NA	1	B3C0172	03/13/2013	03/13/13 12:06	
Tetrachloroethene	ND	0.50	NA	1	B3C0172	03/13/2013	03/13/13 12:06	
Toluene	ND	0.50	NA	1	B3C0172	03/13/2013	03/13/13 12:06	
trans-1,2-Dichloroethene	ND	0.50	NA	1	B3C0172	03/13/2013	03/13/13 12:06	
Trichloroethene	ND	0.50	NA	1	B3C0172	03/13/2013	03/13/13 12:06	
Trichlorofluoromethane	ND	0.50	NA	1	B3C0172	03/13/2013	03/13/13 12:06	
Vinyl chloride	ND	0.50	NA	1	B3C0172	03/13/2013	03/13/13 12:06	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>123 %</i>		<i>70 - 130</i>		B3C0172	03/13/2013	<i>03/13/13 12:06</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>88.3 %</i>		<i>70 - 130</i>		B3C0172	03/13/2013	<i>03/13/13 12:06</i>	
<i>Surrogate: Dibromofluoromethane</i>	<i>120 %</i>		<i>70 - 130</i>		B3C0172	03/13/2013	<i>03/13/13 12:06</i>	
<i>Surrogate: Toluene-d8</i>	<i>100 %</i>		<i>70 - 130</i>		B3C0172	03/13/2013	<i>03/13/13 12:06</i>	



Certificate of Analysis

Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : Raytheon Main: Fullerton Monthly, 532.1:

Report To : Steve Netto

Reported : 03/25/2013

Client Sample ID CEFF

Lab ID: 1300730-06

Anions by Ion Chromatography EPA 300.0

Analyst: AG

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Bromide	0.21	0.05	NA	1	B3C0133	03/11/2013	03/11/13 16:37	

Total Dissolved Solids (Residue, Filterable) by SM 2540C

Analyst: CB

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Residue, Dissolved	620	10	NA	1	B3C0134	03/13/2013	03/14/13 08:18	

Volatile Organic Compounds by EPA 8260

Analyst: SL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	0.50	NA	1	B3C0172	03/13/2013	03/13/13 11:43	
1,1,1-Trichloroethane	ND	0.50	NA	1	B3C0172	03/13/2013	03/13/13 11:43	
1,1,2,2-Tetrachloroethane	ND	0.50	NA	1	B3C0172	03/13/2013	03/13/13 11:43	
1,1,2-Trichloroethane	ND	0.50	NA	1	B3C0172	03/13/2013	03/13/13 11:43	
1,1-Dichloroethane	ND	0.50	NA	1	B3C0172	03/13/2013	03/13/13 11:43	
1,1-Dichloroethene	ND	0.50	NA	1	B3C0172	03/13/2013	03/13/13 11:43	
1,1-Dichloropropene	ND	0.50	NA	1	B3C0172	03/13/2013	03/13/13 11:43	
1,2,3-Trichloropropane	ND	0.50	NA	1	B3C0172	03/13/2013	03/13/13 11:43	
1,2,3-Trichlorobenzene	ND	0.50	NA	1	B3C0172	03/13/2013	03/13/13 11:43	
1,2,4-Trichlorobenzene	ND	0.50	NA	1	B3C0172	03/13/2013	03/13/13 11:43	
1,2,4-Trimethylbenzene	ND	0.50	NA	1	B3C0172	03/13/2013	03/13/13 11:43	
1,2-Dibromo-3-chloropropane	ND	0.50	NA	1	B3C0172	03/13/2013	03/13/13 11:43	
1,2-Dibromoethane	ND	0.50	NA	1	B3C0172	03/13/2013	03/13/13 11:43	
1,2-Dichlorobenzene	ND	0.50	NA	1	B3C0172	03/13/2013	03/13/13 11:43	
1,2-Dichloroethane	ND	0.50	NA	1	B3C0172	03/13/2013	03/13/13 11:43	
1,2-Dichloropropane	ND	0.50	NA	1	B3C0172	03/13/2013	03/13/13 11:43	
1,3,5-Trimethylbenzene	ND	0.50	NA	1	B3C0172	03/13/2013	03/13/13 11:43	
1,3-Dichlorobenzene	ND	0.50	NA	1	B3C0172	03/13/2013	03/13/13 11:43	
1,3-Dichloropropane	ND	0.50	NA	1	B3C0172	03/13/2013	03/13/13 11:43	
1,4-Dichlorobenzene	ND	0.50	NA	1	B3C0172	03/13/2013	03/13/13 11:43	
2,2-Dichloropropane	ND	0.50	NA	1	B3C0172	03/13/2013	03/13/13 11:43	
2-Chlorotoluene	ND	0.50	NA	1	B3C0172	03/13/2013	03/13/13 11:43	
4-Chlorotoluene	ND	0.50	NA	1	B3C0172	03/13/2013	03/13/13 11:43	
4-Isopropyltoluene	ND	0.50	NA	1	B3C0172	03/13/2013	03/13/13 11:43	
Benzene	ND	0.50	NA	1	B3C0172	03/13/2013	03/13/13 11:43	



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9171 Towne Centre Drive, Suite 375

San Diego, CA 92122

Project Number : Raytheon Main: Fullerton Monthly, 532.1:

Report To : Steve Netto

Reported : 03/25/2013

Client Sample ID CEFF

Lab ID: 1300730-06

Volatile Organic Compounds by EPA 8260

Analyst: SL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Bromobenzene	ND	0.50	NA	1	B3C0172	03/13/2013	03/13/13 11:43	
Bromodichloromethane	ND	0.50	NA	1	B3C0172	03/13/2013	03/13/13 11:43	
Bromoform	ND	0.50	NA	1	B3C0172	03/13/2013	03/13/13 11:43	
Bromomethane	ND	0.50	NA	1	B3C0172	03/13/2013	03/13/13 11:43	
Carbon tetrachloride	ND	0.50	NA	1	B3C0172	03/13/2013	03/13/13 11:43	
Chlorobenzene	ND	0.50	NA	1	B3C0172	03/13/2013	03/13/13 11:43	
Chloroethane	ND	0.50	NA	1	B3C0172	03/13/2013	03/13/13 11:43	
Chloroform	ND	0.50	NA	1	B3C0172	03/13/2013	03/13/13 11:43	
Chloromethane	ND	0.50	NA	1	B3C0172	03/13/2013	03/13/13 11:43	
cis-1,2-Dichloroethene	ND	0.50	NA	1	B3C0172	03/13/2013	03/13/13 11:43	
cis-1,3-Dichloropropene	ND	0.50	NA	1	B3C0172	03/13/2013	03/13/13 11:43	
Dibromochloromethane	ND	0.50	NA	1	B3C0172	03/13/2013	03/13/13 11:43	
Dibromomethane	ND	0.50	NA	1	B3C0172	03/13/2013	03/13/13 11:43	
Dichlorodifluoromethane	ND	0.50	NA	1	B3C0172	03/13/2013	03/13/13 11:43	
Ethylbenzene	ND	0.50	NA	1	B3C0172	03/13/2013	03/13/13 11:43	
Hexachlorobutadiene	ND	0.50	NA	1	B3C0172	03/13/2013	03/13/13 11:43	
Isopropylbenzene	ND	0.50	NA	1	B3C0172	03/13/2013	03/13/13 11:43	
m,p-Xylene	ND	1.0	NA	1	B3C0172	03/13/2013	03/13/13 11:43	
Methylene chloride	ND	1.0	NA	1	B3C0172	03/13/2013	03/13/13 11:43	
n-Butylbenzene	ND	0.50	NA	1	B3C0172	03/13/2013	03/13/13 11:43	
n-Propylbenzene	ND	0.50	NA	1	B3C0172	03/13/2013	03/13/13 11:43	
Naphthalene	ND	0.50	NA	1	B3C0172	03/13/2013	03/13/13 11:43	
o-Xylene	ND	0.50	NA	1	B3C0172	03/13/2013	03/13/13 11:43	
sec-Butylbenzene	ND	0.50	NA	1	B3C0172	03/13/2013	03/13/13 11:43	
Styrene	ND	0.50	NA	1	B3C0172	03/13/2013	03/13/13 11:43	
tert-Butylbenzene	ND	0.50	NA	1	B3C0172	03/13/2013	03/13/13 11:43	
Tetrachloroethene	ND	0.50	NA	1	B3C0172	03/13/2013	03/13/13 11:43	
Toluene	ND	0.50	NA	1	B3C0172	03/13/2013	03/13/13 11:43	
trans-1,2-Dichloroethene	ND	0.50	NA	1	B3C0172	03/13/2013	03/13/13 11:43	
Trichloroethene	ND	0.50	NA	1	B3C0172	03/13/2013	03/13/13 11:43	
Trichlorofluoromethane	ND	0.50	NA	1	B3C0172	03/13/2013	03/13/13 11:43	
Vinyl chloride	ND	0.50	NA	1	B3C0172	03/13/2013	03/13/13 11:43	

Surrogate: 1,2-Dichloroethane-d4

123 %

70 - 130

B3C0172

03/13/2013

03/13/13 11:43

Surrogate: 4-Bromofluorobenzene

89.3 %

70 - 130

B3C0172

03/13/2013

03/13/13 11:43

Surrogate: Dibromofluoromethane

120 %

70 - 130

B3C0172

03/13/2013

03/13/13 11:43

Surrogate: Toluene-d8

98.6 %

70 - 130

B3C0172

03/13/2013

03/13/13 11:43



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Project Number : Raytheon Main: Fullerton Monthly, 532.1:
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 Reported : 03/25/2013

QUALITY CONTROL SECTION

Anions by Ion Chromatography EPA 300.0 - Quality Control

Analyte	Result (mg/L)	PQL (mg/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B3C0133 - No_Prep_IC_1									
Blank (B3C0133-BLK1)				Prepared: 3/11/2013 Analyzed: 3/11/2013					
Bromide	ND	0.05			NR				
LCS (B3C0133-BS1)				Prepared: 3/11/2013 Analyzed: 3/11/2013					
Bromide	1.01460	0.05	1.00000		101	90 - 110			
Duplicate (B3C0133-DUP1)		Source: 1300730-02		Prepared: 3/11/2013 Analyzed: 3/11/2013					
Bromide	0.229200	0.05		0.212800	NR		7.42	20	
Matrix Spike (B3C0133-MS1)		Source: 1300730-02		Prepared: 3/11/2013 Analyzed: 3/11/2013					
Bromide	2.76280	0.05	2.50000	0.212800	102	80 - 120			
Matrix Spike Dup (B3C0133-MSD1)		Source: 1300730-02		Prepared: 3/11/2013 Analyzed: 3/11/2013					
Bromide	2.75530	0.05	2.50000	0.212800	102	80 - 120	0.272	20	



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Total Dissolved Solids (Residue, Filterable) by SM 2540C - Quality Control

Analyte	Result (mg/L)	PQL (mg/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B3C0134 - No_Prep_WC_1

Blank (B3C0134-BLK1)

Prepared: 3/13/2013 Analyzed: 3/14/2013

Residue, Dissolved

ND

10

NR

LCS (B3C0134-BS1)

Prepared: 3/13/2013 Analyzed: 3/14/2013

Residue, Dissolved

1002.00

10

970.000

103

80 - 120

Duplicate (B3C0134-DUP1)

Source: 1300739-01

Prepared: 3/13/2013 Analyzed: 3/14/2013

Residue, Dissolved

945.000

10

938.000

NR

0.743

10



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Project Number : Raytheon Main: Fullerton Monthly, 532.1:

Report To : Steve Netto

Reported : 03/25/2013

Total Suspended Solids (Residue, Non-Filtrable) by SM 2540D - Quality Control

Analyte	Result (mg/L)	PQL (mg/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B3C0188 - No_Prep_WC_1

Blank (B3C0188-BLK1)

Prepared: 3/12/2013 Analyzed: 3/12/2013

Residue, Suspended

ND

10

NR

LCS (B3C0188-BS1)

Prepared: 3/12/2013 Analyzed: 3/12/2013

Residue, Suspended

95.0000

10

96.6000

98.3

80 - 120

Duplicate (B3C0188-DUP1)

Source: 1300724-01

Prepared: 3/12/2013 Analyzed: 3/12/2013

Residue, Suspended

984.000

40

1032.00

NR

4.76

10



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San Diego , CA 92122

Project Number : Raytheon Main: Fullerton Monthly, 532.1:

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Reported : 03/25/2013

Volatile Organic Compounds by EPA 8260 - Quality Control

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec % Rec	Limits	RPD RPD	RPD Limit	Notes
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Batch B3C0172 - MSVOAW_LL

Blank (B3C0172-BLK1)

Prepared: 3/13/2013 Analyzed: 3/13/2013

1,1,1,2-Tetrachloroethane	ND	0.50		NR
1,1,1-Trichloroethane	ND	0.50		NR
1,1,2,2-Tetrachloroethane	ND	0.50		NR
1,1,2-Trichloroethane	ND	0.50		NR
1,1-Dichloroethane	ND	0.50		NR
1,1-Dichloroethene	ND	0.50		NR
1,1-Dichloropropene	ND	0.50		NR
1,2,3-Trichloropropane	ND	0.50		NR
1,2,3-Trichlorobenzene	ND	0.50		NR
1,2,4-Trichlorobenzene	ND	0.50		NR
1,2,4-Trimethylbenzene	ND	0.50		NR
1,2-Dibromo-3-chloropropane	ND	0.50		NR
1,2-Dibromoethane	ND	0.50		NR
1,2-Dichlorobenzene	ND	0.50		NR
1,2-Dichloroethane	ND	0.50		NR
1,2-Dichloropropane	ND	0.50		NR
1,3,5-Trimethylbenzene	ND	0.50		NR
1,3-Dichlorobenzene	ND	0.50		NR
1,3-Dichloropropane	ND	0.50		NR
1,4-Dichlorobenzene	ND	0.50		NR
2,2-Dichloropropane	ND	0.50		NR
2-Chlorotoluene	ND	0.50		NR
4-Chlorotoluene	ND	0.50		NR
4-Isopropyltoluene	ND	0.50		NR
Benzene	ND	0.50		NR
Bromobenzene	ND	0.50		NR
Bromodichloromethane	ND	0.50		NR
Bromoform	ND	0.50		NR
Bromomethane	ND	0.50		NR
Carbon tetrachloride	ND	0.50		NR
Chlorobenzene	ND	0.50		NR
Chloroethane	ND	0.50		NR
Chloroform	ND	0.50		NR
Chloromethane	ND	0.50		NR
cis-1,2-Dichloroethene	ND	0.50		NR
cis-1,3-Dichloropropene	ND	0.50		NR
Dibromochloromethane	ND	0.50		NR
Dibromomethane	ND	0.50		NR
Dichlorodifluoromethane	ND	0.50		NR
Ethylbenzene	ND	0.50		NR
Hexachlorobutadiene	ND	0.50		NR



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San Diego, CA 92122

Project Number : Raytheon Main: Fullerton Monthly, 532.1:

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Volatile Organic Compounds by EPA 8260 - Quality Control (cont'd)

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec Limits	RPD	RPD Limit	Notes
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Batch B3C0172 - MSVOAW_LL (continued)

Blank (B3C0172-BLK1) - Continued

Prepared: 3/13/2013 Analyzed: 3/13/2013

Isopropylbenzene	ND	0.50			NR			
m,p-Xylene	ND	1.0			NR			
Methylene chloride	ND	1.0			NR			
n-Butylbenzene	ND	0.50			NR			
n-Propylbenzene	ND	0.50			NR			
Naphthalene	ND	0.50			NR			
o-Xylene	ND	0.50			NR			
sec-Butylbenzene	ND	0.50			NR			
Styrene	ND	0.50			NR			
tert-Butylbenzene	ND	0.50			NR			
Tetrachloroethene	ND	0.50			NR			
Toluene	ND	0.50			NR			
trans-1,2-Dichloroethene	ND	0.50			NR			
Trichloroethene	ND	0.50			NR			
Trichlorofluoromethane	ND	0.50			NR			
Vinyl chloride	ND	0.50			NR			

<i>Surrogate: 1,2-Dichloroethane-d4</i>	24.84		25.0000		99.4	70 - 130		
<i>Surrogate: 4-Bromofluorobenzene</i>	21.15		25.0000		84.6	70 - 130		
<i>Surrogate: Dibromofluoromethane</i>	19.10		25.0000		76.4	70 - 130		
<i>Surrogate: Toluene-d8</i>	23.86		25.0000		95.4	70 - 130		

LCS (B3C0172-BS1)

Prepared: 3/13/2013 Analyzed: 3/13/2013

1,1-Dichloroethene	17.9500		20.0000		89.8	70 - 130		
Benzene	42.7500		40.0000		107	70 - 130		
Chlorobenzene	18.1700		20.0000		90.8	70 - 130		
MTBE	18.1900		20.0000		91.0	70 - 130		
Toluene	35.8600		40.0000		89.6	70 - 130		
Trichloroethene	18.2000		20.0000		91.0	70 - 130		

<i>Surrogate: 1,2-Dichloroethane-d4</i>	29.09		25.0000		116	70 - 130		
<i>Surrogate: 4-Bromofluorobenzene</i>	22.73		25.0000		90.9	70 - 130		
<i>Surrogate: Dibromofluoromethane</i>	28.06		25.0000		112	70 - 130		
<i>Surrogate: Toluene-d8</i>	25.02		25.0000		100	70 - 130		

LCS Dup (B3C0172-BSD1)

Prepared: 3/13/2013 Analyzed: 3/13/2013

1,1-Dichloroethene	19.0900		20.0000		95.4	70 - 130	6.16	20
Benzene	43.2700		40.0000		108	70 - 130	1.21	20
Chlorobenzene	18.3900		20.0000		92.0	70 - 130	1.20	20
MTBE	18.4400		20.0000		92.2	70 - 130	1.37	20
Toluene	36.4100		40.0000		91.0	70 - 130	1.52	20
Trichloroethene	18.5800		20.0000		92.9	70 - 130	2.07	20

<i>Surrogate: 1,2-Dichloroethane-d4</i>	28.20		25.0000		113	70 - 130		
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Project Number : Raytheon Main: Fullerton Monthly, 532.1:

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Volatile Organic Compounds by EPA 8260 - Quality Control (cont'd)

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B3C0172 - MSVOAW_LL (continued)

LCS Dup (B3C0172-BSD1) - Continued

Prepared: 3/13/2013 Analyzed: 3/13/2013

Surrogate: 4-Bromofluorobenzene	22.14	25.0000	88.6	70 - 130
Surrogate: Dibromofluoromethane	27.15	25.0000	109	70 - 130
Surrogate: Toluene-d8	24.33	25.0000	97.3	70 - 130

Duplicate (B3C0172-DUP1)

Source: 1300725-24RE1

Prepared: 3/13/2013 Analyzed: 3/13/2013

1,1-Dichloroethene	ND	0.50	ND	NR	20
Benzene	ND	0.50	ND	NR	20
Chlorobenzene	ND	0.50	ND	NR	20
MTBE	ND	0.50	ND	NR	20
Toluene	ND	0.50	ND	NR	20
Trichloroethene	ND	0.50	ND	NR	20

Surrogate: 1,2-Dichloroethane-d4	30.27	25.0000	121	70 - 130
Surrogate: 4-Bromofluorobenzene	21.74	25.0000	87.0	70 - 130
Surrogate: Dibromofluoromethane	24.74	25.0000	99.0	70 - 130
Surrogate: Toluene-d8	24.73	25.0000	98.9	70 - 130



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San Diego , CA 92122

Project Number : Raytheon Main: Fullerton Monthly, 532.1:

Report To : Steve Netto

Reported : 03/25/2013

1,4-Dioxane by EPA 8270: Isotope Dilution Technique - Quality Control

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec % Rec	% Rec Limits	RPD RPD	RPD Limit	Notes
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Batch B3C0254 - MSSEMI

Blank (B3C0254-BLK1)

Prepared: 3/15/2013 Analyzed: 3/18/2013

1,4-Dioxane	ND	2.0			NR				
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	92.91		100.000		92.9	37 - 93			
<i>Surrogate: 2-Fluorobiphenyl</i>	105.1		100.000		105	51 - 100			S1
<i>Surrogate: 4-Terphenyl-d14</i>	96.67		100.000		96.7	58 - 113			
<i>Surrogate: Nitrobenzene-d5</i>	97.63		100.000		97.6	39 - 95			S1

LCS (B3C0254-BS1)

Prepared: 3/15/2013 Analyzed: 3/18/2013

1,4-Dioxane	101.700	2.0	100.000		102	70 - 130			
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	86.66		100.000		86.7	37 - 93			
<i>Surrogate: 2-Fluorobiphenyl</i>	101.1		100.000		101	51 - 100			L3
<i>Surrogate: 4-Terphenyl-d14</i>	85.30		100.000		85.3	58 - 113			
<i>Surrogate: Nitrobenzene-d5</i>	90.43		100.000		90.4	39 - 95			

LCS Dup (B3C0254-BSD1)

Prepared: 3/15/2013 Analyzed: 3/18/2013

1,4-Dioxane	105.530	2.0	100.000		106	70 - 130	3.70	20	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	87.47		100.000		87.5	37 - 93			
<i>Surrogate: 2-Fluorobiphenyl</i>	100.6		100.000		101	51 - 100			L3
<i>Surrogate: 4-Terphenyl-d14</i>	88.20		100.000		88.2	58 - 113			
<i>Surrogate: Nitrobenzene-d5</i>	91.05		100.000		91.0	39 - 95			



Certificate of Analysis

Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : Raytheon Main: Fullerton Monthly, 532.1:

Report To : Steve Netto

Reported : 03/25/2013

1,4-Dioxane by EPA 8270/SIM: Isotope Dilution Technique - Quality Control

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec % Rec	% Rec Limits	RPD RPD	RPD Limit	Notes
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Batch B3C0255 - MSEMI_ISOTOPEDILN

Blank (B3C0255-BLK1)

Prepared: 3/15/2013 Analyzed: 3/18/2013

1,4-Dioxane	ND	0.20				NR			
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	<i>0.9492</i>		<i>1.00000</i>		<i>94.9</i>	<i>36 - 107</i>			
<i>Surrogate: 2-Fluorobiphenyl</i>	<i>0.8520</i>		<i>1.00000</i>		<i>85.2</i>	<i>42 - 120</i>			
<i>Surrogate: 4-Terphenyl-d14</i>	<i>0.8785</i>		<i>1.00000</i>		<i>87.8</i>	<i>67 - 142</i>			
<i>Surrogate: Nitrobenzene-d5</i>	<i>0.7439</i>		<i>1.00000</i>		<i>74.4</i>	<i>36 - 130</i>			

LCS (B3C0255-BS1)

Prepared: 3/15/2013 Analyzed: 3/18/2013

1,4-Dioxane	0.741120	0.20	1.00000		74.1	70 - 130			
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	<i>0.9069</i>		<i>1.00000</i>		<i>90.7</i>	<i>36 - 107</i>			
<i>Surrogate: 2-Fluorobiphenyl</i>	<i>0.8318</i>		<i>1.00000</i>		<i>83.2</i>	<i>42 - 120</i>			
<i>Surrogate: 4-Terphenyl-d14</i>	<i>0.8189</i>		<i>1.00000</i>		<i>81.9</i>	<i>67 - 142</i>			
<i>Surrogate: Nitrobenzene-d5</i>	<i>0.7094</i>		<i>1.00000</i>		<i>70.9</i>	<i>36 - 130</i>			

LCS Dup (B3C0255-BSD1)

Prepared: 3/15/2013 Analyzed: 3/18/2013

1,4-Dioxane	0.706030	0.20	1.00000		70.6	70 - 130	4.85	20	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	<i>0.8935</i>		<i>1.00000</i>		<i>89.4</i>	<i>36 - 107</i>			
<i>Surrogate: 2-Fluorobiphenyl</i>	<i>0.8040</i>		<i>1.00000</i>		<i>80.4</i>	<i>42 - 120</i>			
<i>Surrogate: 4-Terphenyl-d14</i>	<i>0.7791</i>		<i>1.00000</i>		<i>77.9</i>	<i>67 - 142</i>			
<i>Surrogate: Nitrobenzene-d5</i>	<i>0.7294</i>		<i>1.00000</i>		<i>72.9</i>	<i>36 - 130</i>			



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San Diego , CA 92122

Project Number : Raytheon Main: Fullerton Monthly, 532.1:

Report To : Steve Netto

Reported : 03/25/2013

Notes and Definitions

S3	Surrogate recovery outside of laboratory acceptance limit. Unable to confirm matrix effects.
S1	Surrogate recovery was above laboratory acceptance limit. No target analyte was detected in the sample.
L3	Laboratory control sample outside in-house established limits but within method criteria.
ND	Analyte not detected at or above reporting limit
PQL	Practical Quantitation Limit
MDL	Method Detection Limit
NR	Not Reported
RPD	Relative Percent Difference
CA1	CA-NELAP (CDPH)
CA2	CA-ELAP (CDPH)
OR1	OR-NELAP (OSPHL)
TX1	TX-NELAP (TCEQ)

Notes:

- (1) The reported MDL and PQL are based on prep ratio variation and analytical dilution.
- (2) The suffix [2C] of specific analytes signifies that the reported result is taken from the instrument's second column.

Bromate by EPA 317.0
 Ion Chromatography/Post-Column Reaction-Visible Absorption Spectroscopy

Column: Dionex AS9-HC/AG9-HSC
 Eluent: 10 mM Na₂CO₃
 Flow: 1.2 mL/min
 Injection: 250 µL
 Detection: Visible, 450 nm

Sample preparation: The undiluted samples were treated with a Dionex OnGuard II H cartridge to remove excess basic cations. One sample required dilution with water by 1:5 for analysis. The detection limit is adjusted for the dilution.

Parts Per Billion (µg/L)

Sample ID	Result	Detection Limit
1300730-02 / EW-02	0.4	0.3
1300730-04 / POX	8	2
1300730-06 / CEFF	6.6	0.3
Method Blank	ND	0.3

Date Analyzed: 03-21-13

Quality Control Summary

Sample ID: 1300730-02 / EW-02

Analyte	Sample Result	Spike Conc	Spike Result	Spike % Rec	Spike Duplicate Result	Spike Duplicate % Rec	Spike RPD
Bromate	0.4	20.0	18.4	90	18.7	92	2
QC Guidelines				75-125		75-125	NMT 10


ADVANCED TECHNOLOGY
 LABORATORIES

SUBCONTRACT ORDER

Work Order: 1300730

SENDING LABORATORY:

Advanced Technology Laboratories
 3275 Walnut Avenue
 Signal Hill, CA 90755
 Phone: 562.989.4045
 Fax: 562.989.6348
 Project Manager: Rachele Arada

RECEIVING LABORATORY:

Exova Inc.
 9240 Santa Fe Springs Road
 Santa Fe Springs, CA 90670
 Phone : (562) 948-2225
 Fax: (562) 948-5850
 PO#: SC07892-STANDARD TAT RA

IMPORTANT : Please include Work Order # and PO # in your invoice.

Analysis	Due	Expires	Sampled	Comments
ATL Lab#: 1300730-02 317.0 1-Poly Unpres - 125mL	/ EW-02 03/25/13 17:00	Groundwater 03/10/13 13:15	03/09/13 13:15	
ATL Lab#: 1300730-04 317.0 1-Poly Unpres - 125mL	/ POX 03/25/13 17:00	Groundwater 03/10/13 12:00	03/09/13 12:00	
ATL Lab#: 1300730-06 317.0 1-Poly Unpres - 125mL	/ CEFF 03/25/13 17:00	Groundwater 03/10/13 12:35	03/09/13 12:35	

Released By <i>IGNER MAY 6/13</i>	Date <i>3/11/13</i>	Received By <i>[Signature]</i>	Date <i>3/11/13 9:45</i>
Released By <i>[Signature]</i>	Date <i>3/11/13 14:05</i>	Received By <i>[Signature]</i>	Date <i>03/11/13 2:05 PM</i>

PROJECT NAME		PROJECT No./TASK No.				SAMPLE CONTAINERS		ANALYSIS REQUESTED		ESTIMATED CONCENTRATION RANGE (ppb) FOR VOC'S		SPECIAL HANDLING	LABORATORY INFORMATION		
Raytheon Main: Fullerton Monthly		532.15											Advanced Technology Laboratories 3275 Walnut Ave Signal Hill, CA 90755 Attn: Rachelle Arada		
PROJECT MANAGER Chris Ross		Phone No. 858-455-6500													
QA MANAGER Steve Netto		Fax No. 858-455-6533													
SAMPLER (SIGNATURE) 				SAMPLER (PRINTED) MARCO RODRIGUEZ											
LAB ID	SAMPLE ID	SAMPLE COLLECTION		MATRIX			PRESERVATION					REMARKS			
		Date	Time	Soil	Ground-water	Surface water	Lab H ₂ O	HCl	HNO ₃	NaOH	H ₂ SO ₄		Ice		
1300770-1	TB-030913	3/9/13	11:30				X	X		X					
2	EH-02		13:15	X			X		X			X			
3	PF		11:50	X								X			
4	POX		12:00	X			X		X			X			
5	CBT		12:15	X			X		X			X			
6	CEFF		12:35	X			X		X			X			
Total number of Containers per analysis: <u>14652</u>											Total No. of Containers: <u>27</u>				
Relinquished by:		Date: <u>3/9/13</u>	Received by:		Date: <u>3/9/13</u>	INSTRUCTIONS 1. Fill out form completely except for shaded areas (lab use only); sign only after verified for completeness. 2. Complete in ballpoint pen. Draw one line through errors, initial and date correction. 3. Indicate number of sample containers in analysis request space; indicate choice with ✓ or x. 4. Note applicable preservatives, special instructions, and deviations from typical environmental samples. 5. Consult project QA documents for specific instructions.							Shipment Method: <u>DRIVER</u>		
Company: <u>HTA</u>		Time: <u>14:27</u>	Company: <u>HTA</u>		Time: <u>14:27</u>								Send Results to: <u>Steve Netto</u>		
Relinquished by: _____		Date: _____	Received by: _____		Date: _____	<input type="checkbox"/> No. of containers correct <input type="checkbox"/> custody seals secure			<input checked="" type="checkbox"/> 9171 TOWNE CENTRE DRIVE, SUITE 375 SAN DIEGO, CA 92122 (858) 455-6500 <input type="checkbox"/> 1640 SOUTH STAPLEY DRIVE, SUITE 124 MESA, AZ 85204 (480) 345-0888 <input type="checkbox"/> 1820 EAST RIVER ROAD, SUITE 220 TUCSON, AZ 85718 (520) 881-7300						
Company: _____		Time: _____	Company: _____		Time: _____	Sample Receipt: _____ Temp. @ receipt <u>5.6</u> °C <input type="checkbox"/> received good condition/cold <input type="checkbox"/> conforms to COC document			Send invoice to San Diego, CA Attn: Accounts Payable						

Page 27 of 28

Carmen Aguila

From: Marcos Rodriguez [MRODRIGUEZ@HARGIS.COM]
Sent: Monday, March 11, 2013 12:43 PM
To: Fernando Diwa
Cc: Carmen Aguila; Rachelle Arada
Subject: Re: Raytheon Main: Fullerton Monthly, 532.15

Fernando-

Per our conversation please proceed to analyze EW-02 for TDS. Sorry that it did not get included on the COC.

Thank you.

Marcos Rodriguez, P.E.
Engineer
HARGIS + ASSOCIATES, INC.
9171 Towne Centre Drive, Suite 375
San Diego, CA 92122
Phone: (858) 455-6500
Fax: (858) 410-7455

On Mar 11, 2013, at 11:25 AM, "Fernando Diwa"
<Fernando@atlglobal.com<<mailto:Fernando@atlglobal.com>>> wrote:

Hi Marcos,

We have received sample for TDS for EW-02, but was not marked on coc. Please advise if you need this sample to be analyzed. See attached coc.

Regards,

Fernando Diwa

<image001.jpg>Advanced Technology Laboratories www.atlglobal.com<<http://www.atlglobal.com>>

Tel: (562) 989-4045 ext. 236

Fax: (562) 989-8807

Advanced Technology Laboratories is a full-service environmental lab providing organic and inorganic analyses of soil, water, wastewater, storm water and hazardous waste samples. ATL is accredited by the State of California, NELAP and State of Nevada and holds various SBE, DBE and MBE certificates and a USDA soil permit. ATL takes pride in providing our customers with quick turnaround time, excellent customer service and defensible data while offering very competitive rates. Advanced Technology Labs - Your Partner for Quality Environmental Testing This message is intended for the use of the individual or entity to which it is addressed. This may contain information that is privileged, confidential, and exempt from disclosure under applicable law. If the reader of this message is not the intended recipient, or the employee or agent responsible for delivering the message to the intended recipient, you are hereby notified that any dissemination, distribution or copying of this communication is strictly prohibited. If you have received this communication in error, please notify us immediately by telephone and delete the original message. Thank you.

<DOC_20130311093443.pdf>

March 20, 2013

Steve Netto
Hargis & Associates, Inc.
9171 Towne Centre Drive, Suite 375
San Diego, CA 92122
Tel: (619) 249-3166
Fax: (858) 455-6533



Re: ATL Work Order Number : 1300731
Client Reference : Raytheon Main: Fullerton OCSD, 532.15

Enclosed are the results for sample(s) received on March 09, 2013 by Advanced Technology Laboratories. The sample(s) are tested for the parameters as indicated on the enclosed chain of custody in accordance with applicable laboratory certifications. The laboratory results contained in this report specifically pertains to the sample(s) submitted.

Thank you for the opportunity to serve the needs of your company. If you have any questions, please feel free to contact me or your Project Manager.

Sincerely,

Eddie Rodriguez
Laboratory Director

The cover letter and the case narrative are an integral part of this analytical report and its absence renders the report invalid. Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Conference and/or applicable state-specific certification programs. The report cannot be reproduced without written permission from the client and Advanced Technology Laboratories.



Certificate of Analysis

Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : Raytheon Main: Fullerton OCSD, 532.15

Report To : Steve Netto

Reported : 03/20/2013

SUMMARY OF SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
TB-030913	1300731-01	Lab H2O	3/09/13 11:30	3/09/13 14:27
CEFF	1300731-02	Groundwater	3/09/13 12:35	3/09/13 14:27



Certificate of Analysis

Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego, CA 92122

Project Number : Raytheon Main: Fullerton OCSD, 532.15

Report To : Steve Netto

Reported : 03/20/2013

Client Sample ID TB-030913

Lab ID: 1300731-01

Volatile Organic Compounds by EPA 624

Analyst: SL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1-Trichloroethane	ND	5.0	NA	1	B3C0172	03/13/2013	03/13/13 11:19	
1,1,2,2-Tetrachloroethane	ND	5.0	NA	1	B3C0172	03/13/2013	03/13/13 11:19	
1,1,2-Trichloroethane	ND	5.0	NA	1	B3C0172	03/13/2013	03/13/13 11:19	
1,1-Dichloroethane	ND	5.0	NA	1	B3C0172	03/13/2013	03/13/13 11:19	
1,1-Dichloroethene	ND	5.0	NA	1	B3C0172	03/13/2013	03/13/13 11:19	
1,2-Dichlorobenzene	ND	5.0	NA	1	B3C0172	03/13/2013	03/13/13 11:19	
1,2-Dichloroethane	ND	5.0	NA	1	B3C0172	03/13/2013	03/13/13 11:19	
1,2-Dichloropropane	ND	5.0	NA	1	B3C0172	03/13/2013	03/13/13 11:19	
1,3-Dichlorobenzene	ND	5.0	NA	1	B3C0172	03/13/2013	03/13/13 11:19	
1,4-Dichlorobenzene	ND	5.0	NA	1	B3C0172	03/13/2013	03/13/13 11:19	
2-Chloroethyl vinyl ether	ND	5.0	NA	1	B3C0172	03/13/2013	03/13/13 11:19	
Acrolein	ND	50	NA	1	B3C0172	03/13/2013	03/13/13 11:19	
Acrylonitrile	ND	50	NA	1	B3C0172	03/13/2013	03/13/13 11:19	
Benzene	ND	5.0	NA	1	B3C0172	03/13/2013	03/13/13 11:19	
Bromodichloromethane	ND	5.0	NA	1	B3C0172	03/13/2013	03/13/13 11:19	
Bromoform	ND	5.0	NA	1	B3C0172	03/13/2013	03/13/13 11:19	
Bromomethane	ND	5.0	NA	1	B3C0172	03/13/2013	03/13/13 11:19	
Carbon tetrachloride	ND	5.0	NA	1	B3C0172	03/13/2013	03/13/13 11:19	
Chlorobenzene	ND	5.0	NA	1	B3C0172	03/13/2013	03/13/13 11:19	
Chloroethane	ND	5.0	NA	1	B3C0172	03/13/2013	03/13/13 11:19	
Chloroform	ND	5.0	NA	1	B3C0172	03/13/2013	03/13/13 11:19	
Chloromethane	ND	5.0	NA	1	B3C0172	03/13/2013	03/13/13 11:19	
cis-1,3-Dichloropropene	ND	5.0	NA	1	B3C0172	03/13/2013	03/13/13 11:19	
Dibromochloromethane	ND	5.0	NA	1	B3C0172	03/13/2013	03/13/13 11:19	
Ethylbenzene	ND	5.0	NA	1	B3C0172	03/13/2013	03/13/13 11:19	
m,p-Xylene	ND	10	NA	1	B3C0172	03/13/2013	03/13/13 11:19	
Methylene chloride	ND	5.0	NA	1	B3C0172	03/13/2013	03/13/13 11:19	
o-Xylene	ND	5.0	NA	1	B3C0172	03/13/2013	03/13/13 11:19	
Tetrachloroethene	ND	5.0	NA	1	B3C0172	03/13/2013	03/13/13 11:19	
Toluene	ND	5.0	NA	1	B3C0172	03/13/2013	03/13/13 11:19	
trans-1,2-Dichloroethene	ND	5.0	NA	1	B3C0172	03/13/2013	03/13/13 11:19	
trans-1,3-Dichloropropene	ND	50	NA	1	B3C0172	03/13/2013	03/13/13 11:19	
Trichloroethene	ND	5.0	NA	1	B3C0172	03/13/2013	03/13/13 11:19	
Trichlorofluoromethane	ND	5.0	NA	1	B3C0172	03/13/2013	03/13/13 11:19	
Vinyl chloride	ND	5.0	NA	1	B3C0172	03/13/2013	03/13/13 11:19	

Surrogate: 1,2-Dichloroethane-d4

111 %

70 - 130

B3C0172

03/13/2013

03/13/13 11:19

Surrogate: 4-Bromofluorobenzene

89.3 %

70 - 130

B3C0172

03/13/2013

03/13/13 11:19



Certificate of Analysis

Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : Raytheon Main: Fullerton OCSD, 532.15

Report To : Steve Netto

Reported : 03/20/2013

Client Sample ID TB-030913

Lab ID: 1300731-01

Volatile Organic Compounds by EPA 624

Analyst: SL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
<i>Surrogate: Dibromofluoromethane</i>	85.6 %	70 - 130			B3C0172	03/13/2013	03/13/13 11:19	
<i>Surrogate: Toluene-d8</i>	101 %	70 - 130			B3C0172	03/13/2013	03/13/13 11:19	



Certificate of Analysis

Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : Raytheon Main: Fullerton OCSD, 532.15

Report To : Steve Netto

Reported : 03/20/2013

Client Sample ID CEFF

Lab ID: 1300731-02

Volatile Organic Compounds by EPA 624

Analyst: SL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1-Trichloroethane	ND	5.0	NA	1	B3C0172	03/13/2013	03/13/13 12:30	
1,1,2,2-Tetrachloroethane	ND	5.0	NA	1	B3C0172	03/13/2013	03/13/13 12:30	
1,1,2-Trichloroethane	ND	5.0	NA	1	B3C0172	03/13/2013	03/13/13 12:30	
1,1-Dichloroethane	ND	5.0	NA	1	B3C0172	03/13/2013	03/13/13 12:30	
1,1-Dichloroethene	ND	5.0	NA	1	B3C0172	03/13/2013	03/13/13 12:30	
1,2-Dichlorobenzene	ND	5.0	NA	1	B3C0172	03/13/2013	03/13/13 12:30	
1,2-Dichloroethane	ND	5.0	NA	1	B3C0172	03/13/2013	03/13/13 12:30	
1,2-Dichloropropane	ND	5.0	NA	1	B3C0172	03/13/2013	03/13/13 12:30	
1,3-Dichlorobenzene	ND	5.0	NA	1	B3C0172	03/13/2013	03/13/13 12:30	
1,4-Dichlorobenzene	ND	5.0	NA	1	B3C0172	03/13/2013	03/13/13 12:30	
2-Chloroethyl vinyl ether	ND	5.0	NA	1	B3C0172	03/13/2013	03/13/13 12:30	
Acrolein	ND	50	NA	1	B3C0172	03/13/2013	03/13/13 12:30	
Acrylonitrile	ND	50	NA	1	B3C0172	03/13/2013	03/13/13 12:30	
Benzene	ND	5.0	NA	1	B3C0172	03/13/2013	03/13/13 12:30	
Bromodichloromethane	ND	5.0	NA	1	B3C0172	03/13/2013	03/13/13 12:30	
Bromoform	ND	5.0	NA	1	B3C0172	03/13/2013	03/13/13 12:30	
Bromomethane	ND	5.0	NA	1	B3C0172	03/13/2013	03/13/13 12:30	
Carbon tetrachloride	ND	5.0	NA	1	B3C0172	03/13/2013	03/13/13 12:30	
Chlorobenzene	ND	5.0	NA	1	B3C0172	03/13/2013	03/13/13 12:30	
Chloroethane	ND	5.0	NA	1	B3C0172	03/13/2013	03/13/13 12:30	
Chloroform	ND	5.0	NA	1	B3C0172	03/13/2013	03/13/13 12:30	
Chloromethane	ND	5.0	NA	1	B3C0172	03/13/2013	03/13/13 12:30	
cis-1,3-Dichloropropene	ND	5.0	NA	1	B3C0172	03/13/2013	03/13/13 12:30	
Dibromochloromethane	ND	5.0	NA	1	B3C0172	03/13/2013	03/13/13 12:30	
Ethylbenzene	ND	5.0	NA	1	B3C0172	03/13/2013	03/13/13 12:30	
m,p-Xylene	ND	10	NA	1	B3C0172	03/13/2013	03/13/13 12:30	
Methylene chloride	ND	5.0	NA	1	B3C0172	03/13/2013	03/13/13 12:30	
o-Xylene	ND	5.0	NA	1	B3C0172	03/13/2013	03/13/13 12:30	
Tetrachloroethene	ND	5.0	NA	1	B3C0172	03/13/2013	03/13/13 12:30	
Toluene	ND	5.0	NA	1	B3C0172	03/13/2013	03/13/13 12:30	
trans-1,2-Dichloroethene	ND	5.0	NA	1	B3C0172	03/13/2013	03/13/13 12:30	
trans-1,3-Dichloropropene	ND	50	NA	1	B3C0172	03/13/2013	03/13/13 12:30	
Trichloroethene	ND	5.0	NA	1	B3C0172	03/13/2013	03/13/13 12:30	
Trichlorofluoromethane	ND	5.0	NA	1	B3C0172	03/13/2013	03/13/13 12:30	
Vinyl chloride	ND	5.0	NA	1	B3C0172	03/13/2013	03/13/13 12:30	
Surrogate: 1,2-Dichloroethane-d4	127 %		70 - 130		B3C0172	03/13/2013	03/13/13 12:30	
Surrogate: 4-Bromofluorobenzene	90.7 %		70 - 130		B3C0172	03/13/2013	03/13/13 12:30	



Certificate of Analysis

Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego, CA 92122

Project Number : Raytheon Main: Fullerton OCSD, 532.15

Report To : Steve Netto

Reported : 03/20/2013

Client Sample ID CEFF

Lab ID: 1300731-02

Volatile Organic Compounds by EPA 624

Analyst: SL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
<i>Surrogate: Dibromofluoromethane</i>	121 %		70 - 130		B3C0172	03/13/2013	03/13/13 12:30	
<i>Surrogate: Toluene-d8</i>	99.2 %		70 - 130		B3C0172	03/13/2013	03/13/13 12:30	

1,4-Dioxane by EPA 8270/SIM: Isotope Dilution Technique

Analyst: BB

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,4-Dioxane	ND	0.20	0.13	1	B3C0255	03/15/2013	03/18/13 10:56	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	91.0 %		36 - 107		B3C0255	03/15/2013	03/18/13 10:56	
<i>Surrogate: 2-Fluorobiphenyl</i>	70.9 %		42 - 120		B3C0255	03/15/2013	03/18/13 10:56	
<i>Surrogate: 4-Terphenyl-d14</i>	79.7 %		67 - 142		B3C0255	03/15/2013	03/18/13 10:56	
<i>Surrogate: Nitrobenzene-d5</i>	64.0 %		36 - 130		B3C0255	03/15/2013	03/18/13 10:56	



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QUALITY CONTROL SECTION

Volatile Organic Compounds by EPA 624 - Quality Control

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B3C0172 - MSVOAW_LL

Blank (B3C0172-BLK1)

Prepared: 3/13/2013 Analyzed: 3/13/2013

1,1,1-Trichloroethane	ND	5.0			NR				
1,1,2,2-Tetrachloroethane	ND	5.0			NR				
1,1,2-Trichloroethane	ND	5.0			NR				
1,1-Dichloroethane	ND	5.0			NR				
1,1-Dichloroethene	ND	5.0			NR				
1,2-Dichlorobenzene	ND	5.0			NR				
1,2-Dichloroethane	ND	5.0			NR				
1,2-Dichloropropane	ND	5.0			NR				
1,3-Dichlorobenzene	ND	5.0			NR				
1,4-Dichlorobenzene	ND	5.0			NR				
2-Chloroethyl vinyl ether	ND	5.0			NR				
Acrolein	ND	50			NR				
Acrylonitrile	ND	50			NR				
Benzene	ND	5.0			NR				
Bromodichloromethane	ND	5.0			NR				
Bromoform	ND	5.0			NR				
Bromomethane	ND	5.0			NR				
Carbon tetrachloride	ND	5.0			NR				
Chlorobenzene	ND	5.0			NR				
Chloroethane	ND	5.0			NR				
Chloroform	ND	5.0			NR				
Chloromethane	ND	5.0			NR				
cis-1,3-Dichloropropene	ND	5.0			NR				
Dibromochloromethane	ND	5.0			NR				
Ethylbenzene	ND	5.0			NR				
m,p-Xylene	ND	10			NR				
Methylene chloride	ND	5.0			NR				
o-Xylene	ND	5.0			NR				
Tetrachloroethene	ND	5.0			NR				
Toluene	ND	5.0			NR				
trans-1,2-Dichloroethene	ND	5.0			NR				
trans-1,3-Dichloropropene	ND	50			NR				
Trichloroethene	ND	5.0			NR				
Trichlorofluoromethane	ND	5.0			NR				
Vinyl chloride	ND	5.0			NR				

Surrogate: 1,2-Dichloroethane-d4	24.84	25.0000	99.4	70 - 130
Surrogate: 4-Bromofluorobenzene	21.15	25.0000	84.6	70 - 130
Surrogate: Dibromofluoromethane	19.10	25.0000	76.4	70 - 130
Surrogate: Toluene-d8	23.86	25.0000	95.4	70 - 130



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Volatile Organic Compounds by EPA 624 - Quality Control (cont'd)

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B3C0172 - MSVOAW_LL (continued)

LCS (B3C0172-BS1)

Prepared: 3/13/2013 Analyzed: 3/13/2013

1,1-Dichloroethene	17.9500		20.0000		89.8	70 - 130			
Benzene	42.7500		40.0000		107	70 - 130			
Chlorobenzene	18.1700		20.0000		90.8	70 - 130			
Toluene	35.8600		40.0000		89.6	70 - 130			
Trichloroethene	18.2000		20.0000		91.0	70 - 130			
<hr/>									
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>29.09</i>		<i>25.0000</i>		<i>116</i>	<i>70 - 130</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>22.73</i>		<i>25.0000</i>		<i>90.9</i>	<i>70 - 130</i>			
<i>Surrogate: Dibromofluoromethane</i>	<i>28.06</i>		<i>25.0000</i>		<i>112</i>	<i>70 - 130</i>			
<i>Surrogate: Toluene-d8</i>	<i>25.02</i>		<i>25.0000</i>		<i>100</i>	<i>70 - 130</i>			

LCS Dup (B3C0172-BSD1)

Prepared: 3/13/2013 Analyzed: 3/13/2013

1,1-Dichloroethene	19.0900		20.0000		95.4	70 - 130	6.16	20	
Benzene	43.2700		40.0000		108	70 - 130	1.21	20	
Chlorobenzene	18.3900		20.0000		92.0	70 - 130	1.20	20	
Toluene	36.4100		40.0000		91.0	70 - 130	1.52	20	
Trichloroethene	18.5800		20.0000		92.9	70 - 130	2.07	20	
<hr/>									
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>28.20</i>		<i>25.0000</i>		<i>113</i>	<i>70 - 130</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>22.14</i>		<i>25.0000</i>		<i>88.6</i>	<i>70 - 130</i>			
<i>Surrogate: Dibromofluoromethane</i>	<i>27.15</i>		<i>25.0000</i>		<i>109</i>	<i>70 - 130</i>			
<i>Surrogate: Toluene-d8</i>	<i>24.33</i>		<i>25.0000</i>		<i>97.3</i>	<i>70 - 130</i>			

Duplicate (B3C0172-DUP1)

Source: 1300725-24RE1

Prepared: 3/13/2013 Analyzed: 3/13/2013

1,1-Dichloroethene	ND	5.0		ND	NR			20	
Benzene	ND	5.0		ND	NR			20	
Chlorobenzene	ND	5.0		ND	NR			20	
Toluene	ND	5.0		ND	NR			20	
Trichloroethene	ND	5.0		ND	NR			20	
<hr/>									
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>30.27</i>		<i>25.0000</i>		<i>121</i>	<i>70 - 130</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>21.74</i>		<i>25.0000</i>		<i>87.0</i>	<i>70 - 130</i>			
<i>Surrogate: Dibromofluoromethane</i>	<i>24.74</i>		<i>25.0000</i>		<i>99.0</i>	<i>70 - 130</i>			
<i>Surrogate: Toluene-d8</i>	<i>24.73</i>		<i>25.0000</i>		<i>98.9</i>	<i>70 - 130</i>			



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1,4-Dioxane by EPA 8270/SIM: Isotope Dilution Technique - Quality Control

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec % Rec	% Rec Limits	RPD RPD	RPD Limit	Notes
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Batch B3C0255 - MSEMI_ISOTOPEDILN

Blank (B3C0255-BLK1)

Prepared: 3/15/2013 Analyzed: 3/18/2013

1,4-Dioxane	ND	0.20			NR				
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	<i>0.9492</i>		<i>1.00000</i>		<i>94.9</i>	<i>36 - 107</i>			
<i>Surrogate: 2-Fluorobiphenyl</i>	<i>0.8520</i>		<i>1.00000</i>		<i>85.2</i>	<i>42 - 120</i>			
<i>Surrogate: 4-Terphenyl-d14</i>	<i>0.8785</i>		<i>1.00000</i>		<i>87.8</i>	<i>67 - 142</i>			
<i>Surrogate: Nitrobenzene-d5</i>	<i>0.7439</i>		<i>1.00000</i>		<i>74.4</i>	<i>36 - 130</i>			

LCS (B3C0255-BS1)

Prepared: 3/15/2013 Analyzed: 3/18/2013

1,4-Dioxane	0.741120	0.20	1.00000		74.1	70 - 130			
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	<i>0.9069</i>		<i>1.00000</i>		<i>90.7</i>	<i>36 - 107</i>			
<i>Surrogate: 2-Fluorobiphenyl</i>	<i>0.8318</i>		<i>1.00000</i>		<i>83.2</i>	<i>42 - 120</i>			
<i>Surrogate: 4-Terphenyl-d14</i>	<i>0.8189</i>		<i>1.00000</i>		<i>81.9</i>	<i>67 - 142</i>			
<i>Surrogate: Nitrobenzene-d5</i>	<i>0.7094</i>		<i>1.00000</i>		<i>70.9</i>	<i>36 - 130</i>			

LCS Dup (B3C0255-BSD1)

Prepared: 3/15/2013 Analyzed: 3/18/2013

1,4-Dioxane	0.706030	0.20	1.00000		70.6	70 - 130	4.85	20	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	<i>0.8935</i>		<i>1.00000</i>		<i>89.4</i>	<i>36 - 107</i>			
<i>Surrogate: 2-Fluorobiphenyl</i>	<i>0.8040</i>		<i>1.00000</i>		<i>80.4</i>	<i>42 - 120</i>			
<i>Surrogate: 4-Terphenyl-d14</i>	<i>0.7791</i>		<i>1.00000</i>		<i>77.9</i>	<i>67 - 142</i>			
<i>Surrogate: Nitrobenzene-d5</i>	<i>0.7294</i>		<i>1.00000</i>		<i>72.9</i>	<i>36 - 130</i>			



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Report To : Steve Netto

Reported : 03/20/2013

Notes and Definitions

ND	Analyte not detected at or above reporting limit
PQL	Practical Quantitation Limit
MDL	Method Detection Limit
NR	Not Reported
RPD	Relative Percent Difference
CA1	CA-NELAP (CDPH)
CA2	CA-ELAP (CDPH)
OR1	OR-NELAP (OSPHL)
TX1	TX-NELAP (TCEQ)

Notes:

- (1) The reported MDL and PQL are based on prep ratio variation and analytical dilution.
- (2) The suffix [2C] of specific analytes signifies that the reported result is taken from the instrument's second column.

CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST FORM

PROJECT NAME		PROJECT No./TASK No.				SAMPLE CONTAINERS		ANALYSIS REQUESTED		ESTIMATED CONCENTRATION RANGE (ppb) FOR VOA'S		SPECIAL HANDLING		LABORATORY INFORMATION	
Raytheon Main: Fullerton OCSO		532.15												Advanced Technology Laboratories 3275 Walnut Ave. Signal Hill, CA 90755 Attn: Rachelle Arada	
PROJECT MANAGER Chris Ross		Phone No. 858-455-6500													
QA MANAGER Steve Netto		Fax No. 858-455-6533													
SAMPLER (SIGNATURE)		SAMPLER (PRINTED)													
		MARCOS RODRIGUEZ													
LAB ID	SAMPLE ID	SAMPLE COLLECTION		MATRIX			PRESERVATION					REMARKS			
		Date	Time	Soil	Ground water	Surface water	Lab H2O	HCl	HNO3	NaOH	H2SO4		Ice		
1300731-01	TB-030913	3/9/13	11:30				XX				X				
↓ -02	CEFF	↓	12:35	X			X				X				
Total number of Containers per analysis:						3	12							Total No. of Containers: 6	
Relinquished by:		Date	Received by:		Date	INSTRUCTIONS						Shipment Method: <u>DELIVER</u>			
		3/9/13			3/9/13							1. Fill out form completely except for shaded areas (lab use only); sign only after verified for completeness.		Send Results to: <u>Steve Netto</u>	
Company		Time	Company		Time	2. Complete in ballpoint pen. Draw one line through errors, initial and date correction. 3. Indicate number of sample containers in analysis request space; indicate choice with ✓ or x. 4. Note applicable preservatives, special instructions, and deviations from typical environmental samples. 5. Consult project QA documents for specific instructions.						<input checked="" type="checkbox"/> 9171 TOWNE CENTRE DRIVE, SUITE 375 SAN DIEGO, CA 92122 (858) 455-6500			
H+A		14:27	AR		14:27							<input type="checkbox"/> 1640 SOUTH STAPLEY DRIVE, SUITE 124 MESA, AZ 85204 (480) 345-0888			
Relinquished by:		Date	Received by:		Date	Sample Receipt: Temp. @ receipt <u>5-C</u> °C						<input type="checkbox"/> 1820 EAST RIVER ROAD, SUITE 220 TUCSON, AZ 85718 (520) 881-7300			
		Time			Time							<input type="checkbox"/> No. of containers correct <input type="checkbox"/> received good condition/cold		Send invoice to San Diego, CA Attn: Accounts Payable	
Company			Company			<input type="checkbox"/> custody seals secure <input type="checkbox"/> conforms to COC document									

APPENDIX B
GROUNDWATER SAMPLING FIELD FORMS

APPENDIX B
GROUNDWATER SAMPLING FIELD FORMS
(SECOND QUARTER 2012)

GROUNDWATER SAMPLING INFORMATION

DATE: 5/7/12

113.04

TASK: 532.30

WELL ID: EW-01

Time <u>1256</u> Static DTW (ft below reference point) <u>113.04</u>	Casing Volume (CV) (gallons) <u>54.0</u> 3 CV (gallons) <u>162.3</u>	Weather Conditions	Initials <u>AMB & DM</u>
Casing Total Depth (ft below reference point) <u>195</u>	Purging Device <u>ded. pump</u> Sampling Device <u>ded. sample port</u>	Time <u>1540</u> Temp. <u>75°</u>	Begin Purge <u>1537</u> End Purge <u>1632</u>
Water Column (feet) <u>81.96</u>	Pump: Depth (ft brp) <u>NA</u> Type _____ Voltage _____ HP _____	Skies <u>Clear</u>	Gallons Purged <u>697</u> CVs Purged <u>12.9</u>
Casing Capacity (Diameter <u>4</u> ") (gallons per foot) <u>0.66</u>	Monitor Well Recharge Rate: Slow _____ Fast <u>X</u>	Wind (mph) <u>1-4</u> From <u>S-SW</u>	DTW (ft brp) <u>131.00</u> Time <u>1639</u>

Time	Depth to Water	Volume Purged (Gallons)	Casing Volumes Purged	...FIELD PARAMETERS...						Pump Frequency Hz	COMMENTS
				Temp. (°C)	pH	EC (µS/cm)	O.R.P. (mV)	D.O. (mg/L)	Turbidity (NTU)		
1257	113.04									273702	
1537	PUMP ON									12.44 GPM	
1632	131.93	697	12.9	24.03	7.46	1.397	2052	4.77	1.09	274399 12.171 GPM	
1639	PUMP OFF									DTW = 131.00 274466	

SAMPLE COLLECTION SAMPLE TIME <u>1632</u>	AIR MONITORING PID/FID ppm: VAULT NA	BKGD NA	BREATHING ZONE NA	DISCHARGE WATER NA
ANALYSIS QUANTITY TYPE	NOTES (Color, odor, sand and silt content, factors possibly affecting samples, condition of vault, wellhead, sampling apparatus, etc.)			
8260B VOCs <u>3 MB</u> 40 ml VOA				
8270 SIM 1,4 dioxane <u>1 L</u> 1 L Amber				
8270 MOD 1,4 dioxane <u>1 L</u> 1 L Amber				
DUPLICATES / SPLITS / BLANKS? Y <u>(N)</u>				

GROUNDWATER SAMPLING INFORMATION

DATE: 5/11/12 12734@1248 TASK: 532.30 WELL ID: MW08

Time <u>1026</u> Static DTW (ft below reference point) <u>127.52</u>	Casing Volume (CV) (gallons) <u>4.71</u> ^{0.2} CV (gallons) <u>18.6</u>	Weather Conditions	Initials AMB & DM
Casing Total Depth (ft below reference point) <u>163.79</u>	Purging Device <u>granitex pump</u> Sampling Device <u>ded. tubing</u>	Time <u>1230</u> Temp. <u>75°</u>	Begin Purge <u>1255</u> End Purge <u>1316</u>
Water Column (feet) <u>36.43</u> 27.6	Pump: Depth (ft brp) <u>~162</u> Type <u>rediflo</u> Voltage <u>240</u> HP	Skies <u>Clear, sunny</u>	Gallons Purged <u>19</u> CVs Purged <u>3.1</u>
Casing Capacity (Diameter <u>2"</u>) (gallons per foot) <u>0.17</u>	Monitor Well Recharge Rate: Slow _____ Fast <u>X</u>	Wind (mph) <u>D-3</u> From <u>SW</u>	DTW (ft brp) <u>127.44</u> Time <u>1329</u>

Time	Depth to Water	Volume Purged (Gallons)	Casing Volumes Purged	...FIELD PARAMETERS...						Pump Frequency Hz	COMMENTS
				Temp. (°C)	pH	EC (µS/cm)	O.R.P. (mV)	D.O. (mg/L)	Turbidity (NTU)		
1255	PUMP ON										1 gpm
1258	UTM	1	0.2	23.04	7.54	1.623	156.1	4.85	8.65		
1301	UTM	4	0.6	22.54	7.38	1.600	148.5	5.02	43.1		1 gpm
1304	UTM	6.5	1.0	22.81	7.36	1.544	138.7	5.03	23.2		
1308	UTM	12	1.9	23.16	7.35	1.476	145.9	5.27	6.42		1 gpm
1312	UTM	16	2.6	23.23	7.37	1.467	134.3	5.26	3.15		1 gpm
1316	UTM	19	3.1	22.94	7.36	1.456	130.5	5.09	4.19		1 gpm collect sample

SAMPLE COLLECTION SAMPLE TIME 1316

ANALYSIS	QUANTITY	TYPE
8260B VOCs	<u>3+3</u>	40 ml VOA
8270 SIM 1,4 dioxane	<u>(+)</u>	1 L Amber
8270 MOD 1,4 dioxane	<u>8</u>	1 L Amber

DUPLICATES / SPLITS / BLANKS? (Y) N

If yes, complete appropriate forms

AIR MONITORING PID/FID ppm: VAULT NA BKGD NA BREATHING ZONE NA DISCHARGE WATER NA

NOTES (Color, odor, sand and silt content, factors possibly affecting samples, condition of vault, wellhead, sampling apparatus, etc.)

Pump, previously bailed - on the border. (WL increased 8ft over last quarter)

Previously bailed w/ dedicated bailer

RB-051112@1240 for VOC & 1,4-dioxane

GROUNDWATER SAMPLING INFORMATION

DATE: 5/7/12

TASK: 532.30

WELL ID: Mw-21

Time <u>1448</u> Static DTW (ft below reference point) <u>111.08</u>	Casing Volume (CV) (gallons) <u>83</u> 3 CV (gallons) <u>251</u>	Weather Conditions	Initials <u>AMB & DM</u>
Casing Total Depth (ft below reference point) <u>238.</u>	Purging Device <u>ded pump</u> Sampling Device <u>ded sample pot</u>	Time <u>~1500</u> Temp. <u>~78°</u>	Begin Purge <u>1538</u> End Purge <u>1615</u>
Water Column (feet) <u>126.9</u>	Pump: Depth (ft brp) <u>NA</u> Type _____ Voltage _____ HP _____	Skies <u>Clear</u>	Gallons Purged <u>715</u> CVs Purged <u>86</u>
Casing Capacity (Diameter <u>4"</u>) (gallons per foot) <u>0.66</u>	Monitor Well Recharge Rate: Slow _____ Fast <u>X</u>	Wind (mph) <u>1-3</u> From <u>SW</u>	DTW (ft brp) <u>114.68</u> <u>1625</u>

Time	Depth to Water	Volume Purged (Gallons)	Casing Volumes Purged	...FIELD PARAMETERS...						Pump Frequency Hz	COMMENTS
				Temp. (°)	pH	EC (S/cm)	O.R.P. (mV)	D.O. (mg/L)	Turbidity (NTU)		
<u>1448</u>	<u>111.08</u>	<u>NA</u>								<u>553358 pump off</u>	
<u>1538</u>	<u>Pump on</u>									<u>18.965 gpm</u>	
<u>1615</u>	<u>123.48</u>	<u>715</u>	<u>8.6</u>	<u>22.70</u>	<u>7.30</u>	<u>2.005</u>	<u>216.3</u>	<u>4.58</u>	<u>0.93</u>	<u>554073</u>	
<u>1625</u>	<u>114.68</u>	<u>Pump off</u>								<u>554263</u>	

SAMPLE COLLECTION SAMPLE TIME <u>1615</u>	AIR MONITORING PID/FID ppm: VAULT <u>NA</u> BKGD <u>NA</u> BREATHING ZONE <u>NA</u> DISCHARGE WATER <u>NA</u>
ANALYSIS QUANTITY TYPE	NOTES (Color, odor, sand and silt content, factors possibly affecting samples, condition of vault, wellhead, sampling apparatus, etc.)
8260B VOCs <u>3+3</u> 40 ml VQA	<u>MW-2100P, 1645</u>
8270 SIM 1,4 dioxane <u>1</u> 1 L Amber	
8270 MOD 1,4 dioxane <u>1+1</u> 1 L Amber	
DUPLICATES / SPLITS / BLANKS? <u>Y</u>	

GROUNDWATER SAMPLING INFORMATION

DATE: 5/9/12

TASK: 532.30

WELL ID: MW-260

Time 1440	Static DTW (ft below reference point) 109.93	Casing Volume (CV) (gallons) 66	3 CV (gallons) 198	Weather Conditions	Initials AMB & DM
Casing Total Depth (ft below reference point) 499	Purging Device ded. pump	Sampling Device ded. Sample	Time 1440	Temp. ~78	Begin Purge 1448
Water Column (feet) 309	Pump: Depth (ft brp) ~300	Type ground	Skies clear, sunny	Gallons Purged 201	End Purge 1612
Casing Capacity (Diameter 2") (gallons per foot) 0.17	Monitor Well Recharge Rate: Slow	Fast X	Wind (mph) 1-4	From S-SW	DTW (ft brp) 110.85
					Time 1626

Time	Depth to Water	Volume Purged (Gallons)	Casing Volumes Purged	...FIELD PARAMETERS...						Pump Frequency Hz	COMMENTS
				Temp. (°C)	pH	EC (µS/cm)	O.R.P. (mV)	D.O. (mg/L)	Turbidity (NTU)		
1448	Pump ON									313	2.4 gpm
1451	110.73	7.2	0.1	22.12	9.33	0.471	-222.1	0.22	22.1	313	2.4 gpm
1505	110.73	77.6	0.6	22.16	7.75	0.765	-151.2	0.20	8.69	313	2.4 gpm 40.8 gal purged
1519	110.73	74.4	1.1	22.21	7.69	0.889	-67.6	1.24	2.97	313	2.4 gpm
1533	110.73	108	1.6	22.22	7.74	0.888	-54.4	1.38	1.19	313	2.4 gpm
1547	110.73	141	2.1	22.23	7.74	0.888	-48.8	1.40	0.26	313	2.4 gpm
1601	111.30	174.6	2.6	22.21	7.74	0.894	-47.2	1.74	0.23	313	2.4 gpm
1612	111.44	201	3.0	22.22	7.74	0.895	-44.9	1.45	0.31	313	2.4 gpm

SAMPLE COLLECTION SAMPLE TIME 1612	AIR MONITORING PID/FID ppm: VAULT NA	BKGD NA	BREATHING ZONE NA	DISCHARGE WATER NA
ANALYSIS QUANTITY TYPE	NOTES (Color, odor, sand and silt content, factors possibly affecting samples, condition of vault, wellhead, sampling apparatus, etc.)			
8260B VOCs 3 40 ml VOA				
8270 SIM 1,4 dioxane 1 1 L Amber				
8270 MOD 1,4 dioxane 1 1 L Amber				
DUPLICATES / SPLITS / BLANKS? Y (N)				

GROUNDWATER SAMPLING INFORMATION

DATE: 5/11/12

TASK: 532.30

WELL ID: MW-28

Time <u>715</u> Static DTW (ft below reference point)	<u>115.73</u> Screen <u>SV</u> Casing Volume (CV) (gallons)	<u>27</u> <u>SV</u> 3 CV (gallons)	<u>81</u>	Weather Conditions	Initials AMB & DM
Casing Total Depth (ft below reference point)	<u>375</u>	Purging Device <u>ded pump</u>	Sampling Device <u>ded. 0-10</u>	Time <u>715</u> Temp. <u>~65°</u>	Begin Purge <u>716</u> End Purge <u>727</u>
<u>pump to screen</u> Water Column (feet)	<u>45</u>	Pump: Depth (ft brp) <u>330</u> Type <u>grinder</u>	Voltage <u>240</u> HP	Skies <u>Cloudy</u>	Gallons Purged <u>83</u> CVs Purged <u>3.0</u>
Casing Capacity (Diameter <u>4"</u>) (gallons per foot)	<u>0.60</u>	Monitor Well Recharge Rate: Slow	Fast <u>X</u>	Wind (mph) <u>0-2</u> From <u>S-SW</u>	DTW (ft brp) <u>150.91</u> Time <u>732</u>

Time	Depth to Water	Volume Purged (Gallons)	Casing Volumes Purged	...FIELD PARAMETERS...						Pump Frequency Hz	COMMENTS
				Temp. (°C)	pH	EC (µS/cm)	O.R.P. (mV)	D.O. (mg/L)	Turbidity (NTU)		
716	PUMP	ON									
717	122.15	7	0.3	21.48	7.60	1.089	107.1	5.28	1.92		7.7 gpm
719	123.31	18	0.7	21.28	7.63	1.044	156.6	5.36	0.07		7.6 gpm
721	123.48	31	1.1	21.35	7.65	1.053	146.0	5.56	1.31		7.6 gpm
723	123.50	50	1.8	21.40	7.63	1.071	136.2	5.74	33.9		1.23 NTU
725	123.53	71	1.6	21.40	7.64	1.074	123.0	5.76	12.2		7.6 gpm
727	123.53	83	3.0	21.40	7.64	1.073	117.4	5.85	0.60		7.6 gpm, Collect sample

SAMPLE COLLECTION SAMPLE TIME <u>727</u>	AIR MONITORING PID/FID ppm: VAULT NA	BKGD NA	BREATHING ZONE NA	DISCHARGE WATER NA
ANALYSIS QUANTITY TYPE	NOTES (Color, odor, sand and silt content, factors possibly affecting samples, condition of vault, wellhead, sampling apparatus, etc.)			
8260B VOCs <u>3</u> 40 ml VQA				
8270 SIM 1.4 dioxane <u>1</u> 1 L Amber				
8270 MOD 1.4 dioxane <u>1</u> 1 L Amber				
DUPLICATES / SPLITS / BLANKS? Y <u>(N)</u>				

GROUNDWATER SAMPLING INFORMATION

DATE: 5/11/12

TASK: 532.30

WELL ID: MW-24

Time <u>719</u> Static DTW (ft below reference point) <u>118.05</u>	Casing Volume (CV) (gallons) <u>30</u> 3 CV (gallons) <u>90</u>	Weather Conditions	Initials <u>AMB & DM</u>
Casing Total Depth (ft below reference point) <u>246</u>	Purging Device <u>Dev. pump</u> Sampling Device <u>5100. dediprest</u>	Time <u>750</u> Temp. <u>76°</u>	Begin Purge <u>754</u> End Purge <u>816</u>
Water Column (feet) <u>50</u>	Pump: Depth (ft brp) <u>190</u> Type <u>ground</u> Voltage <u>240</u> HP	Skies <u>cloudy</u>	Gallons Purged <u>94</u> CVs Purged <u>3.1</u>
Casing Capacity (Diameter <u>4"</u>) (gallons per foot) <u>0.60</u>	Monitor Well Recharge Rate: Slow Fast <u>X</u>	Wind (mph) <u>0-3</u> From <u>S-SW</u>	DTW (ft brp) <u>118.31</u> Time <u>824</u>

Time	Depth to Water	Volume Purged (Gallons)	Casing Volumes Purged	...FIELD PARAMETERS...						Pump Frequency Hz	COMMENTS
				Temp. (°C)	pH	EC (µS/cm)	O.R.P. (mV)	D.O. (mg/L)	Turbidity (NTU)		
754	PUMP	ON									4.5 gpm
756	125.34	5	0.2	20.94	7.43	1.375	25.3	5.35	4.16		4.5 gpm
758	125.88	15	0.5	21.26	7.47	1.348	32.4	5.91	2.94		4.5 gpm
800	125.91	25	0.8	21.35	7.46	1.348	53.9	6.33	2.47		4.4 gpm
802	125.96	33	1.1	21.40	7.46	1.365	69.5	6.63	2.96		4.4 gpm
804	125.96	43	1.4	21.42	7.43	1.385	78.7	6.96	3.02		4.4 gpm
807	125.94	56	1.9	21.43	7.42	1.391	85.1	7.47	3.51		4.4 gpm
811	125.95	75	2.5	21.42	7.39	1.398	80.0	7.39	2.12		4.4 gpm
816	126.08	94	3.1	21.41	7.39	1.395	82.6	8.19	1.46		

SAMPLE COLLECTION SAMPLE TIME 816

ANALYSIS	QUANTITY	TYPE
8260B VOCs	<u>3+3+3+3</u>	40 ml VOA
8270 SIM 1,4 dioxane	<u>2</u>	1 L Amber
8270 MOD 1,4 dioxane	<u>(+)(+)(+)</u>	1 L Amber

DUPLICATES / SPLITS / BLANKS? (Y) N

AIR MONITORING PID/FID ppm: VAULT NA BKGD NA BREATHING ZONE NA DISCHARGE WATER NA

NOTES (Color, odor, sand and silt content, factors possibly affecting samples, condition of vault, wellhead, sampling apparatus, etc.)

Dup MW-2400 at 836 sample time Spt (Cal science) Spt (Enova) @ 816

GROUNDWATER SAMPLING INFORMATION

DATE: 5/10/12

TASK: 532.30

WELL ID: MW-30A

Time <u>1710</u> Static DTW (ft below reference point)	<u>105.5</u> SCREEN SV Casing Volume (CV) (gallons)	<u>17.2</u> SV Casing Volume (CV) (gallons)	<u>51.5</u>	Weather Conditions	Initials AMB & DM
Casing Total Depth (ft below reference point)	<u>564'</u>	Purging Device <u>Dep. pump</u>	Sampling Device <u>0-10 pipe stand</u>	Time <u>1715</u> Temp. <u>75°</u>	Begin Purge <u>1721</u> End Purge <u>1732</u>
Water Column (feet)	<u>44</u>	Pump: Depth (ft brp) <u>520'</u> Type <u>Grundfos</u>	Voltage <u>240</u> HP	Skies <u>Clear, sunny</u>	Gallons Purged <u>52</u> CVs Purged <u>3.0</u>
Casing Capacity (Diameter <u>3"</u>) (gallons per foot)	<u>0.39</u>	Monitor Well Recharge Rate: Slow <u>0</u> Fast <u>X</u>		Wind (mph) <u>1-2</u> From <u>S-SW</u>	DTW (ft brp) <u>105.75</u> Time <u>1733</u>

Time	Depth to Water	Volume Purged (Gallons)	Casing Volumes Purged	...FIELD PARAMETERS...						Pump Frequency Hz	COMMENTS
				Temp. (°C)	pH	EC (µS/cm)	O.R.P. (mV)	D.O. (mg/L)	Turbidity (NTU)		
1721	PUMP ON										4.8 gpm
1722	107.25	5	0.3	22.19	7.93	0.736	101.0	3.06	2.51		4.8 gpm
1724	107.25	10	0.6	20.93	8.84	0.765	-158.8	1.02	1.30		4.8 gpm
1726	107.35	20	1.6	21.06	7.48	0.742	-82.6	0.57	4.23		5 gpm
1728	107.29	31	1.6	21.25	7.15	0.737	-37.4	0.35	1.56		5 gpm
1730	107.31	41	2.4	21.28	7.18	0.735	-24.0	0.39	2.15		5 gpm
1732	107.32	52	3.0	21.28	7.22	0.734	-16.2	0.40	1.18		Collect sample

SAMPLE COLLECTION SAMPLE TIME <u>1732</u>	AIR MONITORING PID/FID ppm: VAULT NA	BKGD NA	BREATHING ZONE NA	DISCHARGE WATER NA
ANALYSIS QUANTITY TYPE	NOTES (Color, odor, sand and silt content, factors possibly affecting samples, condition of vault, wellhead, sampling apparatus, etc.)			
8260B VOCs <u>3</u> 40 ml VQA				
8270 SIM 1,4 dioxane <u>1</u> 1 L Amber				
8270 MOD 1,4 dioxane <u>1</u> 1 L Amber				
DUPLICATES / SPLITS / BLANKS? Y <u>(N)</u>				

GROUNDWATER SAMPLING INFORMATION

DATE: 5/16/12

TASK: 532.30

WELL ID: MW-30B

Time <u>1742</u> Static DTW (ft below reference point)	<u>103.7</u>	<u>Screen SV</u> Casing Volume (CV) (gallons) <u>37</u>	<u>3 SV</u> CV (gallons) <u>1123</u>	Weather Conditions	Initials <u>AMB & DM</u>
Casing Total Depth (ft below reference point)	<u>616</u>	Purging Device <u>ded pump</u>	Sampling Device <u>10-100 pipes and</u>	Time <u>1750</u> Temp. <u>75°</u>	Begin Purge <u>1742</u> End Purge <u>1809</u>
<u>500 ft to pump</u> Water Column (feet)	<u>96</u>	Pump: Depth (ft brp) <u>520</u> Type <u>Grundfos</u> Voltage <u>240</u> HP		Skies <u>clear, sunny</u>	Gallons Purged <u>114</u> CVs Purged <u>3.51009</u>
Casing Capacity (Diameter <u>3'</u>) (gallons per foot)	<u>0.39</u>	Monitor Well Recharge Rate: Slow _____ Fast <u>X</u>		Wind (mph) <u>1-3</u> From <u>S-SW</u>	DTW (ft brp) <u>112.22</u> Time <u>1814</u>

Time	Depth to Water	Volume Purged (Gallons)	Casing Volumes Purged	...FIELD PARAMETERS...						Pump Frequency Hz	COMMENTS
				Temp. (C)	pH	EC (mS/cm)	O.R.P. (mV)	D.O. (mg/L)	Turbidity (NTU)		
<u>1742</u>	<u>Pump ON</u>										
<u>1743</u>	<u>112.86</u>	<u>5</u>	<u>0.1</u>	<u>21.37</u>	<u>7.55</u>	<u>1.128</u>	<u>-135.9</u>	<u>2.26</u>	<u>36.7</u>		<u>5.2 gpm</u>
<u>1746</u>	<u>119.30</u>	<u>13</u>	<u>0.4</u>	<u>20.89</u>	<u>7.59</u>	<u>1.018</u>	<u>-157.0</u>	<u>0.73</u>	<u>12.5</u>		<u>4.9 gpm</u>
<u>1749</u>	<u>122.17</u>	<u>27</u>	<u>0.7</u>	<u>21.10</u>	<u>7.67</u>	<u>0.990</u>	<u>-185.2</u>	<u>0.30</u>	<u>8.30</u>		<u>5 gpm</u>
<u>1753</u>	<u>124.19</u>	<u>52</u>	<u>1.4</u>	<u>21.26</u>	<u>7.51</u>	<u>1.020</u>	<u>-158.2</u>	<u>0.10</u>	<u>7.98</u>		<u>5 gpm</u>
<u>1757</u>	<u>124.93</u>	<u>67</u>	<u>1.8</u>	<u>21.29</u>	<u>7.53</u>	<u>1.043</u>	<u>-152.4</u>	<u>0.08</u>	<u>2.30</u>		<u>5 gpm</u>
<u>1801</u>	<u>126.0</u>	<u>93</u>	<u>2.5</u>	<u>21.32</u>	<u>7.53</u>	<u>1.042</u>	<u>-147.2</u>	<u>0.08</u>	<u>5.33</u>		<u>4.9 gpm</u>
<u>1805</u>	<u>126.38</u>	<u>114</u>	<u>3.0</u>	<u>21.34</u>	<u>7.53</u>	<u>1.024</u>	<u>-142.9</u>	<u>0.09</u>	<u>5.81</u>		<u>4.9 gpm</u>
<u>1809</u>	<u>127.17</u>	<u>130</u>	<u>3.5</u>	<u>21.36</u>	<u>7.51</u>	<u>1.014</u>	<u>-137.1</u>	<u>0.10</u>	<u>1.27</u>		<u>4.9 gpm</u>

SAMPLE COLLECTION ANALYSIS	SAMPLE TIME	QUANTITY	TYPE	AIR MONITORING PID/FID ppm: VAULT NA	BKGD NA	BREATHING ZONE NA	DISCHARGE WATER NA
8260B VOCs	<u>1809</u>	<u>3</u>	40 ml VOA	NOTES (Color, odor, sand and silt content, factors possibly affecting samples, condition of vault, wellhead, sampling apparatus, etc.)			
8270 SIM 1,4 dioxane		<u>1</u>	1 L Amber				
8270 MOD 1,4 dioxane		<u>1</u>	1 L Amber				
DUPLICATES / SPLITS / BLANKS?			Y				
If yes, complete appropriate forms.			<u>(N)</u>				

GROUNDWATER SAMPLING INFORMATION

DATE: 841

TASK: 532.30

WELL ID: MW-31

Time <u>848</u> Static DTW (ft below reference point)	<u>96.95</u>	<u>Screen</u> Casing Volume (<u>2V</u>) (gallons) <u>79.4</u>	<u>3V</u> (gallons) <u>238</u>	Weather Conditions	Initials <u>AMB & DM</u>
Casing Total Depth (ft below reference point)	<u>996</u>	Purging Device <u>Dea. Pump</u>	Sampling Device <u>Dea. id-100 pipe stand</u>	Temp. <u>75°F</u>	Begin Purge <u>849</u> End Purge <u>910</u>
<u>PUMP SCREEN</u> Water Column (feet)	<u>54</u>	Pump: Depth (ft brp) <u>942</u>	Type <u>gmudb</u> Voltage <u>240</u> HP	Skies <u>Sunny</u>	Gallons Purged <u>240</u> CVs Purged <u>3.0</u>
Casing Capacity (Diameter <u>6"</u>) (gallons per foot)	<u>1.5</u>	Monitor Well Recharge Rate: Slow	Fast <u>X</u>	Wind (mph) <u>0-5</u> From <u>SW</u>	DTW (ft brp) <u>97.1000</u> Time <u>917</u>

Time	Depth to Water	Volume Purged (Gallons)	Casing Volumes Purged	...FIELD PARAMETERS...						Pump Frequency Hz	COMMENTS
				Temp. (C)	pH	EC (µS/cm)	O.R.P. (mV)	D.O. (mg/L)	Turbidity (NTU)		
<u>849</u>	<u>PUMP</u>	<u>ON</u>									<u>11.5 gpm</u>
<u>850</u>	<u>98.77</u>	<u>15</u>	<u>0.2</u>	<u>20.77</u>	<u>7.97</u>	<u>0.793</u>	<u>111.6</u>	<u>0.51</u>	<u>4.43</u>	<u>4.43</u>	<u>amb</u>
<u>853</u>	<u>98.83</u>	<u>50</u>	<u>0.6</u>	<u>20.72</u>	<u>8.03</u>	<u>0.789</u>	<u>94.6</u>	<u>0.25</u>	<u>185</u>		<u>11.5 gpm</u>
<u>856</u>	<u>98.91</u>	<u>92</u>	<u>1.1</u>	<u>21.03</u>	<u>8.79</u>	<u>1.220</u>	<u>-27.2</u>	<u>0.52</u>	<u>49.3</u>		<u>9.8 gpm</u>
<u>859</u>	<u>98.88</u>	<u>117</u>	<u>1.5</u>	<u>21.11</u>	<u>7.94</u>	<u>1.040</u>	<u>20.3</u>	<u>1.0</u>	<u>22.0</u>		<u>10 gpm</u>
<u>903</u>	<u>98.90</u>	<u>156</u>	<u>2.0</u>	<u>21.15</u>	<u>7.91</u>	<u>0.963</u>	<u>34.8</u>	<u>1.32</u>	<u>13.4</u>		<u>10 gpm</u>
<u>908</u>	<u>98.93</u>	<u>186</u>	<u>2.4</u>	<u>21.16</u>	<u>7.99</u>	<u>0.928</u>	<u>29.1</u>	<u>1.44</u>	<u>12.4</u>		<u>10 gpm</u>
<u>910</u>	<u>98.94</u>	<u>240</u>	<u>3.0</u>	<u>21.16</u>	<u>7.92</u>	<u>0.898</u>	<u>32.2</u>	<u>1.56</u>	<u>4.4</u>		

SAMPLE COLLECTION ANALYSIS	SAMPLE TIME	QUANTITY	TYPE	AIR MONITORING PID/FID ppm: VAULT NA	BKGD NA	BREATHING ZONE NA	DISCHARGE WATER NA
<u>8260B VOCs</u>	<u>910</u>	<u>3</u>	<u>40 ml VOA</u>	NOTES (Color, odor, sand and silt content, factors possibly affecting samples, condition of vault, wellhead, sampling apparatus, etc.)			
<u>8270 SIM 1,4 dioxane</u>		<u>1</u>	<u>1 L Amber</u>				
<u>8270 MOD 1,4 dioxane</u>		<u>1</u>	<u>1 L Amber</u>				
DUPLICATES / SPLITS / BLANKS?	Y		<u>(N)</u>				

GROUNDWATER SAMPLING INFORMATION

DATE: 5/8/12

TASK: 532.30

WELL ID: MW-32A

Time <u>9:00</u> Static DTW (ft below reference point)	<u>662.47</u> Screen SV Casing Volume (CV) (gallons)	<u>207</u> SV (gallons)	<u>621</u> SV (gallons)	Weather Conditions	Initials AMB & DM
Casing Total Depth (ft below reference point)	9:05 Purging Device <u>Dead pump</u>	Sampling Device <u>dead ND pipe stand</u>	Time <u>~9:00</u> Temp. <u>~68°</u>	Begin Purge <u>9:03</u>	End Purge <u>9:56</u>
Water Column (feet)	3:05 Pump: Depth (ft brp) <u>560'</u> Type <u>grndfbs</u>	Voltage <u>240</u> HP	Skies <u>Partly Cloudy</u>	Gallons Purged <u>702</u>	CVs Purged <u>>3</u>
Casing Capacity (Diameter <u>4"</u>) (gallons per foot)	0.60	Monitor Well Recharge Rate: Slow	Fast <u>X</u>	Wind (mph) <u>W 0-2</u> From <u>W</u>	DTW (ft brp) <u>666.54</u> Time <u>10:15</u>

Time	Depth to Water	Volume Purged (Gallons)	Casing Volumes Purged	...FIELD PARAMETERS...						Pump Frequency Hz	COMMENTS
				Temp. (°C)	pH	EC (µS/cm)	O.R.P. (mV)	D.O. (mg/L)	Turbidity (NTU)		
9:03	BEGIN PUMPING									~12 gpm	
9:05	67.90	24	0.1	20.51	7.58	0.919	-31.9	1.71	2.51	2.27 NTU	
9:14	67.96	132	0.6	20.69	7.55	0.918	27.9	1.36	15.5	~12 gpm	
9:23	67.96	240	1.2	20.86	7.56	0.922	5.5	1.72	10.84		
9:32	67.97	348	1.7	20.88	7.57	0.921	21.1	1.91	2.64	12 gpm	
9:41	67.97	456	2.2	20.88	7.55	0.921	-64.4	2.21	2.50		
9:50	67.97	564	2.7	20.88	7.53	0.919	6.3	2.42	2.50		
9:56	67.97	630	3.0	20.88	7.53	0.920	10.1	2.17	5.03	Collect sample	
10:02	NM	702	PUMP OFF								

SAMPLE COLLECTION TIME <u>9:56</u>	AIR MONITORING PID/FID ppm: VAULT NA	BKGD NA	BREATHING ZONE NA	DISCHARGE WATER NA
ANALYSIS QUANTITY TYPE	NOTES (Color, odor, sand and silt content, factors possibly affecting samples, condition of vault, wellhead, sampling apparatus, etc.)			
8260B VOCs <u>3</u> 40 ml VOA				
8270 SIM 1.4 dioxane <u>1</u> 1 L Amber				
8270 MOD 1.4 dioxane <u>1</u> 1 L Amber				
DUPLICATES / SPLITS / BLANKS? Y <u>(N)</u>				

GROUNDWATER SAMPLING INFORMATION

DATE: 5/8/12

TASK: 532.30

WELL ID: MW-32B

Time <u>1312</u> Static DTW (ft below reference point) <u>66.70</u>	Screen <u>SV</u> Casing Volume (CV) (gallons) <u>263.4</u> 3 CV (gallons) <u>790.2</u>	Weather Conditions Time <u>1310</u> Temp. <u>80</u>	Initials AMB & DM
Casing Total Depth (ft below reference point) <u>999</u>	Purging Device <u>Del. pump</u> Sampling Device <u>ded 100 ft pipe stand</u>	Skies <u>Clear, sunny</u>	Begin Purge <u>1313</u> End Purge <u>1429</u>
Screen - Pump Water Column (feet) <u>439</u>	Pump: Depth (ft brp) <u>560</u> Type <u>Grundfos</u> Voltage <u>320V</u>	Wind (mph) <u>1-4</u> From <u>S-SW</u>	Gallons Purged <u>803</u> CVs Purged <u>3.0</u>
Casing Capacity (Diameter <u>4"</u>) (gallons per foot) <u>0.60</u>	Monitor Well Recharge Rate: Slow _____ Fast <u>X</u>	DTW (ft brp) <u>67.82</u>	Time <u>1438</u>

Time	Depth to Water	Volume Purged (Gallons)	Casing Volumes Purged	...FIELD PARAMETERS...						Pump Frequency Hz	COMMENTS
				Temp. (C)	pH	EC (µS/cm)	O.R.P. (mV)	D.O. (mg/L)	Turbidity (NTU)		
1313	BEGIN	purging								11.6 gpm	
1315	85.2	23.2	0.1	20.68	7.87	0.934 0.470	-173	2.32	4.53		EC not stabilizing, odor in water sulfur
1327	87.0	155.2	0.6	20.70	7.91	0.876	-192.0	1.73	0.31		11 gpm @ 1321
1339	87.70	287	1.1	20.61	7.90	0.750	726.0	0.38	10.75		~11 gpm
1352	88.0	422	1.6	21.11	7.96	0.831	-129.0	0.22	1.74		10.4 gpm
1404	88.21	546	2.1	21.13	7.96	0.858	-146.0	0.02	15.2		5.54 NTU ~10.4 gpm
1416	88.34	669	2.5	21.14	7.94	0.867	-136.6	0.16	7.41		10.3 gpm
1429	88.44	803	3.0	21.12	7.95	0.888	-135.2	0.25	4.32		10.3 gpm

SAMPLE COLLECTION SAMPLE TIME <u>1429</u>	AIR MONITORING PID/FID ppm: VAULT NA	BKGD NA	BREATHING ZONE NA	DISCHARGE WATER NA
ANALYSIS QUANTITY TYPE	NOTES (Color, odor, sand and silt content, factors possibly affecting samples, condition of vault, wellhead, sampling apparatus, etc.)			
8260B VOCs <u>2</u> 40 ml VOA				
8270 SIM 1,4 dioxane <u>1</u> 1 L Amber				
8270 MOD 1,4 dioxane <u>1</u> 1 L Amber				
DUPLICATES / SPLITS / BLANKS? Y <u>(N)</u>				

GROUNDWATER SAMPLING INFORMATION

DATE: MW-32C 5/8/12

TASK: 532.30

WELL ID: MW-32C

Time 1018	Static DTW (ft below reference point) 61.08	Screen SV	Casing Volume (CV) (gallons) 318	SV	3 CV (gallons) 954	Weather Conditions	Initials AMB & DM
Casing Total Depth (ft below reference point) 1090	Purging Device dead pump	Sampling Device dead, ND	Time 1030		Temp. ~ 76	Begin Purge 1028	End Purge 1247
Water Column (feet) 530	Pump: Depth (ft brp) 530	Type Ground	Voltage 240	HP	Skies clear, sunny	Gallons Purged 1041	CVs Purged 3.3
Casing Capacity (Diameter 4") (gallons per foot) 0.60	Monitor Well Recharge Rate: Slow <input checked="" type="checkbox"/> AMB	Fast <input checked="" type="checkbox"/>	Wind (mph) 0-2		From W	DTW (ft brp) 177	Time 1253

Time	Depth to Water	Volume Purged (Gallons)	Casing Volumes Purged	...FIELD PARAMETERS...						Pump Frequency Hz	COMMENTS
				Temp. (°C)	pH	EC (µS/cm)	O.R.P. (mV)	D.O. (mg/L)	Turbidity (NTU)		
1028	BEGIN PUMPING										
1030	112.80	22	0.1	20.53	8.22	0.552	288.2	0.10	36.4		~11 gpm @ 1030
1038	159.80	110	0.3	20.66	8.05	0.552	-229.6	0.12	26.3		~10 gpm
1050	199.55	215	0.7	20.77	8.02	0.551	-283.6	0.05	6.17		~7.6 gpm sulfur odor in purge water
1105	210	329	1.0	21.02	8.13	0.550	-240.7	0.11	2.71		~7.6 gpm
1123	214.6	453	1.4	21.28	8.22	0.549	-224.8	0.12	5.38		~7.0 gpm
1138	217.53	558	1.7	21.35	8.27	0.549	-215.8	0.04	5.26		~7.0 gpm
1156	219.63	684	2.1	21.39	8.26	0.549	-203	0.04	4.98		~7.0 gpm
1212	220.69	796	2.5	21.40	8.22	0.549	-143	0.37	3.12		~2 gpm DO equilibrating
1236	221.95	964	3.0	21.41	8.27	0.549	-176.4	0.03	4.00		~7 gpm
1247	222.45	1041	3.3	21.40	8.28	0.549	-176.4	0.03	1.70		

SAMPLE COLLECTION TIME 1247	AIR MONITORING PID/FID ppm: VAULT NA	BKGD NA	BREATHING ZONE NA	DISCHARGE WATER NA
ANALYSIS QUANTITY TYPE	NOTES (Color, odor, sand and silt content, factors possibly affecting samples, condition of vault, wellhead, sampling apparatus, etc.)			
8260B VOCs 3 40 ml VOA	ducr out @ 1020, Purged over 3 casings to account for losses from drawdown; ducr in at 1257 = 129.05			
8270 SIM 1.4 dioxane 1 1 L Amber				
8270 MOD 1.4 dioxane 1 1 L Amber				
DUPLICATES / SPLITS / BLANKS? Y (N)				

GROUNDWATER SAMPLING INFORMATION

DATE: 5/9/12

TASK: 532.30

WELL ID: MW-33

Time: 1553 Static DTW (ft below reference point)	59.02	Screen SV 290 SV 873 Casing Volume (CV) (gallons)	3 CV (gallons)	Weather Conditions	Initials AMB & DM
Casing Total Depth (ft below reference point)	1020	Purging Device Ded pump	Sampling Device 0-10 pipette	Time 1545 Temp. ~80°	Begin Purge 1606 End Purge 1711
Water Column (feet)	483.4	Pump: Depth (ft brp) 535 Type Grundfos	Voltage 240 HP	Skies Clear, Sunny	Gallons Purged 876 CVs Purged 3.0
Casing Capacity (Diameter 4") (gallons per foot)	0.60	Monitor Well Recharge Rate: Slow	Fast X	Wind (mph) 1-2 From S-SW	DTW (ft brp) 58.96 Time 1714

Time	Depth to Water	Volume Purged (Gallons)	Casing Volumes Purged	...FIELD PARAMETERS...						Pump Frequency Hz	COMMENTS
				Temp. (°C)	pH	EC (µS/cm)	O.R.P. (mV)	D.O. (mg/L)	Turbidity (NTU)		
1606	BEGIN PUMPING										14 gpm
1607	60.37	14	0.05	19.55	7.84	0.718	65.9	0.21	1.03		
1617	60.4	154	0.5	20.40	7.61	0.726	-150.1	0.06	3.86		14 gpm
1627	60.39	294	1.0	20.63	7.10	0.730	-122.6	0.06	4.95		14 gpm
1637	60.40	434	1.5	20.71	7.41	0.724	-112.1	0.68	0.88		13 gpm
1647	60.37	564	2.0	20.73	7.57	0.727	-123.8	0.68	1.60		13 gpm
1657	60.33	694	2.5	20.74	7.53	0.727	-114.9	0.73	4.87		13 gpm
1711	60.38	876	3.0	20.77	7.41	0.728	-94.3	2.45	1.38		

SAMPLE COLLECTION SAMPLE TIME 1711	AIR MONITORING PID/FID ppm: VAULT NA	BKGD NA	BREATHING ZONE NA	DISCHARGE WATER NA
ANALYSIS QUANTITY TYPE	NOTES (Color, odor, sand and silt content, factors possibly affecting samples, condition of vault, wellhead, sampling apparatus, etc.)			
8260B VOCs 3 40 ml VOA				
8270 SIM 1.4 dioxane 1 1 L Amber				
8270 MOD 1.4 dioxane 1 1 L Amber				
DUPPLICATES / SPLITS / BLANKS? Y (N)				

GROUNDWATER SAMPLING INFORMATION

DATE: 5/10/12

TASK: 532.30

WELL ID: MW-34A

Time <u>9:59</u> Static DTW (ft below reference point) <u>129.09</u>	Screen <u>SV</u> Casing Volume (CV) (gallons) <u>40</u>	3 CV (gallons) <u>144</u>	Weather Conditions	Initials AMB & DM <u>GDP</u>
Casing Total Depth (ft below reference point) <u>280</u>	Purging Device <u>rod pump</u>	Sampling Device <u>ND pipe stand</u>	Type <u>9:59</u> Temp. _____	Begin Purge <u>1010</u> End Purge <u>1020</u>
Water Column (feet) <u>80</u>	Pump: Depth (ft brp) <u>200'</u> Type <u>ground</u> Voltage <u>240</u> HP		Skies <u>Part cloud</u>	Gallons Purged <u>150</u> CVs Purged <u>3.0</u>
Casing Capacity (Diameter <u>4"</u>) (gallons per foot) <u>0.60</u>	Monitor Well Recharge Rate: Slow _____ Fast <u>X</u>		Wind (mph) <u>0-2</u> From <u>SSW</u>	DTW (ft brp) <u>127.16</u> Time <u>10:25</u>

Time	Depth to Water	Volume Purged (Gallons)	Casing Volumes Purged	...FIELD PARAMETERS...						Pump Frequency Hz	COMMENTS
				Temp. (°C)	pH	EC (µS/cm)	O.R.P. (mV)	D.O. (mg/L)	Turbidity (NTU)		
1009	Pump ON										14.1 gpm
1010	129.09	21.4	8.4	21.19	7.42	1.241	-135.4	4.74	484		
1012	129.11	47	1.0	21.21	7.43	1.241	-130.5	5.09	114		14.0 gpm
1014	129.5	60	1.25	21.23	7.43	1.241	-102.3	5.34	139		14.1 gpm 129.15
1016	129.12	88	1.8	21.24	7.43	1.242	-75.6	5.40	56.1		14.1
1018	129.13	122	2.5	21.25	7.42	1.241	-62.3	5.56	191		14.1 gpm
1020	129.14	150	3.0	21.26	7.41	1.242	-34.1	5.69	254		14.1 gpm
1022	PUMP OFF										

SAMPLE COLLECTION SAMPLE TIME <u>1020</u>	AIR MONITORING PID/FID ppm: VAULT NA	BKGD NA	BREATHING ZONE NA	DISCHARGE WATER NA
ANALYSIS QUANTITY TYPE	NOTES (Color, odor, sand and silt content, factors possibly affecting samples, condition of vault, wellhead, sampling apparatus, etc.)			
8260B VOCs <u>3</u> 40 ml VOA				
8270 SIM 1,4 dioxane <u>1</u> 1 L Amber				
8270 MOD 1,4 dioxane <u>1</u> 1 L Amber				
DUPLICATES / SPLITS / BLANKS? Y <u>(N)</u>				

GROUNDWATER SAMPLING INFORMATION

DATE: 5/10/12

TASK: 532.30

WELL ID: MW-34B

Time 1040 Static DTW (ft below reference point) 129.51	Casing Volume (CV) (gallons) 46	3 CV (gallons) 137	Weather Conditions Time 1040 Temp. ~ Skies clear, sunny Wind (mph) 0-3 Front S-SW	Initials AMB & DM JGDP	
Casing Total Depth (ft below reference point) 536	Purging Device deal pump	Sampling Device >100 pipe stand		Begin Purge 1043 End Purge	
Water Column (feet) 76	Pump: Depth (ft brp) 480	Type ground		Voltage 240 HP	Gallons Purged 138 CVs Purged 3.0
Casing Capacity (Diameter 4") (gallons per foot) 0.60	Monitor Well Recharge Rate: Slow Fast X			DTW (ft brp) 130.05 Time 1059	

Time	Depth to Water	Volume Purged (Gallons)	Casing Volumes Purged	...FIELD PARAMETERS...						Pump Frequency Hz	COMMENTS
				Temp. (°C)	pH	EC (µS/cm)	Q.R.P. (mV)	D.Q. (mg/L)	Turbidity (NTU)		
1043	PUMP	ON									
1044	131.28	7.7	0.2	20.98	7.65	1.101	37.9	2.50	27.3		13.4 gpm
1046	131.30	22.1	0.5	21.40	7.68	0.969	-120.2	2.41	704		13.4 gpm
1048	131.37	49	1.1	21.60	7.67	0.973	-66.0	2.89	139		13.5 gpm
1050	131.47	75	1.6	21.63	7.66	0.972	-57.3	2.92	92.5		13.5 gpm
1052	131.50	107	2.3	21.64	7.64	0.974	-51.4	2.92	37.3		13.5 gpm
1055	131.52	138	3.0	21.65	7.62	0.973	-43.6	2.91	36.6		13.5 gpm
1059	PUMP	OFF									

SAMPLE COLLECTION SAMPLE TIME 1055

ANALYSIS	QUANTITY	TYPE
8260B VOCs	9.0	40 ml VOA w/HCL
8270 SIM 1,4 dioxane	1	1 L Amber
8270 MOD 1,4 dioxane	3	1 L Amber

DUPLICATES / SPLITS / BLANKS? (Y) N

AIR MONITORING PID/FID ppm: VAULT NA BKGD NA BREATHING ZONE NA DISCHARGE WATER NA

NOTES (Color, odor, sand and silt content, factors possibly affecting samples, condition of vault, wellhead, sampling apparatus, etc.)

splits @ 1055 - 6 VDAS w/HCL & 2 1 L Ambers

GROUNDWATER SAMPLING INFORMATION

DATE: 5/10/12

TASK: 532.30

WELL ID: MW-240

Time <u>857</u> Static DTW (ft below reference point)	<u>131.84</u>	Casing Volume (CV) (gallons) <u>57.7</u>	3 CV (gallons) <u>173</u>	Weather Conditions		Initials <u>AMB & DM</u>
Casing Total Depth (ft below reference point)	<u>576</u>	Purging Device <u>ded pump</u>	Sampling Device <u>ded ND pump</u>	Time <u>950</u>	Temp. <u>-75°</u>	Begin Purge <u>928</u> End Purge <u>942</u>
Water Column (feet)	<u>96</u>	Pump: Depth (ft brp) <u>400'</u>	Type <u>granite</u>	Skies <u>Clear</u>		Gallons Purged <u>181</u> CVs Purged <u>3.1</u>
Casing Capacity (Diameter <u>4"</u>) (gallons per foot)	<u>0.60</u>	Monitor Well Recharge Rate: Slow _____ Fast <u>X</u>		Wind (mph) <u>0-3</u>	From <u>W-SW</u>	DTW (ft brp) <u>140.05</u> Time <u>945</u>

Time	Depth to Water	Volume Purged (Gallons)	Casing Volumes Purged	FIELD PARAMETERS						Pump Frequency Hz	COMMENTS
				Temp. (°C)	pH	EC (µS/cm)	Q.R.P. (mV)	D.O. (mg/L)	Turbidity (NTU)		
928	PUMP ON										
929	146.45	10	0.3	20.99	7.82	0.757	-199.0	1.05	3.24		12.9 gpm
931	149.45	33	0.6	21.50	8.21	0.576	-261.5	0.25	2.38		12.7 gpm
933	150.92	61	1.0	21.67	8.22	0.645	-255.7	NM	4.23		12.6 gpm sulfur odor
935	150.22	89	1.5	21.73	7.81	0.754	-213.8	1.10	5.47		12.5 gpm
937	151.58	112	2.0	21.74	7.8	0.755	-207.5	0.08	0.91		12.5 gpm
939	151.99	134	2.3	21.75	7.79	0.756	-201.9	0.05	1.22		12.4 gpm
942	152.41	181	3.1	21.75	7.78	0.757	-198.0	0.04	0.51		12.4 gpm collect sample
944	Pump off										

SAMPLE COLLECTION SAMPLE TIME 9:42

ANALYSIS	QUANTITY	TYPE
8260B VOCs	<u>3</u>	40 ml VOA
8270 SIM 1,4 dioxane	<u>1</u>	1 L Amber
8270 MOD 1,4 dioxane	<u>0</u>	1 L Amber

DUPLICATES / SPLITS / BLANKS? Y (N)

AIR MONITORING PID/FID ppm: VAULT NA BKGD NA BREATHING ZONE NA DISCHARGE WATER NA

NOTES (Color, odor, sand and silt content, factors possibly affecting samples, condition of vault, wellhead, sampling apparatus, etc.)

ducer out at 926, ducer in at 955

Purge over 3 casing volumes (drawdown)

GROUNDWATER SAMPLING INFORMATION

DATE: _____

TASK: 532.30

WELL ID: MW-35A

Time <u>906</u> Static DTW (ft below reference point) <u>60.34</u>	SCREEN <u>SV</u> Casing Volume (CV) (gallons) <u>42</u>	SCREEN <u>SV</u> 3 CV (gallons) <u>126</u>	Weather Conditions Time <u>1000</u> Temp. <u>75°</u> Skies <u>Clear, sunny</u> Wind (mph) <u>0-3</u> From <u>SSW</u>	Initials <u>AMB & DM</u>
Casing Total Depth (ft below reference point) <u>470</u>	Purging Device <u>Red pump</u>	Sampling Device <u>ded. ND pipe</u>	Begin Purge <u>936</u> End Purge <u>957</u>	
Pump-SCREEN Water Column (feet) <u>70</u>	Pump: Depth (ft brp) <u>400</u> Type <u>gpm/hrs</u> Voltage <u>240</u> HP		Gallons Purged <u>210</u> CVs Purged <u>5.0</u>	
Casing Capacity (Diameter <u>4"</u>) (gallons per foot) <u>0.60</u>	Monitor Well Recharge Rate: Slow	Fast <u>X</u>	DTW (ft brp) <u>98R</u> Time <u>1005</u>	

