HARGIS + ASSOCIATES, INC.
HYDROGEOLOGY • ENGINEERING

La Jolla Gateway
9171 Towne Centre Drive, Suite 375
San Diego, CA 92122
Phone: 858.455.6500
Fax: 858.455.6533

January 13, 2021

VIA FEDERAL EXPRESS STANDARD

Mr. Steve Rounds
CALIFORNIA ENVIRONMENTAL PROTECTION AGENCY
DEPARTMENT OF TOXIC SUBSTANCES CONTROL
Southern California Region
9211 Oakdale Avenue
Chatsworth, CA 91311-6520

Re: Data Submittal for Groundwater Monitoring and Groundwater Extraction and Treatment Pilot Testing, Fourth Quarter 2020, Raytheon Company (Former Hughes Aircraft Company) Facility, 1901 West Malvern Avenue, Fullerton, California

Dear Mr. Rounds:

This letter has been prepared for the submittal of groundwater monitoring and groundwater treatment pilot testing data collected during the fourth quarter 2020 for the former Raytheon Company site located at 1901 West Malvern Avenue, Fullerton, California (the Site) (Figure 1). Groundwater monitoring activities were completed in general accordance with the California Environmental Protection Agency, Department of Toxic Substances Control (DTSC)-approved Groundwater Monitoring Work Plan and Sampling and Analysis Plan (GMWPSAP) and subsequent addenda (DTSC, 2003 and 2011; Hargis + Associates, Inc. [H+A], 2003, 2011a, and 2011b). Groundwater treatment pilot testing continued throughout the fourth quarter 2020 in general accordance with the DTSC-approved Groundwater Extraction and Treatment System (GETS) Pilot Testing, Corrective Measures Study Work Plan Addendum No. 6 (DTSC, 2013; H+A, 2013). The results of the fourth quarter 2020 groundwater monitoring and pilot GETS operation from September through November 2020 are included in this data submittal.

GROUNDWATER MONITORING

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 were taken at all wells and piezometers, and groundwater samples were collected from extraction wells and select monitor wells in November 2020 in general accordance with the GMWPSAP and Addendum No. 1 (H+A, 2003 and 2011a) (Table 1).

Water Level Measurement and Groundwater Sample Collection

Groundwater monitoring included water level measurements in all Site monitor wells, piezometers, and extraction wells (Figures 2 and 3). Quarterly groundwater levels were measured in all wells on November 2, 2020 (Table 2).

Groundwater samples were collected during the period from November 3 through November 4, 2020 (Appendix A). Analytical results are summarized in Table 3 and provided in Appendix B. Additional groundwater monitoring was conducted as part of routine operation and monitoring of the pilot GETS. A summary of the pilot GETS operation and monitoring is provided below.

Other Offices:
Folsom, CA
Mesa, AZ
Tucson, AZ

Original and field-duplicate groundwater samples were analyzed by Advanced Technology Laboratories, Inc., Signal Hill, California (ATL) (Appendix B). Laboratory split groundwater samples were analyzed by Eurofins Calscience, Garden Grove, California (Appendix B). Chain-of-custody documentation was enclosed with each sample shipment. Results of groundwater sample volatile organic compound (VOC) and 1,4-dioxane analyses have been summarized (Table 3).

Quality Assurance/Quality Control

Quality assurance/quality control (QA/QC) samples collected in November 2020 consisted of trip blanks, field duplicates, equipment rinsate blanks, and laboratory split samples. Trip blanks were provided by ATL. Field duplicate samples were collected for analysis of VOCs and 1,4-dioxane from monitor wells MW-08 and MW-30B in November 2020 (Table 3). Split samples were collected for analysis of VOCs and 1,4-dioxane from monitor wells MW-08 and MW-30B in November 2020 (Table 3).

The relative percent difference (RPD) was calculated between the results of each field duplicate and each laboratory split sample with its corresponding original sample. All results for groundwater samples collected from monitor wells MW-08 and MW-30B are within quality control criteria. The following table summarizes the principal Site compounds, 1,1-dichloroethylene (1,1-DCE), trichloroethylene (TCE) and 1,4-dioxane, results in the original, field duplicate and laboratory split groundwater samples, as well as the calculated RPDs and assigned qualifier flag, if any.

Well ID / Collection Date	Compound	Original (ug/l)	Duplicate (ug/l)	RPD (percent)	Split (ug/l)	RPD (percent)	Qualifier Flag
MW-08 11/03/20	1,1-DCE	27	27	0	23	16	
	TCE	55	55	0	52	6	
	1,4-dioxane	1.9	1.9	0	1.4	30	
MW-30B 11/03/20	1,1-DCE	24	23	4	19	23	
	TCE	100	110	10	89	12	
	1,4-dioxane	0.43	0.43	0	<0.50	NA	

ug/l = micrograms per liter
NA = not applicable

The following table summarizes H+A project QA/QC criteria for field duplicate and laboratory split RPDs.