Time	Depth to Water	Volume Purged (Gallons)	Casing Volumes Purged	...FIELD PARAMETERS...						Pump Frequency Hz	COMMENTS
				Temp. (°C)	pH	EC (µS/cm)	O.R.P. (mV)	D.O. (mg/L)	Turbidity (NTU)		
936	BEGIN PUMPING										
937	80.7	10	0.2	19.82	7.51	1.019	-103.4	0.80	34.2		11.57 gpm (flow meter) ^{digital} 11.2
941	128.93	51	1.2	19.96	7.48	1.023	-194.6	1.02	18.8		10.3 gpm (manual)
943	142.6	75.8	1.8	20.02	7.46	1.021	-172.9	1.08	3.20		9.8
945	150.65	85	8.8	20.04	7.46	1.032	-172.1	0.88	6.86		9.7
947	157	100	2.4	20.05	7.45	1.038	-170.2	0.86	2.55		9.6 gpm
949	163.55	126	3.0	20.07	7.42	1.032	-163.4	0.79	4.85		9.4
952	168.6	147	3.5	20.09	7.40	1.031	-155.6	0.68	3.14		9.2
957	174.30	210	5.0	20.11	7.38	1.032	-142.0	0.66	3.79		9.2 gpm
959	NM	220	Pump OFF								

SAMPLE COLLECTION SAMPLE TIME 957

ANALYSIS	QUANTITY	TYPE
8260B VOCs	<u>3</u>	40 ml VOA
8270 SIM 1,4 dioxane	<u>1</u>	1 L Amber
8270 MOD 1,4 dioxane	<u>1</u>	1 L Amber
DUPLICATES / SPLITS / BLANKS? <u>Y</u>		

AIR MONITORING PID/FID ppm: VAULT NA BKGD NA BREATHING ZONE NA DISCHARGE WATER NA

NOTES (Color, odor, sand and silt content, factors possibly affecting samples, condition of vault, wellhead, sampling apparatus, etc.)

ducer out @ 900
Purged over 3 casing volumes to account for drawdown losses

GROUNDWATER SAMPLING INFORMATION

DATE: 5/9/12

TASK: 532.30

WELL ID: MW-35B

Time 1014	Static DTW (ft below reference point) 66.49	Screen Casing Volume (CV) (gallons) 207	SV (gallons) 621	Weather Conditions	Initials AMB & DM	
Casing Total Depth (ft below reference point) 805	Purging Device ded pump	Sampling Device ded ND pipe stand	Time 1015	Temp. 75°	Begin Purge 1016	End Purge 1056
Pump 5000 Water Column (feet) 345	Pump: Depth (ft brp) 460'	Type gravel pack	Skies Clear, sunny	DTW (ft brp) 66.95	Gallons Purged 704	CVs Purged 5.0
Casing Capacity (Diameter 4") (gallons per foot) 0.60	Monitor Well Recharge Rate: Slow	Fast X	Wind (mph) 0-4	From W-SW	Time 1109	

Time	Depth to Water	Volume Purged (Gallons)	Casing Volumes Purged	...FIELD PARAMETERS...						Pump Frequency Hz	COMMENTS
				Temp. (°C)	pH	EC (µS/cm)	O.R.P. (mV)	D.O. (mg/L)	Turbidity (NTU)		
1016	PUMP ON										
1018	70.37	29	0.1	19.83	7.75	1.013	-199.7	0.11	2.77	15.5	gpm
1024	70.54	122	0.6	20.18	7.70	0.848	-148.2	0.30	1.09	15.5	gpm
1030	70.62	240	1.1	20.28	7.53	1.107	-20.3	1.83	174	15.5	gpm
1036	70.65	366	1.5	20.28	7.54	1.122	-71.8	1.67	172	15.5	gpm
1042	70.70	408	2.0	20.29	7.53	1.137	-57.8	1.56	206	15.5	gpm
1048	70.73	501	2.4	20.29	7.52	1.147	-49.7	1.52	27.0	15.5	gpm
1056	70.80	625	3.0	20.30	7.51	1.154	-46.1	1.49	8.25	15.5	gpm
1059	NM	704	PUMP OFF								

SAMPLE COLLECTION SAMPLE TIME 1056	AIR MONITORING PID/FID ppm: VAULT NA	BKGD NA	BREATHING ZONE NA	DISCHARGE WATER NA
ANALYSIS QUANTITY TYPE	NOTES (Color, odor, sand and silt content, factors possibly affecting samples, condition of vault, wellhead, sampling apparatus, etc.)			
8260B VOCs 3 40 ml VOA				
8270 SIM 1,4 dioxane 1 1 L Amber				
8270 MOD 1,4 dioxane 1 1 L Amber				
DUPLICATES / SPLITS / BLANKS? Y N				

GROUNDWATER SAMPLING INFORMATION

DATE: 5/9/12

TASK: 532.30

WELL ID: MW-350

Time 1115	Static DTW (ft below reference point) 68.56	Screen SV	Casing Volume (CV) (gallons) 348	SV	1044	Weather Conditions		Initials AMB & DM
Casing Total Depth (ft below reference point) 990	Purging Device ded pump	Sampling Device ND pipe stand	Time 1100	Temp. ~75°	Begin Purge 1120		End Purge 3.0	
Water Column (feet) 580	Pump: Depth (ft brp) 1040	Type groutless	Voltage 240V	Skies Clear, Sunny	Gallons Purged 1091		CVs Purged 3.0	
Casing Capacity (Diameter 4") (gallons per foot) 0.60	Monitor Well Recharge Rate: Slow		Fast	X	Wind (mph) 1-5	From S-SW	DTW (ft brp) 69.22	1234

Time	Depth to Water	Volume Purged (Gallons)	Casing Volumes Purged	...FIELD PARAMETERS...						Pump Frequency Hz	COMMENTS
				Temp. (C)	pH	EC (MS/cm)	O.R.P. (mV)	D.O. (mg/L)	Turbidity (NTU)		
1120	BEGIN PUMPING										
1121	71.10	16	0.1	19.81	7.49	0.948	-71.8	1.19	82.4		15.3 gpm
1131	71.40	149	0.5	20.27	7.24	1.013	-9.8	0.91	4.32		15.4 gpm
1141	71.45	318	0.9	20.34	7.21	0.954	-1.5	NM	9.14		15.2 gpm
1151	71.59	469	1.4	20.44	7.21	0.821	53.4	3.6	23.0		15.2 gpm
1201	71.60	627	1.8	20.44	7.27	0.821	58.0	4.0	15.2		15.2 gpm DO = 3.69 mg/L
1213	71.70	808	2.3	20.45	7.21	0.820	66.6	3.64	6.53		15.2 gpm
1225	71.81	993	2.8	20.46	7.30	0.821	38.9	3.60	12.2		15.3 gpm
1229	71.85	1070	3.0	20.46	7.43	0.821	3.2	3.53	0.68		15.3 gpm
1232	71.89	1091	PUMP OFF								

SAMPLE COLLECTION TIME 1229	AIR MONITORING PID/FID ppm: VAULT NA	BKGD NA	BREATHING ZONE NA	DISCHARGE WATER NA
ANALYSIS QUANTITY TYPE	NOTES (Color, odor, sand and silt content, factors possibly affecting samples, condition of vault, wellhead, sampling apparatus, etc.)			
8260B VOCs 5 40 ml VOA				
8270 SIM 1.4 dioxane 1 1 L Amber				
8270 MOD 1.4 dioxane 1 1 L Amber				
DUPLICATES / SPLITS / BLANKS? Y (N)				

GROUNDWATER SAMPLING INFORMATION

DATE: 5/1/12

TASK: 532.30

WELL ID: MW-36

Time <u>1348</u> Static DTW (ft below reference point) <u>71.60</u>	Casing Volume (CV) (gallons) <u>320</u> 3 CV (gallons) <u>960</u>	Weather Conditions	Initials <u>AMB & DM</u>
Casing Total Depth (ft below reference point) <u>994.3</u>	Purging Device <u>ded pump</u> Sampling Device <u>ded. 40 pipe stand</u>	Time <u>1345</u> Temp. <u>80°</u>	Begin Purge <u>1358</u> End Purge <u>1537</u>
Water Column (feet) <u>553.3</u>	Pump: Depth (ft brp) <u>460</u> Type <u>granules</u> Voltage <u>240</u> HP	Skies <u>clear</u>	Gallons Purged <u>963</u> CVs Purged <u>30</u>
Casing Capacity (Diameter <u>4"</u>) (gallons per foot) <u>0.60</u>	Monitor Well Recharge Rate: Slow _____ Fast <u>X</u>	Wind (mph) <u>1-3</u> From <u>CCW</u>	DTW (ft brp) <u>71.95</u> Time <u>1540</u>

Time	Depth to Water	Volume Purged (Gallons)	Casing Volumes Purged	...FIELD PARAMETERS...						Pump Frequency Hz	COMMENTS
				Temp. (°C)	pH	EC (µS/cm)	O.R.P. (mV)	D.O. (mg/L)	Turbidity (NTU)		
1350	Pump	ON									Pump off @ 1359
1400	Pump	ON									9.5 gpm sulfur odor
1401	73.63	10.0	0.1	20.39	7.81	0.593	-169.0	0.81	2.11		9.5 gpm
1412	73.58	171	0.5	21.35	7.64	0.588	-173.6	0.96	3.15		9.6 gpm sulfur odor
1433	73.64	325	1.0	21.82	7.92	0.631	-93.6	2.40	4.27		9.6 gpm
1449	73.76	476	1.5	21.87	7.98	0.630	-88.6	2.22	1.82		9.6 gpm
1505	73.82	631	2.0	21.87	7.98	0.629	-78.4	2.47	1.05		9.6 gpm
1521	73.87	785	2.5	21.87	7.35	0.629	-77.0	0.64	1.76		9.6 gpm
1537	73.91	963	3.0	22.27	7.94	0.629	-75.9	2.26	1.24		9.6 gpm
1538	Pump	OFF									

SAMPLE COLLECTION SAMPLE TIME <u>1537</u>	AIR MONITORING PID/FID ppm: VAULT NA BKGD NA BREATHING ZONE NA DISCHARGE WATER NA
ANALYSIS QUANTITY TYPE	NOTES (Color, odor, sand and silt content, factors possibly affecting samples, condition of vault, wellhead, sampling apparatus, etc.)
8260B VOCs <u>3</u> 40 ml VOA	
8270 SIM 1,4 dioxane <u>1</u> 1 L Amber	
8270 MOD 1,4 dioxane <u>1</u> 1 L Amber	
DUPLICATES / SPLITS / BLANKS? Y <u>(N)</u>	

APPENDIX B
GROUNDWATER SAMPLING FIELD FORMS
(THIRD QUARTER 2012)

GROUNDWATER SAMPLING INFORMATION

DATE: 8/6/12

TASK: 532.30

WELL ID: EW-01

Time <u>744</u> Static DTW (ft below reference point) <u>125.45</u>	Casing Volume (CV) (gallons) <u>45.9</u> ^{AMB} 3 CV (gallons) <u>137.7</u> ^{AMB}	Weather Conditions	Initials <u>AMB & DM</u>
Casing Total Depth (ft below reference point) <u>195</u>	Purging Device <u>ded. pump</u> Sampling Device <u>ded. tubing</u>	Time <u>1600</u> Temp. <u>85°</u>	Begin Purge <u>1625</u> End Purge <u>1645</u>
Water Column (feet) <u>70</u>	Pump: Depth (ft brp) <u>NA</u> Type _____ Voltage _____ HP _____	Skies <u>Clear</u>	Gallons Purged <u>235</u> CVs Purged <u>5.1</u>
Casing Capacity (Diameter <u>4"</u>) (gallons per foot) <u>0.66</u>	Monitor Well Recharge Rate: Slow _____ Fast <u>X</u>	Wind (mph) <u>1-3</u> From <u>S-W</u>	DTW (ft brp) <u>126.04</u> Time <u>1658</u>

Time	Depth to Water	Volume Purged (Gallons)	Casing Volumes Purged	...FIELD PARAMETERS...						Pump Frequency Hz	COMMENTS
				Temp. (°C)	pH	EC (µS/cm)	O.R.P. (mV)	D.O. (mg/L)	Turbidity (NTU)		
<u>1625</u>	<u>PUMP ON</u>			<u>25.27</u>	<u>7.4</u>						<u>TOT = 274466</u>
<u>1645</u>	<u>NM</u>	<u>235</u>	<u>5.1</u>	<u>25.27</u>	<u>7.48</u>	<u>1.203</u>	<u>106.2</u>	<u>8.81</u>	<u>2.38</u>	<u>NA</u>	<u>274701 11.744 gpm</u>
<u>1658</u>	<u>126.04</u>										
<u>1700</u>	<u>PUMP OFF</u>										<u>275017 totalizer at 1702</u>

SAMPLE COLLECTION SAMPLE TIME <u>1645</u>	AIR MONITORING PID/FID ppm: VAULT NA BKGD NA BREATHING ZONE NA DISCHARGE WATER NA
ANALYSIS QUANTITY TYPE	NOTES (Color, odor, sand and silt content, factors possibly affecting samples, condition of vault, wellhead, sampling apparatus, etc.)
8260B VOCs <u>3+3+3</u> 40 ml VOA	
8270 SIM 1,4 dioxane <u>0</u> 1 L Amber	
8270 MOD 1,4 dioxane <u>3+3+3</u> 1 L Amber	
	<u>274604</u>
DUPLICATES / SPLITS / BLANKS? If yes, complete appropriate forms.	<u>EW-0100 @ 1700 split EW-01 @ 1650</u>

GROUNDWATER SAMPLING INFORMATION

DATE: 8/9/12

TASK: 532.30

WELL ID: MW-08

Time 1020 Static DTW (ft below reference point)	131.03	Casing Volume (CV) (gallons) 5.6	3 CV (gallons) 16.8	Weather Conditions	Initials AMB & DM
Casing Total Depth (ft below reference point)	163.79	Purging Device DEP RAILER	Sampling Device DEP RAILER	Time 1014 Temp 96°	Begin Purge 1029 End Purge 1232
Water Column (feet)	32.76	Pump: Depth (ft brp) N/A Type N/A	Voltage N/A HP N/A	Skies Sunny	Gallons Purged 17 CVs Purged 3
Casing Capacity (Diameter 2") (gallons per foot)	2.17	Monitor Well Recharge Rate: Slow	Fast X	Wind (mph) 0-2 From N	DTW (ft brp) 131.05 Time 1240

Time	Depth to Water	Volume Purged (Gallons)	Casing Volumes Purged	...FIELD PARAMETERS...						Pump Frequency Hz	COMMENTS
				Temp. (°C)	pH	EC (S/cm)	O.R.P. (mV)	D.O. (mg/L)	Turbidity (NTU)		
1029	NM	2.5	0.4	22.65	7.36	1.572	141.2	4.34	4.14	START PURGE	
1052	|	2.8	0.5	21.82	7.30	2.075	145.9	3.84	20.8		
1117	|	5.6	1	22.07	7.25	1.994	134.5	2.65	60.5		
1135	|	8.4	1.5	21.80	7.34	1.896	137.5	4.04	141		
1147	|	11.3	2.0	21.96	7.28	2.032	130.4	3.22	84.3		
1209	|	14.1	2.5	21.99	7.28	2.065	127.3	3.45	77.4		
1226	√	17.0	3.1	21.94	7.25	1.996	129.6	3.73	90.9		
1228	SAMPLE										
1232											

SAMPLE COLLECTION SAMPLE TIME 1228

ANALYSIS	QUANTITY	TYPE
8260B VOCs	3	40 ml VOA
8270 SIM 1,4 dioxane		1 L Amber
8270 MOD 1,4 dioxane	1	1 L Amber

DUPLICATES / SPLITS / BLANKS? Y (N)

If yes, complete appropriate forms.

AIR MONITORING PID/FID ppm: VAULT NA BKGD NA BREATHING ZONE NA DISCHARGE WATER NA

NOTES (Color, odor, sand and silt content, factors possibly affecting samples, condition of vault, wellhead, sampling apparatus, etc.)

GROUNDWATER SAMPLING INFORMATION

DATE 8/8/12

TASK: 532.30

WELL ID: MW-09

Time <u>9:55</u> Static DTW (ft below reference point) <u>152.86</u>	Casing Volume (CV) (gallons) <u>6.5</u> 3 CV (gallons) <u>19.5</u>	Weather Conditions	Initials AMB & DM
Casing Total Depth (ft below reference point) <u>191</u>	Purging Device <u>bailer (dedicated)</u> Sampling Device <u>ded. sampler</u>	Time <u>9:55</u> Temp. <u>~85°</u>	Begin Purge <u>1007</u> End Purge <u>1240</u>
Water Column (feet) <u>38.1</u>	Pump: Depth (ft brp) <u>NA</u> Type _____ Voltage _____ HP _____	Skies <u>clear</u>	Gallons Purged <u>19.6</u> CVs Purged <u>3.0</u>
Casing Capacity (Diameter <u>2</u>) (gallons per foot) <u>0.17</u>	Monitor Well Recharge Rate: Slow _____ Fast <u>X</u>	Wind (mph) <u>0-2</u> From <u>W-SW</u>	DTW (ft brp) <u>152.86</u> Time <u>1647</u>

Time	Depth to Water	Volume Purged (Gallons)	Casing Volumes Purged	...FIELD PARAMETERS...						Pump Frequency Hz	COMMENTS
				Temp. (°C)	pH	EC (µS/cm)	O.R.P. (mV)	D.O. (mg/L)	Turbidity (NTU)		
1007	BEGIN	BAILING									
1009	NM	0.25	0.1	24.01	6.95	2,895	124.9	3.80	NM		
1018	NM	3.5	0.5	23.04	6.95	2,977	121.3	4.49	85		
1051	NM	7.1	1.1	22.70	6.95	3,043	121.8	4.42	109		
1119	NM	10.7	1.6	23.46	6.98	3,030	121.2	4.59	63		
1156	NM	14.3	2.2	23.28	7.01	3,038	108.0	5.17	65.8		
1218	NM	17.9	2.8	22.75	7.08	3,047	100.4	4.66	68.1		
1240	NM	19.6	3.0	23.16	7.02	3,050	103.4	4.73	72.2		

SAMPLE COLLECTION SAMPLE TIME 1240

ANALYSIS	QUANTITY	TYPE
8260B VOCs	<u>3</u>	40 ml VOA
8270 SIM 1,4 dioxane	<u>1</u>	1 L Amber
8270 MOD 1,4 dioxane	<u>1</u>	1 L Amber

DUPLICATES / SPLITS / BLANKS? Y (N)
If yes, complete appropriate forms.

AIR MONITORING PID/FID ppm: VAULT NA BKGD NA BREATHING ZONE NA DISCHARGE WATER NA

NOTES (Color, odor, sand and silt content, factors possibly affecting samples, condition of vault, wellhead, sampling apparatus, etc.)

Previously pumped, bent casing - use dedicated bailer

GROUNDWATER SAMPLING INFORMATION

DATE: 8/9/12

TASK: 532.30

WELL ID: MW-15

Time 720 Static DTW (ft below reference point)	124.89	Casing Volume (CV) (gallons) 7.1 3 CV (gallons) 21.4	Weather Conditions
Casing Total Depth (ft below reference point)	166.80	Purging Device DET BAILER Sampling Device DET BAILER	Time 700 Temp 75°
Water Column (feet)	41.91	Pump: Depth (ft brp) N/A Type N/A Voltage N/A HP N/A	Skies LIGHT OVERCAST
Casing Capacity (Diameter 2") (gallons per foot)	0.17	Monitor Well Recharge Rate: Slow Fast X	Wind (mph) 0-5 From S-W
		Initials AMB & DM	Begin Purge 730 End Purge 915
		Gallons Purged 21.5 CVs Purged 3	DTW (ft brp) 122.74 Time 930

Time	Depth to Water	Volume Purged (Gallons)	Casing Volumes Purged	...FIELD PARAMETERS...						Pump Frequency Hz	COMMENTS
				Temp. (°)	pH	EC (S/cm)	O.R.P. (mV)	D.O. (mg/L)	Turbidity (NTU)		
730	NM	.25	.03	21.41	6.86	1.633	136.4	6.87	79.6	N/A	START PURGE
746		3.5	.5	21.13	7.18	1.613	134.7	6.45	12.1		
803		2.0	.9	21.29	7.19	1.508	134.4	5.87	15.7		
816		10.5	1.5	21.16	7.20	1.595	135.7	5.90	10.61		
833		14.0	1.9	21.27	7.24	1.454	134.5	5.86	10.91		
854		17.5	2.5	21.28	7.23	1.601	133.8	5.88	8.20		
911		21.4	3	21.30	7.22	1.644	130.4	5.71	5.63		
912		SAMPLE									
915		END PURGE									

SAMPLE COLLECTION SAMPLE TIME 912	AIR MONITORING PID/FID ppm: VAULT NA BKGD NA BREATHING ZONE NA DISCHARGE WATER NA
ANALYSIS QUANTITY TYPE	NOTES (Color, odor, sand and silt content, factors possibly affecting samples, condition of vault, wellhead, sampling apparatus, etc.)
8260B VOCs 3 40 ml VOA	TO NEEDS COLLECTION. 725 DOOR OUT 930 DUCK IN.
8270 SIM 1,4 dioxane 1 L Amber	
8270 MOD 1,4 dioxane 1 L Amber	
DUPLICATES / SPLITS / BLANKS? Y N	TB-080912 @ 515
If yes, complete appropriate forms.	RB-080912 @ 505

GROUNDWATER SAMPLING INFORMATION

DATE: 8/16/12

TASK: 532.30

WELL ID: MW-16

Time <u>715</u> Static DTW (ft below reference point)	<u>128.04</u>	Casing Volume (CV) (gallons) <u>33</u> 3 CV (gallons) <u>99</u>	Weather Conditions	Initials <u>AMB & DM</u>
Casing Total Depth (ft below reference point)	<u>170.5</u>	Purging Device <u>GRAND PDS MPI</u> Sampling Device <u>DD TUBING</u>	Time <u>725</u> Temp. <u>85</u>	Begin Purge <u>738</u> End Purge
Water Column (feet)	<u>50.01</u>	Pump: Depth (ft brp) <u>170</u> Type <u>GRAND PDS MPI</u> Voltage <u>240</u> HP <u>.5</u>	Skies <u>PARTLY SUNNY</u>	Gallons Purged CVs Purged
Casing Capacity (Diameter <u>4"</u>) (gallons per foot)	<u>166</u>	Monitor Well Recharge Rate: Slow Fast <u>X</u>	Wind (mph) <u>0</u> From <u>NH</u>	DTW (ft brp) <u>128.15</u> Time <u>835</u>

Time	Depth to Water	Volume Purged (Gallons)	Casing Volumes Purged	...FIELD PARAMETERS...						Pump Frequency Hz	COMMENTS
				Temp. (°)	pH	EC (S/cm)	O.R.P. (mV)	D.O. (mg/L)	Turbidity (NTU)		
738	OTM	1	—	22.20	7.05	0.926	72.5	4.51	27.19 27.19	357	~ 7.4 GPM
741		11	.33	22.27	7.19	0.927	89.6	4.28	66.1	330	~ 3 GPM
745		21	.6	22.33	7.33	0.922	87.2	4.03	13.4	330	~ 3 GPM
750		30	1.1	22.37	7.36	0.914	85.6	3.76	4.13	330	
755		50	1.5	22.38	7.39	0.935	85.2	4.18	3.40	330	2.8 GPM 3.0 GPM
800		65		22.40	7.41	0.948	78.4	4.55	1	330	~ 3 GPM
805		80		22.43	7.42	0.958	77.0	4.90	1	330	
812		101		22.46	7.43	0.963	77.4	4.62	1	333	3 GPM
813	SAMPLE										
815	END PURGE										

SAMPLE COLLECTION SAMPLE TIME <u>813</u>	AIR MONITORING PID/FID ppm: VAULT NA BKGD NA BREATHING ZONE NA DISCHARGE WATER NA
ANALYSIS QUANTITY TYPE	NOTES (Color, odor, sand and silt content, factors possibly affecting samples, condition of vault, wellhead, sampling apparatus, etc.)
8260B VOCs <u>3</u> 40 ml VOA	<u>738 DUCK</u> <u>0.2</u> <u>815 DUCK</u> <u>0.2</u>
8270 SIM 1,4 dioxane <u>1</u> 1 L Amber	
8270 MOD 1,4 dioxane <u>1</u> 1 L Amber	
DUPLICATES / SPLITS / BLANKS? Y <u>(N)</u>	

HARGIS + ASSOCIATES, INC.

GROUNDWATER SAMPLING INFORMATION

DATE: 8/9/2012

TASK: 532.30

WELL ID: MW-18

Time <u>1415</u> Static DTW (ft below reference point) <u>123.83</u>	Casing Volume (CV) (gallons) <u>11.9</u> 3 CV (gallons) <u>35.7</u>	Weather Conditions	Initials <u>AMB & DM</u>
Casing Total Depth (ft below reference point) <u>194</u>	Purging Device <u>SAUNDERS MPI</u> Sampling Device <u>DED. TUBING</u>	Time <u>1220</u> Temp. <u>95°</u>	Begin Purge <u>1440</u> End Purge <u>1458</u>
Water Column (feet) <u>70.17</u>	Pump: Depth (ft brp) _____ Type _____ Voltage _____ HP _____	Skies <u>SUNNY</u>	Gallons Purged <u>37</u> CVs Purged <u>34</u>
Casing Capacity (Diameter 2") (gallons per foot) <u>0.17</u>	Monitor Well Recharge Rate: Slow _____ Fast <u>X</u>	Wind (mph) <u>0-5</u> From <u>W</u>	DTW (ft brp) <u>124.68</u> Time <u>1527</u>

Time	Depth to Water	Volume Purged (Gallons)	Casing Volumes Purged	...FIELD PARAMETERS...						Pump Frequency Hz	COMMENTS
				Temp. (°)	pH	EC (S/cm)	O.R.P. (mV)	D.O. (mg/L)	Turbidity (NTU)		
1440	START	PURGE									
1442	UTM	6		22.49	7.44	1.196	112.0	5.54	19.5	330	2.9 GPM
1445	UTM	10.8		22.11	7.34	1.169	109.9	5.26	24.2		2.5 GPM
1447		15.8		22.21	7.33	1.169	108.7	4.59	29.7		2.5 GPM
1449		20.8		22.29	7.34	1.163	105.7	5.10	24.2		2.5 GPM
1451		25.4		22.30	7.32	1.161	102.7	5.51	26.98		2.3 GPM
1453		30		22.32	7.32	1.164	101.2	5.60	28.7		
1456		36.9		22.34	7.31	1.169	97.0	5.81	8.37		2.3 GPM
1457	SAMPLE										
1458	STOP PURGE										

SAMPLE COLLECTION SAMPLE TIME			AIR MONITORING PID/FID ppm: VAULT NA BKGD NA BREATHING ZONE NA DISCHARGE WATER NA			
ANALYSIS	QUANTITY	TYPE	NOTES (Color, odor, sand and silt content, factors possibly affecting samples, condition of vault, wellhead, sampling apparatus, etc.)			
8260B VOCs	3	40 ml VOA				
8270 SIM 1.4 dioxane	1	1 L Amber				
8270 MOD 1.4 dioxane		1 L Amber				
DUPLICATES / SPLITS / BLANKS? Y N						

GROUNDWATER SAMPLING INFORMATION

DATE: 8/9/12

TASK: 532.30

WELL ID: MW-20

Time 1710 Static DTW (ft below reference point) 148.46	Casing Volume (CV) (gallons) 30 3 CV (gallons) 90	Weather Conditions	Initials AMB & DM
Casing Total Depth (ft below reference point) 194	Purging Device GARDOS MF1 Sampling Device DSD. TUBING	Time 1705 Temp. 90°	Begin Purge 1721 End Purge 1810
Water Column (feet) 45.54	Pump: Depth (ft brp) ~190' Type MF GARDOS Voltage 240 HP .5	Skies SCATTERED CLOUDS/SUNNY	Gallons Purged 92 CVs Purged 3+
Casing Capacity (Diameter 4" (gallons per foot) 166	Monitor Well Recharge Rate: Slow Fast X	Wind (mph) 0-3 From W	DTW (ft brp) 152.75 Time 1855

Time	Depth to Water	Volume Purged (Gallons)	Casing Volumes Purged	...FIELD PARAMETERS...						Pump Frequency Hz	COMMENTS
				Temp. (°C)	pH	EC (S/cm)	O.R.P. (mV)	D.O. (mg/L)	Turbidity (NTU)		
1721	UTM	1		23.17	7.72	1,018	50.2	6.18	19.5	330	15 ACTION ~ 2 GPM
1729	UTM	16		23.26	7.81	0,998	75.6	5.43	15.8	329	
1737	UTM	32		23.41	7.69	0,999	72.4	5.55	16.0	330	~ 2 GPM
1745	UTM	48		23.10	7.61	0,997	68.8	5.05	15.9	330	
1753	UTM	64		23.24	7.69	0,999	73.0	4.94	5.33	330	~ 2 GPM
1801	UTM	80		23.36	7.66	0,999	70.4	4.83	2.77	330	
1807	UTM	92		23.29	7.67	0,996	68.2	4.83	3.24	330	~ 2 GPM
1808	SAMPLE										
1810	OFF										

SAMPLE COLLECTION SAMPLE TIME 1808	AIR MONITORING PID/FID ppm: VAULT NA BKGD NA BREATHING ZONE NA DISCHARGE WATER NA
ANALYSIS QUANTITY TYPE	NOTES (Color, odor, sand and silt content, factors possibly affecting samples, condition of vault, wellhead, sampling apparatus, etc.)
8260B VOCs 3 40 ml VOA	
8270 SIM 1,4 dioxane 1 1 L Amber	
8270 MOD 1,4 dioxane 1 1 L Amber	
DUPLICATES / SPLITS / BLANKS? Y (N)	

GROUNDWATER SAMPLING INFORMATION

DATE: 8/6 / 12

TASK: 532.30

WELL ID: MW-21

Time 1554 Static DTW (ft below reference point) <u>115.74</u>	Casing Volume (CV) (gallons) <u>80.5</u> 3 CV (gallons) <u>24.56</u>	Weather Conditions	Initials AMB & DM
Casing Total Depth (ft below reference point) <u>238</u>	Purging Device <u>ded pump</u> Sampling Device <u>ded port</u>	Time <u>1600</u> Temp. <u>85°</u>	Begin Purge <u>1625</u> End Purge <u>1710</u>
Water Column (feet) <u>122</u>	Pump: Depth (ft brp) <u>NA</u> Type _____ voltage _____ HP _____	Skies <u>Clear</u>	Gallons Purged <u>728</u> CVs Purged <u>9.0</u>
Casing Capacity (Diameter <u>4"</u>) (gallons per foot) <u>0.46</u>	Monitor Well Recharge Rate: Slow _____ Fast <u>X</u>	Wind (mph) <u>0-3</u> From <u>S-SW</u>	DTW (ft brp) <u>127.91</u> Time <u>1706</u>

Time	Depth to Water	Volume Purged (Gallons)	Casing Volumes Purged	...FIELD PARAMETERS...						Pump Frequency Hz	COMMENTS
				Temp. (°C)	pH	EC (µS/cm)	O.R.P. (mV)	D.O. (mg/L)	Turbidity (NTU)		
1625	PUMP ON										TOT = 554263
1701	NM	728	9.0	23.4	7.29	2.098	94.7	7.39	1.03		TOT = 554991
1706	127.91										
1710	PUMP OFF										555111 totalizer

SAMPLE COLLECTION SAMPLE TIME <u>1701</u>	AIR MONITORING PID/FID ppm: VAULT NA BKGD NA BREATHING ZONE NA DISCHARGE WATER NA
ANALYSIS QUANTITY TYPE	NOTES (Color, odor, sand and silt content, factors possibly affecting samples, condition of vault, wellhead, sampling apparatus, etc.)
8280B VOCs <u>3</u> 40 ml VOA	<u>554525</u>
8270 SIM 1.4 dioxane <u>1</u> 1 L Amber	
8270 MOD 1.4 dioxane <u>1</u> 1 L Amber	
DUPLICATES / SPLITS / BLANKS? Y <u>N</u>	

GROUNDWATER SAMPLING INFORMATION

DATE: 8/7/12

TASK: 532.30

WELL ID: MW-260

Time <u>1400</u> Static DTW (ft below reference point) <u>125.33</u>	Screen SV MB 63.6 Casing Volume (CV) (gallons) <u>2 AMB 3 CV</u>	SYMB <u>SYMB</u> <u>SYMB</u> <u>190.7</u>	Weather Conditions	Initials AMB & DM
Casing Total Depth (ft below reference point) <u>499</u>	Purging Device <u>ded pump</u>	Sampling Device <u>ded 0-10</u>	Time <u>1500</u> Temp. <u>~85</u>	Begin Purge <u>1511</u> End Purge <u>1638</u>
Water Column (feet) <u>374</u>	Pump: Depth (ft brp) <u>330</u> Type <u>granite</u> Voltage <u>240</u> HP		Skies <u>clear</u>	Gallons Purged <u>191.40</u> vs Purged <u>30</u>
Casing Capacity (Diameter <u>2</u>) (gallons per foot) <u>0.17</u>	Monitor Well Recharge Rate: Slow Fast <u>X</u>		Wind (mph) <u>2-4</u> From <u>W-SW</u>	DTW (ft brp) <u>125.60</u> Time <u>1649</u>

Time	Depth to Water	Volume Purged (Gallons)	Casing Volumes Purged	...FIELD PARAMETERS...						Pump Frequency Hz	COMMENTS
				Temp. (°C)	pH	EC (µS/cm)	O.R.P. (mV)	D.O. (mg/L)	Turbidity (NTU)		
1511	Dump	DN								313	
1513	126.16	4.4	0.1	22.74	8.37	0.406	-238.0	2.20	0.30	313	Sulfur odor 2.2 gpm
1527	126.24	35.2	0.5	22.47	7.87	0.713	-139.5	1.64	6.37	313	2.2 gpm
1541	126.26	66	1.0	22.47	7.65	0.757	-95.8	2.19	0.82	313	2.2 gpm
1555	126.29	96.8	1.5	22.46	7.62	0.759	-90.6	2.24	0.20	313	2.2 gpm
1609	126.30	127.6	2.0	22.51	7.60	0.762	-88.5	2.29	2.45	313	2.2 gpm
1623	126.32	158.4	2.5	22.50	7.59	0.764	-87.0	2.31	2.89	315	2.2 gpm
1638	126.36	191.40	3.0	22.47	7.59	0.764	-85.8	2.33	0.40	315	2.2 gpm

SAMPLE COLLECTION SAMPLE TIME 1638

ANALYSIS	QUANTITY	TYPE
8260B VOCs	<u>3</u>	40 ml VOA
8270 SIM 1,4 dioxane	<u>1</u>	1 L Amber
8270 MOD 1,4 dioxane	<u>0</u>	1 L Amber
DUPLICATES / SPLITS / BLANKS?	Y	<u>N</u>

If yes, complete appropriate forms.

AIR MONITORING PID/FID ppm: VAULT NA BKGD NA BREATHING ZONE NA DISCHARGE WATER NA

NOTES (Color, odor, sand and silt content, factors possibly affecting samples, condition of vault, wellhead, sampling apparatus, etc.)

GROUNDWATER SAMPLING INFORMATION

DATE: 8/10/12

TASK: 532.30

WELL ID: MW-28

Time <u>1235</u> Static DTW (ft below reference point) <u>129.25</u>	Casing Volume (CV) (gallons) <u>27</u> 3 CV (gallons) <u>81</u>	Weather Conditions	Initials AMB & DM <u>EM</u>
Casing Total Depth (ft below reference point) <u>375</u>	Purging Device <u>Ded pump</u> Sampling Device <u>Ded 0-10</u>	Time <u>1235</u> Temp <u>95-102°</u>	Begin Purge <u>1243</u> End Purge <u>1254</u>
Water Column (feet) <u>45</u>	Pump: Depth (ft brp) <u>330</u> Type <u>goulds</u> Voltage <u>240HP</u>	Skies <u>Clear</u>	Gallons Purged <u>88</u> CVs Purged <u>3.3</u>
Casing Capacity (Diameter <u>4"</u>) (gallons per foot) <u>0.61</u>	Monitor Well Recharge Rate: Slow <u>X</u> Fast <u>X</u>	Wind (mph) <u>1-3</u> From <u>W-SW</u>	DTW (ft brp) <u>129.49</u> Time <u>1259</u>

Time	Depth to Water	Volume Purged (Gallons)	Casing Volumes Purged	...FIELD PARAMETERS...						Pump Frequency Hz	COMMENTS
				Temp. (°C)	pH	EC (µS/cm)	O.R.P. (mV)	D.O. (mg/L)	Turbidity (NTU)		
1243	PUMP	ON									
1244	135.30	8	0.3	23.07	7.66	1.129	70.6	6.01	17.7		8 gpm
1246	136.12	24	0.9	21.91	7.58	1.121	56.7	5.67	4.21		8 gpm
1248	136.19	40	1.5	21.90	7.59	1.166	60.5	8.28	1.43		8 gpm
1250	136.25	56	2.0	21.92	7.56	1.153	58.9	7.85	1.94		
1252	136.27	72	2.5	21.92	7.57	1.154	57.4	7.72	16.9		8 gpm
1254	136.29	88	3.3	21.92	7.58	1.155	57.4	7.64	7.5		

SAMPLE COLLECTION SAMPLE TIME <u>1254</u>	AIR MONITORING PID/FID ppm: VAULT NA	BKGD NA	BREATHING ZONE NA	DISCHARGE WATER NA
ANALYSIS QUANTITY TYPE	NOTES (Color, odor, sand and silt content, factors possibly affecting samples, condition of vault, wellhead, sampling apparatus, etc.)			
8260B VOCs <u>3</u> 40 ml VOA				
8270 SIM 1.4 dioxane <u>1</u> 1 L Amber				
8270 MOD 1.4 dioxane <u>1</u> 1 L Amber				
DUPLICATES / SPLITS / BLANKS? Y <u>(N)</u>				

GROUNDWATER SAMPLING INFORMATION

DATE: 8/6/2012

TASK: 532.30

WELL ID: MW-29

Time <u>1549</u> Static DTW (ft below reference point) <u>130.76</u>	<u>SCREEN REMAINS</u> Casing Volume (CV) (gallons) <u>30</u> 3 CV (gallons) <u>90</u>	Weather Conditions	Initials <u>AMB & DM</u>
Casing Total Depth (ft below reference point) <u>240</u> <u>Pump to SCREEN</u> Water Column (feet) <u>50</u>	Purging Device <u>DOD Pump</u> Sampling Device <u>DOD RPE</u>	Time <u>1530</u> Temp. <u>85</u>	Begin Purge <u>052</u> End Purge <u>1613</u>
Casing Capacity (Diameter ") (gallons per foot) <u>.6</u>	Pump: Depth (ft brp) <u>190</u> Type <u>Surface</u> Voltage <u>240</u> HP	Skies <u>SUNNY HEAVY</u>	Gallons Purged <u>~96</u> CVs Purged <u>~4</u>
	Monitor Well Recharge Rate: Slow Fast <u>X</u>	Wind (mph) <u>0-5</u> From <u>N</u>	DTW (ft brp) <u>134.60</u> Time <u>1615</u>

Time	Depth to Water	Volume Purged (Gallons)	Casing Volumes Purged	....FIELD PARAMETERS....						Pump Frequency Hz	COMMENTS
				Temp. (°)	pH	EC (S/cm)	O.R.P. (mV)	D.O. (mg/L)	Turbidity (NTU)		
1552	START										ET VOC: 791
1557	138.02	24	.7	21.62	7.36	1.038	-75.8	6.44	14.4		~4.75 GPM
1558	138.07	29	.9	21.63	7.36	1.031	-79.1	6.12	4.1		
1601	138.1	44	1.4	21.68	7.37	1.055	-80.9	5.79	1.98		~4.75 GPM
1604	138.13	58	1.9	21.71	7.43	1.106	-77.8	4.29	5.0		~4.75 GPM
1607	138.15	72	2.4	21.73	7.39	1.174	-60.4	5.85	4.83		
1611	138.16	91	3	21.74	7.36	1.174	-58.8	5.94	1.52		~4.75
1612		SAMPLE									
1613		END PUMP									

SAMPLE COLLECTION SAMPLE TIME <u>1612</u>	AIR MONITORING PID/FID ppm: VAULT NA	BKGD NA	BREATHING ZONE NA	DISCHARGE WATER NA
ANALYSIS QUANTITY TYPE	NOTES (Color, odor, sand and silt content, factors possibly affecting samples, condition of vault, wellhead, sampling apparatus, etc.)			
8280B VOCs <u>3</u> 40 ml VOA	<u>LIGHT ODOOR. INITIALLY YELLOW. WELL HEAD COMPONENTS NEED TO BE REPLACED w/ SS, WEETS NEW PUG.</u>			
8270 SIM 1,4 dioxane <u>0</u> 1 L Amber				
8270 MOD 1,4 dioxane <u>1</u> 1 L Amber				
DUPLICATES / SPLITS / BLANKS? Y N				

GROUNDWATER SAMPLING INFORMATION

DATE: 8/10/12

TASK: 532.30

WELL ID: Ma-30A

Time 1133	Static DTW (ft below reference point) 120.47	Casing Volume (CV) (gallons) 17.6	Weather Conditions	Initials AMB & DM
Casing Total Depth (ft below reference point) 564'	Purging Device DEP Pump	Sampling Device DEP PIPE	Time 1134 Temp. 90°	Begin Purge 1135 End Purge 1148
Water Column (feet) .44	Pump: Depth (ft brp) Type 340 Voltage 240 HP	Monitor Well Recharge Rate: Slow Fast X	Skies COM	Gallons Purged ~60 CVs Purged
Casing Capacity (Diameter 3") (gallons per foot) .4			Wind (mph) 0 From	DTW (ft brp) 120.56 Time 1150

Time	Depth to Water	Volume Purged (Gallons)	Casing Volumes Purged	...FIELD PARAMETERS...						Pump Frequency Hz	COMMENTS
				Temp. (°)	pH	EC (S/cm)	O.R.P. (mV)	D.O. (mg/L)	Turbidity (NTU)		
1135	START										
1138	122.48	16.8		21.46	8.19	0.728	-93.5	2.35	3.69		~5.6 GPM
1140	122.38	28		21.23	7.89	0.714	-91.4	1.33	3.63		
1142	122.37	39.2		21.31	7.70	0.757	-79.1	1.1	2.37		~5.6 GPM
1144	122.42	50		21.41	7.60	0.743	-69.5	0.70	3.03		
1145	122.41	56		21.53	7.61	0.738	-73.1	0.81	2.91		
1146	SAMPLE										
1148	STOP PUMP										

SAMPLE COLLECTION SAMPLE TIME 1146	AIR MONITORING PID/FID ppm: VAULT NA BKGD NA BREATHING ZONE NA DISCHARGE WATER NA
ANALYSIS QUANTITY TYPE	NOTES (Color, odor, sand and silt content, factors possibly affecting samples, condition of vault, wellhead, sampling apparatus, etc.)
8260B VOCs 3 40 ml VOA	
8270 SIM 1,4 dioxene 1 1 L Amber	
8270 MOD 1,4 dioxene 1 1 L Amber	
DUPLICATES / SPLITS / BLANKS? Y	

GROUNDWATER SAMPLING INFORMATION

DATE: 8/9/12

TASK: 532.30

WELL ID: MW-30B

Time 959 Static DTW (ft below reference point) 118.09	Casing Volume ^{SV} (gallons) 30	^{SV} 3.0V (gallons) 115	Weather Conditions	Initials AMB & DM
Casing Total Depth (ft below reference point) 996	Purging Device RED Pump	Sampling Device RED PIPE	Time 951 Temp. 90	Begin Purge 1005 End Purge 1037
Water Column (feet) 96	Pump: Depth (ft brp) _____	Type <u>Variable</u> Voltage 140 HP	Skies <u>clear</u>	Gallons Purged 125 ^{SV} SVs Purged 34
Casing Capacity (Diameter 3") (gallons per foot) 4	Monitor Well Recharge Rate: Slow _____ Fast _____		Wind (mph) 0-5 From W	DTW (ft brp) 122.17 Time 1045

Time	Depth to Water	Volume Purged (Gallons)	Casing Volumes Purged	...FIELD PARAMETERS...						Pump Frequency Hz	COMMENTS
				Temp. (°)	pH	EC (S/cm)	O.R.P. (mV)	D.O. (mg/L)	Turbidity (NTU)		
1005	NM	3		22.36	7.50	0.978	-142.3	1.57	2.47		~ 5.4 GPM
1008		STOP									PURGE ODDOR. CHECK EQUIPMENT & WATER. SEE NOTES.
1015		START	PUMP								
1016	NM	21.6	.6	21.73	9.05	0.859	-234.4	0.87	6.6		~ 5.4 GPM
1022	136.24	54	1.4	21.29	7.43	1.430	-111.5	2.62	1		
1028	137.86	91.8	2.3	21.62	7.41	1.271	-77.8	3.20	.58		~ 5.3 GPM
1034	138.73			21.52	7.37	1.174	-59.2	2.74	3.04		~ 5.3 GPM
1035			SAMPLE								
1037			STOP PURGE								

SAMPLE COLLECTION SAMPLE TIME 1035	AIR MONITORING PID/FID ppm: VAULT NA	BKGD NA	BREATHING ZONE NA	DISCHARGE WATER NA
ANALYSIS QUANTITY TYPE	NOTES (Color, odor, sand and silt content, factors possibly affecting samples, condition of vault, wellhead, sampling apparatus, etc.)			
8260B VOCs 3 1/2 40 ml VOA	INITIAL PETRO ODDOR. THEN SULFUR SMELL. INFORMED			
8270 SIM 1.4 dioxane 1 1 L Amber	LEAD STAFF COLLECTED PURGE SAMPLE IN CASE SPIKE IN			
8270 MOD 1.4 dioxane 1 1 L Amber	RESULTS (MWJOB INITIAL B1012)			
DUPLICATES / SPLITS / BLANKS? (Y) (N)	MW-3000B @ 1135			

GROUNDWATER SAMPLING INFORMATION

DATE: 6/6/2012

TASK: 532.30

WELL ID: MW-31

Time 1345 Static DTW (ft below reference point) 110.09	Casing Volume (CV) (gallons) 79.4	3 CV (gallons) 238	Weather Conditions
Casing Total Depth (ft below reference point) 996	Purging Device DED Pump	Sampling Device DED PIPE STAND	Time 1345 Temp. 94°
Round to SCAPER Water Column (feet) 54	Pump: Depth (ft brp) 996	Type GARDNER Voltage 240 HP ?	Skies SUNNY 140M10
Casing Capacity (Diameter ") (gallons per foot) 1.5	Monitor Well Recharge Rate: Slow	Fast X	Wind (mph) 0-5 From N
			Initials AMB & DM
			Begin Purge 1427 End Purge 1449
			Gallons Purged ~254 CVs Purged N/A
			DTW (ft brp) 110.23 Time 1459

Time	Depth to Water	Volume Purged (Gallons)	Casing Volumes Purged	...FIELD PARAMETERS...						Pump Frequency Hz	COMMENTS
				Temp. (°)	pH	EC (S/cm)	O.R.P. (mV)	D.O. (mg/L)	Turbidity (NTU)		
1427	START		Pump On								
1429		24	1.3	20.97	8.15	1491	108.1	1.58	72.3		~ 12 GPM
1432	112.28	60	1.75	21.07	8.54	929	93.2	1.40	24.9		~ 12 GPM
1435	112.29	96	1.21	21.19	7.88	977	95.8	1.58	14.4		
1438	112.31	132	1.7	21.23	7.79	974	85.7	1.62	8.94		~ 12 GPM
1441	112.32	168	2.1	21.26	7.72	894	73	1.98	5.66		~ 12 GPM
1445	112.34	216	2.7	21.28	7.69	865	64.1	1.93	3.95		
1447	112.35	240	3	21.27	7.66	855	61.4	1.96	2.3		
1448	SAMPLE										
1449	PUMP OFF										

SAMPLE COLLECTION SAMPLE TIME 1448	AIR MONITORING PID/FID ppm: VAULT NA	BKGD NA	BREATHING ZONE NA	DISCHARGE WATER NA
ANALYSIS QUANTITY TYPE	NOTES (Color, odor, sand and silt content, factors possibly affecting samples, condition of vault, wellhead, sampling apparatus, etc.)			
8260B VOCs 3 40 ml VOA	FD: 8260B VOCs MW-31 @ 1228; 8270 SIM @ 1448 (248)			
8270 SIM 1,4 dioxane 1 1 L Amber	VAULT MW-31 1448			
8270 MOD 1,4 dioxane 1 1 L Amber				
DUPLICATES / SPLITS / BLANKS? (Yes) Complete appropriate forms. (Y) N				

GROUNDWATER SAMPLING INFORMATION

DATE: 8/9 / 2012

TASK: 532.30

WELL ID: MW-32A

Time <u>0746</u> Static DTW (ft below reference point) <u>90.10</u>	Screen <u>263.4</u> (gallons) <u>3</u> CV (gallons) <u>790.2</u>	Weather Conditions	Initials AMB & BM <u>EJT</u>
Casing Total Depth (ft below reference point) <u>905</u>	Purging Device <u>Ded. Pump</u> Sampling Device <u>Ded. Pipe Strainer</u>	Time <u>0750</u> Temp. <u>80</u>	Begin Purge <u>813</u> End Purge <u>906</u>
Pump to screen bottom Water Column (feet) <u>305</u>	Pump: Depth (ft brp) <u>560</u> Type <u>Grundfos</u> Voltage <u>240</u> HP	Skies <u>sunny & humid</u>	Gallons Purged <u>636</u> CVs Purged <u>3.1</u>
Casing Capacity (Diameter <u>4"</u>) (gallons per foot) <u>0.60</u>	Monitor Well Recharge Rate: Slow Fast <u>X</u>	Wind (mph) <u>0</u> From <u>0</u>	DTW (ft brp) <u>90.45</u> Time <u>915</u>

Time	Depth to Water	Volume Purged (Gallons)	Casing Volumes Purged	...FIELD PARAMETERS...						Pump Frequency Hz	COMMENTS
				Temp. (C)	pH	EC (MS/cm)	O.R.P. (mV)	D.O. (mg/L)	Turbidity (NTU)		
813	PUMP ON										
815	91.40	24	0.1	20.88	7.38	0.810	-202.2	1.16	3.69		12 gpm sulfur smell in purge water
821	91.60	96	0.5	20.90	7.42	0.814	-84.6	1.99	8.32		12 gpm
827	91.62	168	0.8	21.01	7.44	0.815	-88.0	1.93	0.63		12 gpm
833	91.56	240	1.2	21.09	7.44	0.820	-91.4	2.12	4.76		
839	91.57	312	1.5	21.12	7.41	0.818	-92.3	2.21	11.00		
847	91.60	340	2.0	21.12	7.42	0.819	-90.6	2.26	0.64		12 gpm
855	91.61	504	2.4	21.13	7.41	0.818	-88.9	2.27	2.04		
906	91.65	636	3.1	21.14	7.41	0.817	-87.8	2.27	0.43		

SAMPLE COLLECTION SAMPLE TIME <u>906</u>	AIR MONITORING PID/FID ppm: VAULT NA BKGD NA BREATHING ZONE NA DISCHARGE WATER NA
ANALYSIS QUANTITY TYPE	NOTES (Color, odor, sand and silt content, factors possibly affecting samples, condition of vault, wellhead, sampling apparatus, etc.)
8260B VOCs <u>3</u> 40 ml VOA	<u>strong sulfur odor</u>
8270 SIM 1.4 dioxane <u>1</u> 1 L Amber	
8270 MOD 1.4 dioxane <u>1</u> 1 L Amber	
DUPLICATES / SPLITS / BLANKS? Y <u>(N)</u>	

MS/MSD collected for VOCs & 1,4-Dioxane

GROUNDWATER SAMPLING INFORMATION

DATE: 8/9/12

TASK: 532.30

WELL ID: MW-32B

Time 1219 Static DTW (ft below reference point) 38.36	Casing Volume (CV) (gallons) 263.4	3 CV (gallons) 790.2	Weather Conditions	Initials AMB & DM EKH
Casing Total Depth (ft below reference point) 999	Purging Device D.D. Pump	Sampling Device 10-100 Dia. Pipe Stand	Time 1220 Temp. ~95	Begin Purge 1225 End Purge 1348
Water Column (feet) 439	Pump: Depth (ft brp) 560	Type Grundfos Voltage 240 HP	Skies Clear	Gallons Purged 850 Vs Purged 3.2
Casing Capacity (Diameter 4") (gallons per foot) 0.60	Monitor Well Recharge Rate: Slow	Fast X	Wind (mph) 0-2 From W-SW	DTW (ft brp) 89.99 Time 1353

Time	Depth to Water	Volume Purged (Gallons)	Casing Volumes Purged	...FIELD PARAMETERS...						Pump Frequency Hz	COMMENTS
				Temp. (°C)	pH	EC (µS/cm)	O.R.P. (mV)	D.O. (mg/L)	Turbidity (NTU)		
1225	—	PUMP ON									
1227	102.68	20	0.1	20.84	7.82	0.847	-180.7	0.36	1.86	NA	11 gpm
1239	106.46	154	0.6	21.05	7.84	0.784	-171.7	0.30	1.64		10.5
1254	107.02	311.5	1.2	21.50	7.72	0.925	-142.3	0.46	1.90		10.5 gpm
1314	107.46	471.5	1.8	21.39	7.73	0.917	-152.1	0.28	3.29		11 gpm
1330	107.63	652	2.5	21.41	7.74	0.910	-107.7	0.54	0.34		11 gpm
1339	107.69	751	2.8	21.41	7.74	0.899	-157.2	0.35	0.31		11 gpm
1348	107.71	850	3.2	21.42	7.74	0.897	129.1	0.17	8.56		

SAMPLE COLLECTION SAMPLE TIME 1348	AIR MONITORING PID/FID ppm: VAULT NA	BKGD NA	BREATHING ZONE NA	DISCHARGE WATER NA
ANALYSIS QUANTITY TYPE	NOTES (Color, odor, sand and silt content, factors possibly affecting samples, condition of vault, wellhead, sampling apparatus, etc.)			
8260B VOCs 3 40 ml VOA	ducer out at 1315 ducer in at 1353			
8270 SIM 1.4 dioxane 1 1 L Amber				
8270 MOD 1.4 dioxane 1 1 L Amber				
DUPLICATES / SPLITS / BLANKS? Y (N)				

GROUNDWATER SAMPLING INFORMATION

DATE: 8/9/12

TASK: 532.30

WELL ID: 9L MW-320

Time <u>9:17</u> Static DTW (ft below reference point) <u>70.30</u>	<u>Screen SV</u> Casing Volume (CV) (gallons) <u>319</u> 3 CV (gallons) <u>957</u>	Weather Conditions	Initials AMB & DM <u>EDH</u>
Casing Total Depth (ft below reference point) <u>109.0</u>	Purging Device <u>Ded Pump</u> Sampling Device <u>ND pipes and</u>	Time <u>1000</u> Temp. <u>~90°</u>	Begin Purge <u>948</u> End Purge <u>120</u>
<u>Pump to Screen</u> Water Column (feet) <u>530</u>	Pump: Depth (ft brp) <u>560</u> Type <u>QJWHP</u> Voltage <u>240HP</u>	Skies <u>clear</u>	Gallons Purged <u>1050</u> CVs Purged <u>3.3</u>
Casing Capacity (Diameter <u>4"</u>) (gallons per foot) <u>0.60</u>	Monitor Well Recharge Rate: Slow _____ Fast <u>X</u>	Wind (mph) <u>0-2</u> From <u>W-SW</u>	DTW (ft brp) <u>70.70</u> Time <u>1313</u>

Time	Depth to Water	Volume Purged (Gallons)	Casing Volumes Purged	...FIELD PARAMETERS...						Pump Frequency Hz	COMMENTS
				Temp. (°C)	pH	EC (µS/cm)	O.R.P. (mV)	D.O. (mg/L)	Turbidity (NTU)		
948	PUMP ON									12 gpm	
949	116.0	12	0.1	20.89	8.01	0.486	-210.6	12.15	0.7	12 gpm	
959	174.75	118	0.4	20.97	8.04	0.486	-196.7	1.45	1.47	10 gpm	
1017	203.65	256	0.8	21.17	8.09	0.486	-186.5	0.94	0.60	8 gpm	
1041	214.90	424	1.3	21.62	8.12	0.482	-154.8	4.50	4.50	7 gpm	1.40 mg/L DO
1109	214.90	620	2.0	21.63	8.13	0.482	-122.9	1.63	4.94	7 gpm	
1130	220.89	809	2.5	21.67	8.13	0.482	-735.9	0.68	4.95	7 gpm	
1210	222.40	1050	3.3	21.69	8.11	0.483	-46.1	0.50	2.75	7 gpm	
1213	PUMP OFF										

SAMPLE COLLECTION SAMPLE TIME <u>1210</u>	AIR MONITORING PID/FID ppm: VAULT NA	BKGD NA	BREATHING ZONE NA	DISCHARGE WATER NA
ANALYSIS QUANTITY TYPE	NOTES (Color, odor, sand and silt content, factors possibly affecting samples, condition of vault, wellhead, sampling apparatus, etc.)			
8260B VOCs <u>3 ± 3 ml</u>	<u>ducker out at 925</u>			
8270 SIM 1,4 dioxane <u>1 L</u>	<u>ducker in at 70.70 @ 1313</u>			
8270 MOD 1,4 dioxane <u>1 L</u>	<u>Purge over 3 casing volumes to account for drawdown</u>			
DUPLICATES / SPLITS / BLANKS? <u>(Y)</u> N				

Split sample collected but not analyzed

GROUNDWATER SAMPLING INFORMATION

DATE: 8/9/12

TASK: 532.30

WELL ID: MW-33

Time 3:13 PM	Static DTW (ft below reference point) 85.95	Casing Volume (CV) (gallons) 290	3 CV (gallons) 873	Weather Conditions		Initials AMB & DM EJM
Casing Total Depth (ft below reference point) 102.0	Purging Device ded pump	Sampling Device ded pipes	Time 1515	Temp. ~95°	Begin Purge 1539	End Purge 1651
Water Column (feet) 483.4	Pump: Depth (ft brp) 535	Type GPM	10-100	Skies Clear	Gallons Purged 881	CVs Purged 3.0
Casing Capacity (Diameter 4") (gallons per foot) 0.60	Monitor Well Recharge Rate: Slow	Fast X	Wind (mph) 3-5	From W-SW	DTW (ft brp) 86.20	Time 1701

Time	Depth to Water	Volume Purged (Gallons)	Casing Volumes Purged	...FIELD PARAMETERS...						Pump Frequency Hz	COMMENTS
				Temp. (°C)	pH	EC (µS/cm)	O.R.P. (mV)	D.O. (mg/L)	Turbidity (NTU)		
1539	PUMP	0N									
1541	87.15	26	0.1	19.98	7.73	0.643	18.5	2.13	3.83		13 gpm strong sulfur odor
1551	87.39	156	0.5	20.75	7.74	0.641	-89.6	1.04	3.56		12 gpm
1601	87.37	281	1.0	20.83	7.78	0.641	-120.4	0.56	0.89		12 gpm
1611	87.40	401	1.4	20.91	7.69	0.641	-119.1	0.65	4.5 AMB		105 NTU 12 gpm
1621	87.45	521	1.8	21.00	7.75	0.617	-121.7	0.44	3.01		12 gpm
1631	87.45	641	2.2	20.98	7.69	0.616	-101.8	0.49	0.19		12 gpm
1641	87.46	761	2.6	21.02	7.69	0.607	-113.4	0.51	0.3		12 gpm
1651	87.50	881	3.0	21.03	7.68	0.618	-105.7	0.51	0.4		

SAMPLE COLLECTION SAMPLE TIME 1651

ANALYSIS	QUANTITY	TYPE
8260B VOCs	3	40 ml VOA
8270 SIM 1,4 dioxane	1	1 L Amber
8270 MOD 1,4 dioxane	1	1 L Amber
DUPLICATES / SPLITS / BLANKS?	(Y)	N

If yes, complete appropriate forms.

AIR MONITORING PID/FID ppm: VAULT NA BKGD NA BREATHING ZONE NA DISCHARGE WATER NA

NOTES (Color, odor, sand and silt content, factors possibly affecting samples, condition of vault, wellhead, sampling apparatus, etc.)

GROUNDWATER SAMPLING INFORMATION

DATE: 8/8/12

TASK: 532.30

WELL ID: MW-34A

Time <u>1542</u> Static DTW (ft below reference point)	<u>139.85</u>	Screen <u>SV</u>	Casing Volume (CV) (gallons) <u>46</u>	3 CV (gallons) <u>137</u>	Weather Conditions	Initials AMB & DM <u>AMB DM</u>
Casing Total Depth (ft below reference point)	<u>280</u>	Purging Device <u>ded. pump</u>	Sampling Device <u>ded. ND pipes</u>	Time <u>1540</u> Temp. <u>-92°</u>	Begin Purge <u>1552</u> End Purge <u>1603</u>	
Water Column (feet)	<u>80</u>	Pump: Depth (ft brp) <u>200</u> Type	Voltage <u>240</u> HP	Skies <u>Clear</u>	Gallons Purged <u>149.6</u> CVs Purged <u>3.2</u>	
Casing Capacity (Diameter <u>4"</u>) (gallons per foot)	<u>0.60</u>	Monitor Well Recharge Rate: Slow	Fast <u>X</u>	Wind (mph) <u>0-3</u> From <u>WSW</u>	DTW (ft brp) <u>139.99</u> Time <u>1602</u>	

Time	Depth to Water	Volume Purged (Gallons)	Casing Volumes Purged	...FIELD PARAMETERS...						Pump Frequency Hz	COMMENTS
				Temp. (°F)	pH	EC (µS/cm)	O.R.P. (mV)	D.O. (mg/L)	Turbidity (NTU)		
1552	BEGIN PUMPING										
1553	141.90	13.6	0.3	21.27	7.28	1.273	-157.9	2.40	44.6	Strong sulfur odor 13.6 gpm	
1555	141.80	40.8	0.8	21.32	7.34	1.315	-129.7	3.70	705	turbidity increase	
1557	141.80	68	1.5	21.34	7.34	1.316	-106.8	3.93	92.1		
1559	141.80	95.2	2.1	21.34	7.35	1.309	-95.6	3.96	71.4	13.6 gpm	
1601	141.82	122.40	2.6	21.34	7.35	1.312	-81.4	4.02	76.6 NTU	48.9 NTU	
1603	141.82	149.6	3.2	21.36	7.35	1.313	-70.6	4.00	24.7		

SAMPLE COLLECTION SAMPLE TIME <u>1603</u>	AIR MONITORING PID/FID ppm: VAULT NA	BKGD NA	BREATHING ZONE NA	DISCHARGE WATER NA
ANALYSIS QUANTITY TYPE	NOTES (Color, odor, sand and silt content, factors possibly affecting samples, condition of vault, wellhead, sampling apparatus, etc.)			
8260B VOCs <u>3</u> 40 ml VOA				
8270 SIM 1,4 dioxane <u>1</u> 1 L Amber				
8270 MOD 1,4 dioxane <u>1</u> 1 L Amber				
DUPLICATES / SPLITS / BLANKS? Y <u>N</u>				

GROUNDWATER SAMPLING INFORMATION

DATE: 8/10/12

TASK: 532.30

WELL ID: MW-34B

Time <u>701</u> Static DTW (ft below reference point)	<u>146.00</u>	<u>Screen SV</u> Casing Volume (CV) (gallons) <u>46</u>	<u>3 CV (gallons) 137</u>	Weather Conditions Time <u>7:00</u> Temp. <u>~85°</u>	Initials <u>AMB & DM</u>
Casing Total Depth (ft below reference point)	<u>536</u>	Purging Device <u>Ded pump</u>	Sampling Device <u>100 pipe stand</u>	Skies <u>clear</u>	Begin Purge <u>732</u> End Purge <u>744</u>
<u>Screen to pump</u> Water Column (feet)	<u>76</u>	Pump: Depth (ft brp) <u>420'</u> Type <u>gyrodrill</u>	Voltage <u>240</u> HP	Wind (mph) <u>0-2</u> From <u>W-SW</u>	Gallons Purged <u>168</u> CVs Purged <u>3.7</u>
Casing Capacity (Diameter <u>4"</u>) (gallons per foot)	<u>0.60</u>	Monitor Well Recharge Rate: Slow	Fast <u>X</u>	DTW (ft brp) <u>146.00</u>	Time <u>7:47</u>

Time	Depth to Water	Volume Purged (Gallons)	Casing Volumes Purged	...FIELD PARAMETERS...						Pump Frequency Hz	COMMENTS
				Temp. (°C)	pH	EC (µS/cm)	O.R.P. (mV)	D.O. (mg/L)	Turbidity (NTU)		
732	Pump on										
734	147.20	28	0.6	21.29	7.58	0.973	107.65	1.84	4.07		14 gpm
736	147.87	56	1.2	21.83	7.58	1.195	-126.2	5.49	NM		
738	147.90	84	1.8	21.87	7.58	1.191	-112.0	5.52	60.4		14 gpm
740	147.95	112	2.4	21.88	7.59	1.190	-105.3	5.55	87.4		Sulfur odor in purged water
742	148.02	140	3.0	21.90	7.59	1.192	-98.2	5.56	38.5		
744	148.03	168	3.7	21.90	7.58	1.193	-91.0	5.57	10.04		
744											

SAMPLE COLLECTION SAMPLE TIME <u>744</u>	AIR MONITORING PID/FID ppm: VAULT NA	BKGD NA	BREATHING ZONE NA	DISCHARGE WATER NA
ANALYSIS QUANTITY TYPE	NOTES (Color, odor, sand and silt content, factors possibly affecting samples, condition of vault, wellhead, sampling apparatus, etc.)			
8260B VOCs <u>3</u> 40 ml VOA				
8270 SIM 1,4 dioxane <u>1</u> 1 L Amber				
8270 MOD 1,4 dioxane <u>1</u> 1 L Amber				
DUPLICATES / SPLITS / BLANKS? Y <u>(N)</u>				

MS & MSD collected

GROUNDWATER SAMPLING INFORMATION

DATE: 8/8/12

TASK: 532.30

WELL ID: MW-34C

Time <u>1439</u> Static DTW (ft below reference point) <u>145.99</u>	Casing Volume (CV) (gallons) <u>57.7</u> 3 CV (gallons) <u>173</u>	Weather Conditions	Initials <u>AMB & DM</u>
Casing Total Depth (ft below reference point) <u>576</u>	Purging Device <u>ded. pump</u> Sampling Device <u>ded. ND Dipstand</u>	Time <u>1430</u> Temp. <u>~93°</u>	Begin Purge <u>1506</u> End Purge <u>1520</u>
Water Column (feet) <u>96</u>	Pump: Depth (ft brp) <u>400</u> Type <u>Grundfos</u> Voltage <u>240VBP</u>	Skies <u>Clear</u>	Gallons Purged <u>187+</u> CVs Purged <u>33</u>
Casing Capacity (Diameter <u>4"</u>) (gallons per foot) <u>0.60</u>	Monitor Well Recharge Rate: Slow _____ Fast <u>X</u>	Wind (mph) <u>0-3</u> From <u>W-SW</u>	DTW (ft brp) <u>148.65</u> Time <u>1527</u>

Time	Depth to Water	Volume Purged (Gallons)	Casing Volumes Purged	...FIELD PARAMETERS...						Pump Frequency Hz	COMMENTS
				Temp. (°C)	pH	EC (µS/cm)	O.R.P. (mV)	D.O. (mg/L)	Turbidity (NTU)		
1506	PUMP ON										14 gpm throttled back valve to 3/4
1507	162.05	14	0.2	21.19	7.52	0.735	-189.2	1.64	40.1		14 gpm
1509	163.50	42	0.7	21.68	7.84	0.587	-217.5	0.90	8.66		13.25 gpm
1511	164.3	66.5	1.2	21.75	7.86	0.616	-221.1	0.59	1.98		13.25 gpm
1514	164.50	108.25	1.9	21.82	7.91	0.674	-193.0	0.52	2.47		Sulfur odor
1517	164.87	147.8	2.6	21.84	7.90	0.674	-180.8	0.33	4.28		13.25 gpm
1520	165.14	187.6	3.3	21.84	7.88	0.677	-177.4	0.28	16.2		

SAMPLE COLLECTION SAMPLE TIME <u>1520</u>	AIR MONITORING PID/FID ppm: VAULT NA	BKGD NA	BREATHING ZONE NA	DISCHARGE WATER NA
ANALYSIS QUANTITY TYPE	NOTES (Color, odor, sand and silt content, factors possibly affecting samples, condition of vault, wellhead, sampling apparatus, etc.)			
8260B VOCs <u>3</u> 40 ml VOA	<u>sugar out at 1450</u>			
8270 SIM 1,4 dioxane <u>1</u> 1 L Amber	<u>Purged over 3 casing volumes to account for drawdown.</u>			
8270 MOD 1,4 dioxane <u>1</u> 1 L Amber				
DUPLICATES / SPLITS / BLANKS? <u>Y</u> <u>(N)</u>				

GROUNDWATER SAMPLING INFORMATION

DATE 8/7/12

TASK: 532.30

WELL ID: MW-35A

Time <u>8:27</u> Static DTW (ft below reference point) <u>73.06</u>	Screen Casing Volume (CV) (gallons) <u>42</u> 3 CV (gallons) <u>126</u>	Weather Conditions	Initials AMB & DM
Casing Total Depth (ft below reference point) <u>470</u>	Purging Device <u>Dead Pump</u> Sampling Device <u>ded. NID</u>	Time <u>8:00</u> Temp. <u>~78</u>	Begin Purge <u>9:26</u> End Purge <u>9:34</u>
<u>pump-screen</u> Water Column (feet) <u>70</u>	Pump: Depth (ft brp) <u>470</u> Type <u>Grounds</u> Voltage <u>240</u> HP	Skies <u>Clear</u>	Gallons Purged <u>154</u> CVs Purged <u>3.7</u>
Casing Capacity (Diameter <u>4"</u>) (gallons per foot) <u>0.60</u>	Monitor Well Recharge Rate: Slow _____ Fast <u>X</u>	Wind (mph) <u>0-2</u> From <u>SW</u>	DTW (ft brp) <u>98.40</u> Time <u>9:42</u>

Time	Depth to Water	Volume Purged (Gallons)	Casing Volumes Purged	...FIELD PARAMETERS...						Pump Frequency Hz	COMMENTS
				Temp. (°F)	pH	EC (µS/cm)	O.R.P. (mV)	D.O. (mg/L)	Turbidity (NTU)		
9:20	PUMP ON										
9:22	102.4	24	0.6	19.80	7.21	0.821	12.0	2.20	6.70	12 gpm	
9:25	125.6	58.5	1.4	20.04	7.30	0.764	-129.0	2.28	18.0	11 gpm	
9:28	137.8	91.5	2.1	20.08	7.36	0.809	-136.2	1.89	7.25		
9:31	147.6	123	2.9	20.12	7.36	0.807	-134.2	1.21	7.03	10.5 gpm	
9:34	152.6	154.5	3.7	20.12	7.35	0.809	-130.8	1.05	3.77	10.5 gpm	
9:37	PUMP OFF										

SAMPLE COLLECTION SAMPLE TIME 9:34

ANALYSIS	QUANTITY	TYPE
8260B VOCs	<u>3</u>	40 ml VOA
8270 SIM 1,4 dioxane	<u>1</u>	1 L Amber
8270 MOD 1,4 dioxane	<u>1</u>	1 L Amber
DUPLICATES / SPLITS / BLANKS?	Y	<u>N</u>

If yes, complete appropriate forms.

AIR MONITORING PID/FID ppm: VAULT NA BKGD NA BREATHING ZONE NA DISCHARGE WATER NA

NOTES (Color, odor, sand and silt content, factors possibly affecting samples, condition of vault, wellhead, sampling apparatus, etc.)

ducer out at 8:28

purged over 3 casing

Collected MS&MSD for VOCs & 1,4 dioxane

GROUNDWATER SAMPLING INFORMATION

DATE: 8/7/2012

TASK: 532.30

WELL ID: MW-35B

Time <u>943</u> Static DTW (ft below reference point) <u>81.16</u>	Casing Volume (CV) (gallons) <u>207</u> 3 CV (gallons) <u>621</u>	Weather Conditions	Initials <u>AMB & DM</u>
Casing Total Depth (ft below reference point) <u>805</u>	Purging Device <u>DED Pump</u> Sampling Device <u>DED PIPE</u>	Time <u>945</u> Temp. <u>90</u>	Begin Purge <u>955</u> End Purge <u>1026</u>
Water Column (feet) <u>345</u> <i>SCREEN TO PUMP</i>	Pump: Depth (ft brp) <u>460</u> Type <u>PERISTALSIS</u> Voltage <u>240</u> HP	Skies <u>SUNNY HAZY</u>	Gallons Purged <u>1632</u> CVs Purged <u>3.2</u>
Casing Capacity (Diameter <u>4"</u>) (gallons per foot) <u>0.60</u>	Monitor Well Recharge Rate: Slow Fast <u>X</u>	Wind (mph) <u>0-5</u> From <u>W</u>	DTW (ft brp) <u>81.45</u> Time <u>1044</u>

Time	Depth to Water	Volume Purged (Gallons)	Casing Volumes Purged	...FIELD PARAMETERS...						Pump Frequency Hz	COMMENTS
				Temp. (°F)	pH	EC (µS/cm)	O.R.P. (mV)	D.O. (mg/L)	Turbidity (NTU)		
<u>955</u>	<u>PUMP ON</u>										
<u>956</u>	<u>84.80</u>	<u>15.4</u>	<u>0.1</u>	<u>19.96</u>	<u>7.40</u>	<u>0.893</u>	<u>-138.9</u>	<u>0.77</u>	<u>15.5</u>		<u>15.4 gpm</u>
<u>1002</u>	<u>84.96</u>	<u>15.4</u>	<u>0.5</u>	<u>20.19</u>	<u>7.59</u>	<u>0.747</u>	<u>-190.3</u>	<u>0.30</u>	<u>1.77</u>		<u>15.4 gpm</u>
<u>1008</u>	<u>85.04</u>	<u>20.2</u>	<u>1.0</u>	<u>20.34</u>	<u>7.57</u>	<u>0.788</u>	<u>-138.3</u>	<u>1.34</u>	<u>77.2</u>		<u>strong sulfur odor</u>
<u>1014</u>	<u>85.11</u>	<u>292.6</u>	<u>1.4</u>	<u>20.36</u>	<u>7.44</u>	<u>0.814</u>	<u>-102.6</u>	<u>1.97</u>	<u>148</u>		<u>15.4 odor in purge water</u>
<u>1020</u>	<u>85.12</u>	<u>385</u>	<u>1.9</u>	<u>20.35</u>	<u>7.42</u>	<u>0.892</u>	<u>-69.9</u>	<u>1.82</u>	<u>7.04</u>		<u>15.4 gpm</u>
<u>1026</u>	<u>85.15</u>	<u>493</u>	<u>2.4</u>	<u>20.35</u>	<u>7.42</u>	<u>0.902</u>	<u>-54.3</u>	<u>1.73</u>	<u>5.88</u>		<u>15.4 gpm</u>
<u>1036</u>	<u>85.18</u>	<u>632</u>	<u>3.0</u>	<u>20.36</u>	<u>7.42</u>	<u>0.907</u>	<u>-46.5</u>	<u>1.63</u>	<u>4.20</u>		<u>15.4 gpm</u>
<u>1038</u>	<u>PUMP OFF</u>										

SAMPLE COLLECTION SAMPLE TIME <u>1036</u>	AIR MONITORING PID/FID ppm: VAULT NA BKGD NA BREATHING ZONE NA DISCHARGE WATER NA
ANALYSIS QUANTITY TYPE	NOTES (Color, odor, sand and silt content, factors possibly affecting samples, condition of vault, wellhead, sampling apparatus, etc.)
8260B VOCs <u>3</u> 40 ml VOA	
8270 SIM 1.4 dioxane <u>1</u> 1 L Amber	
8270 MOD 1.4 dioxane <u>1</u> 1 L Amber	
DUPLICATES / SPLITS / BLANKS? Y <u>N</u>	

GROUNDWATER SAMPLING INFORMATION

DATE: 8/7/12

TASK: 532.30

WELL ID: MW-35C

Time <u>1052</u> Static DTW (ft below reference point) <u>88.90</u>	Screen <u>SV</u> Casing Volume (CV) (gallons) <u>348</u> 3 CV (gallons) <u>1044</u>	Weather Conditions	Initials AMB & DM
Casing Total Depth (ft below reference point) <u>990</u>	Purging Device <u>Diapump</u> Sampling Device <u>ND Pipe Stand</u>	Time <u>1100</u> Temp. <u>28.5°</u>	Begin Purge <u>1059</u> End Purge <u>1206</u>
Pump to screen Water Column (feet) <u>580</u>	Pump: Depth (ft brp) <u>1048</u> Type <u>Diapump</u> Voltage <u>240 HP</u>	Skies <u>Clear</u>	Gallons Purged <u>1048</u> Vs Purged <u>3.0</u>
Casing Capacity (Diameter <u>4"</u>) (gallons per foot) <u>0.60</u>	Monitor Well Recharge Rate: Slow _____ Fast <u>X</u>	Wind (mph) <u>0-2</u> From <u>S-SW</u>	DTW (ft brp) <u>89.04</u> Time <u>1212</u>

Time	Depth to Water	Volume Purged (Gallons)	Casing Volumes Purged	... FIELD PARAMETERS ...						Pump Frequency Hz	COMMENTS
				Temp. (°C)	pH	EC (µS/cm)	O.R.P. (mV)	D.O. (mg/L)	Turbidity (NTU)		
1059	88.90	Pump ON									
1100	91.42	15.4	0.1	20.09	7.35	0.804	-53.7	2.17	2.16		15.4 gpm
1110	91.60	169	0.5	20.30	7.36	0.799	-38.3	2.62	2.37		15.4 gpm
1120	91.61	323	0.9	20.40	7.37	0.733	-29.9	2.75	10.66		15.4 gpm
1130	91.64	477	1.4	20.48	7.53	0.638	-25.5	4.52	13.4		15.4 gpm
1142	91.69	662	1.9	20.49	7.53	0.640	-14.0	4.43	4.68		15.4 gpm
1154	91.65	847	2.4	20.50	7.53	0.645	-20.8	3.85	2.24		15.4 gpm
1206	91.69	1048	3.0	20.50	7.53	0.644	-55.0	3.80	4.19		15.4 gpm
1210	Pump	OFF									

SAMPLE COLLECTION SAMPLE TIME <u>1206</u>	AIR MONITORING PID/FID ppm: VAULT NA	BKGD NA	BREATHING ZONE NA	DISCHARGE WATER NA
ANALYSIS QUANTITY TYPE	NOTES (Color, odor, sand and silt content, factors possibly affecting samples, condition of vault, wellhead, sampling apparatus, etc.)			
8260B VOCs <u>3</u> 40 ml VOA				
8270 SIM 1,4 dioxane <u>1</u> 1 L Amber				
8270 MOD 1,4 dioxane <u>1</u> 1 L Amber				
DUPLICATES / SPLITS / BLANKS? Y <u>(N)</u>				

GROUNDWATER SAMPLING INFORMATION

DATE: 8/10/12

TASK: 532.30

WELL ID: MW-36

Time <u>851</u> Static DTW (ft below reference point)	<u>91.02</u> Screen <u>SY</u>	Casing Volume (CV) (gallons) <u>320</u>	3 CV (gallons) <u>960</u>	Weather Conditions Time <u>9:00</u> Temp. <u>79.0°</u>	Initials <u>AMB & DM ESH</u>
Casing Total Depth (ft below reference point)	<u>994.3</u>	Purging Device <u>Red. pump</u>	Sampling Device <u>Red 10-100 pipe stand</u>	Time	Begin Purge <u>9:08</u> End Purge <u>10:33</u>
Water Column (feet)	<u>553.3</u>	Pump: Depth (ft brp) <u>460</u> Type <u>grounding</u> Voltage <u>240</u> HP		Skies <u>clear</u>	Gallons Purged <u>974</u> CVs Purged <u>3.0</u>
Casing Capacity (Diameter <u>4"</u>) (gallons per foot)	<u>0.60</u>	Monitor Well Recharge Rate: Slow	Fast <u>X</u>	Wind (mph) <u>0-2</u> From <u>S-SW</u>	DTW (ft brp) <u>89.53</u> Time <u>10:39</u>

Time	Depth to Water	Volume Purged (Gallons)	Casing Volumes Purged	...FIELD PARAMETERS...						Pump Frequency Hz	COMMENTS
				Temp. (°F)	pH	EC (µS/cm)	O.R.P. (mV)	D.O. (mg/L)	Turbidity (NTU)		
9:08	PUMP	ON									
9:09	93.09	11.5	0.1	20.42	7.88	0.608	-158.7	2.09	4.75		11.5 gpm strong sulfur smell
9:23	93.32	169	0.5	21.34	7.97	0.605	-176.2	1.35	0.15		11 gpm
9:37	93.05	330	1.0	21.86	7.92	0.640	-165.1	0.48	0.03		11.5 gpm
9:51	92.65	491	1.5	21.95	7.91	0.622	-163.5	0.20	0.07		11.5 gpm
10:05	92.50	652	2.0	21.90	7.92	0.624	-147.8	0.25	0.25		11.5 gpm
10:19	92.14	813	2.5	21.99	7.92	0.625	-141.4	0.73	0.01		11.5 gpm
10:33	92.90	974	3.0	22.01	7.92	0.625	-156.8	0.23	0.15		

SAMPLE COLLECTION SAMPLE TIME <u>1033</u>	AIR MONITORING PID/FID ppm: VAULT NA	BKGD NA	BREATHING ZONE NA	DISCHARGE WATER NA
ANALYSIS QUANTITY TYPE	NOTES (Color, odor, sand and silt content, factors possibly affecting samples, condition of vault, wellhead, sampling apparatus, etc.)			
8260B VOCs <u>3+3+3</u> 40 ml VOA				
8270 SIM 1,4 dioxane <u>1+1+1</u> 1 L Amber				
8270 MOD 1,4 dioxane <u>20</u> 1 L Amber				
DUPLICATES/SPLITS/BLANKS? if yes, complete appropriate forms.	<u>(Y)</u>	N	Dup collected @ 1045; Split collected @ 1033	

APPENDIX B
GROUNDWATER SAMPLING FIELD FORMS
(FOURTH QUARTER 2012)

GROUNDWATER SAMPLING INFORMATION

DATE: 10-26-2012

TASK: 532.03

WELL ID: MW-37

Time <u>12:42</u> Static DTW (ft below reference point)	<u>144.62</u>	Screen-Pump Casing Volume (GV) (gallons)	<u>168</u>	3 GV (gallons)	<u>504</u>	Weather Conditions	Initials <u>KBS / DM</u>
Casing Total Depth (ft below reference point)	<u>820</u>	Purging Device <u>180 Pump</u>	Sampling Device			Time <u>1245</u> Temp. <u>80</u>	Begin Purge <u>1317</u> End Purge <u>1517</u>
Water Column (feet)	<u>675</u>	Pump: Depth (ft brp) <u>540</u>	Type <u>225015-20</u>	Voltage <u>230</u>	HP <u>1.5</u>	Skies <u>CLEAR WINDY</u>	Gallons Purged <u>22,500</u> GVs Purged <u>73</u>
Casing Capacity (Diameter <u>4"</u>) (gallons per foot)	<u>0.6</u>	Monitor Well Recharge Rate: Slow _____ Fast <u>X</u>			Wind (mph) <u>15-20</u> From <u>E</u>	DTW (ft brp) <u>144.01</u>	Time <u>1640</u>

Time	Depth to Water	Volume Purged (Gallons)	Casing Volumes Purged	...FIELD PARAMETERS...						Pump Frequency Hz	COMMENTS
				Temp. (°)	pH	EC (S/cm)	O.R.P. (mV)	D.O. (mg/L)	Turbidity (NTU)		
<u>1332</u>	<u>148.75</u>	<u>278</u>		<u>23.43</u>	<u>7.72</u>	<u>0.569</u>	<u>98.1</u>	<u>1.76</u>	<u>66.8</u>		<u>~18.5 GPM</u>
<u>1337</u>	<u>148.77</u>	<u>555.5</u>		<u>23.31</u>	<u>7.72</u>	<u>0.618</u>	<u>167.5</u>	<u>1.97</u>	<u>28.9</u>		↑
<u>1402</u>	<u>148.81</u>	<u>834</u>		<u>23.32</u>	<u>7.74</u>	<u>0.619</u>	<u>97.2</u>	<u>1.82</u>	<u>19.6</u>		
<u>1432</u>	<u>148.80</u>	<u>1111</u>		<u>23.32</u>	<u>7.76</u>	<u>0.630</u>	<u>68.3</u>	<u>1.52</u>	<u>30.4</u>		<u>1417</u>
<u>1432</u>	<u>148.77</u>	<u>1389</u>		<u>23.36</u>	<u>7.81</u>	<u>0.628</u>	<u>62.1</u>	<u>1.11</u>	<u>31.4</u>		↓
<u>1447</u>	<u>148.77</u>	<u>1667</u>		<u>23.35</u>	<u>7.88</u>	<u>0.629</u>	<u>55.7</u>	<u>0.96</u>	<u>11.7</u>		
<u>1502</u>	<u>148.70</u>	<u>1945</u>		<u>23.32</u>	<u>7.84</u>	<u>0.628</u>	<u>54.1</u>	<u>0.99</u>	<u>11.1</u>		
<u>1517</u>	<u>148.82</u>	<u>2223</u>		<u>—</u>	<u>—</u>	<u>—</u>	<u>—</u>	<u>—</u>	<u>7.8</u>		<u>~18.5 GPM</u>

SAMPLE COLLECTION SAMPLE TIME 1520

ANALYSIS QUANTITY TYPE

8260B VOCs 9 40 ml VOA

8270 MOD 1.4 dioxane 3 1 L Amber

DUPLICATES / SPLITS BLANKS? (Y) N

If yes, complete appropriate forms.

AIR MONITORING PID/FID ppm: VAULT / BKGD / BREATHING ZONE / DISCHARGE WATER /

NOTES (Color, odor, sand and silt content, factors possibly affecting samples, condition of vault, wellhead, sampling apparatus, etc.)

SPLIT 1525: DUP 1700

GROUNDWATER SAMPLING INFORMATION

DATE: 11/05/2020

TASK: 532.30

WELL ID: EW-01

Time <u>1522</u> Static DTW (ft below reference point) <u>136.31</u>	Casing Volume (CV) (gallons) <u>38.7</u> 3 CV (gallons) <u>116.2</u>	Weather Conditions	Initials <u>AMB & BM EJH</u>
Casing Total Depth (ft below reference point) <u>195</u>	Purging Device <u>ded pump</u> Sampling Device <u>ded tubing</u>	Time <u>1525</u> Temp. <u>84°F</u>	Begin Purge <u>1533</u> End Purge <u>1600</u>
Water Column (feet) <u>58.69</u>	Pump: Depth (ft brp) <u>N/A</u> Type _____ Voltage _____ HP _____	Skies <u>Sunny/Clear</u>	Gallons Purged <u>307</u> CVs Purged <u>7.9</u>
Casing Capacity (Diameter ") (gallons per foot) <u>0.66</u>	Monitor Well Recharge Rate: Slow _____ Fast <u>X</u>	Wind (mph) <u>Ø</u> From <u>N/A</u>	DTW (ft brp) _____ Time _____

Time	Depth to Water	Volume Purged (Gallons)	Casing Volumes Purged	....FIELD PARAMETERS....						Pump Frequency Hz	COMMENTS
				Temp. (°C)	pH	EC (µS/cm)	O.R.P. (mV)	D.O. (mg/L)	Turbidity (NTU)		
<u>1533</u>	<u>136.31</u>	<u>Ø</u>	<u>Ø</u>							<u>TOT = 275011</u>	<u>Q = 10.5 gpm</u>
<u>1600</u>				<u>25.69</u>	<u>6.77</u>	<u>1243</u>	<u>140.6</u>	<u>6.68</u>	<u>1.6</u>	<u>TOT = 275318</u>	<u>Q = 10.97</u>

SAMPLE COLLECTION SAMPLE TIME <u>1605</u> ANALYSIS QUANTITY TYPE <u>8260B VOCs</u> <u>3</u> 40 ml VOA <u>8270 SIM 1.4 dioxane</u> <u>Ø</u> 1 L Amber <u>8270 MOD 1.4 dioxane</u> <u>1</u> 1 L Amber _____ _____ _____	AIR MONITORING PID/FID ppm: VAULT NA BKGD NA BREATHING ZONE NA DISCHARGE WATER NA NOTES (Color, odor, sand and silt content, factors possibly affecting samples, condition of vault, wellhead, sampling apparatus, etc.) _____ _____ _____ _____
DUPLICATES / SPLITS / BLANKS? Y (N)	

GROUNDWATER SAMPLING INFORMATION

DATE: 11 / 7 / 12

TASK: 532.30

WELL ID: MW-08

Time <u>1542</u> Static DTW (ft below reference point) <u>136.78</u>	Casing Volume (CV) (gallons) <u>4.5</u> 3 CV (gallons) <u>13.5</u>	Weather Conditions	Initials <u>AMB & DM</u>
Casing Total Depth (ft below reference point) <u>163.79</u>	Purging Device <u>DED BAILER</u> Sampling Device <u>BUCKET BAILER</u>	Time <u>1540</u> Temp. <u>80°</u>	Begin Purge <u>1543</u> End Purge <u>1649</u>
Water Column (feet) <u>201</u> <u>163.79</u>	Pump: Depth (ft brp) <u>N/A</u> Type <u>N/A</u> Voltage <u>N/A</u> HP	Skies <u>SUNNY</u>	Gallons Purged <u>13.6</u> CVs Purged <u>3</u>
Casing Capacity (Diameter ") (gallons per foot) <u>.17</u>	Monitor Well Recharge Rate: Slow Fast <u>X</u>	Wind (mph) <u>0-5</u> From <u>SW</u>	DTW (ft brp) <u>137.92</u> Time <u>1654</u>

Time	Depth to Water	Volume Purged (Gallons)	Casing Volumes Purged	...FIELD PARAMETERS...						Pump Frequency Hz	COMMENTS
				Temp. (°)	pH	EC (S/cm)	O.R.P. (mV)	D.O. (mg/L)	Turbidity (NTU)		
1547	NM	.25		21.94	7.98	1.742	-0.3	1.92	6.1		
1559	NM	4		21.79	7.91	1.701	-1	1.96	NM		
1508	NM	6.9		21.70	7.80	1.680	-2.3	0.97	34.8		
1620	NM	9.3		21.72	7.61	1.787	7.8	2.04	49		
1631	NM	11.1		21.67	7.59	1.798	19.7	2.64	78.9		
1641	NM	13.6		21.75	7.53	1.798	146	2.90	85.7		
1649	end										

SAMPLE COLLECTION SAMPLE TIME <u>1645</u>	AIR MONITORING PID/FID ppm: VAULT NA BKGD NA BREATHING ZONE NA DISCHARGE WATER NA
ANALYSIS QUANTITY TYPE	NOTES (Color, odor, sand and silt content, factors possibly affecting samples, condition of vault, wellhead, sampling apparatus, etc.)
8260B VOCs <u>3</u> 40 ml VOA	<u>RB-11072012 @ 1545</u>
8270 SIM 1.4 dioxane <u>1</u> 1 L Amber	
8270 MOD 1.4 dioxane <u>1</u> 1 L Amber	
DUPLICATES / SPLITS / BLANKS? <u>(Y)</u> N	
If yes, complete appropriate forms.	

GROUNDWATER SAMPLING INFORMATION

DATE: 11/05/2012

TASK: 532.30

WELL ID: MW-21

Time <u>1519</u> Static DTW (ft below reference point) <u>122.76</u>	Casing Volume (CV) (gallons) <u>76.1</u> 3 CV (gallons) <u>228.2</u>	Weather Conditions	Initials <u>AMB & DM - EJH</u>
Casing Total Depth (ft below reference point) <u>238</u>	Purging Device <u>ded pump</u> Sampling Device <u>ded tubing</u>	Time <u>15:29</u> Temp. <u>95°F</u>	Begin Purge <u>1533</u> End Purge <u>1611</u>
Water Column (feet) <u>115.24</u>	Pump: Depth (ft brp) <u>NA</u> Type _____ Voltage _____ HP _____	Skies <u>Sunny/Clear</u>	Gallons Purged <u>477</u> CVs Purged <u>6.3</u>
Casing Capacity (Diameter <u>4"</u>) (gallons per foot) <u>0.62</u>	Monitor Well Recharge Rate: Slow _____ Fast <u>X</u>	Wind (mph) <u>Ø</u> From <u>NA</u>	DTW (ft brp) _____ Time _____

Time	Depth to Water	Volume Purged (Gallons)	Casing Volumes Purged	...FIELD PARAMETERS...						Pump Frequency Hz	COMMENTS
				Temp. (°C)	pH	EC (S/cm)	O.R.P. (mV)	D.O. (mg/L)	Turbidity (NTU)		
<u>1533</u>	<u>122.76</u>	<u>Ø</u>	<u>Ø</u>	<u>—</u>	<u>—</u>	<u>Pump on</u>	<u>—</u>	<u>—</u>	<u>—</u>	<u>TOT = 555111</u>	
<u>1611</u>				<u>24.84</u>	<u>7.00</u>	<u>2.109</u>	<u>111.2</u>	<u>4.62</u>	<u>2.1</u>	<u>Q = 15 gpm</u>	
										<u>TOT = 555588</u>	

SAMPLE COLLECTION SAMPLE TIME _____	AIR MONITORING PID/FID ppm: VAULT NA _____ BKGD NA _____ BREATHING ZONE NA _____ DISCHARGE WATER NA _____
ANALYSIS _____ QUANTITY _____ TYPE _____	NOTES (Color, odor, sand and silt content, factors possibly affecting samples, condition of vault, wellhead, sampling apparatus, etc.)
8260B VOCs <u>3</u> 40 ml VOA _____	_____
8270 SIM 1,4 dioxane <u>Ø</u> 1 L Amber _____	_____
8270 MOD 1,4 dioxane <u>1</u> 1 L Amber _____	_____
_____	_____
DUPLICATES / SPLITS / BLANKS? _____ Y <u>(N)</u>	_____
If yes, complete appropriate forms.	_____

GROUNDWATER SAMPLING INFORMATION

DATE: 11/7/12

TASK: 532.30

WELL ID: MW-26C

Time <u>1054</u> Static DTW (ft below reference point) <u>134.61</u>	Casing Volume (CV) (gallons) <u>61.9</u> 3 CV (gallons) <u>185.7</u>	Weather Conditions	Initials <u>AMB & DM</u>
Casing Total Depth (ft below reference point) <u>499</u>	Purging Device <u>DED Pump</u> Sampling Device <u>DED W6W6</u>	Time <u>1050</u> Temp. <u>80</u>	Begin Purge <u>1105</u> End Purge <u>1232</u>
Water Column (feet) <u>364.39</u>	Pump: Depth (ft brp) <u>336</u> Type <u>Grundfos</u> Voltage <u>240</u> HP <u>.5</u>	Skies <u>Sunny</u>	Gallons Purged <u>186.8</u> CVs Purged <u>3</u>
Casing Capacity (Diameter *) (gallons per foot) <u>.17</u>	Monitor Well Recharge Rate: Slow _____ Fast <u>X</u>	Wind (mph) <u>0-5</u> From <u>W</u>	DTW (ft brp) <u>135.49</u> Time <u>1242</u>

Time	Depth to Water	Volume Purged (Gallons)	Casing Volumes Purged	...FIELD PARAMETERS...						Pump Frequency Hz	COMMENTS
				Temp. (°C)	pH	EC (S/cm)	O.R.P. (mV)	D.O. (mg/L)	Turbidity (NTU)		
<u>1105</u>		<u>START</u>									
<u>1106</u>	<u>135.43</u>	<u>2.2</u>		<u>25.51</u>	<u>7.90</u>	<u>1.601</u>	<u>-107</u>	<u>5.30</u>	<u>1.71</u>	<u>315</u>	<u>~ 2.2 GPM</u>
<u>1121</u>	<u>135.57</u>	<u>35</u>		<u>22.37</u>	<u>8.56</u>	<u>0.725</u>	<u>-187</u>	<u>1.57</u>	<u>2.19</u>		
<u>1136</u>	<u>135.59</u>	<u>68</u>		<u>22.42</u>	<u>8.03</u>	<u>0.902</u>	<u>-125</u>	<u>2.44</u>	<u>2.7</u>		
<u>1151</u>	<u>135.61</u>	<u>101</u>		<u>22.45</u>	<u>7.99</u>	<u>0.906</u>	<u>-115</u>	<u>2.51</u>	<u>2.6</u>		
<u>1206</u>	<u>135.62</u>	<u>134</u>		<u>22.41</u>	<u>7.98</u>	<u>0.907</u>	<u>-109</u>	<u>2.58</u>	<u>0.7</u>		
<u>1221</u>	<u>135.61</u>	<u>167</u>		<u>22.45</u>	<u>7.95</u>	<u>0.908</u>	<u>-104</u>	<u>2.61</u>	<u>0.6</u>		
<u>1230</u>	<u>135.61</u>	<u>186.8</u>		<u>22.46</u>	<u>7.93</u>	<u>0.909</u>	<u>-102</u>	<u>2.66</u>	<u>1.4</u>		
<u>1232</u>		<u>END</u>									

SAMPLE COLLECTION SAMPLE TIME <u>1230</u>	AIR MONITORING PID/FID ppm: VAULT NA BKGD NA BREATHING ZONE NA DISCHARGE WATER NA
ANALYSIS QUANTITY TYPE	NOTES (Color, odor, sand and silt content, factors possibly affecting samples, condition of vault, wellhead, sampling apparatus, etc.)
<u>8260B VOCs</u> <u>3</u> 40 ml VOA	<u>ODOR</u>
<u>8270 SIM 1,4 dioxane</u> <u>1</u> 1 L Amber	
<u>8270 MOD 1,4 dioxane</u> <u>1</u> 1 L Amber	
DUPLICATES / SPLITS / BLANKS? Y <u>(N)</u>	

GROUNDWATER SAMPLING INFORMATION

DATE: 11/7/12

TASK: 532.30

WELL ID: MW 28

Time <u>821</u> Static DTW (ft below reference point) <u>138.56</u>	Casing Volume (CV) (gallons) <u>27</u> 3 CV (gallons) <u>81</u>	Weather Conditions	Initials <u>AMB & DM</u>
Casing Total Depth (ft below reference point) <u>375</u>	Purging Device <u>DED Pump</u> Sampling Device <u>DED RPE</u>	Time <u>826</u> Temp. <u>75°</u>	Begin Purge <u>825</u> End Purge <u>838</u>
Water Column (feet) <u>236.4</u>	Pump: Depth (ft brp) <u>330</u> Type <u>peristaltic</u> Voltage <u>240</u> HP	Skies <u>cloudy</u>	Gallons Purged <u>88</u> CVs Purged <u>3.2</u>
Casing Capacity (Diameter ") (gallons per foot) <u>.6</u>	Monitor Well Recharge Rate: Slow _____ Fast <u>X</u>	Wind (mph) <u>0-5</u> From <u>W</u>	DTW (ft brp) <u>138.56</u> Time <u>845</u>

Time	Depth to Water	Volume Purged (Gallons)	Casing Volumes Purged	...FIELD PARAMETERS...						Pump Frequency Hz	COMMENTS
				Temp. (°)	pH	EC (S/cm)	O.R.P. (mV)	D.O. (mg/L)	Turbidity (NTU)		
825 820	START										
827 822	145.34	16		21.43	7.87	1.033	22.4	1.93	21.4		~8 GPM
829	145.48	32		21.61	7.85	1.097	22.6	5.62	9.6		
831	145.53	48		21.66	7.81	1.146	22.9	6.10	2.1		
833	145.54	64		21.67	7.82	1.150	22.1	6.11	1.7		
835	145.54	80		21.67	7.83	1.153	21.9	6.13	2.1		
836	145.53	88		21.68	7.83	1.154	21.1	6.16	.9		
838	END										

SAMPLE COLLECTION SAMPLE TIME <u>836</u>	AIR MONITORING PID/FID ppm: VAULT NA	BKGD NA	BREATHING ZONE NA	DISCHARGE WATER NA
ANALYSIS QUANTITY TYPE	NOTES (Color, odor, sand and silt content, factors possibly affecting samples, condition of vault, wellhead, sampling apparatus, etc.)			
8260B VOCs <u>3</u> 40 ml VOA				
8270 SIM 1,4 dioxane <u>1</u> 1 L Amber				
8270 MOD 1,4 dioxane _____ 1 L Amber				
DUPLICATES / SPLITS / BLANKS? Y <u>(N)</u>				

GROUNDWATER SAMPLING INFORMATION

DATE: 11/7/12

TASK: 532.30

WELL ID: MW 29

Time <u>908</u> Static DTW (ft below reference point) <u>141.68</u>	Casing Volume (CV) (gallons) <u>30</u> 3 CV (gallons) <u>90</u>	Weather Conditions	Initials <u>AMB & DM</u>
Casing Total Depth (ft below reference point) <u>240</u> <i>pump to screen</i>	Purging Device <u>DED Pump</u> Sampling Device <u>2" PIPE</u>	Time <u>907</u> Temp. <u>80°</u>	Begin Purge <u>915</u> End Purge <u>938</u>
Water Column (feet) <u>50</u>	Pump: Depth (ft brp) <u>190</u> Type <u>Gumbros</u> Voltage <u>240</u> HP	Skies <u>gray</u>	Gallons Purged <u>95</u> CVs Purged <u>31</u>
Casing Capacity (Diameter <u>4"</u>) (gallons per foot) <u>.6</u>	Monitor Well Recharge Rate: Slow Fast <u>X</u>	Wind (mph) <u>05</u> From <u>W</u>	DTW (ft brp) <u>141.80</u> Time <u>947</u>

Time	Depth to Water	Volume Purged (Gallons)	Casing Volumes Purged	...FIELD PARAMETERS...						Pump Frequency Hz	COMMENTS
				Temp. (°C)	pH	EC (S/cm)	O.R.P. (mV)	D.O. (mg/L)	Turbidity (NTU)		
915	START			21.54	7.71	1.454	-180	8.03	nm		
918	148.49	14.25		21.66	7.73	1.573	-200	7.92	0.8		4.75 GPM
921	148.51	28.5		21.70	7.62	1.545	-140	10.13	2.9		
924	148.46	42.75		21.74	7.60	1.568	-124	10.84	0.71		
927	nm	57		21.79	7.59	1.566	-119	10.81	0.6		PAUSE. PUMP FAILURE.
930	148.15	71.25		21.88	7.59	1.590	-115	11.05	.8		
933	148.22	85		21.80	7.59	1.568	-136	11.10	.9		
935	148.43	95		21.76	7.60	1.558	-139	11.01	1.4		
938			STOP								

SAMPLE COLLECTION SAMPLE TIME <u>937</u>	AIR MONITORING PID/FID ppm: VAULT NA BKGD NA BREATHING ZONE NA DISCHARGE WATER NA
ANALYSIS QUANTITY TYPE	NOTES (Color, odor, sand and silt content, factors possibly affecting samples, condition of vault, wellhead, sampling apparatus, etc.)
8260B VOCs 40 ml VOA	<u>STRONG ODOOR, PUMP CUTTING OUT. WIRING IS OK.</u>
8270 SIM 1,4 dioxane 1 L Amber	
8270 MOD 1,4 dioxane 1 L Amber	
DUPLICATES / SPLITS / BLANKS? Y N	
If yes, complete appropriate forms.	

GROUNDWATER SAMPLING INFORMATION

DATE: 11/6/12

TASK: 532.30

WELL ID: MW-30A

Time 1252 Static DTW (ft below reference point) 128.38	SCAED Gauge Volume (CV) (gallons) 17.6	SV 3.0V (gallons) 52.8	Weather Conditions	Initials AMB & DM
Casing Total Depth (ft below reference point) 564	Purging Device Red Pump	Sampling Device Red Pipe	Time 1233 Temp. 90°	Begin Purge 1225 End Purge 1307
Water Column (feet) 435.6	Pump: Depth (ft brp) _____ Type GARDPOS	Voltage 240 HP	Skies SUNNY	Gallons Purged 56 CVs Purged 3.1
Casing Capacity (Diameter 3") (gallons per foot) .4	Monitor Well Recharge Rate: Slow _____ Fast X		Wind (mph) 0-5 From W	DTW (ft brp) 128.43 Time 1312

Time	Depth to Water	Volume Purged (Gallons)	Casing Volumes Purged	...FIELD PARAMETERS...						Pump Frequency Hz	COMMENTS
				Temp. (°)	pH	EC (S/cm)	O.R.P. (mV)	D.O. (mg/L)	Turbidity (NTU)		
1255	START										
1257	216.4	11.2		21.50	8.07	0.700	44.6	0.37	1.42		~5.6 ± 130.18
1259	130.20	22.4		21.19	8.67	0.703	-257	0.28	2.61		
1301	130.19	33.6		21.34	8.03	0.687	-188	0.38	2.86		
1303	130.19	44.8		21.54	7.88	0.683	-163	0.51	0.71		
1305	130.20	56		21.57	7.86	0.681	-151	0.53	0.4		
1307	END										

SAMPLE COLLECTION SAMPLE TIME	1305	
ANALYSIS	QUANTITY	TYPE
8260B VOCs	3	40 ml VOA
8270 SIM 1,4 dioxane	1	1 L Amber
8270 MOD 1,4 dioxane		1 L Amber
DUPLICATES / SPLITS / BLANKS?	Y	(N)

AIR MONITORING PID/FID ppm: VAULT NA BKGD NA BREATHING ZONE NA DISCHARGE WATER NA

NOTES (Color, odor, sand and silt content, factors possibly affecting samples, condition of vault, wellhead, sampling apparatus, etc.)