Range of detection	RPD Criteria (percent)	Project Qualifier Flag	Note
PQL to 10x PQL	< 100	E (estimated) or U (unusable)	Project qualifier flag may be assigned if RPD criteria is not met and/or result is not consistent with data trending
10x PQL to 100x PQL	< 30		
>100x PQL	< 50		

PQL = practical quantitation limit (undiluted)
< = less than
> = greater than

There were no detections of 1,4-dioxane in the equipment rinsate blank or method blanks analyzed with groundwater samples collected during the November 2020 groundwater monitoring event (Table 3; Appendix B). Additionally, there were no detection of VOCs in the trip blanks, equipment rinsate blanks or method blanks analyzed with groundwater samples collected during the November 2020 groundwater samples with the exception of the following low-level detections:

- Methylene chloride was detected at concentrations of 0.68 J ug/l in laboratory split trip blank sample TB-110320B

Methylene chloride was not detected in any associated groundwater samples collected during the November 2020 sampling event; therefore, no associated groundwater sample results were qualified due to the low-level methylene chloride detection in the laboratory split trip blank sample.

The data quality assessment also included review of laboratory QA/QC results. Laboratory QA/QC results are within acceptable criteria.

GROUNDWATER EXTRACTION AND TREATMENT PILOT STUDY

This section summarizes the pilot GETS operation within the three-month period of monitoring conducted September to November 2020. The pilot GETS consists of four groundwater extraction wells, the treatment system, and the disposal system; however, the current phase of pilot testing is operating using only two extraction wells, EW-02 and MW-29. Current extraction rates are nominally 40 gallons per minute (gpm) from extraction well EW-02 and nominally 10 gpm from extraction well MW-29. The treatment system processes extracted groundwater through an advanced oxidation unit that utilizes ultraviolet (UV) light and hydrogen peroxide (UV Ox), followed by a granular activated carbon polish prior to disposal to the sanitary sewer.

Initial startup of the pilot GETS took place in July 2008. From July 2008 through November 2009, the pilot GETS was operated with extraction wells EW-01 and MW-21 operating at approximately 10 gpm each. Pilot GETS expansion took place between November 2009 and March 2010 in order to incorporate extraction well EW-02 into the extraction well network. The system maximum flowrate was also increased from 20 gpm to 50 gpm to utilize the maximum local sewer capacity. Beginning in March 2010, the pilot GETS was operated at 50 gpm, entirely from extraction well EW-02. In 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 (a relatively high-concentration extraction well) 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 in March 2012, and operation of the pilot GETS was restored to 50 gpm entirely from extraction well EW-02. A second phase of pilot GETS expansion took place between March 2014 and August 2014 in order to incorporate extraction well MW-29 into the extraction well network as well as replacing an advanced oxidation unit that used ozone and hydrogen peroxide with a UV Ox system. Extraction wells EW-01 and MW-21 are on standby for the current phase of pilot testing, but are planned to be used as part of the full scale pump-and-treat system.

During the fourth quarter of 2020, the pilot GETS was operational greater than 97 percent of the available runtime and approximately 4.8 million gallons of groundwater were treated and discharged to the sanitary sewer (Table 4). The average operational monthly discharge flowrate to the sanitary sewer from September to November 2020 was approximately 36.8 gpm. Since startup of the pilot GETS, approximately 207 million gallons of groundwater have been treated at an average operational flowrate of 41 gpm through the end of November 2020 (Table 4).

Current monthly and quarterly pilot GETS monitoring activities include collecting groundwater samples from extraction wells EW-02 and MW-29 in addition to collecting samples at treatment system sampling ports: Influent, Post-Particulate-Filter, Post-UV-Ox, Carbon-Breakthrough, and Carbon-Effluent (Tables 5 and 6; Figures 4 and 5). Samples collected during these activities were transmitted to ATL for analysis in accordance with chain-of-custody procedures. Analytical results of the extraction wells and treatment system sampling have been summarized (Table 6; Appendix B).

The UV Ox advanced oxidation treatment unit is designed to remove 1,4-dioxane and most VOCs in groundwater. The carbon adsorption units provide a polish following the UV Ox treatment and remove possible low-level VOCs remaining in groundwater post UV Ox (principally low-level ethanes). The UV Ox advanced oxidation and carbon adsorption treatment units effectively removed VOCs and 1,4-dioxane from extracted groundwater in the fourth quarter of 2020. The samples collected from the effluent of the UV Ox treatment unit (Post-UV-Ox) were analyzed for VOCs and 1,4-dioxane, and resulted in non-detect values (Table 6).

The pilot GETS continues to remove VOCs and 1,4-dioxane from extracted groundwater. During the fourth quarter of 2020, the pilot GETS removed approximately 2.0 pounds of VOCs and 1.1 pounds of 1,4-dioxane from extracted groundwater. Since startup of the pilot GETS in July 2008, approximately 182 pounds of VOCs and 47 pounds of 1,4-dioxane have been removed from groundwater through November 2020 (Figure 7). Operation of the pilot GETS continues to be optimized to maximize the treatment of 1,4-dioxane and VOCs in extracted groundwater.