GROUNDWATER SAMPLING INFORMATION

DATE: 11/6/12

TASK: 532.30

WELL ID: MW-30B

Time 1315	Static DTW (ft below reference point) 123.67	Casing Volume (CV) (gallons) 38	3 CV (gallons) 115	Weather Conditions		Initials <u>AMB & DM</u>
Casing Total Depth (ft below reference point) 796	Purging Device <u>DEP PUMP</u>	Sampling Device <u>DEP PIPE</u>	Time 1314	Temp. 90°	Begin Purge _____ End Purge _____	
Water Column (feet) 872.3	Pump: Depth (ft brp) _____ Type <u>Grundfos</u>	Voltage <u>200</u> HP	Skies <u>partly</u>	Gallons Purged _____ CVs Purged _____		
Casing Capacity (Diameter ") (gallons per foot) .4	Monitor Well Recharge Rate: Slow _____ Fast <u>X</u>	Wind (mph) <u>0-5</u> From <u>W</u>	DTW (ft brp) <u>128.03</u>	Time <u>1355</u>		

Time	Depth to Water	Volume Purged (Gallons)	Casing Volumes Purged	...FIELD PARAMETERS...						Pump Frequency Hz	COMMENTS
				Temp. (°)	pH	EC (S/cm)	O.R.P. (mV)	D.O. (mg/L)	Turbidity (NTU)		
1320		START									
1324	138.95	21.2		21.21	7.61	1.342	-56	0.94	8.8		~5.36PM ~ 5.4
1328	141.82	42.4		21.55	7.65	1.449	-139	3.97	4.3		
1332	143.12	63		21.61	7.76	1.079	-131	2.68	40.4		
1336	143.59	85		21.64	7.76	1.051	-126	2.52	19.1		~ 5.36PM
1340	144.37	106		21.68	7.75	1.059	-122	2.57	9.7		
1343	143.59	121		21.69	7.74	1.069	-115	2.58	6.6		~5.36PM
1347		END									

SAMPLE COLLECTION SAMPLE TIME 1343

ANALYSIS	QUANTITY	TYPE
8260B VOCs	<u>3</u>	40 ml VOA
8270 SIM 1,4 dioxane	<u>1</u>	1 L Amber
8270 MOD 1,4 dioxane		1 L Amber

DUPLICATES / SPLITS / BLANKS? Y (N)

If yes, complete appropriate forms.

AIR MONITORING PID/FID ppm: VAULT NA BKGD NA BREATHING ZONE NA DISCHARGE WATER NA

NOTES (Color, odor, sand and silt content, factors possibly affecting samples, condition of vault, wellhead, sampling apparatus, etc.)

LIGHT ODOR (rotten egg)

GROUNDWATER SAMPLING INFORMATION

DATE: 11/6/12

TASK: 532.30

WELL ID: MW-31

Time 1135	Static DTW (ft below reference point) 117.79	Casing Volume (CV) (gallons) 79.4	3 CV (gallons) 238	Weather Conditions		Initials AMB & DM	
Casing Total Depth (ft below reference point) 99.6		Purging Device <u>DD Pump</u>	Sampling Device <u>DD Pipe Stand</u>	Time 1137	Temp. 85°	Begin Purge 1143	End Purge 1207
Water Column (feet) 5.4		Pump: Depth (ft brp) 99.2	Type <u>Grundfos</u>	Skies <u>SUNNY</u>		Gallons Purged <u>264</u>	CVs Purged <u>3.3</u>
Casing Capacity (Diameter ") (gallons per foot) 1.5		Monitor Well Recharge Rate: Slow	Fast <u>X</u>	Wind (mph) <u>0-5</u>	From <u>NW</u>	DTW (ft brp) <u>118.38</u>	Time <u>1215</u>

Time	Depth to Water	Volume Purged (Gallons)	Casing Volumes Purged	...FIELD PARAMETERS...						Pump Frequency Hz	COMMENTS
				Temp. (°C)	pH	EC (S/cm)	O.R.P. (mV)	D.O. (mg/L)	Turbidity (NTU)		
1143		START	PURGE								
1145	120.08	24		21.08	7.75	0.804	108.8	0.36	1.4		~ 12 GPM
1149	120.06	72		21.26	9.22	1.299	-73	0.70	118		~ 12 GPM
1153	120.07	120		21.37	7.28	1.165	70	0.67	93.1		
1157	120.08	168		21.39	7.27	1.062	36.4	0.70	45.3		
1201	120.08	216		21.40	7.51	0.996	14.2	0.72	19.9		
1205	120.10	264		21.40	7.65	0.995	0.9	0.75	9.2		
1207		END									

SAMPLE COLLECTION SAMPLE TIME	1205
ANALYSIS	QUANTITY
8260B VOCs	3
8270 SIM 1,4 dioxane	1
8270 MOD 1,4 dioxane	1
DUPLICATES / SPLITS / BLANKS?	Y

AIR MONITORING PID/FID ppm: VAULT NA	BKGD NA	BREATHING ZONE NA	DISCHARGE WATER NA
NOTES (Color, odor, sand and silt content, factors possibly affecting samples, condition of vault, wellhead, sampling apparatus, etc.)			

GROUNDWATER SAMPLING INFORMATION

DATE: 1/7 / 2012

TASK: 532.30

WELL ID: MW-32B

Time 8:34 Static DTW (ft below reference point) 393.78	Casing Volume (CV) (gallons) 203.4 3 CV (gallons) 790.2	Weather Conditions	Initials AMB & DM EHS/ASIF
Casing Total Depth (ft below reference point) 999	Purging Device Ded pump Sampling Device 10' 100' Jet pipe	Time 8:35 Temp. 63°F	Begin Purge 8:51 End Purge 10:17
Screen to Pump Water Column (feet) 439	Pump: Depth (ft brp) 5100 Type groundwater Voltage 240 HP	Skies Overcast	Gallons Purged 831 CVs Purged
Casing Capacity (Diameter 4") (gallons per foot) 0.60	Monitor Well Recharge Rate: Slow Fast X	Wind (mph) 0 From N/A	DTW (ft brp) 101.2 Time 10:17

Time	Depth to Water	Volume Purged (Gallons)	Casing Volumes Purged	...FIELD PARAMETERS...						Pump Frequency Hz	COMMENTS
				Temp. (°C)	pH	EC (µS/cm)	O.R.P. (mV)	D.O. (mg/L)	Turbidity (NTU)		
8:47	PUMP ON										
8:52	110.41	9.7	0.04	20.79	7.30	0.893	-113.7	3.60	4.5	10 gpm	
9:04	110.0	125	0.47	20.90	7.50	0.872	-108.4	0.29	17	9.6 gpm	
9:17	110.24	248	0.94	21.19	7.59	0.897	-103.5	0.20	3.8	9.0 gpm	
9:31	110.49	387	1.47	21.32	7.57	0.929	-86.1	0.20	3.6	9.7 gpm	
9:45	110.69	521	1.98	21.20	7.59	0.915	-85.6	0.27	2.9	9.71 gpm	
9:59	110.78	655	2.49	21.38	7.60	0.907	-80.4	0.28	4.5	9.7 gpm	
10:10	110.98	8.20	3.11	21.39	7.61	0.902	-87.1	0.28	1.0	9.6 gpm	
10:17	PUMP OFF										

SAMPLE COLLECTION SAMPLE TIME 1017

ANALYSIS	QUANTITY	TYPE
8260B VOCs	3	40 ml VOA
8270 SIM 1,4 dioxane	1	1 L Amber
8270-MOD 1,4 dioxane		1 L Amber

DUPLICATES / SPLITS / BLANKS? Y (N)

AIR MONITORING PID/FID ppm: VAULT NA BKGD NA BREATHING ZONE NA DISCHARGE WATER NA

NOTES (Color, odor, sand and silt content, factors possibly affecting samples, condition of vault, wellhead, sampling apparatus, etc.)

Transducer removed during sampling (8:50)

10:25 → transducer replaced

GROUNDWATER SAMPLING INFORMATION

DATE 11/6/12

TASK: 532.30

WELL ID: MW-34A

Time <u>1630</u> Static DTW (ft below reference point) <u>146.29</u>	Casing Volume (CV) (gallons) <u>46</u> 3 CV (gallons) <u>137</u>	Weather Conditions
Casing Total Depth (ft below reference point) <u>280</u>	Purging Device <u>DED Pump</u> Sampling Device <u>DED PIPE</u>	Time <u>1629</u> Temp. <u>82°</u>
Water Column (feet) <u>133.71</u>	Pump: Depth (ft brp) _____ Type <u>Grundfos</u> Voltage <u>240</u> HP _____	Skies <u>sunny</u>
Casing Capacity (Diameter ") (gallons per foot) <u>16</u>	Monitor Well Recharge Rate: Slow _____ Fast <u>X</u>	Wind (mph) <u>05</u> From <u>NW</u>
		Initials <u>AMB & DM</u>
		Begin Purge <u>1635</u> End Purge <u>1648</u>
		Gallons Purged <u>148</u> CVs Purged <u>52</u>
		DTW (ft brp) <u>NM</u> Time <u>NM</u>

Time	Depth to Water	Volume Purged (Gallons)	Casing Volumes Purged	...FIELD PARAMETERS...						Pump Frequency Hz	COMMENTS
				Temp. (°)	pH	EC (S/cm)	O.R.P. (mV)	D.O. (mg/L)	Turbidity (NTU)		
<u>1635</u>			<u>START</u>								
<u>1637</u>	<u>148.18</u>	<u>27</u>	<u>2139</u>	<u>21.39</u>	<u>7.49</u>	<u>1.236</u>	<u>-214</u>	<u>1.51</u>	<u>26.6</u>		<u>~13.5 GPM</u>
<u>1639</u>	<u>148.25</u>	<u>54</u>		<u>21.51</u>	<u>7.46</u>	<u>1.303</u>	<u>-165</u>	<u>3.84</u>	<u>167</u>		
<u>1641</u>	<u>148.34</u>	<u>81</u>		<u>21.55</u>	<u>7.40</u>	<u>1.306</u>	<u>-139</u>	<u>3.74</u>	<u>45.9</u>		<u>~13.5 GPM</u>
<u>1643</u>	<u>148.34</u>	<u>108</u>		<u>21.56</u>	<u>7.41</u>	<u>1.301</u>	<u>-134</u>	<u>3.88</u>	<u>49.6</u>		
<u>1646</u>	<u>148.33</u>	<u>148</u>		<u>21.56</u>	<u>7.43</u>	<u>1.301</u>	<u>-136</u>	<u>3.89</u>	<u>25.6</u>		
<u>1648</u>	<u>END</u>										

SAMPLE COLLECTION	SAMPLE TIME <u>1646</u>
ANALYSIS	QUANTITY
<u>8260B VOCs</u>	<u>3</u> 40 ml VOA
<u>8270 SIM 1,4 dioxane</u>	<u>1</u> 1 L Amber
<u>8270 MOD 1,4 dioxane</u>	<u>1</u> 1 L Amber
DUPLICATES / SPLITS / BLANKS?	Y N

AIR MONITORING PID/FID ppm: VAULT NA BKGD NA BREATHING ZONE NA DISCHARGE WATER NA

NOTES (Color, odor, sand and silt content, factors possibly affecting samples, condition of vault, wellhead, sampling apparatus, etc.)

STRONG ODOUR

GROUNDWATER SAMPLING INFORMATION

DATE: 11/17/12

TASK: 532.30

WELL ID: 11W-34B

Time <u>1325</u> Static DTW (ft below reference point) <u>154.15</u>	Casing Volume (CV) (gallons) <u>46</u> 3 CV (gallons) <u>137</u>	Weather Conditions	Initials AMB & DM
Casing Total Depth (ft below reference point) <u>996</u>	Purging Device <u>DED Pump</u> Sampling Device <u>DED PIPE</u>	Time <u>1320</u> Temp. <u>80</u>	Begin Purge <u>1333</u> End Purge <u>1350</u>
Water Column (feet) <u>841.9</u>	Pump: Depth (ft bsp) <u>480'</u> Type <u>Cam</u> Voltage <u>HP</u>	Skies <u>sunny</u>	Gallons Purged <u>140</u> CVs Purged <u>3</u>
Casing Capacity (Diameter <u>3</u> ") (gallons per foot) <u>14</u>	Monitor Well Recharge Rate: Slow _____ Fast <u>X</u>	Wind (mph) <u>0-5</u> From <u>w</u>	DTW (ft bsp) <u>nm</u> Time <u>-</u>

Time	Depth to Water	Volume Purged (Gallons)	Casing Volumes Purged	...FIELD PARAMETERS...						Pump Frequency Hz	COMMENTS
				Temp. (°)	pH	EC (S/cm)	O.R.P. (mV)	D.O. (mg/L)	Turbidity (NTU)		
<u>1333</u>		<u>START</u>									
<u>1335</u>	<u>155.95</u>	<u>28</u>		<u>21.29</u>	<u>7.78</u>	<u>1.104</u>	<u>-20</u>	<u>2.53</u>	<u>40</u>		<u>~146 PM</u>
<u>1337</u>	<u>155.98</u>	<u>56</u>		<u>21.58</u>	<u>7.73</u>	<u>1.051</u>	<u>-237</u>	<u>2.91</u>	<u>35</u>		
<u>1339</u>	<u>156.06</u>	<u>84</u>		<u>21.80</u>	<u>7.80</u>	<u>1.090</u>	<u>-189</u>	<u>4.72</u>	<u>498</u>		
<u>1341</u>	<u>156.09</u>	<u>112</u>		<u>21.89</u>	<u>7.73</u>	<u>1.088</u>	<u>-149</u>	<u>4.75</u>	<u>79.4</u>		
<u>1343</u>	<u>156.10</u>	<u>140</u>		<u>21.91</u>	<u>7.68</u>	<u>1.087</u>	<u>-136</u>	<u>4.80</u>	<u>33.1</u>		
<u>1350</u>		<u>END</u>									

SAMPLE COLLECTION SAMPLE TIME <u>1343</u>	AIR MONITORING PID/FID ppm: VAULT NA BKGD NA BREATHING ZONE NA DISCHARGE WATER NA
ANALYSIS QUANTITY TYPE	NOTES (Color, odor, sand and silt content, factors possibly affecting samples, condition of vault, wellhead, sampling apparatus, etc.)
<u>8260B VOCs</u> <u>312</u> 40 ml VOA	<u>STRONG ODOR</u>
<u>8270 SIM 1,4 dioxane</u> 1 L Amber	<u>SPLIT 11W-34B @ 1345</u>
<u>8270 MOD 1,4 dioxane</u> <u>14</u> 1 L Amber	<u>MS/MS ID</u>
DUPLICATES / SPLITS / BLANKS? <u>(Y)</u> N	
If yes, complete appropriate forms.	

GROUNDWATER SAMPLING INFORMATION

DATE: 11/6/12

TASK: 532.30

WELL ID: MW-34C

Time <u>1542</u> Static DTW (ft below reference point) <u>152.12</u>	Casing Volume (CV) (gallons) <u>57.7</u> 3 CV (gallons) <u>173</u>	Weather Conditions	Initials <u>AMB & DM</u>
Casing Total Depth (ft below reference point) <u>576</u>	Purging Device <u>DD Pump</u> Sampling Device <u>DD PIPE</u>	Time <u>1540</u> Temp. <u>60°</u>	Begin Purge <u>1545</u> End Purge <u>1600</u>
Water Column (feet) <u>423.7</u>	Pump: Depth (ft brp) _____ Type _____ Voltage _____ HP _____	Skies <u>Sunny</u>	Gallons Purged <u>182</u> CVs Purged <u>3.1</u>
Casing Capacity (Diameter <u>4"</u>) (gallons per foot) <u>.6</u>	Monitor Well Recharge Rate: Slow _____ Fast _____	Wind (mph) <u>0-5</u> From <u>W</u>	DTW (ft brp) <u>156.51</u> Time <u>1602</u>

Time	Depth to Water	Volume Purged (Gallons)	Casing Volumes Purged	...FIELD PARAMETERS...						Pump Frequency Hz	COMMENTS
				Temp. (°)	pH	EC (S/cm)	O.R.P. (mV)	D.O. (mg/L)	Turbidity (NTU)		
1545	START										
1547	UTM	28		21.69	8.15	0.579	-260	0.25	1.1		~ 14 GPM
1549		56		21.87	8.12	0.573	-261	0.16	3.7		
1551		84		21.89	8.13	0.572	-269	0.15	21.7		
1553		112		21.93	8.15	0.572	-260	0.14	29		~ 14 GPM
1555		140		21.96	8.18	0.570	-255	0.13	21		
1558		182		22.01	8.22	0.565	-249	0.11	35.9		
1600	END										

SAMPLE COLLECTION SAMPLE TIME <u>1558</u>	AIR MONITORING PID/FID ppm: VAULT NA	BKGD NA	BREATHING ZONE NA	DISCHARGE WATER NA
ANALYSIS QUANTITY TYPE	NOTES (Color, odor, sand and silt content, factors possibly affecting samples, condition of vault, wellhead, sampling apparatus, etc.)			
8260B VOCs <u>3</u> 40 ml VOA	<u>STRONG ODOUR (EGC)</u>			
8270 SIM 1.4 dioxane <u>1</u> 1 L Amber				
8270 MOD 1.4 dioxane <u>1</u> 1 L Amber				
DUPLICATES / SPLITS / BLANKS? Y <u>(N)</u>	if yes, complete appropriate forms.			

GROUNDWATER SAMPLING INFORMATION

DATE: 11/10/2012

TASK: 532.30

WELL ID: MW-35A

Time: 10:00	Static DTW (ft below reference point)	77.05	Screen SV	Casing Volume (CV) (gallons)	42	3 CV (gallons)	120	Weather Conditions	Initials: AMB & DM - EJT & ASF
Casing Total Depth (ft below reference point)	470	Purging Device	dedicated pump	Sampling Device	ded. ND	Time	9:30	Temp.	73°F
Water Column (feet)	70	Pump: Depth (ft brp)	400	Type	groundos	Skies	sunny & clear	Begin Purge	10:02
Casing Capacity (Diameter ") (gallons per foot)	0.60	Monitor Well Recharge Rate: Slow		Fast	X	Gallons Purged	160	CVs Purged	3.8
						DTW (ft brp)	81.80	Time	10:35

Time	Depth to Water	Volume Purged (Gallons)	Casing Volumes Purged	FIELD PARAMETERS....						Pump Frequency Hz	COMMENTS
				Temp. (C)	pH	EC (µS/cm)	O.R.P. (mV)	D.O. (mg/L)	Turbidity (NTU)		
10:02											
10:05		22	0.523	20.15	7.80	0.907	58.8	2.12	3.1	9.7 gpm	DTW not measured
10:08	129.01	37	0.88	20.33	7.48	0.905	-132.7	1.20	3.5	9.3 gpm	
10:11	139.15	72	1.71	20.39	7.43	0.904	-124.2	1.08	3.3	9.1 gpm	
10:14	140.40	99	2.36	20.41	7.41	0.901	-114.4	1.55	2.43	9.0 gpm	
10:17	151.40	130	3.24	20.44	7.37	0.909	-107.3	1.13	5.4	8.93 gpm	
10:20	154.42	160	3.81	20.45	7.30	0.917	-101.5	1.05	8.4	8.9 gpm	
10:25											

SAMPLE COLLECTION SAMPLE TIME	10:25	AIR MONITORING PID/FID ppm:	VAULT NA	BKGD NA	BREATHING ZONE NA	DISCHARGE WATER NA
ANALYSIS	QUANTITY	TYPE	NOTES (Color, odor, sand and silt content, factors possibly affecting samples, condition of vault, wellhead, sampling apparatus, etc.)			
8260B VOCs	3	40 ml VOA	Sulfur odor coming from well.			
8270 SIM 1,4 dioxane	1	1 L Amber	transducer removed during sampling			
8270 MOD 1,4 dioxane		1 L Amber				
DUPLICATES / SPLITS / BLANKS?	Y	(N)				

MS/MSD collected

GROUNDWATER SAMPLING INFORMATION

DATE: 1/20/12

TASK: 532.30

WELL ID: MW-3513

Time: 10:29	Static DTW (ft below reference point) 85.97	Casing Volume (CV) (gallons) 207	3 CV (gallons) 621	Weather Conditions		Initials AMB & DM EST/ASF
Casing Total Depth (ft below reference point) 805	Purging Device Ded. pump	Sampling Device Ded. pipe	Temp. 73°F	Time 10:29	Begin Purge 10:42	End Purge 11:36
Water Column (feet) 345	Pump: Depth (ft brp) 410	Type Grundfos	Voltage 240	HP	Skies Sunny/clear	Gallons Purged 654
Casing Capacity (Diameter 4") (gallons per foot) 0.60	Monitor Well Recharge Rate: Slow	Fast X	Wind (mph) 0	From	DTW (ft brp) 87.31	Time 11:37

Time	Depth to Water	Volume Purged (Gallons)	Casing Volumes Purged	...FIELD PARAMETERS...						Pump Frequency Hz	COMMENTS
				Temp. (°C)	pH	EC (µS/cm)	O.R.P. (mV)	D.O. (mg/L)	Turbidity (NTU)		
10:42	PUMP ON										
10:48	89.21	55	0.27	20.44	7.40	0.890	-145.7	0.50	2.2		12.3 gpm
10:57	89.33	100	0.77	20.01	7.60	0.657	-85.7	0.27	2.0		13.4 gpm 12.4 gpm
11:00	89.35	211	1.31	20.05	7.43	0.908	-42.0	2.02	2.8		12.4 gpm
11:05	89.37	380	1.84	20.08	7.41	1.004	-17.5	2.05	5.4		12.5 gpm
11:24	89.40	494	2.39	20.09	7.40	1.018	-10.4	2.04	8.4		12.5 gpm
11:33	89.41	610	3.00	20.09	7.39	1.026	-4.6	2.04	1.3		12.5 gpm
11:36	-	654	3.16	-	-	Pump off	-	-	-		

SAMPLE COLLECTION SAMPLE TIME 1135	AIR MONITORING PID/FID ppm: VAULT NA	BKGD NA	BREATHING ZONE NA	DISCHARGE WATER NA
ANALYSIS QUANTITY TYPE	NOTES (Color, odor, sand and silt content, factors possibly affecting samples, condition of vault, wellhead, sampling apparatus, etc.)			
8260B VOCs 3 40 ml VOA	Sulfur odor present coming from well			
8270 SIM 1,4 dioxane 1 1 L Amber				
8270 MOD 1,4 dioxane 1 1 L Amber				
DUPLICATES / SPLITS / BLANKS? Y (N)	If yes, complete appropriate forms.			

GROUNDWATER SAMPLING INFORMATION

DATE: 1/10/12

TASK: 532.30

WELL ID: MW-35C

Time 11:42 Static DTW (ft below reference point) 94.85	Screen SV	Casing Volume (CV) (gallons) 348	3 CV (gallons) 1044	Weather Conditions	Initials: AWB & DW ESH/AGF
Casing Total Depth (ft below reference point) 990	Purging Device Dedicated Pump	Sampling Device ND pipe start	Time 11:43 Temp. 73°F	Begin Purge 11:52	End Purge 13:17
Water Column (feet) 580	Pump: Depth (ft brp) 1040	Type groundfos	Voltage 240 HP	Skies Sunny/clear	Gallons Purged 1070
Casing Capacity (Diameter 4") (gallons per foot) 0.40	Monitor Well Recharge Rate: Slow	Fast X	Wind (mph) 8	From -	CVs Purged 313
					DTW (ft brp) 94.98
					Time 13:17

Time	Depth to Water	Volume Purged (Gallons)	Casing Volumes Purged	...FIELD PARAMETERS...						Pump Frequency Hz	COMMENTS
				Temp. (°C)	pH	EC (S/cm)	O.R.P. (mV)	D.O. (mg/L)	Turbidity (NTU)		
11:52	1 - Pump ON										
12:02	96.90	45	0.13	20.42	7.38	0.905	20.4	2.42	3.5		12.34 gpm
12:04	97.11	148	0.43	20.59	7.34	0.90	23	1.01	1.0		12.4 gpm
12:18	97.07	307	0.88	20.72	7.33	0.878	23.5	1.57	1.1		12.4 gpm
12:34	97.08	513	1.47	20.77	7.40	0.710	23.1	3.30	7.3		12.5 gpm
12:50	97.09	712	2.05	20.75	7.47	0.715	27.5	3.33	11		12.5 gpm
13:05	97.08	897	2.57	20.70	7.47	0.710	-1.3	3.32	2.9		12.5 gpm
13:17	97.09	1055	3.03	20.70	7.47	0.717	-20.0	3.31	1.8		12.5 gpm
13:19	1 - PUMP OFF										

SAMPLE COLLECTION SAMPLE TIME 13:18

ANALYSIS	QUANTITY	TYPE
8260B VOCs	3	40 ml VOA
8270 SIM 1,4 dioxane	1	1 L Amber
8270-MGD 1,4 dioxane		1 L Amber

DUPLICATES / SPLITS / BLANKS? Y N

AIR MONITORING PID/FID ppm: VAULT NA BKGD NA BREATHING ZONE NA DISCHARGE WATER NA

NOTES (Color, odor, sand and silt content, factors possibly affecting samples, condition of vault, wellhead, sampling apparatus, etc.)

GROUNDWATER SAMPLING INFORMATION

DATE: 1/7/12

TASK: 532.30

WELL ID: MW-36

Time: 14:27	Static DTW (ft below reference point) 95.55	Screen	Casing Volume (CV) (gallons) 320	3 CV (gallons) 960	Weather Conditions	Initials: AMB & DM ESH/ASF
Casing Total Depth (ft below reference point) 994.3	Water Column (feet) 553.3	Purging Device: Ded pump	Sampling Device: Ded 10-100 pipe	Time: 14:28	Temp:	Begin Purge: 14:35
Casing Capacity (Diameter 4") (gallons per foot) 0.60	Monitor Well Recharge Rate: Slow	Pump: Depth (ft brp) 1100	Type: ground DS	Voltage: 240	HP:	End Purge: 16:04
						Gallons Purged: 960
						CVs Purged: 300
						DTW (ft brp): 90.00
						Time: 16:04

Time	Depth to Water	Volume Purged (Gallons)	Casing Volumes Purged	...FIELD PARAMETERS...						Pump Frequency Hz	COMMENTS
				Temp. (°C)	pH	EC (µS/cm)	O.R.P. (mV)	D.O. (mg/L)	Turbidity (NTU)		
14:35	PUMP ON										
14:36	97.71	20	0.04	20.71	8.20	0.556	4.8	2.02	21		10.5 gpm
14:50	97.97	160	0.50	21.10	7.71	0.541	-86.7	0.35	NM		10.7 gpm
15:04	98.08	317	1.00	21.72	7.80	0.480	-83.5	0.32	1.5		10.7 gpm
15:18	98.10	455	1.42	21.80	7.74	0.545	-71.4	0.31	1.1		10.8 gpm
15:32	98.15	608	1.90	21.83	7.74	0.509	-67.1	0.30	0.40		10.8 gpm
15:47	98.15	777	2.43	21.84	7.72	0.574	-65.9	0.30	0.90		10.7 gpm
16:04	98.19	960	3.00	21.85	7.71	0.576	-66.1	0.30	0.00		10.6 gpm
16:04	PUMP OFF										

SAMPLE COLLECTION SAMPLE TIME: 16:05

ANALYSIS	QUANTITY	TYPE
6260B VOCs	0	40 ml VOA
8270 SIM 1,4 dioxane	2	1 L Amber
8270 MOD 1,4 dioxane		1 L Amber

DUPLICATES / SPLITS / BLANKS? (Y) Y D.W. N

AIR MONITORING PID/FID ppm: VAULT NA BKGD NA BREATHING ZONE NA DISCHARGE WATER NA

NOTES (Color, odor, sand and silt content, factors possibly affecting samples, condition of vault, wellhead, sampling apparatus, etc.)

Duplicate Sample MW-3600 (1500)

GROUNDWATER SAMPLING INFORMATION

DATE 1/7/12

TASK: 532.30

WELL ID: MW-37

Time 11:11	Static DTW (ft below reference point) 142.10	Casing Volume (CV) (gallons) 168	3 CV (gallons) 504	Weather Conditions		Initials AMB & DM AOP & EJA
Casing Total Depth (ft below reference point) 800	Purging Device ded. pump	Sampling Device ded. sample	Time 11:20	Temp. 72	Begin Purge 11:20	End Purge 12:05
Water Column (feet) 677.9	Pump: Depth (ft brp) 520	Type Grundfos	Voltage 230	HP 1.5	Skies Sunny	Gallons Purged 1032
Casing Capacity (Diameter ") (gallons per foot) 0.6	Monitor Well Recharge Rate: Slow	Fast	X	Wind (mph) 0	From 0	DTW (ft brp) 142.95
						Time 12:05

Time	Depth to Water	Volume Purged (Gallons)	Casing Volumes Purged	...FIELD PARAMETERS....						Pump Frequency Hz	COMMENTS
				Temp. (C)	pH	EC (µS/cm)	O.R.P. (mV)	D.O. (mg/L)	Turbidity (NTU)		
11:20	142.10										
11:22	145.80	20	0.12	22.83	7.81	0.615	-6.0	1.50	7.9		13.8 gpm
11:28	146.24	107	0.04	23.27	8.18	0.542	-4.0	0.31	55		13.9 gpm
11:34	136.60	193	1.15	23.30	8.14	0.385	-5.5	0.27	65		14 gpm
11:40	145.90	275	1.04	23.31	8.20	0.411	-7.4	0.2	>1000		dirty, brown H ₂ O 14 gpm
11:46	145.95	300	2.18	23.30	8.13	0.446	-7.8	0.25	>1000		14 gpm
11:52	145.80	440	2.02	23.31	8.07	0.470	-7.1	0.27	450		14.1 gpm
11:58	145.75	523	3.11	23.29	8.03	0.487	-9.1	0.29	180		14.1 gpm
12:01	145.70	507	3.43	23.30	8.01	0.495	-9.7	0.30	140		14.1 gpm
12:05											130+

SAMPLE COLLECTION SAMPLE TIME 12:02

ANALYSIS	QUANTITY	TYPE
8260B VOCs	9	40 ml VOA
8270 SIM 1,4 dioxane	2	1 L Amber
8270 MOD 1,4 dioxane	1	1 L Amber

DUPLICATES / SPLITS / BLANKS?
 If yes, complete appropriate forms.
 DUP & SPLIT

AIR MONITORING PID/FID ppm: VAULT NA BKGD NA BREATHING ZONE NA DISCHARGE WATER NA

NOTES (Color, odor, sand and silt content, factors possibly affecting samples, condition of vault, wellhead, sampling apparatus, etc.)

Duplicate Sample MW-37(0) (13:00)
 Split sample sent to CalScience MW-37 (12:02)

GROUNDWATER SAMPLING INFORMATION

DATE: 11/10/12

TASK: 532.30

WELL ID: MW-33

Time 15:00 Static DTW (ft below reference point) <u>90.90</u>	Casing Volume <u>290</u> (gallons) <u>3 CV</u> (gallons) <u>1020</u>	Weather Conditions	Initials <u>AMB & DM</u> <u>EJH/ASF</u>
Casing Total Depth (ft below reference point) <u>1020</u>	Purging Device <u>Deed Pump</u> Sampling Device <u>Deed Pipe Stand</u>	Time <u>15:33</u> Temp. <u>81°F</u>	Begin Purge <u>15:10</u> End Purge <u>16:32</u>
Water Column (feet) <u>483.4</u>	Pump: Depth (ft brp) <u>535</u> Type <u>grundyfos</u> Voltage <u>240</u> HP <u>10-100</u>	Skies <u>Sunny/Clear</u>	Gallons Purged <u>896</u> CVs Purged _____
Casing Capacity (Diameter <u>4"</u>) (gallons per foot) <u>0.00</u>	Monitor Well Recharge Rate: Slow _____ Fast <u>X</u>	Wind (mph) <u>0-2 mph</u> From <u>NW</u>	DTW (ft brp) <u>89.1</u> Time <u>16:32</u>

Time	Depth to Water	Volume Purged (Gallons)	Casing Volumes Purged	...FIELD PARAMETERS...						Pump Frequency Hz	COMMENTS
				Temp. (°)	pH	EC (S/cm)	O.R.P. (mV)	D.O. (mg/L)	Turbidity (NTU)		
15:10	← DUMP DN										
15:11	92.04	10	0.03	19.78	8.04	0.022	21.5	0.13	1.5		10.8 gpm
15:24	92.00	144	0.50	20.05	7.39	0.024	-82.0	0.35	1.2		10.9 gpm
15:37	91.01	280	0.99	20.90	7.58	0.054	-81.1	0.53	1.4		11.0 gpm
15:50	91.23	430	1.48	20.90	7.50	0.059	-89.4	1.11	1.4		11.1 gpm
16:03	90.91	580	2.00	20.98	7.58	0.000	-59.0	1.13	0.25		11.1 gpm
16:16	90.50	715	2.47	20.99	7.58	0.059	-50.5	1.14	1.0		11.2 gpm
16:29	90.26	873	3.01	21.00	7.58	0.000	-47.4	1.14	0.95		11.2 gpm
16:32	← PUMPS OFF										

SAMPLE COLLECTION ANALYSIS	SAMPLE TIME	QUANTITY	TYPE
8260B VOCs	16:30	3	40 ml VOA
8270 SIM 1,4 dioxane		1	1 L Amber
8270 MOB 1,4 dioxane			4 L Amber
DUPLICATES / SPLITS / BLANKS?	Y		(N)

AIR MONITORING PID/FID ppm: VAULT NA BKGD NA BREATHING ZONE NA DISCHARGE WATER NA
 NOTES (Color, odor, sand and silt content, factors possibly affecting samples, condition of vault, wellhead, sampling apparatus, etc.)

APPENDIX B
GROUNDWATER SAMPLING FIELD FORMS
(FIRST QUARTER 2013)

GROUNDWATER SAMPLING INFORMATION

DATE: 1/3/13

WELL ID: MW-30A

TASK: S32.30

Time <u>1007</u> Static DTW (ft below reference point)	<u>120.06</u>	<u>SCREEN</u> Casing-Volume (CV) (gallons) <u>17.6</u> 3 CV (gallons) <u>52.8</u>	Weather Conditions	Initials
Casing Total Depth (ft below reference point)	<u>564</u>	Purging Device <u>DED Pump</u> Sampling Device <u>DED PIPE</u>	Time <u>1043</u> Temp. <u>70°</u>	Begin Purge <u>1040</u> End Purge <u>1055</u>
Water Column (feet)	<u>443.94</u>	Pump: Depth (ft brp) _____ Type <u>CAVITYLESS</u> Voltage <u>240</u> HP	Skies <u>CLEAR</u>	Gallons Purged <u>83</u> CVs Purged <u>47</u>
Casing Capacity (Diameter <u>3</u> ") (gallons per foot)	<u>.4</u>	Monitor Well Recharge Rate: Slow _____ Fast _____	Wind (mph) <u>3-5</u> From <u>W</u>	DTW (ft brp) _____ Time _____

Time	Depth to Water	Volume Purged (Gallons)	Casing Volumes Purged	...FIELD PARAMETERS...						Pump Frequency Hz	COMMENTS
				Temp. (°C)	pH	EC (S/cm)	O.R.P. (mV)	D.O. (mg/L)	Turbidity (NTU)		
1040	START									~ 5.6 GPM	
1042	121.81	11.2		21.18	7.18	0.602	103.1	1.23	1.69		
1044	121.79	22.4		21.26	7.68	0.604	-178.2	0.71	4.58	~ 5.6 GPM	
1046	121.77	33.6		21.46	7.59	0.605	-123	0.70	3.27		
1048	121.78	44.8		21.48	7.57	0.604	-96.4	0.69	2.07		
1050	121.76	55.0		21.49	7.57	0.603	-89.2	0.70	3.1		
1055	END										

SAMPLE COLLECTION SAMPLE TIME <u>1050</u>	AIR MONITORING PID/FID ppm: VAULT _____ BKGD _____ BREATHING ZONE _____ DISCHARGE WATER _____
ANALYSIS _____ QUANTITY _____ TYPE _____	NOTES (Color, odor, sand and silt content, factors possibly affecting samples, condition of vault, wellhead, sampling apparatus, etc.)

- 8260B VOC's; 3; 40 mL VOA's
- 8270 (SIM) 1,4-Dioxane; 1; 1 L Amber
- Surfactants by SM5540C; Bicarbonate only by SM2320B; 1; 500 mL Poly
- Diss. Metals by EPA 6010p; Diss. Na by EPA 7770; Diss. K by EPA 7610; 1; 500 mL Poly
- Ions by EPA 300.0; SC by EPA 120.1; TDS by SM2540C; pH by SM4500 H+B; 1; 1 L Poly
- Total Hardness by SM2340B; Total Metals Cu/Fe/Mn/Zn by EPA 6010B; 1; 500 mL Poly
- Ammonia by SM4500-NH3; 1; 250 mL Poly

GROUNDWATER SAMPLING INFORMATION

DATE: 1/3/2013

WELL ID: MW-30B

TASK: 53230

Time <u>1116</u> Static DTW (ft below reference point) <u>115.49</u>	<u>SCREEN</u> Casing-Volume (CV) (gallons) <u>38</u> 3 CV (gallons) <u>115</u>	Weather Conditions	Initials <u>DM</u>
Casing Total Depth (ft below reference point) <u>996</u>	Purging Device <u>Dead pump</u> Sampling Device <u>Dead pipe</u>	Time _____ Temp. _____	Begin Purge <u>1120</u> End Purge <u>1140</u>
Water Column (feet) <u>872.3</u>	Pump: Depth (ft brp) _____ Type <u>groundfos</u> Voltage <u>240</u> HP	Skies _____	Gallons Purged <u>140.4</u> CVs Purged <u>3.7</u>
Casing Capacity (Diameter <u>3</u> ") (gallons per foot) <u>.4</u>	Monitor Well Recharge Rate: Slow _____ Fast _____	Wind (mph) _____ From _____	DTW (ft brp) _____ Time _____

Time	Depth to Water	Volume Purged (Gallons)	Casing Volumes Purged	...FIELD PARAMETERS...						Pump Frequency Hz	COMMENTS
				Temp. (°)	pH	EC (S/cm)	O.R.P. (mV)	D.O. (mg/L)	Turbidity (NTU)		
1120		START		~ 10m					1.80m		~ 5.4 GPM
1124	132.02	21.6		21.12	7.40	0.998	42.3	0.49	1.6		~ 5.4 GPM
1128	134.02	43.2		21.43	7.27	1.345	60.6	4.08	3.1		
1132	135.58	64.8		21.50	7.36	1.055	40.8	3.26	21.5		
1136	136.14	86.4		21.54	7.38	0.993	35.3	2.74	10.9		
1140	136.83	108		21.58	7.37	1.001	26.1	2.45	9.1		
1142	137.15	118.8		21.58	7.37	1.005	26.7	2.51	8.9		
1146		OFF									

- SAMPLE COLLECTION SAMPLE TIME 1142
- 8260B VOC's; 3; 40 mL VOA's
 - 8270 (SIM) 1,4-Dioxane; 1; 1 L Amber
 - Surfactants by SM5540C; Bicarbonate only by SM2320B; 1; 500 mL Poly
 - Diss. Metals by EPA 6010p; Diss. Na by EPA 7770; Diss. K by EPA 7610; 1; 500 mL Poly
 - Ions by EPA 300.0; SC by EPA 120.1; TDS by SM2540C; pH by SM4500 H+B; 1; 1 L Poly
 - Total Hardness by SM2340B; Total Metals Cu/Fe/Mn/Zn by EPA 6010B; 1; 500 mL Poly
 - Ammonia by SM4500-NH3; 1; 250 mL Poly

AIR MONITORING PID/FID ppm: VAULT _____ BKGD _____ BREATHING ZONE _____ DISCHARGE WATER _____

NOTES (Color, odor, sand and silt content, factors possibly affecting samples, condition of vault, wellhead, sampling apparatus, etc.)

GROUNDWATER SAMPLING INFORMATION

DATE: 1/3/13

WELL ID: MW-32B

TASK: 532.30

Time <u>12:45</u> Static DTW (ft below reference point) <u>82.51</u>	Screen <u>SV</u>	Casing Volume (CV) (gallons) <u>2103.4</u>	3 CV (gallons) <u>790.2</u>	Weather Conditions		Initials <u>ASF/ESH</u>
Casing Total Depth (ft below reference point) <u>999</u>	Purging Device <u>Ded. Pump</u>	Sampling Device <u>3" ID pipe</u>	Time <u>14:10</u> Temp. <u>73°F</u>	Begin Purge <u>13:03</u>	End Purge <u>14:35</u>	
Water Column (feet) <u>910.49</u>	Pump: Depth (ft brp) <u>500</u> Type <u>groundwater</u> Voltage <u>240</u> HP	Skies <u>Clear/Sunny</u>	Gallons Purged <u>840</u>	CVs Purged <u>3.19</u>		
Casing Capacity (Diameter ") (gallons per foot) <u>0.100</u>	Monitor Well Recharge Rate: Slow Fast <u>X</u>	Wind (mph) <u>0</u> From <u>NA</u>	DTW (ft brp) <u>89.20</u>	Time <u>14:35</u>		

Time	Depth to Water	Volume Purged (Gallons)	Casing Volumes Purged	...FIELD PARAMETERS...						Pump Frequency Hz	COMMENTS
				Temp. (°C)	pH	EC (MS/cm)	O.R.P. (mV)	D.O. (mg/L)	Turbidity (NTU)		
<u>13:03</u>		<u>PUMP ON</u>									
<u>13:17</u>	<u>96.24</u>	<u>119</u>	<u>0.45</u>	<u>21.1°C</u>	<u>7.77</u>	<u>0.96</u>	<u>-179.5</u>	<u>0.41</u>	<u>12</u>		<u>9.3 gpm</u>
<u>13:32</u>	<u>96.50</u>	<u>204</u>	<u>1.00</u>	<u>21.4°C</u>	<u>7.85</u>	<u>0.79</u>	<u>-163.6</u>	<u>0.19</u>	<u>8.3</u>		<u>9.3 gpm</u>
<u>13:47</u>	<u>96.78</u>	<u>402</u>	<u>1.53</u>	<u>21.4°C</u>	<u>7.79</u>	<u>0.87</u>	<u>-138.4</u>	<u>0.61</u>	<u>0.75</u>		<u>9.3 gpm</u>
<u>14:00</u>	<u>96.89</u>	<u>531</u>	<u>2.02</u>	<u>21.5°C</u>	<u>7.79</u>	<u>0.88</u>	<u>-134.2</u>	<u>0.14</u>	<u>1.5</u>		<u>9.3 gpm</u>
<u>14:13</u>	<u>97.02</u>	<u>650</u>	<u>2.47</u>	<u>21.5°C</u>	<u>7.78</u>	<u>0.91</u>	<u>-133.1</u>	<u>0.13</u>	<u>Ø</u>		<u>9.3 gpm</u>
<u>14:30</u>	<u>97.18</u>	<u>809</u>	<u>3.07</u>	<u>21.5°C</u>	<u>7.77</u>	<u>0.92</u>	<u>-133.3</u>	<u>0.16</u>	<u>0.8</u>		<u>9.2 gpm</u>
<u>14:35</u>		<u>PUMP OFF</u>									
		<u>89.20</u>	<u>840</u>	<u>3.19</u>							
		<u>ASF</u>									
		<u>ASF</u>									

- SI 8260B VOC's; 3; 40 mL VOA's
- 8270 (SIM) 1,4-Dioxane; 1; 1 L Amber
- Surfactants by SM5540C; Bicarbonate only by SM2320B; 1; 500 mL Poly
- Diss. Metals by EPA 6010p; Diss. Na by EPA 7770; Diss. K by EPA 7610; 1; 500 mL Poly
- Ions by EPA 300.0; SC by EPA 120.1; TDS by SM2540C; pH by SM4500 H+B; 1; 1 L Poly
- Total Hardness by SM2340B; Total Metals Cu/Fe/Mn/Zn by EPA 6010B; 1; 500 mL Poly
- Ammonia by SM4500-NH3; 1; 250 mL Poly

AIR MONITORING PID/FID ppm: VAULT BKGD BREATHING ZONE DISCHARGE WATER

NOTES (Color, odor, sand and silt content, factors possibly affecting samples, condition of vault, wellhead, sampling apparatus, etc.)

GROUNDWATER SAMPLING INFORMATION

DATE: 1/3/13

WELL ID: ~~82~~ MW-32C

TASK: 532.30

Time: 9:14	Static DTW (ft below reference point)	24.05	Screen SV	Casing Volume (CV) (gallons) 318	3 CV (gallons) 954	Weather Conditions		Initials ASF/EIH					
Casing Total Depth (ft below reference point)	1090	Purging Device	Dev. pump	Sampling Device	ND Pipestand	Time	9:32	Temp. 20°C	Begin Purge 9:32	End Purge 12:24			
Water Column (feet)	105.95	Pump: Depth (ft brp)	530	Type	groundfoot	Voltage	240	HP	Gallons Purged	1106	CVs Purged	3.5	
Casing Capacity (Diameter 4") (gallons per foot)	0.00	Monitor Well Recharge Rate: Slow		Fast	X	Wind (mph)	15	From	N/A	DTW (ft brp)	134.00	Time	12:24

Time	Depth to Water (ft)	Volume Purged (Gallons)	Casing Volumes Purged	...FIELD PARAMETERS...						Pump Frequency Hz	COMMENTS	
				Temp. (°C)	pH	EC (µS/cm)	O.R.P. (mV)	D.O. (mg/L)	Turbidity (NTU)			
9:32											10.5 gpm	
9:43	153.75	89	0.28	20.9	8.07	0.514	-220.4	0.71	0.90		8.2 gpm	
9:53	173.3	109	0.53	21.0°C	8.10	0.514	-234.1	4.50	1.9		7.4 gpm	
10:13	191.21	307	0.97	21.3°C	8.17	0.514	-202.8	0.55	0.95		6.8 gpm	
10:43	191.00	500	1.57	21.0°C	8.19	0.519	-144.4	4.33	1.4		7.0 gpm	
11:03	205.14	638	2.01	21.0°C	8.17	0.520	-150.4	0.32	4.2		6.0 gpm	
11:23	207.43	770	2.42	21.7°C	8.17	0.521	-132.3	4.71	2.2		6.5 gpm	
11:43	208.90	894	2.81	21.7°C	8.17	0.521	-121.3	0.24	2.2		6.4 gpm	
12:07	209.88	1050	3.30	21.7°C	8.17	0.521	-115.6	3.02	4.3		6.4 gpm	
12:20	134.00											

SAMPLE COLLECTION SAMPLE TIME	12:07	AIR MONITORING PID/FID ppm:	VAULT	BKGD	BREATHING ZONE	DISCHARGE WATER
ANALYSIS	QUANTITY	TYPE	NOTES (Color, odor, sand and silt content, factors possibly affecting samples, condition of vault, wellhead, sampling apparatus, etc.)			
82.000	3	40ML VOA	MS & MSD			
69.10	1	1L Ammonia	→ DISS. METALS by EPA 6010; DISS. Na by EPA 7770; DISS. K by EPA 7010 = 1.29 min			
2.00	1	1.500ML Poly	IONS by EPA 300.0; Specific Conductance by EPA 120.1; TDS by SM2540C; pH by SM4500 HRS			
			↳ 1; 1L Poly/total hardness by SM2340B; total metals Cu/Pb/Mn/Zn by EPA 6010B; 1.500ML Ammonia by SM4500 NH3; 1; 250ML Poly			
DUPLICATES / SPLITS / BLANKS?	Y	(N)				

GROUNDWATER SAMPLING INFORMATION

DATE: 1/4/13 WELL ID: MV-33 TASK: 53230

Time <u>8:30</u> Static DTW (ft below reference point)	<u>75.02</u> ^{Screen} Casing Volume (CV) (gallons) <u>290</u> 3 CV (gallons) <u>873</u>	Weather Conditions	Initials <u>ASE/ESIT</u>
Casing Total Depth (ft below reference point)	<u>1020</u> Purging Device <u>ded pump</u> Sampling Device <u>ded pipe stand</u>	Time <u>8:50</u> Temp. <u>55°F</u>	Begin Purge <u>8:50</u> End Purge <u>10:12</u>
Water Column (feet)	<u>944.98</u> Pump: Depth (ft brp) <u>535</u> Type <u>ground</u> Voltage HP	Skies <u>Sunny/Clear</u>	Gallons Purged <u>922</u> CVs Purged
Casing Capacity (Diameter ") (gallons per foot)	<u>0.00</u> Monitor Well Recharge Rate: Slow Fast <u>X</u>	Wind (mph) <u>0</u> From <u>N/A</u>	DTW (ft brp) <u>70.99</u> Time <u>10:16</u>

Time	Depth to Water	Volume Purged (Gallons)	Casing Volumes Purged	...FIELD PARAMETERS...						Pump Frequency Hz	COMMENTS
				Temp. (°C)	pH	EC (S/cm)	O.R.P. (mV)	D.O. (mg/L)	Turbidity (NTU)		
8:50	—	PUMP	ON								120 gpm
9:03	70.91	144	0.50	20.6°C	7.72	0.73	-100.9	0.43	5.1		11.3 gpm
9:16	77.23	288	1.00	20.8°C	7.86	0.74	-114.0	0.26	Ø		11.4 gpm
9:29	77.45	435	1.50	20.9°C	7.72	0.73	-110.0	1.73	Ø		11.4 gpm
9:42	77.72	580	2.00	21.0°C	7.71	0.73	-121.4	0.92	Ø		11.4 gpm
9:55	77.91	726	2.50	21.0°C	7.70	0.73	-119.4	0.93	Ø		11.3 gpm
10:08	78.02	880	3.00	21.0°C	7.69	0.73	-118.2	0.91	Ø		11.3 gpm
10:12	—	PUMP	OFF								

SAMPLE COLLECTION SAMPLE TIME 10:10 AIR MONITORING PID/FID ppm: VAULT BKGD BREATHING ZONE DISCHARGE WATER

- 8260B VOC's; 3; 40 mL VOA's
- 8270 (SIM) 1,4-Dioxane; 1; 1 L Amber
- Surfactants by SM5540C; Bicarbonate only by SM2320B; 1; 500 mL Poly
- Diss. Metals by EPA 6010p; Diss. Na by EPA 7770; Diss. K by EPA 7610; 1; 500 mL Poly
- Ions by EPA 300.0; SC by EPA 120.1; TDS by SM2540C; pH by SM4500 H+B; 1; 1 L Poly
- Total Hardness by SM2340B; Total Metals Cu/Fe/Mn/Zn by EPA 6010B; 1; 500 mL Poly
- Ammonia by SM4500-NH3; 1; 250 mL Poly

NOTES (Color, odor, sand and silt content, factors possibly affecting samples, condition of vault, wellhead, sampling apparatus, etc.)
organic odor
NO DUPLICATES, SPLITS, OR BLANKS

GROUNDWATER SAMPLING INFORMATION

DATE: 1/3/2013

WELL ID: MW-34B

TASK: 532.30

Time <u>1429</u> Static DTW (ft below reference point) <u>145.38</u>	<u>SCREEN</u> Casing Volume (CV) (gallons) <u>46</u> 3 CV (gallons) <u>137</u>	Weather Conditions	Initials <u>DM</u>
Casing Total Depth (ft below reference point) <u>996</u>	Purging Device <u>Ded. Pump</u> Sampling Device <u>Ded. pipe</u>	Time _____ Temp. <u>64F</u>	Begin Purge <u>1440</u> End Purge <u>1451</u>
Water Column (feet)	Pump: Depth (ft brp) <u>480'</u> Type <u>groundhog</u> Voltage _____ HP _____	Skies _____	Gallons Purged <u>152</u> CVs Purged <u>3.3</u>
Casing Capacity (Diameter <u>3"</u>) (gallons per foot) <u>4</u>	Monitor Well Recharge Rate: Slow _____ Fast <u>X</u>	Wind (mph) _____ From _____	DTW (ft brp) _____ Time _____

Time	Depth to Water	Volume Purged (Gallons)	Casing Volumes Purged	...FIELD PARAMETERS...						Pump Frequency Hz	COMMENTS
				Temp. (°C)	pH	EC (S/cm)	O.R.P. (mV)	D.O. (mg/L)	Turbidity (NTU)		
1440		START									
1442	147.11	28		21.38	7.32	0.931	-156	2.73	388	~146PM	
1444	147.13	56		21.81	7.37	0.951	-129	3.47	487		
1446	147.19	84		21.84	7.38	0.913	-119	3.4	159		
1448	147.22	112		21.87	7.38	0.917	-112	3.55	43.7		
1450	147.23	140		21.89	7.38	0.906	-101	3.65		~146PM	
1450	147.05	THROTTLE BACK								To ~ 12 AM	
1451		SAMPLE									

SAMPLE COLLECTION SAMPLE TIME 1451

AIR MONITORING PID/FID ppm: VAULT _____ BKGD _____ BREATHING ZONE _____ DISCHARGE WATER _____

NOTES (Color, odor, sand and silt content, factors possibly affecting samples, condition of vault, wellhead, sampling apparatus, etc.)
1425 DUCER OUT

MW-3400B @ 1351 (O.C. @ TIME 1451) Duplicate to blank
EB-01032013 @ 1425

- 8260B VOC's; 3; 40 mL VOA's
- 8270 (SIM) 1,4-Dioxane; 1; 1 L Amber
- Surfactants by SM5540C; Bicarbonate only by SM2320B; 1; 500 mL Poly
- Diss. Metals by EPA 6010p; Diss. Na by EPA 7770; Diss. K by EPA 7610; 1; 500 mL Poly
- Ions by EPA 300.0; SC by EPA 120.1; TDS by SM2540C; pH by SM4500 H+B; 1; 1 L Poly
- Total Hardness by SM2340B; Total Metals Cu/Fe/Mn/Zn by EPA 6010B; 1; 500 mL Poly
- Ammonia by SM4500-NH3; 1; 250 mL Poly

GROUNDWATER SAMPLING INFORMATION

DATE: 1/3/2013

WELL ID: MW-34C

TASK: S32.30

Time <u>1329</u> Static DTW (ft below reference point) <u>141.80</u>	<u>SCREEN</u> Gasing-Volume (CV) (gallons) <u>57.7</u> 3 CV (gallons) <u>173</u>	Weather Conditions	Initials <u>DM</u>
Casing Total Depth (ft below reference point) <u>576</u>	Purging Device <u>Ded. pump</u> Sampling Device <u>Ded. pipe</u>	Time <u>1330</u> Temp. <u>74° F</u>	Begin Purge <u>1345</u> End Purge <u>1405</u>
Water Column (feet)	Pump: Depth (ft brp) _____ Type _____ Voltage _____ HP _____	Skies _____	Gallons Purged <u>254</u> CVs Purged <u>44</u>
Casing Capacity (Diameter <u>4"</u>) (gallons per foot) <u>16</u>	Monitor Well Recharge Rate: Slow _____ Fast _____	Wind (mph) _____ From _____	DTW (ft brp) <u>151.15</u> Time <u>1405</u>

Time	Depth to Water	Volume-Purged (Gallons)	Casing Volumes Purged	...FIELD PARAMETERS...						Pump Frequency Hz	COMMENTS
				Temp. (°C)	pH	EC (S/cm)	O.R.P. (mV)	D.O. (mg/L)	Turbidity (NTU)		
<u>1345</u>		<u>START</u>									
<u>1347</u>	<u>157.02</u>	<u>28</u>		<u>21.25</u>	<u>7.96</u>	<u>0.492</u>	<u>-256</u>	<u>0.18</u>	<u>2.9</u>		<u>~14 GPM</u>
<u>1349</u>	<u>UTM</u>	<u>56</u>		<u>21.85</u>	<u>8.05</u>	<u>0.482</u>	<u>-271</u>	<u>0.09</u>	<u>11.3</u>		
<u>1351</u>	|	<u>84</u>		<u>21.92</u>	<u>8.09</u>	<u>0.477</u>	<u>-265</u>	<u>0.07</u>	<u>4.1</u>		<u>~14 GPM</u>
<u>1353</u>	|	<u>112</u>		<u>21.98</u>	<u>8.08</u>	<u>0.495</u>	<u>-253</u>	<u>0.05</u>	<u>6.2</u>		
<u>1355</u>	|	<u>140</u>		<u>21.99</u>	<u>8.04</u>	<u>0.514</u>	<u>-240</u>	<u>0.08</u>	<u>5.8</u>		
<u>1358</u>	|	<u>182</u>		<u>22.00</u>	<u>8.01</u>	<u>0.524</u>	<u>-233</u>	<u>0.03</u>	<u>6.6</u>		<u>~14 GPM</u>
<u>1359</u>	↓	<u>VALVE BACK TO</u>				<u>~13 GPM</u>					<u>~12 GPM</u>
<u>1405</u>		<u>END PURGE PUMP OFF</u>									

1400

- 8260B VOC's; 3; 40 mL VOA's
- 8270 (SIM) 1,4-Dioxane; 1; 1 L Amber
- Surfactants by SM5540C; Bicarbonate only by SM2320B; 1; 500 mL Poly
- Diss. Metals by EPA 6010p; Diss. Na by EPA 7770; Diss. K by EPA 7610; 1; 500 mL Poly
- Ions by EPA 300.0; SC by EPA 120.1; TDS by SM2540C; pH by SM4500 H+B; 1; 1 L Poly
- Total Hardness by SM2340B; Total Metals Cu/Fe/Mn/Zn by EPA 6010B; 1; 500 mL Poly
- Ammonia by SM4500-NH3; 1; 250 mL Poly

AIR MONITORING PID/FID ppm: VAULT _____ BKGD _____ BREATHING ZONE _____ DISCHARGE WATER _____

NOTES (Color, odor, sand and silt content, factors possibly affecting samples, condition of vault, wellhead, sampling apparatus, etc.)

LIGHT ODDOR. UTM DUE TO DICAL.

147.08 @ 1406

145.00 @ 1407

GROUNDWATER SAMPLING INFORMATION

DATE: 01/04/13

WELL ID: MW-36

TASK: 532.30

Time 1110 Static DTW (ft below reference point) 81.65	Casing Volume (CV) (gallons) 320	3 CV (gallons) 960	Weather Conditions	Initials EJJ/ANF
Casing Total Depth (ft below reference point) 994.3	Purging Device Ded. Pump	Sampling Device Ded 10-100	Time 1100 Temp. 68	Begin Purge 11:30 End Purge 13:05
Water Column (feet) 912.65	Pump: Depth (ft brp) 460	Type groundpos Voltage 240 HP	Skies sunny	Gallons Purged 900 CVs Purged 3.0
Casing Capacity (Diameter ") (gallons per foot) 0.60	Monitor Well Recharge Rate: Slow	Fast X	Wind (mph) 0 From 0	DTW (ft brp) 82.87 Time 13:08

Time	Depth to Water	Volume Purged (Gallons)	Casing Volumes Purged	....FIELD PARAMETERS....						Pump Frequency Hz	COMMENTS
				Temp. (C)	pH	EC (S/cm)	O.R.P. (mV)	D.O. (mg/L)	Turbidity (NTU)		
11:30	1		Pump on								
11:44	84.19	141	0.44	21.0°C	7.83	0.63	-117.5	6.10	0.75		10.7 gpm
11:59	84.25	297	0.93	21.6°C	7.86	0.64	-124.0	0.10	0		10.1 gpm
12:15	84.37	458	1.43	21.8°C	7.92	0.70	-127.0	0.25	0.70		9.8 gpm
12:30	84.47	606	1.90	21.8°C	7.92	0.71	-132.4	0.08	1.0		9.7 gpm
12:48	84.59	782	2.44	21.9°C	7.92	0.71	-138.4	0.30	1.0		9.6 gpm
13:08	84.66	960	3.00	21.9°C	7.92	0.69	-141.8	0.07	1.0		

- SAMPLE COLLECTION SAMPLE TIME 13:05
- 8260B VOC's; 3; 40 mL VOA's
 - 8270 (SIM) 1,4-Dioxane; 1; 1 L Amber
 - Surfactants by SM5540C; Bicarbonate only by SM2320B; 1; 500 mL Poly
 - Diss. Metals by EPA 6010p; Diss. Na by EPA 7770; Diss. K by EPA 7610; 1; 500 mL Poly
 - Ions by EPA 300.0; SC by EPA 120.1; TDS by SM2540C; pH by SM4500 H+B; 1; 1 L Poly
 - Total Hardness by SM2340B; Total Metals Cu/Fe/Mn/Zn by EPA 6010B; 1; 500 mL Poly
 - Ammonia by SM4500-NH3; 1; 250 mL Poly

AIR MONITORING PID/FID ppm: VAULT BKGD BREATHING ZONE DISCHARGE WATER

NOTES (Color, odor, sand and silt content, factors possibly affecting samples, condition of vault, wellhead, sampling apparatus, etc.)

NO duplicates, splits, or blanks

GROUNDWATER SAMPLING INFORMATION

DATE: 1/3/13

WELL ID: MW-37

TASK: 532.30

Time <u>15:22</u> Static DTW (ft below reference point) <u>137.21</u>	Casing Volume (CV) (gallons) <u>108</u> 3 CV (gallons) <u>504</u>	Weather Conditions	Initials <u>ASF/EJH</u>
Casing Total Depth (ft below reference point) <u>820</u>	Purging Device <u>ded. pump</u> Sampling Device <u>ded P</u>	Time <u>15:39</u> Temp. <u>72°F</u>	Begin Purge <u>15:39</u> End Purge <u>16:30</u>
Water Column (feet) <u>082.79</u> <u>167.9</u>	Pump: Depth (ft brp) <u>520</u> Type <u>ground</u> Voltage _____ HP _____	Skies <u>Sunny/Clear</u>	Gallons Purged <u>573</u> CVs Purged <u>3.4</u>
Casing Capacity (Diameter ") (gallons per foot) <u>0.10</u>	Monitor Well Recharge Rate: Slow _____ Fast <u>X</u>	Wind (mph) <u>0</u> From <u>N/A</u>	DTW (ft brp) <u>138.21</u> Time <u>16:30</u>

Time	Depth to Water	Volume Purged (Gallons)	Casing Volumes Purged	...FIELD PARAMETERS...						Pump Frequency Hz	COMMENTS
				Temp. (°C)	pH	EC (µm S/cm)	O.R.P. (mV)	D.O. (mg/L)	Turbidity (NTU)		
<u>15:39</u>	<u>1</u>	<u>PUMP ON</u>							<u>1</u>		
<u>15:45</u>	<u>141.5</u>	<u>85</u>	<u>0.51</u>	<u>22.7°C</u>	<u>8.01</u>	<u>0.58</u>	<u>-218.3</u>	<u>0.13</u>	<u>15</u>	<u>13.4 gpm</u>	
<u>15:51</u>	<u>141.57</u>	<u>108</u>	<u>1.00</u>	<u>22.9°C</u>	<u>8.00</u>	<u>0.58</u>	<u>-224.8</u>	<u>0.15</u>	<u>11</u>	<u>13.5 gpm</u>	
<u>15:57</u>	<u>141.01</u>	<u>240</u>	<u>1.43</u>	<u>23.0°C</u>	<u>7.89</u>	<u>0.80</u>	<u>-174.0</u>	<u>0.70</u>	<u>9.3</u>	<u>13.0 gpm</u>	
<u>10:04</u>	<u>141.05</u>	<u>345</u>	<u>2.05</u>	<u>23.0°C</u>	<u>7.88</u>	<u>0.81</u>	<u>-152.1</u>	<u>0.41</u>	<u>32</u>	<u>13.7 gpm</u>	
<u>10:10</u>	<u>141.07</u>	<u>420</u>	<u>2.54</u>	<u>23.0°C</u>	<u>7.87</u>	<u>0.82</u>	<u>-135.8</u>	<u>0.41</u>	<u>140</u>	<u>13.7 gpm</u>	
<u>10:16</u>	<u>141.02</u>	<u>504</u>	<u>3.00</u>	<u>23.0°C</u>	<u>7.87</u>	<u>0.81</u>	<u>-129.0</u>	<u>0.42</u>	<u>120</u>	<u>13.7 gpm</u> Turbidity @ 17:17 = 90	
<u>10:20</u>	<u>NM</u>	<u>573</u>	<u>3.41</u>	<u>23.0°C</u>	<u>7.80</u>	<u>0.81</u>	<u>-122.3</u>	<u>0.41</u>	<u>45</u>	<u>13.7 gpm</u>	
<u>16:30</u>	<u>138.21</u>									<u>Pump off</u>	

- SAMPLE COLLECTION SAMPLE TIME 1620
- 8260B VOC's; 3; 40 mL VOA's
 - 8270 (SIM) 1,4-Dioxane; 1; 1 L Amber
 - Surfactants by SM5540C; Bicarbonate only by SM2320B; 1; 500 mL Poly
 - Diss. Metals by EPA 6010p; Diss. Na by EPA 7770; Diss. K by EPA 7610; 1; 500 mL Poly
 - Ions by EPA 300.0; SC by EPA 120.1; TDS by SM2540C; pH by SM4500 H+B; 1; 1 L Poly
 - Total Hardness by SM2340B; Total Metals Cu/Fe/Mn/Zn by EPA 6010B; 1; 500 mL Poly
 - Ammonia by SM4500-NH3; 1; 250 mL Poly

AIR MONITORING PID/FID ppm: VAULT _____ BKGD _____ BREATHING ZONE _____ DISCHARGE WATER _____

NOTES (Color, odor, sand and silt content, factors possibly affecting samples, condition of vault, wellhead, sampling apparatus, etc.)

MW-37 @ 1620 (SPT)

GROUNDWATER SAMPLING INFORMATION

DATE: 04/20/13

TASK: 532.30

WELL ID: EW-01

Time 1308 Static DTW (ft below reference point) 128.42	Casing Volume (CV) (gallons) 43.9	3 CV (gallons) 132	Weather Conditions	
Casing Total Depth (ft below reference point) 195	Purging Device ded. Pump	Sampling Device ded. Tubing	Time 1321	Temp. 66
Water Column (feet) 60.58	Pump: Depth (ft brp) NA	Type	Skies sunny	
Casing Capacity (Diameter ") (gallons per foot) 0.166	Monitor Well Recharge Rate: Slow	Fast X	Wind (mph) 0	From W
			Initials EJA/MER	
			Begin Purge 1343	End Purge 1359
			Gallons Purged 215	CVs Purged 5
			DTW (ft brp) NM	Time

Time	Depth to Water	Volume Purged (Gallons)	Casing Volumes Purged	...FIELD PARAMETERS...						Pump Frequency Hz	COMMENTS
				Temp. (C)	pH	EC (uS/cm)	O.R.P. (mV)	D.O. (mg/L)	Turbidity (NTU)		
1343	128.42	0	0			Pump on					TOT = 275446
1345	NM	22	0.5	21.68	7.11	1.560	199.2	6.89	11.4		Q = 11gpm
1359	NM	215	4.9	24.44	7.3	1.301	61.3	7.60	3.04		TOT = 275651

SAMPLE COLLECTION SAMPLE TIME 1400	AIR MONITORING PID/FID ppm: VAULT NA	BKGD NA	BREATHING ZONE NA	DISCHARGE WATER NA
ANALYSIS QUANTITY TYPE	NOTES (Color, odor, sand and silt content, factors possibly affecting samples, condition of vault, wellhead, sampling apparatus, etc.)			
8260B VOCs 3 40 ml VOA				
8270 SIM 1,4-dioxane 1 L Amber				
8270 MOD 1,4-dioxane 1 L Amber				
DUPLICATES / SPLITS / BLANKS? Y (N)	MS/MSD collected			

12.4 = 1.63
 2.5 = 1.03
 15.0
 1.0
 100 DATE: 2/05 1/13

HARGIS + ASSOCIATES, INC.

GROUNDWATER SAMPLING INFORMATION

TASK: 532.30

WELL ID: MW-10

Time <u>12:08</u> Static DTW (ft below reference point) <u>157.87</u>	Casing Volume (CV) (gallons) <u>5.28</u> 3 CV (gallons) <u>15.8</u>	Weather Conditions <u>~60°F</u>	Initials <u>ASF/DM</u>
Casing Total Depth (ft below reference point) <u>102.7 (ASF)</u>	Purging Device <u>quick-e</u> Sampling Device <u>dedicated</u>	Time <u>12:10</u> Temp: <u>55°F (ASF)</u>	Begin Purge <u>12:13</u> End Purge <u>14:10</u>
Water Column (feet) <u>31.05</u>	Pump: Depth (ft brp) <u>N/A</u> Type <u>N/A</u> Voltage <u>N/A</u> HP <u>N/A</u>	Skies <u>overcast</u>	Gallons Purged <u>10.0</u> CVs Purged <u>3.03</u>
Casing Capacity (Diameter <u>2"</u>) (gallons per foot) <u>0.17</u>	Monitor Well Recharge Rate: Slow _____ Fast <u>X</u>	Wind (mph) <u>0-5</u> From <u>W</u>	DTW (ft brp) <u>159.89</u> Time <u>14:14</u>

Time	Depth to Water	Volume Purged (Gallons)	Casing Volumes Purged	...FIELD PARAMETERS...						Pump Frequency Hz	COMMENTS
				Temp. (C)	pH	EC (uS/cm)	O.R.P. (mV)	D.O. (mg/L)	Turbidity (NTU)		
<u>12:13</u>	<u>begin purging</u>										
<u>12:15</u>	<u>N/A</u>	<u>0.25</u>	<u>0.05</u>	<u>20.24</u>	<u>7.72</u>	<u>1.407</u>	<u>120.3</u>	<u>8.72</u>	<u>NM (ASF)</u>	<u>N/A</u>	
<u>12:27</u>	<u>NM</u>	<u>2.5</u>	<u>0.47</u>	<u>21.13</u>	<u>7.53</u>	<u>1.397</u>	<u>105.2</u>	<u>9.82</u>	<u>45</u>		
<u>12:54</u>	<u>NM</u>	<u>5</u>	<u>1</u>	<u>21.20</u>	<u>7.62</u>	<u>1.414</u>	<u>93.3</u>	<u>9.58</u>	<u>NM</u>		
<u>13:12</u>	<u>NM</u>	<u>7.5</u>	<u>1.42 (ASF)</u>	<u>20.72</u>	<u>7.59</u>	<u>1.427</u>	<u>90.2</u>	<u>10.88</u>	<u>33</u>		
<u>13:29</u>	<u>NM</u>	<u>10.0</u>	<u>1.90</u>	<u>NM</u>	<u>7.52</u>	<u>1.414</u>	<u>85.2</u>	<u>10.07</u>	<u>100</u>		
<u>13:45</u>	<u>NM</u>	<u>12.5</u>	<u>2.38</u>	<u>21.13</u>	<u>7.51</u>	<u>1.428</u>	<u>91.4</u>	<u>11.04</u>	<u>95</u>		
<u>14:08</u>	<u>NM</u>	<u>10.0</u>	<u>3.03</u>	<u>NM</u>	<u>7.59</u>	<u>1.428</u>	<u>84.0</u>	<u>10.47</u>	<u>120</u>		

SAMPLE COLLECTION SAMPLE TIME 14:10

ANALYSIS	QUANTITY	TYPE
8260B VOCs	<u>3</u>	40 ml VOA
8270 SIM 1,4 dioxane	<u>0</u>	1 L Amber
8270 MOD 1,4 dioxane	<u>0</u>	1 L Amber
DUPLICATES / SPLITS / BLANKS?	<u>Y</u>	<u>N</u>

If yes, complete appropriate forms.

AIR MONITORING PID/FID ppm: VAULT NA BKGD NA BREATHING ZONE NA DISCHARGE WATER NA

NOTES (Color, odor, sand and silt content, factors possibly affecting samples, condition of vault, wellhead, sampling apparatus, etc.)

GROUNDWATER SAMPLING INFORMATION

DATE: 2/8/2013

TASK: 532.30

WELL ID: MW-08

Time: 0910 Static DTW (ft below reference point) 135.75	Casing Volume (CV) (gallons) 4.77 3 CV (gallons) 14.3	Weather Conditions	Initials EJM/SJK
Casing Total Depth (ft below reference point) 163.79	Purging Device Grundfos Pump Sampling Device destraining	Time 0835 Temp. 52	Begin Purge 0916 End Purge 0930
Water Column (feet) 28.04	Pump: Depth (ft brp) Type Voltage HP	Skies overcast/raining	Gallons Purged 19 CVs Purged 3.9
Casing Capacity (Diameter ") (gallons per foot) 0.17	Monitor Well Recharge Rate: Slow Fast	Wind (mph) 0 From 0	DTW (ft brp) 137.08 Time 0942

Time	Depth to Water	Volume Purged (Gallons)	Casing Volumes Purged	...FIELD PARAMETERS...						Pump Frequency Hz	COMMENTS
				Temp. (°C)	pH	EC (µS/cm)	O.R.P. (mV)	D.O. (mg/L)	Turbidity (NTU)		
0916	135.75	0	0	—	Pump on	—	—	—	—	—	
0919	—	4	0.90	20.36	6.95	0.094	304.2	—	1.68	275	Q=2gpm
0921	148.95	7	1.5	17.96	7.56	1.945	173.5	13.01	NM	295	
0923	UTM	10	2.1	21.69	7.39	1.860	190.4	4.25	NM	295	
0925	UTM	13	2.7	22.33	7.38	1.727	188.1	2.88	8.76	295	
0928	UTM	16	3.3	22.12	7.44	1.481	171.5	0.98	7.62	295	
0929	Samples Taken			—						—	
0930	Purge Ended			—						—	

SAMPLE COLLECTION TIME 0930	ANALYSIS QUANTITY TYPE	AIR MONITORING PID/FID ppm VAULT NA	BKGB NA	BREATHING ZONE NA	DISCHARGE WATER NA
8260B VOCs 3 40 ml VOA	8270 SIM 1,4 dioxane 1 1 L Amber	NOTES (Color, odor, sand and silt content, factors possibly affecting samples, condition of vault, wellhead, sampling apparatus, etc.)			
8270 MOD 1,4 dioxane 1 1 L Amber					
DUPPLICATES/SPLITS/BLANKS? Y (N)					

GROUNDWATER SAMPLING INFORMATION

DATE 02/07/13

TASK: 532.30

WELL ID: MW-09

Time 10:05 Static DTW (ft below reference point) 150.79	Casing Volume (CV) (gallons) 5.8	3 CV (gallons) 17.4	Weather Conditions		Initials ASF/DM
Casing Total Depth (ft below reference point) 191	Purging Device quick-e	Sampling Device ded bailer	Time 10:09	Temp. 55°F	Begin Purge 10:09 End Purge 11:21
Water Column (feet) 34.2	Pump: Depth (ft brp) N/A	Type N/A	Voltage N/A	HP N/A	Gallons Purged 6 CVs Purged 1
Casing Capacity (Diameter ") (gallons per foot) 0.17	Monitor Well Recharge Rate: Slow _____ Fast X		Wind (mph) 0-5	From W	DTW (ft brp) NM Time NM

Time	Depth to Water	Volume Purged (Gallons)	Casing Volumes Purged	....FIELD PARAMETERS....						Pump Frequency Hz	COMMENTS
				Temp. (°C)	pH	EC (µS/cm)	O.R.P. (mV)	D.O. (mg/L)	Turbidity (NTU)		
10:11	150.79	0.25	0.04	21.47	7.11	2.746	91.0	7.67	10.0		
10:40	NM	3	0.52	21.42	7.08	2.748	89.8	7.30	181		Bottom of well bent.
11:21	NM	6	1.03	21.73	7.10	2.751	85.5	8.42	332		
NM	9	1.55	1.55	11:22 stopped purging due to bent well casing. will return tomorrow to sample.							
NM	12	2.07	2.07								
NM	15	2.59	2.59								
NM	17.5	3.02	3.02								
02/08/13	returned to sample @ 9:35										
9:38				21.40					2010		total gallons: 1111

SAMPLE COLLECTION SAMPLE TIME 02/08/13 9:35	AIR MONITORING PID/FID ppm: VAULT NA	-BKGD NA	-BREATHING ZONE NA	DISCHARGE WATER NA
ANALYSIS QUANTITY TYPE	NOTES (Color, odor, sand and silt content, factors possibly affecting samples, condition of vault, wellhead, sampling apparatus, etc.)			
8260B VOCs 3 40 ml VOA				
8270 SIM 1,4 dioxane 1 1 L Amber				
8270 MOD 1,4 dioxane 1 1 L Amber				
DUPLICATES / SPLITS / BLANKS? Y				

GROUNDWATER SAMPLING INFORMATION

DATE: 02/06/2013

TASK: 532.30

WELL ID: MW-13

Time <u>0836</u> Static DTW (ft below reference point) <u>122.52</u>	Casing Volume (CV) (gallons) <u>6.3</u> 3 CV (gallons) <u>18.9</u>	Weather Conditions	Initials <u>DM/SLK</u>
Casing Total Depth (ft below reference point) <u>159.60</u>	Purging Device <u>6" wand/foam</u> Sampling Device <u>Ded Tubing</u>	Time <u>0837</u> Temp. <u>70</u>	Begin Purge <u>849</u> End Purge <u>915</u>
Water Column (feet) <u>37.08</u> ^{SLK} <u>42.04</u>	Pump: Depth (ft brp) <u>157</u> Type <u>MP1</u> Voltage <u>115</u> HP <u>0.5</u>	Skies <u>Clear</u>	Gallons Purged <u>20</u> CVs Purged <u>3*</u>
Casing Capacity (Diameter <u>2"</u>) (gallons per foot) <u>0.17</u>	Monitor Well Recharge Rate: Slow _____ Fast <u>X</u>	Wind (mph) <u>0-2</u> From <u>SW</u>	DTW (ft brp) <u>122.40</u> Time <u>910</u>

Time	Depth to Water	Volume Purged (Gallons)	Casing Volumes Purged	...FIELD PARAMETERS...						Pump Frequency Hz	COMMENTS
				Temp. (°)	pH	EC (S/cm)	O.R.P. (mV)	D.O. (mg/L)	Turbidity (NTU)		
0849	Pump	Turned ON								253	Q=0.75 gpm
0853	NM	3.0	0.5	20.97	7.05	1.173	133.1	11.65	22.5		Q=0.75 gpm
0857	NM	6.0	1.0	22.36	7.27	1.171	114.4	11.69	14.4		
0901	NM	9.0	1.5	22.88	7.35	1.069	101.5	11.61	5.60		
0904	NM	12.0	2.0	22.99	7.40	1.153	94.0	10.94	2.67		
0908	NM	15.0	2.5	23.10	7.41	1.187	89.6	10.86	0.20		
0912	NM	19.0	3.0	23.11	7.40	1.188	86.1	11.48	1.08		
0913	SAMPLE										
0915	END PURGE										

SAMPLE COLLECTION SAMPLE TIME <u>913</u>	AIR MONITORING PID/FID ppm: VAULT NA BKGD NA BREATHING ZONE NA DISCHARGE WATER NA
ANALYSIS QUANTITY TYPE	NOTES (Color, odor, sand and silt content, factors possibly affecting samples, condition of vault, wellhead, sampling apparatus, etc.)
8260B VOCs <u>3</u> 40 ml VOA	
8270 SIM 1,4 dioxane <u>1</u> 1 L Amber	
8270 MOD 1,4 dioxane _____ 1 L Amber	
DUPLICATES / SPLITS / BLANKS? Y <u>(N)</u>	

GROUNDWATER SAMPLING INFORMATION

DATE 2/07/13

TASK: 532.30

WELL ID: MW-15

Time <u>14:27</u> Static DTW (ft below reference point) <u>130.62</u>	Casing Volume (CV) (gallons) <u>0.2</u> 3 CV (gallons) <u>18.5</u>	Weather Conditions	Initials <u>ASF/DM</u>
Casing Total Depth (ft below reference point) <u>100.80</u>	Purging Device <u>quick-e</u> Sampling Device <u>decal. bailer</u>	Time <u>14:34</u> Temp. <u>104°F</u>	Begin Purge <u>14:32</u> End Purge <u>10:22</u>
Water Column (feet) <u>30.18</u>	Pump: Depth (ft brp) <u>N/A</u> Type <u>N/A</u> Voltage <u>N/A</u> HP <u>N/A</u>	Skies <u>partly cloudy</u>	Gallons Purged <u>18.5</u> CVs Purged <u>3</u>
Casing Capacity (Diameter <u>2"</u>) (gallons per foot) <u>0.17</u>	Monitor Well Recharge Rate: Slow _____ Fast <u>X</u>	Wind (mph) <u>0-5</u> From <u>W</u>	DTW (ft brp) <u>131.11</u> Time <u>10:28</u>

Time	Depth to Water	Volume Purged (Gallons)	Casing Volumes Purged	...FIELD PARAMETERS...						Pump Frequency Hz	COMMENTS
				Temp. (°)	pH	EC (S/cm)	O.R.P. (mV)	D.O. (mg/L)	Turbidity (NTU)		
14:32	NM	0.25	0.04	20.85	7.37	1.715	88.4	11.94	104.4	14:25 transducer removed	
14:40	NM	3	0.48	20.87	7.25	1.731	82.4	10.33	299		
15:00	NM	6	0.97	20.108	7.24	1.727	83.6	10.22	199		
15:21	NM	9	1.45	20.07	7.28	1.722	86.0	10.95	218		
15:44	NM	12	1.94	20.40	7.26	1.745	82.7	11.32	147		
16:02	NM	15	2.42	20.68	7.25	1.752	84.1	11.60	254	transducer replaced	
16:22	NM	18.5	3.0	20.04	7.19	1.745	86.9	11.75	383	attempt to dump next time!	
										total gallons: 111 111 111 1	

SAMPLE COLLECTION SAMPLE TIME <u>10:25</u>	AIR MONITORING PID/FID ppm: VAULT NA BKGD NA BREATHING ZONE NA DISCHARGE WATER NA
ANALYSIS QUANTITY TYPE	NOTES (Color, odor, sand and silt content, factors possibly affecting samples, condition of vault, wellhead, sampling apparatus, etc.)
8260B VOCs <u>3</u> 40 ml VOA	
8270 SIM 1,4 dioxane <u>1</u> 1 L Amber	
8270 MOD 1,4 dioxane <u>1</u> 1 L Amber	
DUPLICATES / SPLITS / BLANKS? Y <u>N</u>	

GROUNDWATER SAMPLING INFORMATION

DATE: 2/6/2013

TASK: 532.30

WELL ID: MW-16

Time <u>1134</u> Static DTW (ft below reference point) <u>133.70</u>	Casing Volume (CV) (gallons) <u>29.6</u> 3 CV (gallons) <u>88.8</u>	Weather Conditions	Initials <u>DM/SLK</u>
Casing Total Depth (ft below reference point) <u>178.5</u>	Purging Device <u>Grundfos Pump</u> Sampling Device <u>Red Tubing</u>	Time <u>1218</u> Temp. <u>73</u>	Begin Purge <u>1142</u> End Purge <u>1218</u>
Water Column (feet) <u>144.8</u>	Pump: Depth (ft brp) <u>176</u> Type <u>Grundfos</u> Voltage <u>115</u> HP <u>0.5</u>	Skies <u>Clear</u>	Gallons Purged <u>102</u> CVs Purged <u>3.4</u>
Casing Capacity (Diameter <u>4"</u>) (gallons per foot) <u>.66</u>	Monitor Well Recharge Rate: Slow <input type="checkbox"/> Fast <input checked="" type="checkbox"/>	Wind (mph) <u>0</u> From <u>---</u>	DTW (ft brp) <u>130.34</u> Time <u>1228</u>

Time	Depth to Water	Volume Purged (Gallons)	Casing Volumes Purged	...FIELD PARAMETERS...						Pump Frequency Hz	COMMENTS
				Temp. (°C)	pH	EC (µS/cm)	O.R.P. (mV)	D.O. (mg/L)	Turbidity (NTU)		
<u>1142</u>	<u>START PURGE</u>									<u>331</u>	
<u>1148</u>	<u>135.88</u>	<u>18</u>	<u>0.5</u>	<u>22.44</u>	<u>7.70</u>	<u>0.896</u>	<u>70.8</u>	<u>6.77</u>	<u>4.46</u>		<u>~36PM</u>
<u>1154</u>	<u>136.37</u>	<u>36</u>	<u>1.2</u>	<u>22.52</u>	<u>8.64</u>	<u>0.836</u>	<u>32.8</u>	<u>7.09</u>	<u>3.42</u>		
<u>1159</u>	<u>136.48</u>	<u>51</u>	<u>1.8</u>	<u>22.52</u>	<u>7.97</u>	<u>0.887</u>	<u>56.7</u>	<u>6.84</u>	<u>0.0</u>		
<u>1204</u>	<u>136.54</u>	<u>66</u>	<u>2.2</u>	<u>22.52</u>	<u>7.68</u>	<u>0.903</u>	<u>60.6</u>	<u>6.71</u>	<u>0.0</u>		
<u>1209</u>	<u>136.62</u>	<u>81</u>	<u>2.7</u>	<u>22.53</u>	<u>7.60</u>	<u>0.913</u>	<u>60.9</u>	<u>6.99</u>	<u>0.0</u>		
<u>1212</u>	<u>136.68</u>	<u>90</u>	<u>3.0</u>	<u>22.54</u>	<u>7.59</u>	<u>0.919</u>	<u>60.2</u>	<u>8.09</u>	<u>0.0</u>		
<u>1215</u>	<u>Sample (pump slowed down)</u>										
<u>1218</u>	<u>END PURGE</u>										

SAMPLE COLLECTION SAMPLE TIME <u>1215</u>	AIR-MONITORING PID/FID ppm: VAULT NA	BKGD NA	BREATHING ZONE NA	DISCHARGE WATER NA
ANALYSIS QUANTITY TYPE	NOTES (Color, odor, sand and silt content, factors possibly affecting samples, condition of vault, wellhead, sampling apparatus, etc.)			
8260B VOCs <u>39</u> 40 ml VOA	<u>MS / MSD / RB</u> <u>RB 02062013 1140</u>			
8270 SIM 1.4 dioxane 1 L Amber				
8270 MOD 1.4 dioxane 3 1 L Amber				
DUPLICATES / SPLITS / BLANKS? <input checked="" type="checkbox"/> N				

GROUNDWATER SAMPLING INFORMATION

DATE: 21 05 / 2013

TASK: 532.30

WELL ID: MW-18

1.00
0.50
0.20

Time: 8:45	Static DTW (ft below reference point): 122.80	Casing Volume (CV) (gallons): 40.99	3 CV (gallons): 141.00	Weather Conditions		Initials: ASF/DM
Casing Total Depth (ft below reference point): 194	Water Column (feet): 71.20	Purging Device: <u>Grundfos pump MP</u>	Sampling Device: <u>ded. tubing</u>	Time: 9:12	Temp: 105°F	Begin Purge: 9:20
Casing Capacity (Diameter: <u>2"</u>) (gallons per foot): <u>0.17</u>	Pump: Depth (ft brp): <u>~190</u>	Type: <u>Grundfos</u>	Voltage: <u>120</u> HP	Skies: <u>overcast</u>		End Purge: 10:19
	Monitor Well Recharge Rate: Slow	Fast: <u>X</u>		Wind (mph): <u>0-5</u>	From: <u>W</u>	Gallons Purged: <u>147</u>
						CVs Purged: <u>3</u>
						DTW (ft brp): <u>NM</u>
						Time: <u>NM</u>

Time	Depth to Water	Volume Purged (Gallons)	Casing Volumes Purged	...FIELD PARAMETERS...						Pump Frequency Hz	COMMENTS
				Temp. (°C)	pH	EC (µS/cm)	O.R.P. (mV)	D.O. (mg/L)	Turbidity (NTU)		
9:20	START		pump prime							331	
9:23	NM	9.0	0.19	21.56	7.30	1.194	127.1	9.56	3.0		~ 3 GPM
9:29	NM	22	0.57	22.20	7.31	1.673	116.4	6.07	0.0		~ 2.75 gpm
9:37	NM	49	1	22.31	7.23	1.133	107	10.20	0.0		~ 2.5 GPM
9:46	NM	71.5	1.52	22.30	7.20	1.137	99.3	12.39	2.3		~ 2.25 gpm
9:50	NM	94	2.0	22.38	7.18	1.207	92	14.42	0.75		~ 2.25 gpm
10:06	NM	110.5	2.48	22.40	7.18	1.253	81.7	12.72	3.1		~ 2.25 gpm
10:17	NM	143	3.0	22.40	7.19	1.254	73.9	12.43	16		

SAMPLE COLLECTION SAMPLE TIME: 10:19	AIR MONITORING PID/FID ppm: VAULT NA	BKGD NA	BREATHING ZONE NA	DISCHARGE WATER NA
ANALYSIS QUANTITY TYPE	NOTES (Color, odor, sand and silt content, factors possibly affecting samples, condition of vault, wellhead, sampling apparatus, etc.)			
8260B VOCs 3 40 ml VOA				
8270 SIM 1,4 dioxane 1 1 L Amber				
8270 MOD 1,4 dioxane 1 1 L Amber				
DUPLICATES / SPLITS / BLANKS? Y (N)	Ded. Tubing in storage			

GROUNDWATER SAMPLING INFORMATION

DATE: 21 6 1 2013

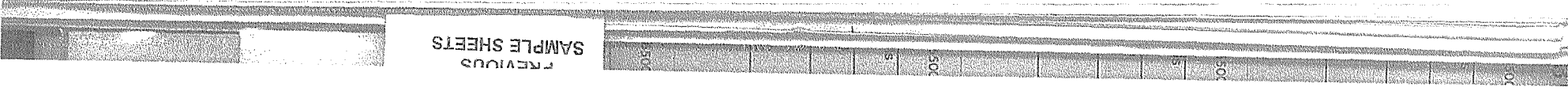
TASK: 532.30

WELL ID: MW-20

Time <u>951</u> Static DTW (ft below reference point) <u>153.10</u>	Casing Volume (CV) (gallons) <u>27</u> 3 CV (gallons) <u>81</u>	Weather Conditions		Initials <u>DM/SLK</u>
Casing Total Depth (ft below reference point) <u>194</u>	Purging Device <u>MPI GALVDFOS</u> Sampling Device <u>DD TUBING</u>	Time <u>947</u> Temp. <u>70</u>	Begin Purge <u>1000</u> End Purge <u>1055</u>	
Water Column (feet) <u>40.9</u>	Pump: Depth (ft brp) <u>192</u> Type <u>MPI</u> Voltage <u>115</u> HP <u>.5</u>	Skies <u>cloudy</u>	Gallons Purged <u>283</u> CVs Purged <u>3+</u>	
Casing Capacity (Diameter <u>4"</u>) (gallons per foot) <u>.66</u>	Monitor Well Recharge Rate: Slow _____ Fast <u>X</u>	Wind (mph) <u>0-2</u> From <u>w</u>	DTW (ft brp) <u>153.03</u> Time <u>1111</u>	

Time	Depth to Water	Volume Purged (Gallons)	Casing Volumes Purged	...FIELD PARAMETERS...						Pump Frequency Hz	COMMENTS
				Temp. (°C)	pH	EC (S/cm)	O.R.P. (mV)	D.O. (mg/L)	Turbidity (NTU)		
1000		START	PURGE							285	~16PM
1003	NM	2	.07	21.50	8.01	0.943	82	11.14	NM	285	
1014	NM	14	0.51	22.50	7.72	0.943	59.9	10.02	35.6	285	
1025	NM	28	1	23.15	7.66	0.948	51.5	10.69	36.7	305	
1033	NM	42	1.6	23.04	7.65	0.946	44.4	11.21	29.7	313	
1039	NM	56	2.07	22.97	7.64	0.943	45.9	11.21	22.1	313	
1046	NM	70	2.6	23.01	7.65	0.944	50.5	11.06	29.9	313	
1052	NM	81	3	23.02	7.65	0.945	51.5	11.20	31.1	313	✓
1053	SAMPLE		(slow DOWN Pump)							283	
1055	END										

SAMPLE COLLECTION SAMPLE TIME <u>1053</u>		AIR MONITORING PID/FID ppm: VAULT NA BKGD NA BREATHING ZONE NA DISCHARGE WATER NA	
ANALYSIS	QUANTITY	TYPE	NOTES (Color, odor, sand and silt content, factors possibly affecting samples, condition of vault, wellhead, sampling apparatus, etc.)
8260B VOCs	<u>3</u>	40 ml VOA	<u>3.5 GAV</u> <u>|||||</u> <u>|||||</u> <u>|||||</u> <u>|||||</u> <u>||</u>
8270 SIM 1,4 dioxane	<u>1</u>	1 L Amber	
8270 MOD 1,4 dioxane		1 L Amber	
DUPLICATES / SPLITS / BLANKS?	Y	(N)	



GROUNDWATER SAMPLING INFORMATION

DATE 01/04/2013

TASK: 532.30

WELL ID: MW-21

Time <u>1247</u> Static DTW (ft below reference point) <u>12081</u>	Casing Volume (CV) (gallons) <u>773</u> 3 CV (gallons) <u>232</u>	Weather Conditions	Initials <u>EJA/MED</u>
Casing Total Depth (ft below reference point) <u>238</u>	Purging Device <u>ded. pump</u> Sampling Device <u>det tubing</u>	Time <u>1321</u> Temp. <u>66</u>	Begin Purge <u>1343</u> End Purge <u>1409</u>
Water Column (feet) <u>117.19</u>	Pump: Depth (ft brp) <u>NM</u> Type _____ Voltage _____ HP _____	Skies <u>sunny</u>	Gallons Purged <u>2321</u> CVs Purged <u>5</u>
Casing Capacity (Diameter <u>4"</u>) (gallons per foot) <u>0.66</u>	Monitor Well Recharge Rate: Slow _____ Fast <u>X</u>	Wind (mph) <u>0</u> From <u>0</u>	DTW (ft brp) <u>NM</u> Time _____

Time	Depth to Water	Volume Purged (Gallons)	Casing Volumes Purged	...FIELD PARAMETERS...						Pump Frequency Hz	COMMENTS
				Temp. (C)	pH	EC (uS/cm)	O.R.P. (mV)	D.O. (mg/L)	Turbidity (NTU)		
1343	12081	0	0	—	pump on	—	—	—	—	TOT = 555670	
1349	NM	—	—	20.40	7.12	2.156	112.0	2.92	12.1	Q=16.7	
1409	NM	421	5.4	23.78	7.26	2.092	42.7	4.95	0	TOT = 556091	

SAMPLE COLLECTION SAMPLE TIME <u>1415</u>	AIR MONITORING PID/FID ppm: VAULT NA	BKGD NA	BREATHING ZONE NA	DISCHARGE WATER NA
ANALYSIS QUANTITY TYPE	NOTES (Color, odor, sand and silt content, factors possibly affecting samples, condition of vault, wellhead, sampling apparatus, etc.)			
8260B VOCs <u>3</u> 40 ml VOA				
8270 SIM 1,4 dioxane <u>1</u> 1 L Amber				
8270 MOD 1,4 dioxane <u>1</u> 1 L Amber				
DUPLICATES / SPLITS / BLANKS? Y <u>(N)</u>				
If yes, complete appropriate forms.				

GROUNDWATER SAMPLING INFORMATION

DATE: 2/6/2013

TASK: 532.30

WELL ID: MW-24

Time <u>1610</u> Static DTW (ft below reference point) <u>119.43</u>	Casing Volume (CV) (gallons) <u>138.9</u> 3 CV (gallons) <u>416</u>	Weather Conditions	Initials <u>DM/SLK</u>
Casing Total Depth (ft below reference point) <u>330</u>	Purging Device <u>DEP Pump</u> Sampling Device <u>DEP PIPE</u>	Time <u>1605</u> Temp. <u>65</u>	Begin Purge <u>1615</u> End Purge <u>1657</u>
Water Column (feet) <u>210</u>	Pump: Depth (ft brp) _____ Type <u>Grundfos</u> Voltage <u>240</u> HP <u>X</u>	Skies <u>Hazy</u>	Gallons Purged <u>432</u> CVs Purged <u>3</u>
Casing Capacity (Diameter <u>4"</u>) (gallons per foot) <u>.66</u>	Monitor Well Recharge Rate: Slow _____ Fast <u>X</u>	Wind (mph) <u>0-10</u> From <u>W</u>	DTW (ft brp) <u>124.15</u> Time <u>1702</u>

Time	Depth to Water	Volume Purged (Gallons)	Casing Volumes Purged	...FIELD PARAMETERS...						Pump Frequency Hz	COMMENTS
				Temp. (°C)	pH	EC (µS/cm)	O.R.P. (mV)	D.O. (mg/L)	Turbidity (NTU)		
1615	START	PURGE								~11.75 GPM	
1622	124.58	69	.5	21.90	8.40	.483	-261	0.27	4.62		
1629	125.00	138	1	21.94	8.11	.491	-236	0.10	75 ^{ppm} <5		
1635	125.10	207	1.5	21.96	7.96	.493	-228	0.07	75 ^{ppm} <5		
1642	125.15	276	2	21.95	7.99	.489	-163	0.10	<5		
1649	125.21	345	2.5	21.96	7.92	.490	-196	0.07	0.0		
1654	125.25	416	3	21.97	7.89	.493	-175	0.54	<5		
1655	SAMPLE									↓	
1657	OFF	END	PURGE								

SAMPLE COLLECTION SAMPLE TIME <u>1655</u>	AIR MONITORING PID/FID ppm: VAULT NA BKGD NA BREATHING ZONE NA DISCHARGE WATER NA
ANALYSIS QUANTITY TYPE	NOTES (Color, odor, sand and silt content, factors possibly affecting samples, condition of vault, wellhead, sampling apparatus, etc.)
8260B VOCs <u>3</u> 40 ml VOA	
8270 SIM 1,4 dioxane <u>1</u> 1 L Amber	
8270 MOD 1,4 dioxane <u>1</u> 1 L Amber	
DUPLICATES / SPLITS / BLANKS? Y <u>(N)</u>	

GROUNDWATER SAMPLING INFORMATION

DATE: 21 8 / 2013

TASK: 532.30

WELL ID: MW-260

Time <u>0950</u> Static DTW (ft below reference point) <u>126.78</u>	Casing Volume (CV) (gallons) <u>63.2</u> 3 CV (gallons) <u>189.8</u>	Weather Conditions	Initials <u>EJH/SLK</u>
Casing Total Depth (ft below reference point) <u>499</u>	Purging Device <u>ded pump</u> Sampling Device <u>ded tubing</u>	Time <u>1003</u> Temp. <u>52</u>	Begin Purge <u>0957</u> End Purge <u>1116</u>
Water Column (feet) <u>372.22</u>	Pump: Depth (ft brp) <u>330</u> Type <u>grndfs</u> Voltage <u>240</u> HP	Skies <u>overcast/rain</u>	Gallons Purged <u>195</u> CVs Purged <u>3</u>
Casing Capacity (Diameter <u>8</u> ") (gallons per foot) <u>0.17</u>	Monitor Well Recharge Rate: Slow _____ Fast <u>X</u>	Wind (mph) <u>0</u> From <u>0</u>	DTW (ft brp) <u>126.80</u> Time <u>1119</u>

Time	Depth to Water	Volume Purged (Gallons)	Casing Volumes Purged	...FIELD PARAMETERS....						Pump Frequency Hz	COMMENTS
				Temp. (C)	pH	EC (uS/cm)	O.R.P. (mV)	D.O. (mg/L)	Turbidity (NTU)		
0957	126.78	0	0								
1007	127.60	25	0.40	21.34	8.16	0.251	-61.4	6.82	1.69	315	Q=2.5gpm
1019	127.65	55	0.90	21.65	7.96	0.762	-132.9	1.42	2.51	315	Q=2.5gpm
1031	127.65	85	1.35	21.59	7.75	0.763	-121.9	1.48	1.92	315	Q=2.5gpm
1043	127.65	115	1.82	21.65	7.69	0.765	-117.3	1.48	0.79	315	Q=2.7gpm
1055	127.65	145	2.30	21.73	7.65	0.765	-111.3	1.53	0.88	315	Q=2.5gpm
1113	127.65	190	3.0	21.85	7.66	0.766	-106.7	1.49	0	315	
1116		195									

SAMPLE COLLECTION SAMPLE TIME <u>1115</u>	AIR MONITORING PID/FID ppm: <u>VAULT NA</u>	BKGD NA	BREATHING ZONE NA	DISCHARGE WATER NA
ANALYSIS QUANTITY TYPE	NOTES (Color, odor, sand and silt content, factors possibly affecting samples, condition of vault, wellhead, sampling apparatus, etc.)			
8260B VOCs <u>3</u> 40 ml VOA				
8270 SIM 1.4 dioxane <u>1</u> 1 L Amber				
8270 MOD 1.4 dioxane <u>1</u> 1-L Amber				
DUPLICATES / SPLITS / BLANKS? <u>Y</u> <u>(N)</u>				
If yes, complete appropriate forms.				

GROUNDWATER SAMPLING INFORMATION

DATE: 2, 7, 13

TASK: 532.30

WELL ID: MW-27

Time 1135 ¹¹³⁸ Static DTW (ft below reference point)	126.10	Casing Volume (CV) (gallons) 29.7 ^{29.7} 3 CV (gallons) 89.1 ^{89.1}	Weather Conditions	Initials <u>EJH/SLK</u>
Casing Total Depth (ft below reference point)	515	Purging Device <u>ded pump</u> Sampling Device <u>ded. NO PS.</u>	Time 1135 ¹¹³⁸ Temp. 56 ⁵⁶	Begin Purge <u>1138</u> End Purge <u>1152</u>
Water Column (feet)	45	Pump: Depth (ft brp) <u>470</u> Type <u>gandf</u> Voltage <u>240</u> HP	Skies <u>overcast</u>	Gallons Purged <u>92</u> CVs Purged <u>3</u>
Casing Capacity (Diameter 4") (gallons per foot)	0.66	Monitor Well Recharge Rate: Slow _____ Fast <u>X</u>	Wind (mph) <u>0</u> From <u>0</u>	DTW (ft brp) <u>NM</u> Time <u>NM</u>

Time	Depth to Water	Volume Purged (Gallons)	Casing Volumes Purged	...FIELD PARAMETERS...						Pump Frequency Hz	COMMENTS
				Temp. (°C)	pH	EC (µS/cm)	O.R.P. (mV)	D.O. (mg/L)	Turbidity (NTU)		
081138	126.10	0	0	—	—	—	Pump on	—	—		
1140	131.70	15	0.5	20.93	6.77	—	359	3.10	16		
1142	131.70	30	1.0	21.27	7.75	0.723	-29.3	1.34	7.9		
1144	131.70	43	1.5	21.34	7.67	0.722	-41.3	1.40	8.2		
1146	131.82	51	1.8	21.33	7.66	0.720	-42.4	1.33	36		
1148	131.78	64	2.1	21.33	7.61	0.720	-34.5	1.32	18		
1150	131.80	77	2.5	21.33	7.59	0.720	-29.7	1.32	12		
1152	131.79	92	3.0	21.33	7.57	0.720	-31.8	1.31	6.0		
				—	—	—	Pump off	—	—		

SAMPLE COLLECTION SAMPLE TIME <u>1155</u>	AIR MONITORING PID/FID ppm: VAULT NA BKGD NA BREATHING ZONE NA DISCHARGE WATER NA
ANALYSIS QUANTITY TYPE	NOTES (Color, odor, sand and silt content, factors possibly affecting samples, condition of vault, wellhead, sampling apparatus, etc.)
8260B VOCs <u>3</u> 40 ml VOA	
8270 SIM 1,4 dioxane <u>1</u> 1 L Amber	
8270 WOD 1,4 dioxane <u>1</u> 1 L Amber	
DUPLICATES / SPLITS / BLANKS? Y <u>(N)</u>	<u>MS/MSD</u>

GROUNDWATER SAMPLING INFORMATION

DATE: 2/7 / 13

TASK: 532.30

WELL ID: MW-28

Time <u>0822</u> Static DTW (ft below reference point) <u>137.5</u>	Casing Volume (CV) (gallons) <u>27</u> 3 CV (gallons) <u>81</u>	Weather Conditions	
Casing Total Depth (ft below reference point) <u>375</u>	Purging Device <u>ded pump</u> Sampling Device <u>ded pipe</u>	Time <u>0818</u> Temp. _____	Initials <u>EJA/SLK</u>
<u>screen pump</u> Water Column (feet) <u>45</u>	Pump: Depth (ft brp) <u>330</u> Type <u>granules</u> Voltage <u>240</u> HP _____	Skies <u>overcast</u>	Begin Purge <u>0826</u> End Purge <u>0840</u>
Casing Capacity (Diameter <u>4"</u>) (gallons per foot) <u>0.60</u>	Monitor Well Recharge Rate: Slow _____ Fast <u>X</u>	Wind (mph) <u>0</u> From <u>0</u>	Gallons Purged <u>97</u> CVs Purged <u>13</u>
			DTW (ft brp) <u>137.5</u> Time <u>0843</u>

Time	Depth to Water	Volume Purged (Gallons)	Casing Volumes Purged	...FIELD PARAMETERS...						Pump Frequency Hz	COMMENTS
				Temp. (°C)	pH	EC (µS/cm)	O.R.P. (mV)	D.O. (mg/L)	Turbidity (NTU)		
0826	137.5	0	0			Pump on					
0828	137.2	14	0.5	20.98	7.31	1.013	231.6	2.42	7.0		Q = 7gpm
0830	137.55	29	1.0	21.19	7.38	0.971	229.1	4.14	4.4		Q = 7gpm
0832	137.60	44	1.5	21.23	7.42	0.979	230.5	4.35	1.5		Q = 7gpm
0834	137.62	60	2.0	21.27	7.44	0.978	233.1	4.18	0		Q = 7gpm
0836	137.65	72	2.5	21.28	7.45	0.978	234.8	4.28	0		Q = 7gpm
0838	137.68	83	3.0	21.29	7.46	0.977	236.0	4.17	0		
0840	—	97	—			Pump off					

SAMPLE COLLECTION TIME <u>0840</u>	AIR MONITORING PID/FID ppm: VAULT <u>NA</u> BKGD <u>NA</u> BREATHING ZONE <u>NA</u> DISCHARGE WATER <u>NA</u>
ANALYSIS QUANTITY TYPE	NOTES (Color, odor, sand and silt content, factors possibly affecting samples, condition of vault, wellhead, sampling apparatus, etc.)
8260B VOCs <u>3</u> 40 ml VOA	
8270 SIM 1,4 dioxane <u>1</u> 1 L Amber	
8270 MOD 1,4 dioxane _____ 1 L Amber	
DUPLICATES / SPLITS / BLANKS? Y <u>(N)</u>	
If yes, complete appropriate forms.	

GROUNDWATER SAMPLING INFORMATION

DATE: 01/7/2013

TASK: 532.30

WELL ID: MW-29

Time 0920 Static DTW (ft below reference point) 133.88	Screen SV	Casing Volume (CV) (gallons) 30	3 CV (gallons) 90	Weather Conditions		Initials EJA/SJK
Casing Total Depth (ft below reference point) 240	Purging Device Ded Pump	Sampling Device Ded Pipe Stake	Time 0922	Temp 58	Begin Purge 0924	End Purge 0950
Water Column (feet) 50	Pump: Depth (ft brp) 190	Type Grundfos	Voltage 240	HP	Skies overcast	Gallons Purged 107
Casing Capacity (Diameter 4") (gallons per foot) 0.60	Monitor Well Recharge Rate: Slow	Fast X	Wind (mph) ϕ	From ϕ	DTW (ft brp) 137.2	Time 0952

Time	Depth to Water	Volume Purged (Gallons)	Casing Volumes Purged	...FIELD PARAMETERS...						Pump Frequency Hz	COMMENTS
				Temp. (C)	pH	EC (μ S/cm)	O.R.P. (mV)	D.O. (mg/L)	Turbidity (NTU)		
0924	133.88	ϕ	ϕ	Pump on							
0924	140.80	10.5	0.4	20.87	7.30	1.642	-121.3	3.11	5.9		
0930	140.85	25.0	0.8	21.26	7.34	1.680	-106.4	5.95	1.3		Q = 4gpm
0935	140.88	45.0	1.5	21.35	7.30	1.715	-82.0	7.24	0.00		
0939	140.90	63.0	2.0	21.34	7.27	1.720	-67.8	7.28	2.8		Q = 4.5gpm
0942	140.90	78	2.5	21.39	7.26	1.724	-53.7	7.85	6.3		Q = 5gpm
0945	140.92	91	3.0	21.41	7.26	1.725	-49.3	7.22	ϕ		Q = 4.75gpm
0950	—	107	+	Pump off							

SAMPLE COLLECTION SAMPLE TIME 0945	AIR MONITORING PIS/EID num: VAULT NA	BRGD NA	BREATHING ZONE NA	DISCHARGE WATER NA
ANALYSIS QUANTITY TYPE	NOTES (Color, odor, sand and silt content, factors possibly affecting samples, condition of vault, wellhead, sampling apparatus, etc.)			
8260B VOCs 9 40 ml VOA				
8270 SIM 1.4 dioxane 1 L Amber				
8270 MOD 1.4 dioxane 3 1 L Amber				
DUPLICATES / SPLITS / BLANKS? 2 N				
DUP / SPT MW-29 (spt) @ 0945 MW-2900 (dup) @ 0940				

GROUNDWATER SAMPLING INFORMATION

MLW-30A ASP
~~MLW-30B~~
~~MLW-30A ASP~~

DATE: 02/00/13

116.71

TASK: 532.30

WELL ID:

Time: 15:52	Static DTW (ft below reference point)	170.78	Casing Volume (CV) (gallons)	17.6	3 CV (gallons)	52.8	Weather Conditions		Initials	ASE/EJH
	Casing Total Depth (ft below reference point)	504	Purging Device	ded. pump	Sampling Device	ded. pipe stand	Time	10:38	Temp.	44°F
	Water Column (feet)	44	Pump: Depth (ft brp)	520	Type	grundfos	Skies	SUNNY	Begin Purge	16:35
	Casing Capacity (Diameter 3") (gallons per foot)	0.4	Monitor Well Recharge Rate: Slow		Fast	X	Wind (mph)	0	From	N/A
									Gallons Purged	72
									CVs Purged	23
									DTW (ft brp)	138.45
									Time	16:52

Time	Depth to Water	Volume Purged (Gallons)	Casing Volumes Purged	...FIELD PARAMETERS...						Pump Frequency Hz	COMMENTS
				Temp. (C)	pH	EC (µS/cm)	O.R.P. (mV)	D.O. (mg/L)	Turbidity (NTU)		
15:52											
10:35											
10:37	129.50	10	0.57	21.20	7.42	1.111	-18.6	0.24	1.2		Q = 5gpm
10:39	132.00	20	1.14	20.09	7.40	1.113	-3.7	0.21	0.0		
10:41	133.52	31	1.76	20.88	7.55	1.376	-2.1	2.78	0.0		
10:43	134.78	43	2.44	21.03	7.39	1.494	26.6	4.02	0.15		
10:45	135.20	52	2.95	21.07	7.34	1.509	39.9	3.99	1.9		
10:47	135.80	62	3.52	21.09	7.37	1.350	48.0	3.01	13		
16:50		72									

SAMPLE COLLECTION SAMPLE TIME	1650	AIR MONITORING PID/FID ppm: VAULT NA	BKGD NA	BREATHING ZONE NA	DISCHARGE WATER NA
ANALYSIS	QUANTITY	TYPE	NOTES (Color, odor, sand and silt content, factors possibly affecting samples, condition of vault, wellhead, sampling apparatus, etc.)		
8260B VOCs	3	40 ml VOA			
8270 SIM 1,4 dioxane	1	1 L Amber			
8270 MOD 1,4 dioxane		1 L Amber			
DUPLICATES / SPLITS / BLANKS?	Y	(N)			

GROUNDWATER SAMPLING INFORMATION

DATE: 04/01/13

TASK: 532.30

WELL ID: MW-30B

Time 15:52 Static DTW (ft below reference point) 120.28	Casing Volume (CV) (gallons) 38	3 CV (gallons) 115	Weather Conditions	Initials ASF/EJH
Casing Total Depth (ft below reference point) 120.28 <i>(VCD) 599 ft</i>	Purging Device Decl. pump	Sampling Device decl. pipe stand	Time 10:19 Temp. 104°F	Begin Purge 11:02 End Purge 11:25
Water Column (feet) 99	Pump: Depth (ft brp) 520 Type Grundfos Voltage 240 HP		Skies Sunny	Gallons Purged 129 CVs Purged 3
Casing Capacity (Diameter 3") (gallons per foot) 0.4	Monitor Well Recharge Rate: Slow Fast X		Wind (mph) 0-5 From E	DTW (ft brp) 120.45 Time 11:27

Time	Depth to Water	Volume Purged (Gallons)	Casing Volumes Purged	...FIELD PARAMETERS...						Pump Frequency Hz	COMMENTS
				Temp. (C)	pH	EC (µS/cm)	O.R.P. (mV)	D.O. (mg/L)	Turbidity (NTU)		
11:02	Begin Pumping										
11:04	122.00	13.2	0.35	20.70	7.89	0.075	69.0	0.57	0.40		
11:08	122.04	31	0.82	20.92	7.88	0.079	14.4	0.38	0.0		
11:13	122.06	59	1.55	21.11	7.71	0.077	-26.4	0.53	0.0		
11:18	122.08	80	2.20	21.14	7.60	0.074	-42.1	0.50			
11:22	122.08	109	2.87	21.10	7.64	0.073	-44.3	0.50			
11:25		129								Pump off	

SAMPLE COLLECTION SAMPLE TIME 11:25	AIR MONITORING PID/FID ppm: VAULT NA	-BKGD-NA	BREATHING-ZONE NA	DISCHARGE WATER NA
ANALYSIS QUANTITY TYPE	NOTES (Color, odor, sand and silt content, factors possibly affecting samples, condition of vault, wellhead, sampling apparatus, etc.)			
8260B VOCs 10 40 ml VOA				
8270 SIM 1.4 dioxane 2 1 L Amber				
8270 MOD 1.4 dioxane 1 1 L Amber				
DUPLICATES (SPLITS) BLANKS? (Y) N	MW-30B @ 11:25			

GROUNDWATER SAMPLING INFORMATION

DATE: 2/8/2013

TASK: 532.30

WELL ID: MW-31

Time <u>0830</u> Static DTW (ft below reference point) <u>109.51</u>	Screen <u>SV</u> Casing Volume (CV) (gallons) <u>79.4</u> 3 CV (gallons) <u>238</u>	Weather Conditions	Initials <u>EJH/SLK</u>
Casing Total Depth (ft below reference point) <u>996</u>	Purging Device <u>Net Pump</u> Sampling Device <u>Net pipette</u>	Time <u>0839</u> Temp. <u>52</u>	Begin Purge <u>0837</u> End Purge <u>0900</u>
Screen to Pump Water Column (feet) <u>54</u>	Pump: Depth (ft brp) <u>942</u> Type <u>granite</u> Voltage <u>240</u> BIP	Skies <u>overcast + rain</u>	Gallons Purged <u>210</u> CVs Purged <u>3</u>
Casing Capacity (Diameter <u>6"</u>) (gallons per foot) <u>15</u>	Monitor Well Recharge Rate: Slow _____ Fast <u>X</u>	Wind (mph) <u>0</u> From <u>0</u>	DTW (ft brp) _____ Time <u>0902</u>

Time	Depth to Water	Volume Purged (Gallons)	Casing Volumes Purged	...FIELD PARAMETERS...						Pump Frequency Hz	COMMENTS
				Temp. (°C)	pH	EC (µS/cm)	O.R.P. (mV)	D.O. (mg/L)	Turbidity (NTU)		
0837	109.51	0	0								
0839	111.15	26	0.35	20.60		1.182	48.1	2.31	0.30		Q = 13gpm
0842	111.30	60	0.75	20.78	8.31	1.11d	36.1	0.87	1.10		Q = 11.3
0845	111.35	96	1.28	21.00	8.24	1.248	121.3	1.10	65		Q = 12gpm
0848	111.38	128	1.60	21.05	7.83	1.247	141.0	1.02	18		Q = 10.7gpm
0851	111.38	165	2.10	21.07	7.69	1.235	144.0	1.01	9.38		Q = 12gpm
0854	111.39	199	2.52	21.08	7.64	1.206	142.8	1.01	9.81		Q = 11.3gpm
0857	111.40	238	3.0	21.09	7.60	1.200	141.7	1.02	6.45		
0900		260									

SAMPLE COLLECTION TIME <u>0900</u>	AIR MONITORING PID/FID ppm: VAULT NA BKGD NA BREATHING ZONE NA DISCHARGE WATER NA
ANALYSIS QUANTITY TYPE	NOTES (Color, odor, sand and silt content, factors possibly affecting samples, condition of vault, wellhead, sampling apparatus, etc.)
8260B VOCs <u>3</u> 40 ml VOA	
8270 SIM 1,4 dioxane <u>1</u> 1 L Amber	
8270 MOD 1,4 dioxane <u>1</u> 1 L Amber	
DUPLICATES / SPLITS / BLANKS? Y <u>(N)</u>	

GROUNDWATER SAMPLING INFORMATION

DATE: 01/05 / 2013

TASK: 532.30

WELL ID: MW-32A

Time <u>0835</u> Static DTW (ft below reference point) <u>85.70</u>	Casing Volume <u>207</u> (gallons) <u>3 CV (gallons) 621</u>	Weather Conditions	Initials <u>BJH/SLT</u>
Casing Total Depth (ft below reference point) <u>905</u>	Purging Device <u>ded pump</u> Sampling Device <u>ded pipe w/ screen</u>	Time <u>0835</u> Temp. <u>63</u>	Begin Purge <u>0839</u> End Purge <u>0943</u>
Water Column (feet) <u>305</u>	Pump: Depth (ft brp) <u>522</u> Type <u>gandfu</u> Voltage <u>240</u> HP	Skies <u>overcast</u>	Gallons Purged <u>657</u> CVs Purged <u>3</u>
Casing Capacity (Diameter <u>4</u> ") (gallons per foot) <u>0.60</u>	Monitor Well Recharge Rate: Slow Fast <u>X</u>	Wind (mph) <u>0</u> From <u>sb</u>	DTW (ft brp) <u>86.36</u> Time <u>0943</u>

Time	Depth to Water	Volume Purged (Gallons)	Casing Volumes Purged	...FIELD PARAMETERS...						Pump Frequency Hz	COMMENTS
				Temp. (°C)	pH	EC (µS/cm)	O.R.P. (mV)	D.O. (mg/L)	Turbidity (NTU)		
0839	85.70	0	0								
											Q = 12gpm
0845	87.0	38	0.18	20.39	7.39	0.857	28.1	2.53	0.51		
0851	86.98	108	0.5	20.54	7.38	0.863	-15.3	2.21	0.67		Q = 12gpm
0859	87.07	194	1.0	20.69	7.35	0.863	-19.3	1.05	0.30		Q = 11gpm
0908	87.09	304	1.5	20.76	7.34	0.871	-23.9	1.66	1.60		
0917	87.18	384	1.9	20.76	7.33	0.870	-22.4	1.76	2.53		
0926 0926	87.19	480	2.3	20.75	7.33	0.869	-20.7	1.71	2.90		Q = 10.6gpm
0935	87.20	579	2.8	20.76	7.32	0.869	-14.0	1.70	1.01		
0941	87.23	624	3.0	20.74	7.31	0.869	-13.5	1.81	1.77		
0943	86.36										

SAMPLE COLLECTION SAMPLE TIME 0940

ANALYSIS QUANTITY TYPE

8260B VOCs 3 40 ml VOA

8270 SIM 1,4 dioxane 1 1 L Amber

8270 MOD 1,4 dioxane 1 1 L Amber

DUPLICATES / SPLITS / BLANKS? Y (N)

If yes, complete appropriate forms.

AIR MONITORING FID/FID ppm: VAULT NA BK6B NA BREATHING ZONE NA DISCHARGE WATER NA

NOTES (Color, odor, sand and silt content, factors possibly affecting samples, condition of vault, wellhead, sampling apparatus, etc.)

Slight sulfur odor

MS/MSD collected

GROUNDWATER SAMPLING INFORMATION

DATE: 2/05/2013

TASK: 532.30

WELL ID: MW-32B

Time 1235 Static DTW (ft below reference point) 85.16	screen SV Casing Volume (CV) (gallons) 203.4 3 CV (gallons) 790.2	Weather Conditions	Initials EJH/SLK
Casing Total Depth (ft below reference point) 999	Purging Device Ded pump Sampling Device Ded 10-100 pipe	Time 1232 Temp 63	Begin Purge 1242 End Purge 1405
Water Column (feet) 439	Pump: Depth (ft brp) 510 Type Grundfos Voltage 240 HP	Skies overcast	Gallons Purged 840 CVs Purged 3
Casing Capacity (Diameter 4") (gallons per foot) 0.60	Monitor Well Recharge Rate: Slow Fast X	Wind (mph) 0 From 0	DTW (ft brp) 89.70 Time 1407

Time	Depth to Water	Volume Purged (Gallons)	Casing Volumes Purged	...FIELD PARAMETERS...						Pump Frequency Hz	COMMENTS
				Temp. (C)	pH	EC (uS/cm)	O.R.P. (mV)	D.O. (mg/L)	Turbidity (NTU)		
1242	85.16	0	0								
1245	99.57	35	0.13	20.50	7.51	0.956	-161.7	0.15	10.10		Q = 11.0 gpm
1255	100.97	130	0.5	20.61	7.57	0.911	-159.4	0.11	0.26		Q = 10.0 gpm
1308	101.37	266	1.0	20.88	7.63	0.834	-148.1	0.10	13.1		Q = 10 gpm
1321	101.70	396	1.5	20.99	7.62	0.905	-137.0	0.09	0.0		
1335	101.89	540	2.0	20.99	7.61	0.909	-134.6	0.09	0.0		
1348	102.00	670	2.5	21.00	7.59	0.910	-133.3	0.09	1.02		Q = 10 gpm
1349	102.10	795	3.0	21.01	7.61	0.911	-131.0		0		
1405	102.12	840									

SAMPLE COLLECTION SAMPLE TIME 1400	AIR MONITORING PID/FID ppm: VAULT NA	BKGD NA	BREATHING ZONE NA	DISCHARGE WATER NA
ANALYSIS QUANTITY TYPE	NOTES (Color, odor, sand and silt content, factors possibly affecting samples, condition of vault, wellhead, sampling apparatus, etc.)			
8260B VOCs 6 40 ml VOA	Slight sulfur odor			
8270 SIM 1,4 dioxane 2 1 L Amber				
8270 MOD 1,4 dioxane 1 L Amber				
DUPLICATES / SPLITS / BLANKS? (Y) N	MW-3200 @ 1300			

GROUNDWATER SAMPLING INFORMATION

DATE 2/05/2013

TASK: 532.30

WELL ID: MW-320

Time <u>0952</u> Static DTW (ft below reference point) <u>72.15</u>	screen	Casing Volume (CV) (gallons) <u>318</u>	3 CV (gallons) <u>954</u>	Weather Conditions		Initials <u>EJH/SLK</u>
Casing Total Depth (ft below reference point) <u>1090</u>	Purging Device <u>ded pump</u>	Sampling Device <u>ded ND P.S.</u>		Time <u>0955</u> Temp. <u>63</u>	Begin Purge <u>0958</u> End Purge <u>1226</u>	
<u>Pump a screen</u> Water Column (feet) <u>530</u>	Pump: Depth (ft brp) <u>530</u> Type <u>guards</u> Voltage <u>240</u> HP			Skies <u>overcast</u>	Gallons Purged <u>1059</u> CVs Purged <u>3</u>	
Casing Capacity (Diameter <u>4</u> ") (gallons per foot) <u>0.60</u>	Monitor Well Recharge Rate: Slow Fast <u>X</u>			Wind (mph) <u>0</u> From <u>0</u>	DTW (ft brp) <u>179.02</u> Time <u>1230</u>	

Time	Depth to Water	Volume Purged (Gallons)	Casing Volumes Purged	...FIELD PARAMETERS....						Pump Frequency Hz	COMMENTS
				Temp. (C)	pH	EC (uS/cm)	O.R.P. (mV)	D.O. (mg/L)	Turbidity (NTU)		
0958	72.15	0	0				Pump on				Q=10.0 gpm
1000	105.0	20	0.06	20.41	7.85	0.511	-121.3	0.17	1.87		
1015	161.40	150	0.47	20.54	7.92	0.510	-157.1	0.13	1.53		Q=8.67 gpm
1034	198.51	300	1.0	20.83	7.99	0.509	-152.4	0.12	1.91		Q=7.89 gpm
1102	206.20	500	1.5	21.10	8.00	0.509	-144.1	0.12	3.77		Q=7.14 gpm
1124	209.13	650	2.0	21.15	7.99	0.509	-142.4	0.11	2.9		Q=6.8 gpm
1148	209.2	815	2.5	21.17	7.98	0.509	-141.9	0.10	1.87		Q=6.9 gpm
1210	212.30	954	3.0	21.19	7.98	0.509	-141.8	0.09	1.29		Q=6.32 gpm
1224	212.21	1050	3.3	21.21	7.98	0.509	-141.8	0.10	4.44		
1227							Pump off				

SAMPLE COLLECTION SAMPLE TIME <u>1225</u>	AIR MONITORING PID/FID ppm: VAULT NA	BKGD NA	BREATHING ZONE NA	DISCHARGE WATER NA
ANALYSIS QUANTITY TYPE	NOTES (Color, odor, sand and silt content, factors possibly affecting samples, condition of vault, wellhead, sampling apparatus, etc.)			
8260B VOCs <u>3</u> 40 ml VOA	<u>Transducer pulled @ 0952</u>			
8270 SIM 1.4 dioxane <u>1</u> 1 L Amber	<u>Transducer placed @ 1231</u>			
8270 MOD 1.4 dioxane <u>1</u> 1 L Amber				
DUPLICATES / SPLITS / BLANKS? Y <u>(N)</u>				

GROUNDWATER SAMPLING INFORMATION

DATE: 02/06/13

TASK: 532.30

WELL ID: MW-33

Time: 13:17 Static DTW (ft below reference point) <u>-77.85</u>	Casing Volume (CV) (gallons) <u>485</u> ²⁹¹ 3 CV (gallons) <u>873</u>	Weather Conditions	Initials <u>ASF/ESH</u>
Casing Total Depth (ft below reference point) <u>1020</u>	Purging Device <u>Ded pump</u> Sampling Device <u>Ded pipe stand 10-100</u>	Time <u>13:22</u> Temp. <u>104°F</u>	Begin Purge <u>13:20</u> End Purge <u>14:30</u>
Water Column (feet) <u>457</u>	Pump: Depth (ft brp) <u>535</u> Type <u>groundeds</u> Voltage <u>240</u> HP	Skies <u>SUNNY w/ clouds</u>	Gallons Purged <u>898</u> CVs Purged <u>3.09</u>
Casing Capacity (Diameter ") (gallons per foot) <u>0.00</u>	Monitor Well Recharge Rate: Slow Fast <u>X</u>	Wind (mph) <u>0-5</u> From <u>SW</u>	DTW (ft brp) <u>79.78</u> Time <u>14:30</u>

Time	Depth to Water	Volume Purged (Gallons)	Casing Volumes Purged	...FIELD PARAMETERS...						Pump Frequency Hz	COMMENTS
				Temp. (C)	pH	EC (uS/cm)	O.R.P. (mV)	D.O. (mg/L)	Turbidity (NTU)		
13:20											PUMP TURNED ON
13:33	79.52	152	0.52	20.30	7.63	0.064	65.1	0.54	1.8		~11.7 gpm
13:40	79.90	307	1.05	20.02	7.73	0.066	-0.1	0.34	0.95		~11.9 gpm
13:59	80.18	450	1.57	20.67	7.61	0.003	-9.5	0.73	0.0		~11.5 gpm
14:12	80.45	610	2.12	20.08	7.00	0.003	-20.3	0.76	0.0		~12.1 gpm
14:25	80.65	774	2.60	20.69	7.58	0.003	-22.3	0.78	0.0		~12.2 gpm
14:33	80.81	872	3.00	20.70	7.58	0.003	-23.5	0.79	0.0		
14:30	79.78	898	3.09								PUMP TURNED OFF

SAMPLE COLLECTION SAMPLE TIME	AIR MONITORING PID/FID ppm: VAULT NA	BKGD NA	BREATHING ZONE NA	DISCHARGE WATER NA
ANALYSIS QUANTITY TYPE	NOTES (Color, odor, sand and silt content, factors possibly affecting samples, condition of vault, wellhead, sampling apparatus, etc.)			
8260B VOCs <u>3</u> 40 ml VOA				
8270 SIM 1,4 dioxane <u>1</u> 1 L Amber				
8270 MOD 1,4 dioxane <u>1</u> 1 L Amber				
DUPLICATES / SPLITS / BLANKS? Y <u>(N)</u>				

GROUNDWATER SAMPLING INFORMATION

DATE 02/05/2013

TASK: 532.30

WELL ID: MW-34A

Time <u>10:25</u> Static DTW (ft below reference point) <u>139.20</u>	Casing Volume (CV) (gallons) <u>24.5</u> 3 CV (gallons) <u>137</u>	Weather Conditions	Initials <u>ASF/DM</u>
Casing Total Depth (ft below reference point) <u>280</u>	Purging Device <u>Ded pump</u> Sampling Device <u>Ded pipestand</u>	Time <u>10:30</u> Temp. <u>~60°F</u>	Begin Purge <u>1631</u> End Purge <u>1643</u>
Water Column (feet) <u>80</u>	Pump: Depth (ft brp) <u>200</u> Type <u>groundfos</u> Voltage <u>240</u> HP	Skies <u>overcast</u>	Gallons Purged <u>140</u> CVs Purged <u>3</u>
Casing Capacity (Diameter <u>4</u> ") (gallons per foot) <u>0.10</u>	Monitor Well Recharge Rate: Slow _____ Fast <u>X</u>	Wind (mph) <u>0-5</u> From <u>W</u>	DTW (ft brp) <u>NM</u> Time <u>NM</u>

Time	Depth to Water	Volume Purged (Gallons)	Casing Volumes Purged	...FIELD PARAMETERS...						Pump Frequency Hz	COMMENTS
				Temp. (°)	pH	EC (S/cm)	O.R.P. (mV)	D.O. (mg/L)	Turbidity (NTU)		
<u>10:31</u>	<u>PUMP TURNED ON</u>										
<u>10:33</u>	<u>141.22</u>	<u>30</u>	<u>0.65</u>	<u>21.43</u>	<u>7.22</u>	<u>1.454</u>	<u>-150.0</u>	<u>8.58</u>	<u>130</u>	<u>~13.5 gpm</u>	
<u>10:35</u>	<u>141.22</u>	<u>50</u>	<u>1.22</u>	<u>21.49</u>	<u>7.27</u>	<u>1.477</u>	<u>-97.1</u>	<u>9.25</u>	<u>150</u>	|	
<u>10:37</u>	<u>141.22</u>	<u>82</u>	<u>1.78</u>	<u>21.51</u>	<u>7.26</u>	<u>1.475</u>	<u>-99.3</u>	<u>9.24</u>	<u>120</u>	|	
<u>10:39</u>	<u>141.22</u>	<u>110</u>	<u>2.52</u>	<u>21.52</u>	<u>7.25</u>	<u>1.472</u>	<u>-10.3</u>	<u>9.18</u>	<u>110</u>	|	
<u>10:41</u>	<u>141.22</u>	<u>140</u>	<u>3.04</u>	<u>21.53</u>	<u>7.25</u>	<u>1.468</u>	<u>-1.1</u>	<u>9.23</u>	<u>120</u>	↓	
<u>10:43</u>	<u>Pump off</u>										

SAMPLE COLLECTION SAMPLE TIME <u>10:42</u>	AIR MONITORING PID/EID ppm: VAULT NA _____ BKGD NA _____ BREATHING ZONE NA _____ DISCHARGE WATER NA _____
ANALYSIS QUANTITY TYPE	NOTES (Color, odor, sand and silt content, factors possibly affecting samples, condition of vault, wellhead, sampling apparatus, etc.)
8260B VOCs <u>3</u> 40 ml VOA	
8270 SIM 1,4 dioxane <u>1</u> 1 L Amber	
8270 MOD 1,4 dioxane <u>0</u> 1 L Amber	
DUPLICATES / SPLITS / BLANKS? Y <u>(N)</u>	

GROUNDWATER SAMPLING INFORMATION

DATE: 02/06/2013

TASK: 532.30

WELL ID: MW-34B

Time <u>1440</u> Static DTW (ft below reference point) <u>145.92</u>	Casing Volume ^{SV} (gallons) <u>46</u> ^{SV} (gallons) <u>137</u>	Weather Conditions	Initials <u>SLX / DM</u>
Casing Total Depth (ft below reference point) <u>536</u>	Purging Device <u>ded. pump</u> Sampling Device <u>ded. pipestare</u>	Time <u>1443</u> Temp. <u>73</u>	Begin Purge <u>1445</u> End Purge <u>1500</u>
Water Column (feet) <u>76</u>	Pump: Depth (ft brp) <u>460</u> Type <u>granite</u> Voltage <u>240</u> HP	Skies <u>clear</u>	Gallons Purged <u>191</u> CVs Purged <u>3</u>
Casing Capacity (Diameter <u>4"</u>) (gallons per foot) <u>0.6</u>	Monitor Well Recharge Rate: Slow Fast <u>X</u>	Wind (mph) <u>0</u> From <u>-</u>	DTW (ft brp) <u>146.10</u> Time <u>1505</u>

Time	Depth to Water	Volume Purged (Gallons)	Casing Volumes Purged	...FIELD PARAMETERS...						Pump Frequency Hz	COMMENTS
				Temp. (°)	pH	EC (S/cm)	O.R.P. (mV)	D.O. (mg/L)	Turbidity (NTU)		
<u>1445</u> <u>1444</u> <u>SLX</u>											
				<u>START PURGE</u>							
<u>1446</u>	<u>147.69</u>	<u>25</u>	<u>0.5</u>	<u>21.20</u>	<u>7.37</u>	<u>1.059</u>	<u>-141</u>	<u>5.16</u>	<u>16.2</u>		<u>Q = 12.5 gpm</u>
<u>1448</u>	<u>147.68</u>	<u>50</u>	<u>1.0</u>	<u>21.81</u>	<u>7.29</u>	<u>1.023</u>	<u>-171</u>	<u>7.98</u>	<u>374</u>		<u>water is cloudy with an orange tint.</u>
<u>1450</u>	<u>147.78</u>	<u>75</u>	<u>1.5</u>	<u>21.86</u>	<u>7.32</u>	<u>1.021</u>	<u>-168</u>	<u>7.89</u>	<u>188</u>		
<u>1452</u>	<u>147.79</u>	<u>100</u>	<u>2.0</u>	<u>21.88</u>	<u>7.38</u>	<u>1.017</u>	<u>-161</u>	<u>8.00</u>	<u>41.6</u>		
<u>1454</u>	<u>147.83</u>	<u>125</u>	<u>2.5</u>	<u>21.89</u>	<u>7.40</u>	<u>1.018</u>	<u>-160</u>	<u>8.01</u>	<u>14.2</u>		
<u>1456</u>	<u>147.90</u>	<u>150</u>	<u>3.0</u>	<u>21.89</u>	<u>7.42</u>	<u>1.018</u>	<u>-157</u>	<u>8.03</u>	<u>10.3</u>		
<u>1458</u>											
<u>1500</u>											

SAMPLE COLLECTION SAMPLE TIME 1458

ANALYSIS	QUANTITY	TYPE
8260B VOCs	<u>9</u>	40 ml VOA
8270 SIM 1,4 dioxane	<u>3</u>	1 L Amber
8270 MOD 1,4 dioxane	<u>3</u>	1 L Amber

DUPLICATES / SPLITS / BLANKS? (Y) N

AIR MONITORING PID/FID ppm: VAULT NA BKGD NA BREATHING ZONE NA DISCHARGE WATER NA

NOTES (Color, odor, sand and silt content, factors possibly affecting samples, condition of vault, wellhead, sampling apparatus, etc.)

DIP MW-3400B @ 1550

SLT MW-34B @ 1559

GROUNDWATER SAMPLING INFORMATION

DATE: 2/6/2013

TASK: 532.30

WELL ID: MW-34C

Time <u>1406</u> Static DTW (ft below reference point) <u>144.40</u>	Casing Volume ^{SV} (gallons) <u>57.7</u> ^{SV} (gallons) <u>173</u>	Weather Conditions	Initials <u>DM/SLK</u>
Casing Total Depth (ft below reference point) <u>576</u>	Purging Device <u>DED Pump</u> Sampling Device <u>DED PIPE</u>	Time <u>1420</u> Temp. <u>70</u>	Begin Purge <u>1413</u> End Purge <u>1428</u>
Screen to Pump Water Column (feet) <u>96</u>	Pump: Depth (ft brp) <u>400</u> Type <u>gpm</u> Voltage <u>240</u> HP	Skies <u>CLEAR</u>	Gallons Purged <u>190</u> CVs Purged <u>33</u>
Casing Capacity (Diameter <u>4"</u>) (gallons per foot) <u>16</u>	Monitor Well Recharge Rate: Slow _____ Fast <u>X</u>	Wind (mph) <u>0-5</u> From <u>W</u>	DTW (ft brp) <u>147.55</u> Time <u>1430</u>

Time	Depth to Water	Volume Purged (Gallons)	Casing Volumes Purged	...FIELD PARAMETERS...						Pump Frequency Hz	COMMENTS
				Temp. (°C)	pH	EC (µS/cm)	O.R.P. (mV)	D.O. (mg/L)	Turbidity (NTU)		
1413	START Purge										
1415	NM	23	.5	21.33	8.12	0.578	-312	0.55	75		Q=13.0gpm
1417	162.89	56	.9	<u>21.85</u> 7.1am	8.08	0.538	-309	0.28	75		
1419	163.35	81.92	1.6	21.95	8.06	0.529	-294	0.19	2.38		
1422	163.61	114	2.0	21.98	8.01	0.537	-285	0.14	0.41		
1424	163.88	148	2.5	21.99	7.93	0.569	-277	0.11	0.81		↓
1426	164.11	173	3.0	21.99	7.90	0.578	-270	0.11	0.47		Q=13.0 gpm
1427	Samples Taken										

SAMPLE COLLECTION SAMPLE TIME <u>1427</u>	AIR MONITORING PID/FID ppm: VAULT NA	BKGD-NA	BREATHING ZONE NA	DISCHARGE WATER NA
ANALYSIS QUANTITY TYPE	NOTES (Color, odor, sand and silt content, factors possibly affecting samples, condition of vault, wellhead, sampling apparatus, etc.)			
8260B VOCs <u>3</u> 40 ml VOA	<u>Light pink odor. Clear out.</u>			
8270 SIM 1,4 dioxane <u>1</u> 1 L Amber				
8270 MOD 1,4 dioxane _____ 1 L Amber				
DUPLICATES / SPLITS / BLANKS? _____ Y <u>(N)</u>				

GROUNDWATER SAMPLING INFORMATION

DATE: 02/01/13

TASK: 532.30

WELL ID: MW-35A

Time <u>8:33</u> Static DTW (ft below reference point)	<u>09.49</u>	<u>screen</u> Casing Volume (CV) (gallons)	<u>42</u> 3 CV (gallons)	Weather Conditions	Initials <u>ASF/ ESH</u>
Casing Total Depth (ft below reference point)	<u>470</u>	Purging Device <u>Dedicated pump</u>	Sampling Device <u>ded. pipe stand</u>	Time <u>8:51</u> Temp <u>55°F</u>	Begin Purge <u>8:45</u> End Purge <u>9:02</u>
Water Column (feet) <u>pump to screen</u>	<u>70</u>	Pump: Depth (ft brp) <u>400</u> Type <u>ground/OS</u>	Voltage <u>240</u> HP	Skies <u>cloudy w/ sun</u>	Gallons Purged <u>173</u> CVs Purged <u>4.12</u>
Casing Capacity (Diameter <u>4"</u>) (gallons per foot)	<u>0.00</u>	Monitor Well Recharge Rate: Slow	Fast <u>X</u>	Wind (mph) <u>0-5</u> From <u>W</u>	DTW (ft brp) <u>144</u> Time <u>9:02</u>

Time	Depth to Water	Volume Purged (Gallons)	Casing Volumes Purged	...FIELD PARAMETERS...						Pump Frequency Hz	COMMENTS
				Temp. (°)	pH	EC (S/cm)	O.R.P. (mV)	D.O. (mg/L)	Turbidity (NTU)		
<u>8:45</u>											<u>PUMP TURNED ON</u>
<u>8:47</u>	<u>100.4</u>	<u>21</u>	<u>0.5</u>	<u>19.90</u>	<u>7.95</u>	<u>0.926</u>	<u>280.8</u>	<u>0.03</u>	<u>3.3</u>		<u>Transducer replaced at 9:05</u>
<u>8:50</u>	<u>128.38</u>	<u>55</u>	<u>1.31</u>	<u>19.80</u>	<u>7.30</u>	<u>0.914</u>	<u>-15.1</u>	<u>1.00</u>	<u>0.4</u>		<u>Q = 11.3 gpm</u>
<u>8:53</u>	<u>139.00</u>	<u>87</u>	<u>2.07</u>	<u>19.93</u>	<u>7.35</u>	<u>0.911</u>	<u>-64.1</u>	<u>1.17</u>	<u>0.9</u>		
<u>8:50</u>	<u>140.00</u>	<u>119</u>	<u>2.83</u>	<u>19.90</u>	<u>7.30</u>	<u>0.910</u>	<u>-70.4</u>	<u>1.58</u>	<u>1.2</u>		
<u>8:59</u>	<u>151.40</u>	<u>140</u>	<u>3.48</u>	<u>19.99</u>	<u>7.34</u>	<u>0.912</u>	<u>-72.5</u>	<u>1.50</u>	<u>7.3</u>		
<u>9:02</u>	<u>144</u>	<u>173</u>	<u>4.12</u>								<u>PUMP TURNED OFF</u>

SAMPLE COLLECTION SAMPLE TIME <u>9:00</u>	AIR MONITORING PID/PID ppm: <u>VAULT NA</u>	BKGD NA	BREATHING ZONE NA	DISCHARGE WATER NA
ANALYSIS QUANTITY TYPE	NOTES (Color, odor, sand and silt content, factors possibly affecting samples, condition of vault, wellhead, sampling apparatus, etc.)			
8260B VOCs <u>3</u> 40 ml VOA				
8270 SIM 1,4 dioxane <u>1</u> 1 L Amber				
8270 MOD 1,4 dioxane <u>1</u> 1 L Amber				
DUPLICATES / SPLITS / BLANKS? Y <u>(N)</u>				

GROUNDWATER SAMPLING INFORMATION

DATE: 2/05/2013

TASK: 532.30

WELL ID: MW-35B

Time <u>1522</u> Static DTW (ft below reference point) <u>78.62</u>	Screen <input checked="" type="checkbox"/> Casing Volume (CV) (gallons) <u>207</u> 3 CV (gallons) <u>621</u>	Weather Conditions	Initials <u>EJA/SLE</u>
Casing Total Depth (ft below reference point) <u>805</u>	Purging Device <u>ded. Pump</u> Sampling Device <u>ded pipe ND</u>	Time <u>1524</u> Temp. <u>65</u>	Begin Purge <u>1527</u> End Purge <u>1609</u>
Water Column (feet) <u>345</u>	Pump: Depth (ft brp) <u>460</u> Type <u>groundpis</u> Voltage <u>240</u> HP	Skies <u>overcast</u>	Gallons Purged <u>647</u> CVs Purged <u>3.13</u>
Casing Capacity (Diameter <u>4</u> " (gallons per foot) <u>0.60</u>	Monitor Well Recharge Rate: Slow _____ Fast <u>X</u>	Wind (mph) <u>0</u> From <u>0</u>	DTW (ft brp) <u>79.00</u> Time <u>1610</u>

Time	Depth to Water	Volume Purged (Gallons)	Casing Volumes Purged	...FIELD PARAMETERS...						Pump Frequency Hz	COMMENTS
				Temp. (C)	pH	EC (uS/cm)	O.R.P. (mV)	D.O. (mg/L)	Turbidity (NTU)		
1527	78.62	0	0								
1530	82.30	48	0.23	19.89	7.65	0.956	111.9	0.38	1.77		
1535	82.40	105	0.50	20.06	7.62	0.884	41.2	0.31	0.0		
1541	82.53	210	1.0	20.18	7.62	0.877	-12.9	0.97	120		
1549	82.64	320	1.5	20.20	7.46	1.046	-26.8	1.61	58.7		
1555	82.60	440	2.0	20.20	7.43	1.055	-24.0	1.57	24.3		
1601	82.60	525	2.5	20.20	7.42	1.060	-21.8	1.44	5.84		
1607	82.62	625	3.0	20.20	7.41	1.062	-20.7	1.47	7.60		
1609											

SAMPLE COLLECTION SAMPLE TIME <u>1607</u>	AIR MONITORING PID/FID ppm: <u>VAULT-NA</u> <u>0</u> <u>-BKGD-NA-</u> BREATHING ZONE NA DISCHARGE WATER NA
ANALYSIS QUANTITY TYPE	NOTES (Color, odor, sand and silt content, factors possibly affecting samples, condition of vault, wellhead, sampling apparatus, etc.)
8260B VOCs <u>3</u> 40 ml VOA	
8270 SIM 1,4 dioxane <u>1</u> 1 L Amber	
8270 MOD 1,4 dioxane _____ 1 L Amber	
DUPLICATES / SPLITS / BLANKS? Y <u>(N)</u>	

GROUNDWATER SAMPLING INFORMATION

DATE: 02/01/13

TASK: 532.30

WELL ID: MW-35C

Time 9:08 Static DTW (ft below reference point) 80.12	Screen 3V Casing Volume (CV) (gallons) 348	3 CV (gallons) 1044	Weather Conditions	Initials ASF/ESH
Casing Total Depth (ft below reference point) 990	Purging Device dedicated pump	Sampling Device dedicated ND pipe stub	Time 9:07 Temp. 57°F	Begin Purge 9:11 End Purge 10:22
Water Column (feet) 580	Pump: Depth (ft brp) 1040	Type groundfis Voltage 240 HP	Skies cloudy w/ sun	Gallons Purged 1090 CVs Purged 23
Casing Capacity (Diameter 4") (gallons per foot) 0.00	Monitor Well Recharge Rate: Slow	Fast X	Wind (mph) 0-5 From W	DTW (ft brp) 1075 Time 10:22

Time	Depth to Water	Volume Purged (Gallons)	Casing Volumes Purged	...FIELD PARAMETERS...						Pump Frequency Hz	COMMENTS
				Temp. (°C)	pH	EC (S/cm)	O.R.P. (mV)	D.O. (mg/L)	Turbidity (NTU)		
9:11		PUMP	TURNED ON								
9:13	88.55	31	0.09	19.76	7.49	0.722	-39.0	0.24	4.4		
9:27	88.71	245	0.70	20.22	7.34	0.890	0.9	1.54	3.2		~15.3 gpm
9:41	88.50	400	1.34	20.36	7.51	0.723	-44.9	3.28	1.0		~15.8 gpm
9:53	88.52	051	1.87	20.37	7.50	0.723	-12.0	3.25	3.9		~15.4 gpm
10:00	88.40	844	2.42	20.37	7.50	0.719	-1.5	3.27	3.0		~14.8 gpm
10:20	88.30	1055	3.03	20.39	7.50	0.721	5.2	3.21	8.4		~15 gpm
10:22											

SAMPLE COLLECTION SAMPLE TIME 1020	AIR MONITORING PID/FID ppm: VAULT NA	BKGD NA	BREATHING ZONE NA	DISCHARGE WATER NA
ANALYSIS QUANTITY TYPE	NOTES (Color, odor, sand and silt content, factors possibly affecting samples, condition of vault, wellhead, sampling apparatus, etc.)			
8260B VOCs 3 40 ml VOA				
8270 SIM 1,4 dioxane 1 1 L Amber				
8270 MOD 1,4 dioxane 1 1 L Amber				
DUPLICATES / SPLITS / BLANKS? Y N				

GROUNDWATER SAMPLING INFORMATION

DATE: 2/7/13

TASK: 532.30

WELL ID: MW-36

Time <u>1309</u> Static DTW (ft below reference point) <u>185.56</u>	Casing Volume (CV) (gallons) <u>320</u> 3 CV (gallons) <u>960</u>	Weather Conditions	Initials <u>EJH/SLK</u>
Casing Total Depth (ft below reference point) <u>994.3</u>	Purging Device <u>ded. pump</u> Sampling Device <u>ded. pipe still</u>	Time <u>1301</u> Temp. <u>64</u>	Begin Purge <u>1330</u> End Purge <u>1457</u>
Water Column (feet) <u>534</u>	Pump: Depth (ft brp) <u>400</u> Type <u>gnr/rtf</u> Voltage <u>240</u> HP	Skies <u>overcast</u>	Gallons Purged <u>960</u> CVs Purged <u>3</u>
Casing Capacity (Diameter <u>4</u> ") (gallons per foot) <u>0.60</u>	Monitor Well Recharge Rate: Slow _____ Fast <u>X</u>	Wind (mph) <u>0</u> From <u>0</u>	DTW (ft brp) <u>803.0</u> Time <u>1453</u>

Time	Depth to Water	Volume Purged (Gallons)	Casing Volumes Purged	...FIELD PARAMETERS...						Pump Frequency Hz	COMMENTS
				Temp. (°C)	pH	EC (µS/cm)	O.R.P. (mV)	D.O. (mg/L)	Turbidity (NTU)		
1326	185.56	0	0	—	—	Pump on	—	—	—	—	
1330	187.85	48	0.15	20.38	7.79	0.640	-165.9	0.70	0.15		Q = 12 gpm
1344	88.03	208	0.65	20.97	7.86	0.625	-152.9	0.11	0		Q = 11.4
1358	88.12	362	1.13	21.45	7.83	0.562	-129.3	0.07	0		Q = 11 gpm
1412	88.25	525	1.61	21.49	7.75	0.616	-108.5	0.06	0		Q = 11.6 gpm
1426	88.32	685	2.14	21.49	7.73	0.615	-97.4	0.06	0		Q = 11.4 gpm
1440	89.46	860	2.68	21.52	7.72	0.613	-92.3	0.05	0		Q = 11.7 gpm
1448	88.50	962	3.0	21.51	7.71	0.613	-92.1	0.04	0		
1450	—	960	—	—	—	Pump off	—	—	—		

SAMPLE COLLECTION SAMPLE TIME <u>1450</u>	AIR MONITORING PID/EID ppm: <u>VAULT NA</u> <u>BKGD NA</u> <u>BREATHING ZONE NA</u> <u>DISCHARGE WATER NA</u>
ANALYSIS QUANTITY TYPE	NOTES (Color, odor, sand and silt content, factors possibly affecting samples, condition of vault, wellhead, sampling apparatus, etc.)
8260B VOCs <u>6</u> 40 ml VOA	
8270 SIM 1,4 dioxane <u>2</u> 1 L Amber	
8270 MOD 1,4 dioxane _____ 1 L Amber	
DUPLICATES / SPLITS / BLANKS? <u>Y</u> N	<u>NEW MW-3600 @ 1400</u>

GROUNDWATER SAMPLING INFORMATION

DATE: 02/06/13

TASK: 532.30

WELL ID: MW-37

Time 11:47 Static DTW (ft below reference point) 130.45	Casing Volume (CV) (gallons) 180 3 CV (gallons) 540	Weather Conditions	Initials EJA/ASF
Casing Total Depth (ft below reference point) 830	Purging Device del pump Sampling Device ND Pipe Stn	Time 11:50 Temp 63	Begin Purge 11:58 End Purge 12:30
Pump 2 screen Water Column (feet) 300 637.95	Pump: Depth (ft brp) 520 Type grinder Voltage 240 HP	Skies sunny w/ clouds	Gallons Purged 557 CVs Purged
Casing Capacity (Diameter 6") (gallons per foot) 0.6	Monitor Well Recharge Rate: Slow Fast X	Wind (mph) 0 From 0	DTW (ft brp) 130.55 Time 12:45

Time	Depth to Water	Volume Purged (Gallons)	Casing Volumes Purged	...FIELD PARAMETERS...						Pump Frequency Hz	COMMENTS
				Temp. (C)	pH	EC (uS/cm)	O.R.P. (mV)	D.O. (mg/L)	Turbidity (NTU)		
11:58	136.45	0	0	Pump on							
12:04	139.80	87	0.48	22.32	7.90	0.734	-132.6	0.39	5.5		Q = 15.5 gpm
12:10	139.85	180	1.00	22.50	7.89	0.720	-110.4	0.34	19		↓
12:16	139.91	260	1.44	22.65	7.89	0.737	-122.6	0.46	140		Q = 13 gpm
12:22	139.93	350	1.94	22.65	7.84	0.750	-143.4	0.50	90		Q = 15 gpm
12:28	138.93	440	2.44	22.65	7.83	0.749	-108.7	0.50	38		↓
12:34	139.95	514	2.85	22.65	7.82	0.744	-105.7	0.49	21		↓
12:36		557		-PUMP TURNED OFF							

SAMPLE COLLECTION SAMPLE TIME 12:35	AIR MONITORING PID/EID ppm: VAULT NA	BKGD NA	BREATHING ZONE NA	DISCHARGE WATER NA
ANALYSIS QUANTITY TYPE	NOTES (Color, odor, sand and silt content, factors possibly affecting samples, condition of vault, wellhead, sampling apparatus, etc.)			
8260B VOCs 0 40 ml VOA				
8270 SIM 1,4 dioxane 2 1 L Amber				
8270 MOD 1,4 dioxane 1 1 L Amber				
DUPLICATES/SPLITS/BLANKS? (Y) N	MW-37 @ 12:35			

GROUNDWATER SAMPLING INFORMATION

DATE: 02/07/13

TASK: 532.30

WELL ID: P-07

Time 12:45 Static DTW (ft below reference point) 11.48	Casing Volume (CV) (gallons) 0.833 ₃ CV (gallons) 2.5	Weather Conditions	Initials ASF/DM
Casing Total Depth (ft below reference point) 110.38	Purging Device quick-e Sampling Device ded. millex	Time 13:17 Temp. 60°F	Begin Purge 12:48 End Purge 13:30
Water Column (feet) 4.9	Pump: Depth (ft brp) N/A Type N/A Voltage N/A HP N/A	Skies partly cloudy	Gallons Purged 2.5 CVs Purged 3.0
Casing Capacity (Diameter ") (gallons per foot) 0.17	Monitor Well Recharge Rate: Slow Fast X	Wind (mph) 0 From N/A	DTW (ft brp) 115.05 Time 13:42

Time	Depth to Water	Volume Purged (Gallons)	Casing Volumes Purged	....FIELD PARAMETERS....						Pump Frequency Hz	COMMENTS
				Temp. (°C)	pH	EC (S/cm)	O.R.P. (mV)	D.O. (mg/L)	Turbidity (NTU)		
12:48	NM	0.25	0.3	21.50	7.34	2.250	81.0	10.97	35.6		
12:53	NM	0.75	0.9	21.53	7.35	2.233	79.6	11.90	415		
12:50	NM	1.25	1.5	21.61	7.31	2.234	80.0	11.34	814		
13:05	NM	0.75 2.1	2.1	21.45	7.32	2.232	80.8	11.59	1408		
13:30	NM	2.5	3.0	NM	NM	NM	NM	NM	NM		parameters not measured due to slow recharge of well.

SAMPLE COLLECTION SAMPLE TIME 13:05	AIR MONITORING PID/FID ppm: VAULT NA BKGD NA BREATHING ZONE NA DISCHARGE WATER NA
ANALYSIS QUANTITY TYPE	NOTES (Color, odor, sand and silt content, factors possibly affecting samples, condition of vault, wellhead, sampling apparatus, etc.)
8260B VOCs 3 40 ml VOA	
8270 SIM 1.4 dioxane 1 1 L Amber	
8270 MOD 1.4 dioxane 1 1 L Amber	
DUPLICATES / SPLITS / BLANKS? Y N	
If yes, complete appropriate forms.	

GROUNDWATER SAMPLING INFORMATION

DATE: 02/07/13

TASK: 532-80

WELL ID: P-09

Time: 8:32 Static DTW (ft below reference point)	120.05	Casing Volume (CV) (gallons)	18.5	Weather Conditions	Initials	ASF/DM							
Casing Total Depth (ft below reference point)	130	Purging Device	quick-p	Time	8:34	Temp. 50°F							
Water Column (feet)	9.35	Sampling Device	ded. bailer	Skies	overcast	Begin Purge	8:38	End Purge	9:45				
Casing Capacity (Diameter 4") (gallons per foot)	0.00	Pump: Depth (ft brp)	N/A	Type	N/A	Voltage	N/A	HP	N/A	Gallons Purged	18.5	CVs Purged	3.0
		Monitor Well Recharge Rate: Slow		Fast	X	Wind (mph)	0-5	From	W	DTW (ft brp)	121.05	Time	9:49

Time	Depth to Water	Volume Purged (Gallons)	Casing Volumes Purged	...FIELD PARAMETERS...						Pump Frequency Hz	COMMENTS
				Temp. (C)	pH	EC (µS/cm)	O.R.P. (mV)	D.O. (mg/L)	Turbidity (NTU)		
8:38	NM	0.5	0.08	20.59	6.85	3.417	40.8	8.94	NM		
8:45	NM	3	0.48	21.33	6.93	3.447	77.8	8.58	NM		
8:54	NM	6	0.97	21.23	6.90	3.437	88.0	8.48	NM		
9:02	NM	9	1.45	21.46	6.90	3.438	92.3	8.42	NM		
9:17	NM	12	1.94	20.75	6.90	3.401	99.3	8.61	NM		
9:27	NM	15	2.42	21.57	6.97	3.428	90.0	7.90	NM		
9:45	NM	18.5	3.0	21.34	6.99	3.422	93.1	—	NM		
										total # of gallons = 111 111	

SAMPLE COLLECTION SAMPLE TIME	9:45	AIR MONITORING PID/FID ppm:	VAULT NA	BKGD-NA	BREATHING ZONE NA	DISCHARGE WATER NA
ANALYSIS	QUANTITY	TYPE	NOTES (Color, odor, sand and silt content, factors possibly affecting samples, condition of vault, wellhead, sampling apparatus, etc.)			
8260B VOCs	3	40 ml VOA				
8270 SIM 1,4 dioxane	1	1 L Amber				
8270 MOD 1,4 dioxane		1 L Amber				
DUPLICATES / SPLITS / BLANKS?	Y	N				

APPENDIX C
CONCENTRATIONS OF SELECT COMPOUNDS OF CONCERN IN GROUNDWATER
UNIT B
HYDROGRAPHS

APPENDIX C
CONCENTRATIONS OF SELECT COMPOUNDS OF CONCERN IN GROUNDWATER
UNIT B
HYDROGRAPHS

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FIGURE C-1: CONCENTRATIONS OF SELECT COMPOUNDS OF CONCERN IN GROUNDWATER, UNIT B, EW-01

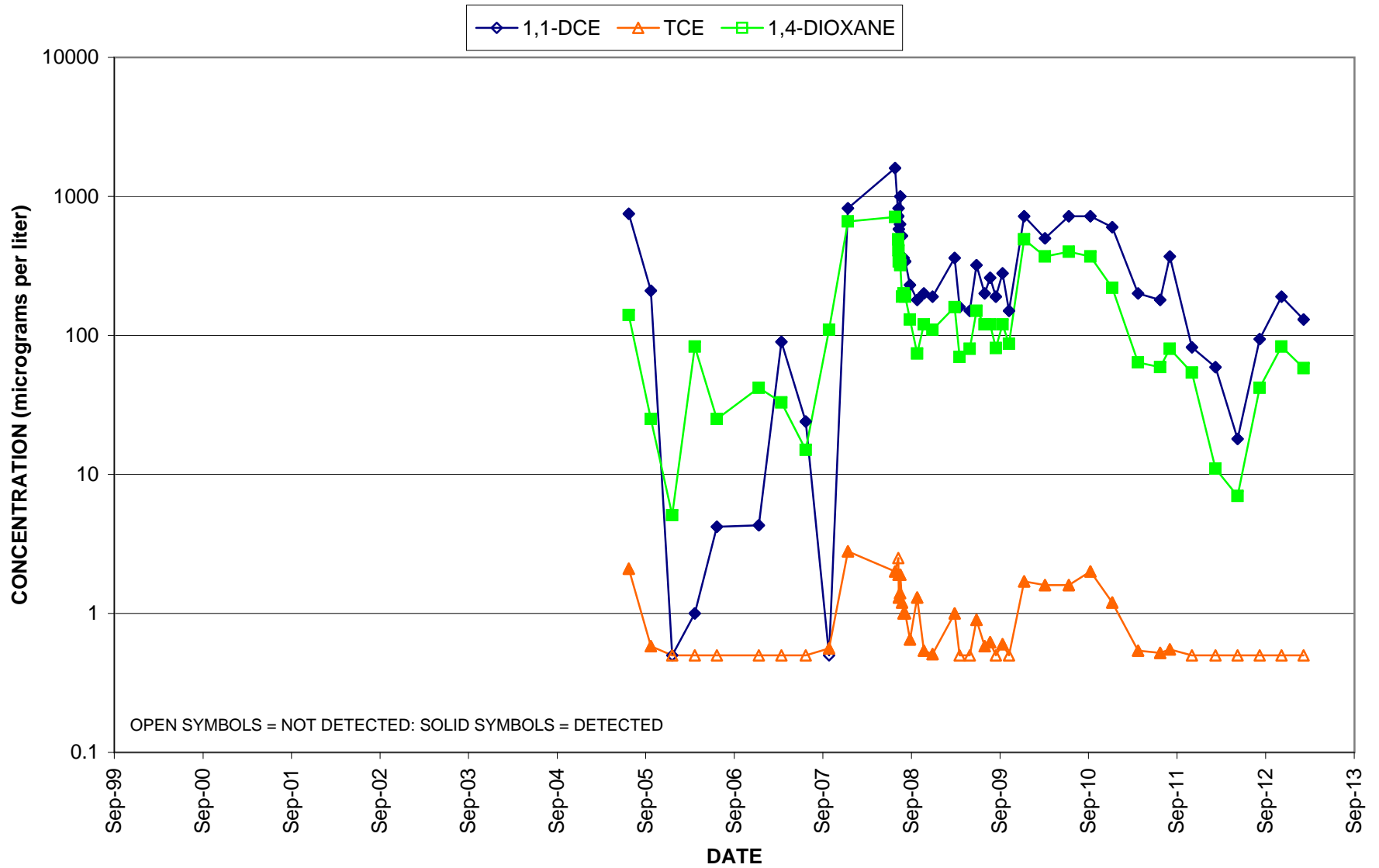




FIGURE C-2: CONCENTRATIONS OF SELECT COMPOUNDS OF CONCERN IN GROUNDWATER, UNIT B, EW-02

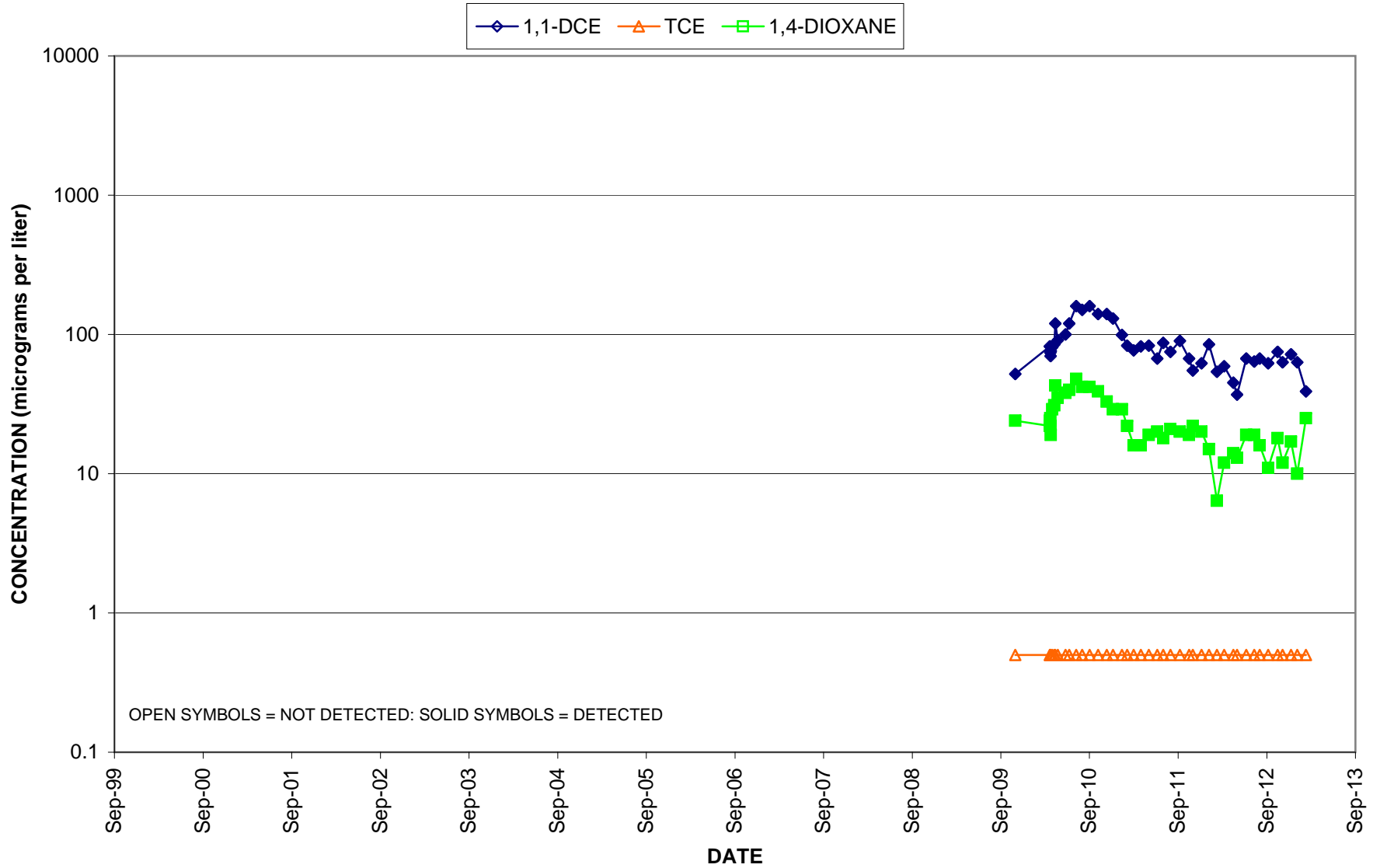




FIGURE C-3: CONCENTRATIONS OF SELECT COMPOUNDS OF CONCERN IN GROUNDWATER, UNIT B, MW-16

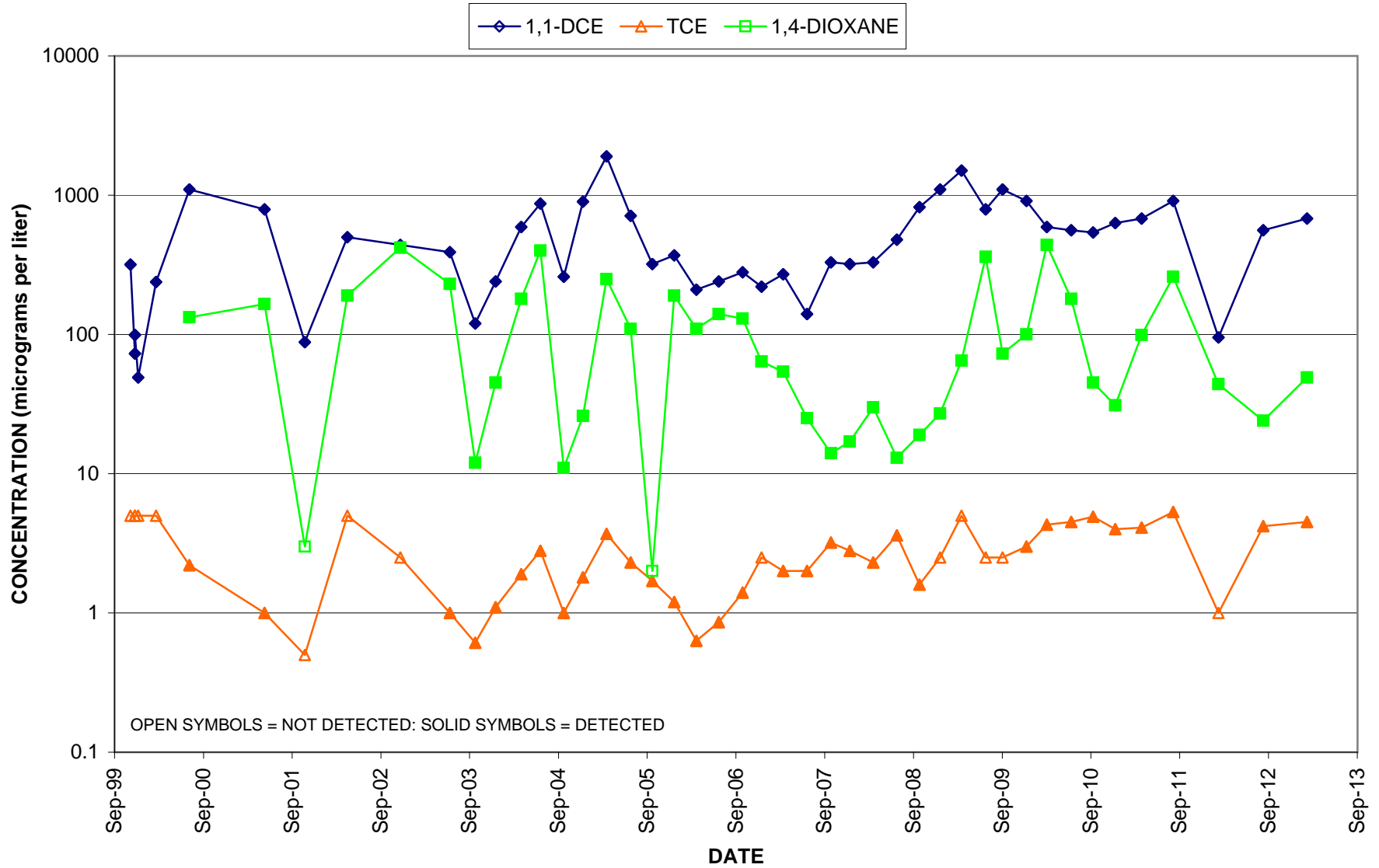




FIGURE C-4: CONCENTRATIONS OF SELECT COMPOUNDS OF CONCERN IN GROUNDWATER, UNIT B, MW-26C

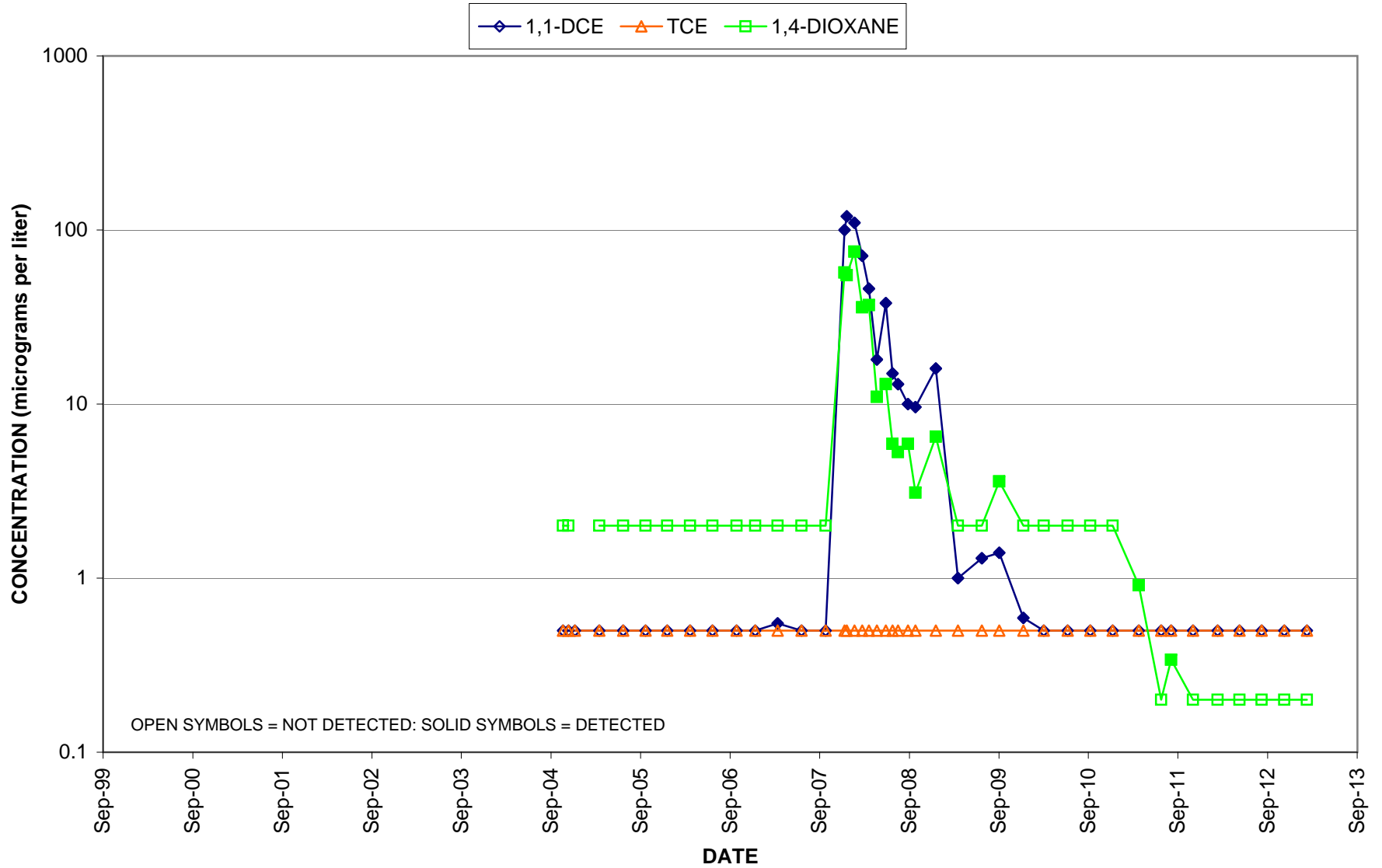




FIGURE C-5: CONCENTRATIONS OF SELECT COMPOUNDS OF CONCERN IN GROUNDWATER, UNIT B, MW-27

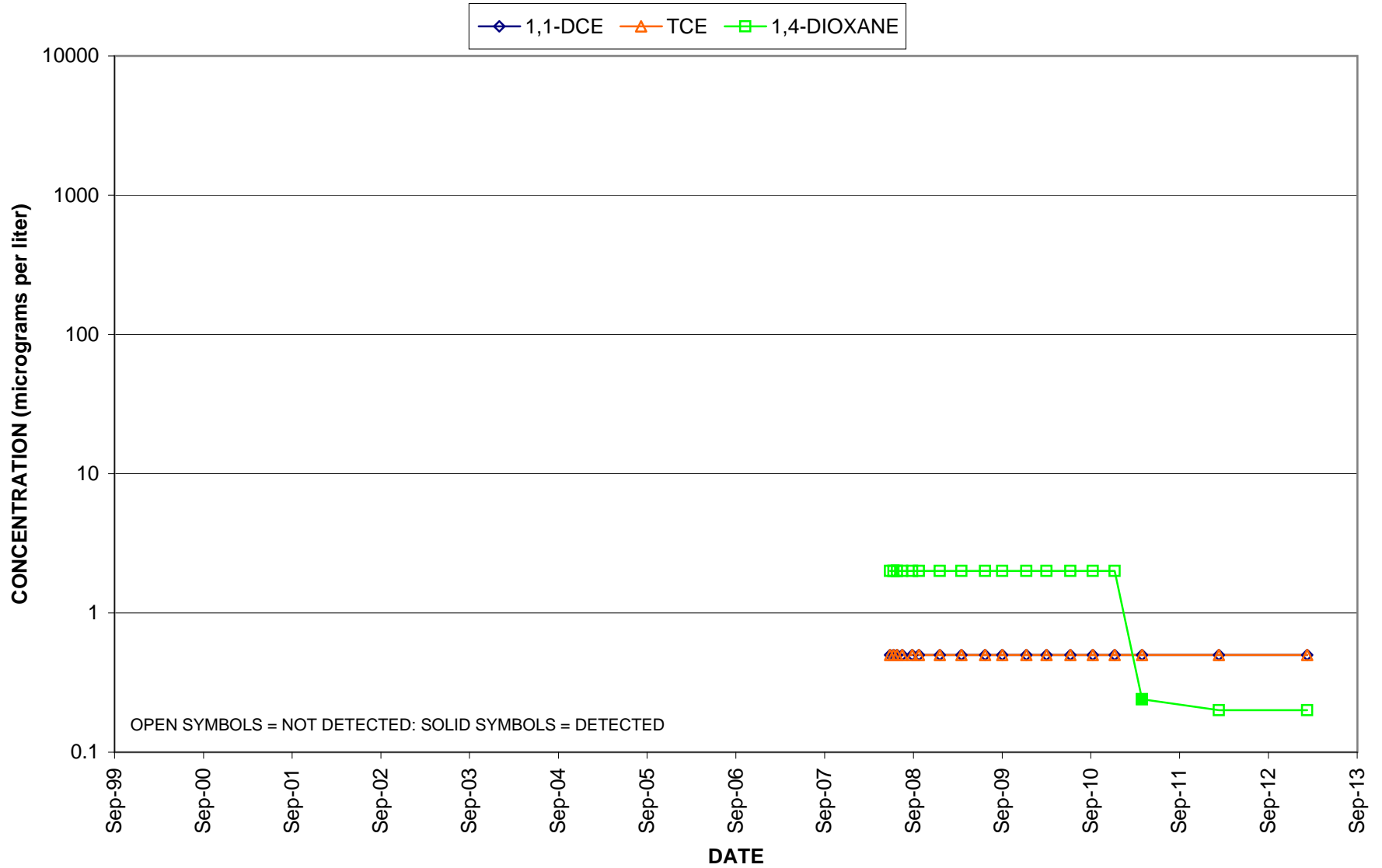




FIGURE C-6: CONCENTRATIONS OF SELECT COMPOUNDS OF CONCERN IN GROUNDWATER, UNIT B, MW-28

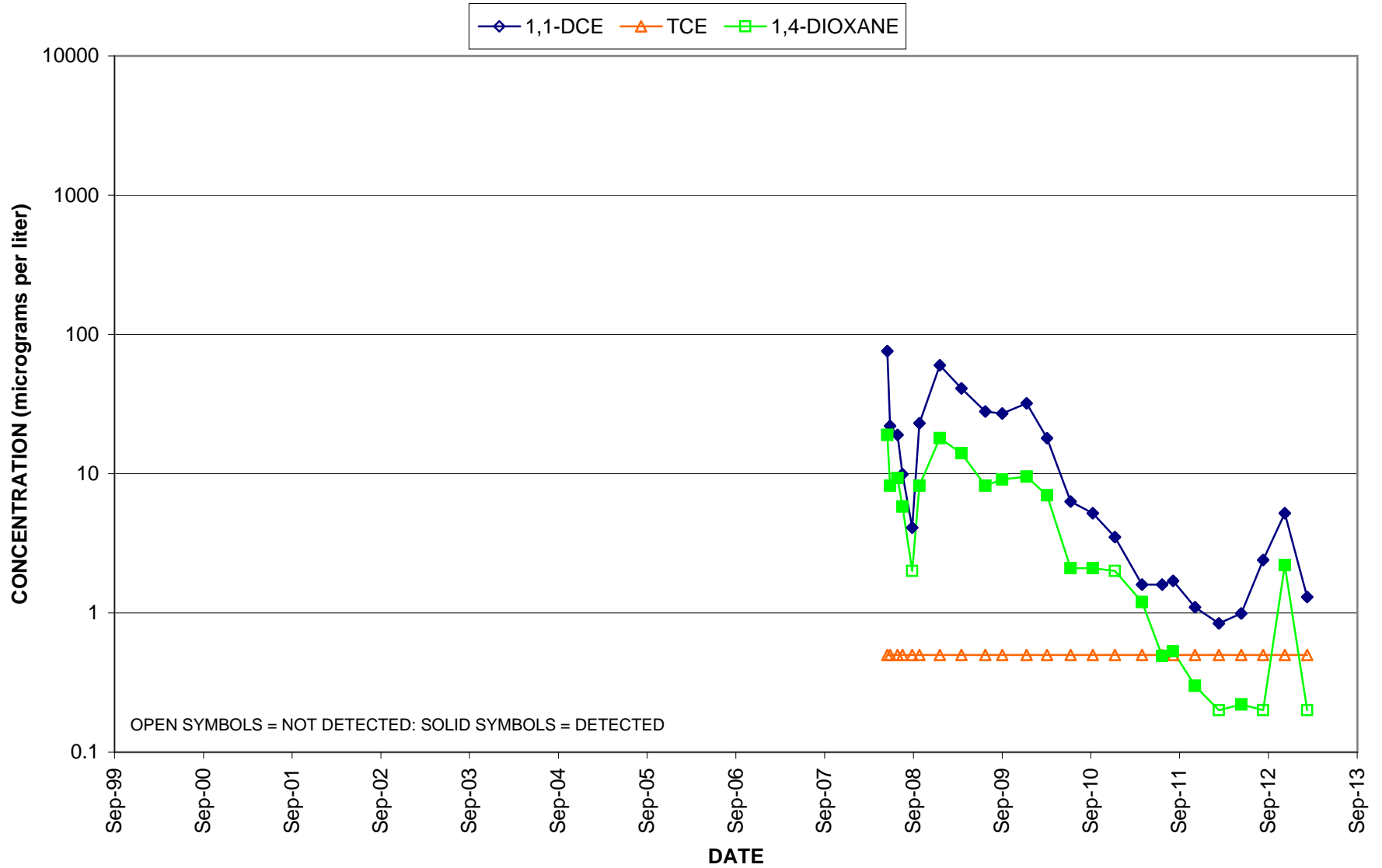




FIGURE C-7: CONCENTRATIONS OF SELECT COMPOUNDS OF CONCERN IN GROUNDWATER, UNIT B, MW-29

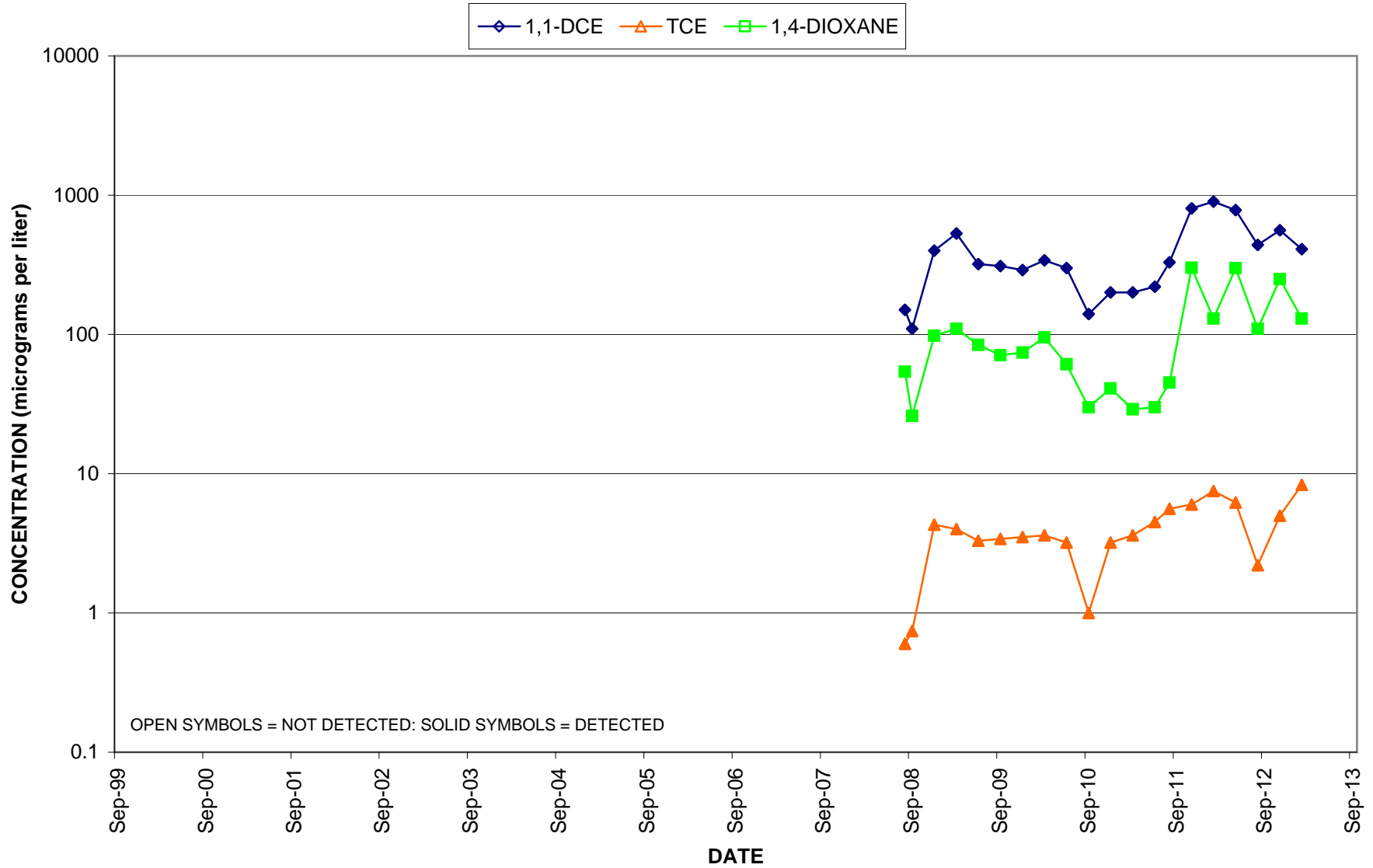




FIGURE C-8: CONCENTRATIONS OF SELECT COMPOUNDS OF CONCERN IN GROUNDWATER, UNIT B, MW-30A

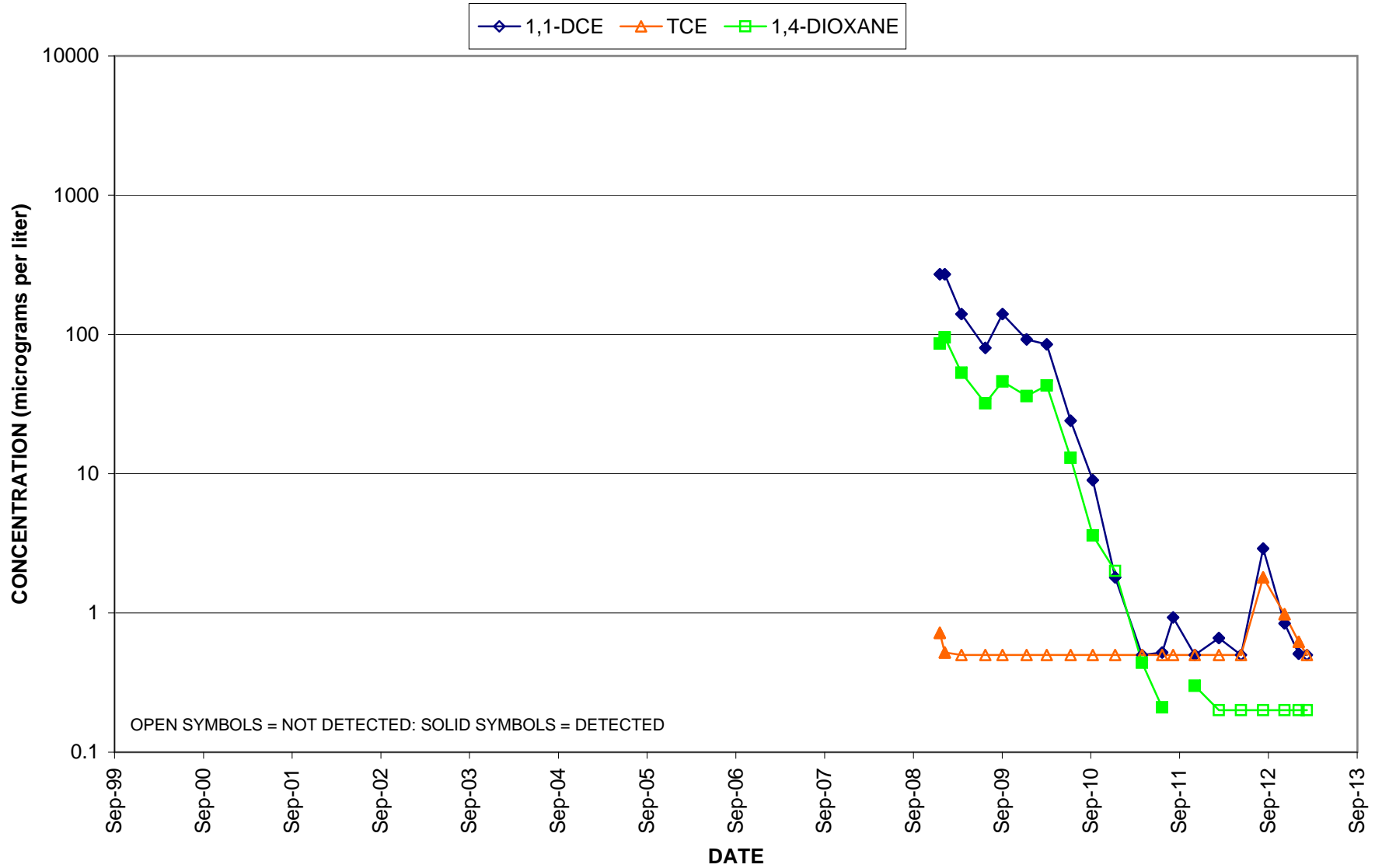


FIGURE C-9: CONCENTRATIONS OF SELECT COMPOUNDS OF CONCERN IN GROUNDWATER, UNIT B, MW-31

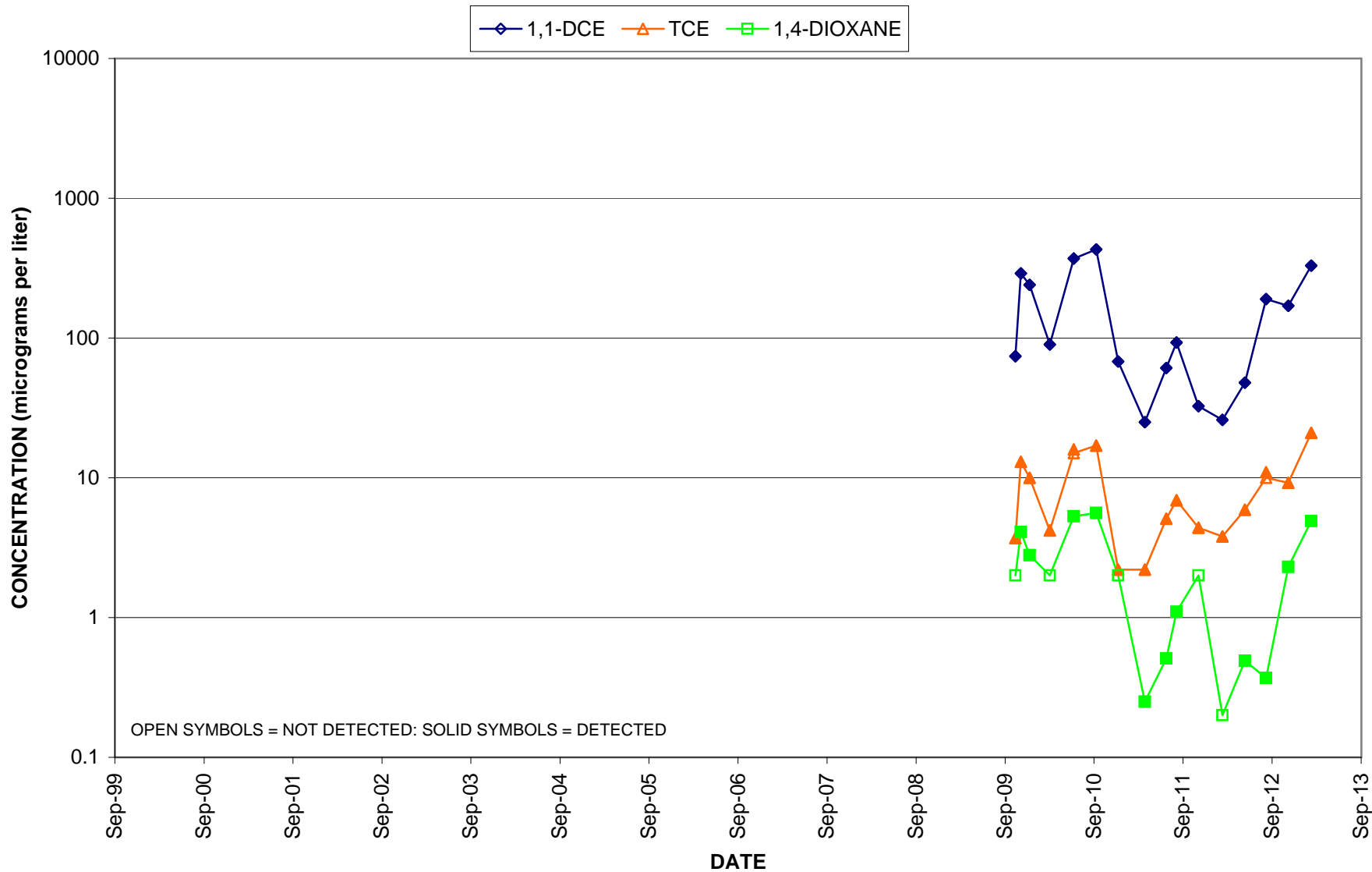




FIGURE C-10: CONCENTRATIONS OF SELECT COMPOUNDS OF CONCERN IN GROUNDWATER, UNIT B, MW-32B

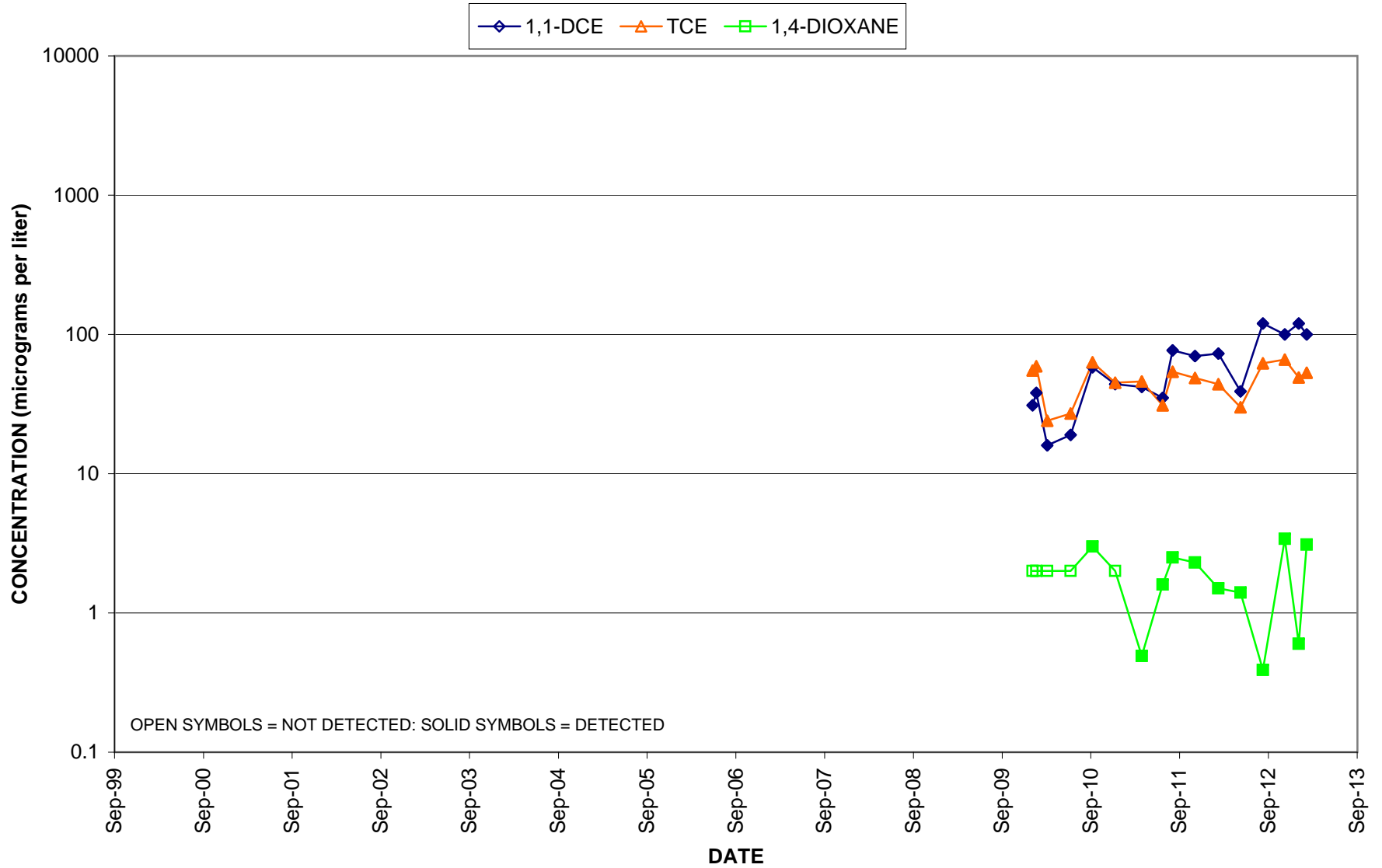




FIGURE C-11: CONCENTRATIONS OF SELECT COMPOUNDS OF CONCERN IN GROUNDWATER, UNIT B, MW-33

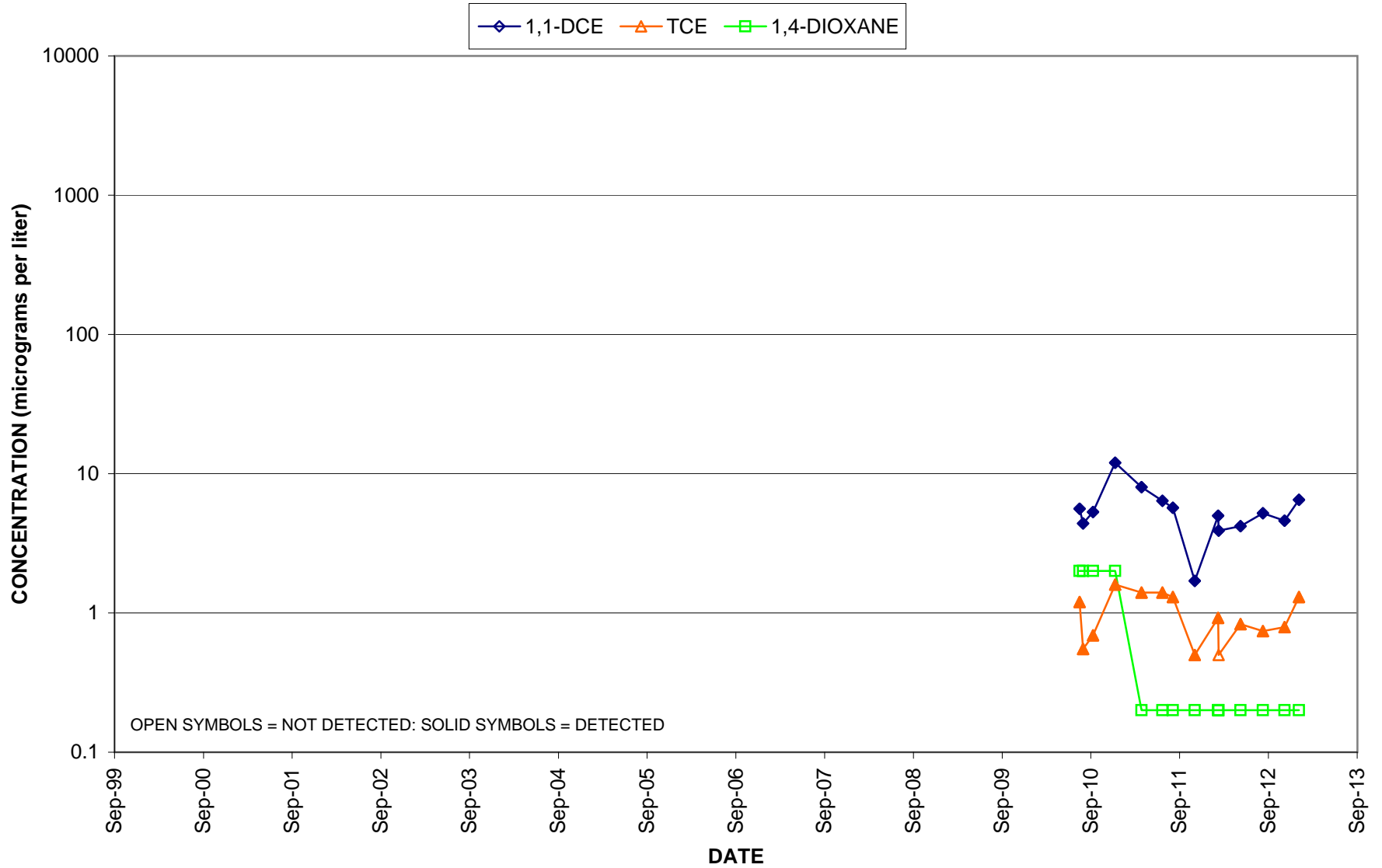




FIGURE C-12: CONCENTRATIONS OF SELECT COMPOUNDS OF CONCERN IN GROUNDWATER, UNIT B, MW-34B

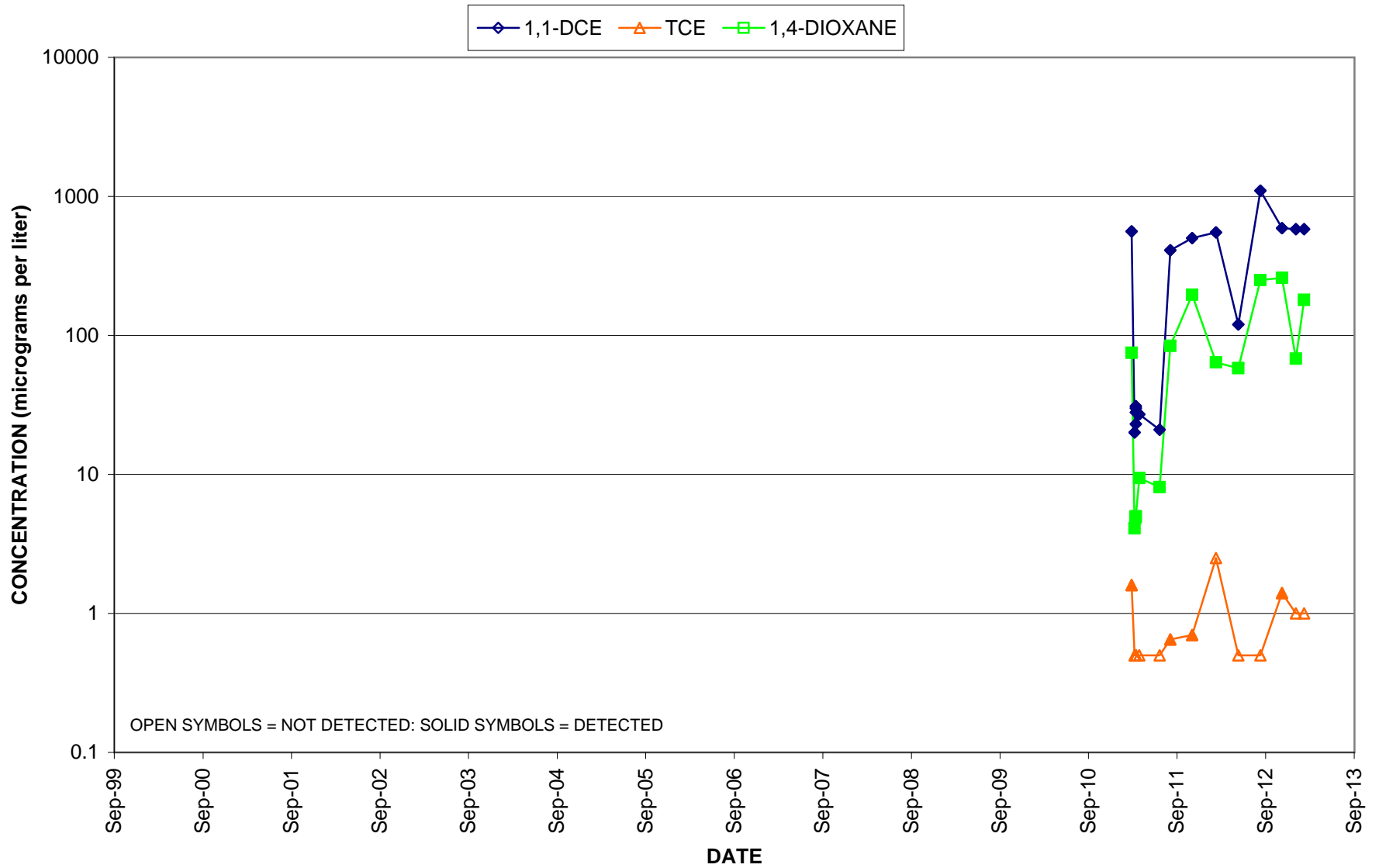




FIGURE C-13: CONCENTRATIONS OF SELECT COMPOUNDS OF CONCERN IN GROUNDWATER, UNIT B, MW-35C

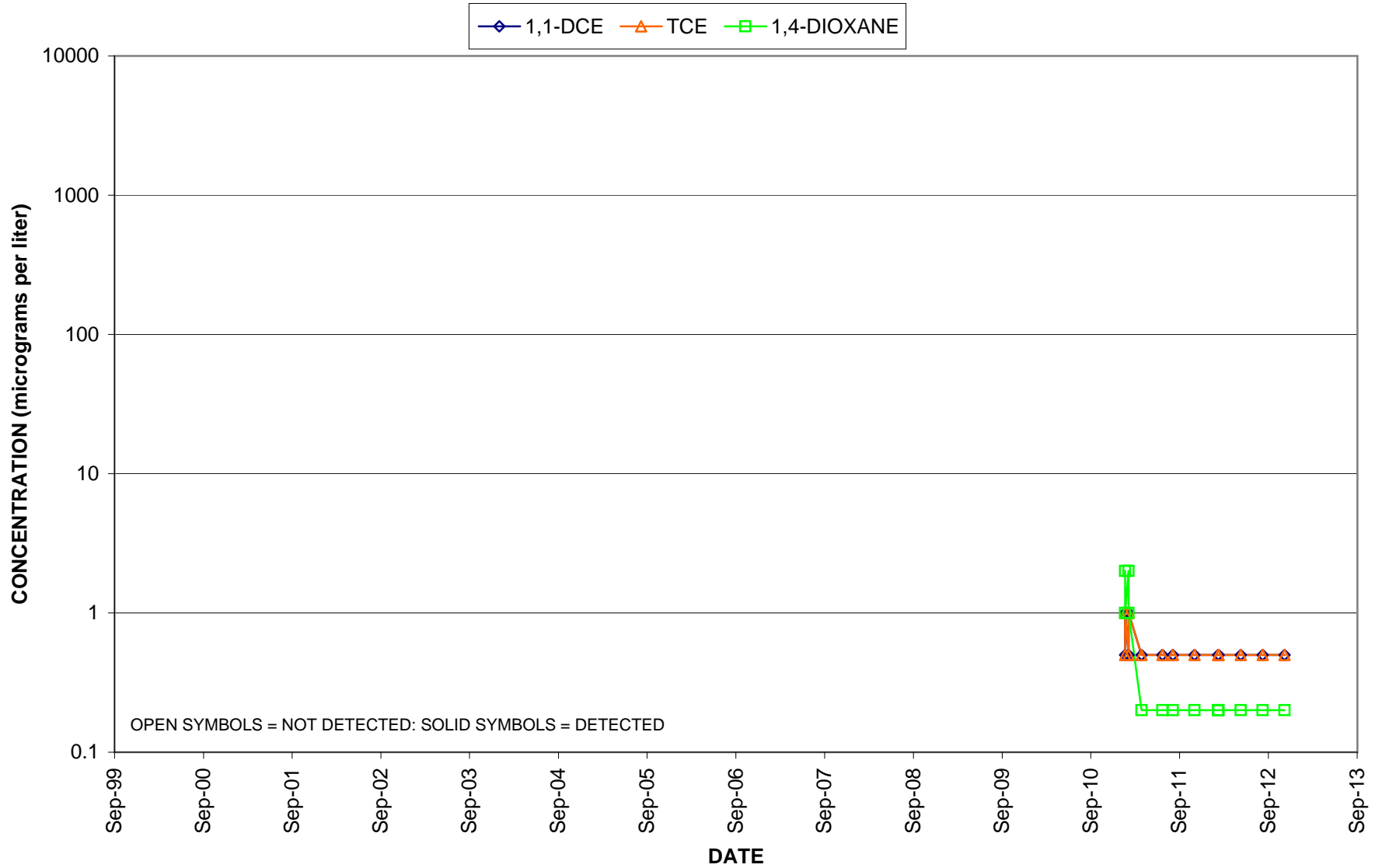




FIGURE C-14: CONCENTRATIONS OF SELECT COMPOUNDS OF CONCERN IN GROUNDWATER, UNIT B, MW-36

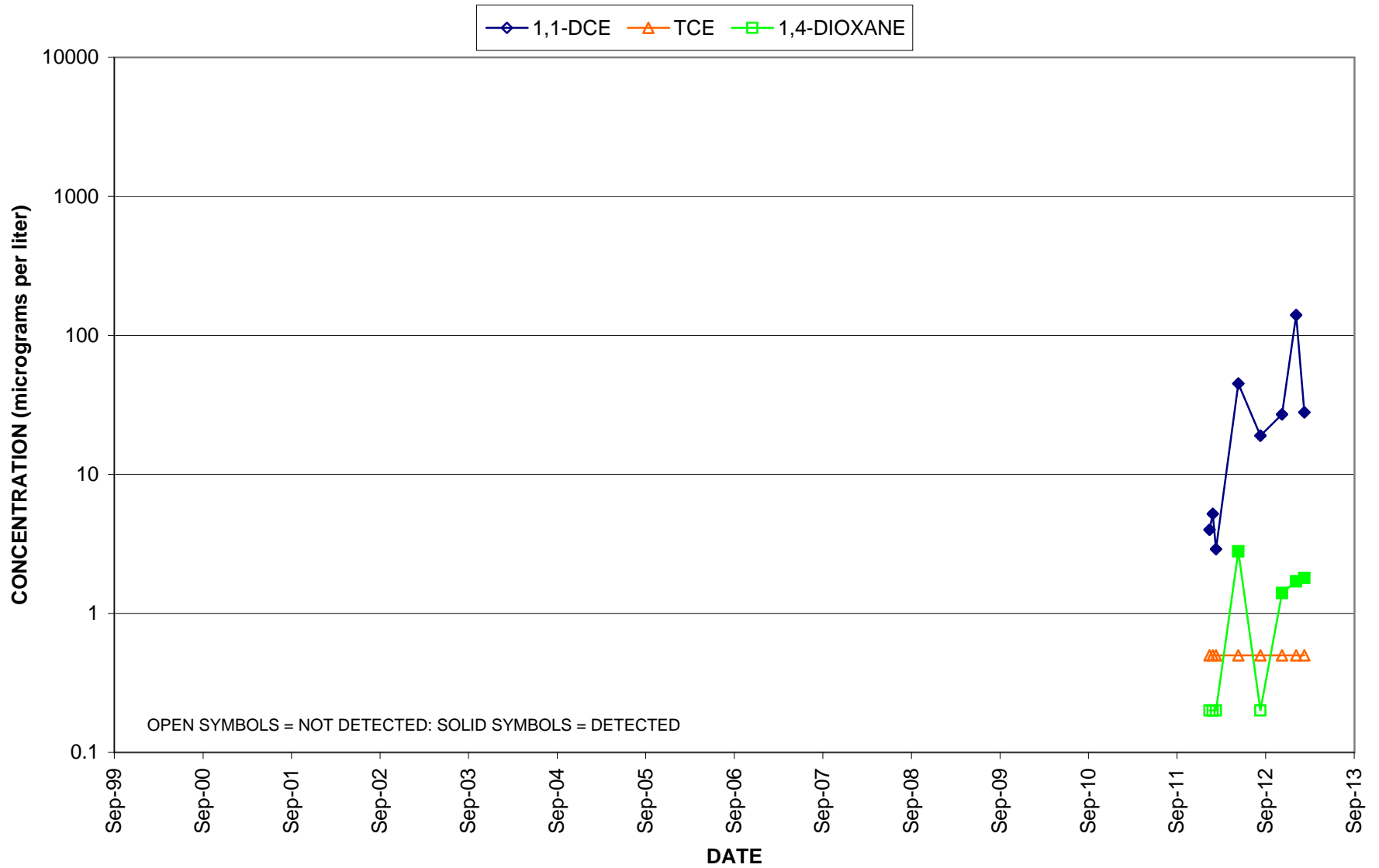




FIGURE C-15: CONCENTRATIONS OF SELECT COMPOUNDS OF CONCERN IN GROUNDWATER, UNIT B, MW-37