If you have any questions or require additional information, please contact us at 858-455-6500.

Sincerely,

HARGIS + ASSOCIATES, INC.

Steven P. Netto, RG 8030, CHG 872
Senior Hydrogeologist

Andrew M. Donnelly
Hydrogeologist

Ross H. Horton
Engineer

SPN/AMD/RHH/jak

REFERENCES

California Environmental Protection Agency, Department of Toxic Substances Control (DTSC), 2003. Letter to P. Brewer, Raytheon Systems Company, from A. Plaza, DTSC, re: Review of Additional Groundwater Assessment Workplan and Groundwater Monitoring Workplan and Sampling and Analysis Plan. May 20, 2003.

_____, 2011. Email from W. Jeffers, DTSC, re: Conditional Approval of Addendum No. 1 to the Ground Water Monitoring Work Plan, Raytheon Fullerton, dated June 7, 2011.

_____, 2013. Email from W. Jeffers, DTSC, re: Groundwater Extraction and Treatment System Pilot Testing Corrective Measures Study Workplan, Addendum #6, dated April 16, 2013.

Hargis + Associates, Inc. (H+A), 2003. Groundwater Monitoring Work Plan and Sampling and Analysis Plan (Revision 1.0), Raytheon Company (former Hughes Aircraft Company), 1901 West Malvern Avenue, Fullerton, California. April 25, 2003.

_____, 2011a. Letter to W. Jeffers, DTSC, re: Addendum No. 1 to the *Groundwater Monitoring Work Plan and Sampling and Analysis Plan (Revision 1.0)*, by Hargis + Associates, Inc., dated April 25, 2003, for the Raytheon Company, (Former Hughes Aircraft Company), 1901 West Malvern Avenue, Fullerton, California. February 11, 2011.

_____, 2011b. Letter to W. Jeffers, DTSC, re: Amendment A, Addendum No. 1 to the *Groundwater Monitoring Work Plan and Sampling and Analysis Plan (Revision 1.0)*, by Hargis + Associates, Inc., dated April 25, 2003, for the Raytheon Company, (Former Hughes Aircraft Company), 1901 West Malvern Avenue, Fullerton, California. June 16, 2011.

_____, 2013. Groundwater Extraction and Treatment System Pilot Testing, Corrective Measures Study Workplan Addendum No. 6, Raytheon Company (former Hughes Aircraft Company), 1901 West Malvern Avenue, Fullerton, California. February 27, 2013.

Enclosures

Tables

Table 1	Groundwater Monitoring Program
Table 2	Groundwater Levels, Fourth Quarter 2020
Table 3	Prevalent Volatile Organic Compounds and 1,4-Dioxane in Groundwater, Fourth Quarter 2020
Table 4	Pilot Groundwater Extraction and Treatment System Operational Summary
Table 5	Pilot Groundwater Extraction and Treatment System Sampling Schedule
Table 6	Select Compounds Monitored in Pilot Groundwater Extraction and Treatment System Samples, Fourth Quarter 2020

Figures

Figure 1	Site Location
Figure 2	Well and Piezometer Locations
Figure 3	Water Level and Water Quality, Unit B, November 2020
Figure 4	Pilot Groundwater Extraction and Treatment System Operation and Extraction Well Water Levels
Figure 5	1,1-Dichloroethylene and 1,4-Dioxane Concentrations in Extraction Wells
Figure 6	1,4-Dioxane and Bromate in Influent and Post-Oxidation Samples
Figure 7	Pilot Groundwater Extraction and Treatment System Mass Removal

Appendices

Appendix A	Groundwater Sampling Field Forms (provided on CD in hard copy)
Appendix B	Laboratory Analytical Reports (provided on CD in hard copy)

cc w/encl: (1 copy w-CD)
Mr. Steve Rounds, Department of Toxic Substances Control, Chatsworth
Mr. Paul Pongetti, Department of Toxic Substances Control, Cypress
Mr. Dave Mark, Orange County Water District
Mr. Eric Silvers, Regency Centers

(2 copies w-CD)
Mr. Louis Gonzales, City of Fullerton

(via CD)
Ms. Tiffany Foo, City of Fullerton
Ms. Kim Buss, Orange County Public Works – Flood Control District
Mr. Carl Bernhardt, California Regional Water Quality Control Board, Santa Ana Region
Mr. Danny Samorano, Raytheon Company
Mr. Nabil Henein, City of Buena Park
Mr. Amir Modarressi, City of Buena Park

(via Email)
Mr. Jon Hone, Raytheon Company
Mr. Duc Nguyen, Orange County Public Works
Mr. Mike McGee, City of Buena Park
Ms. Lisa Turturro, Haley & Aldrich, Inc.
Mr. Jimmy Chung, Regency Centers
Mr. Neil Hu, Regency Centers
Ms. Marnie Farcone, 1st Commercial Realty Group, Inc.
Ms. Linda Opperman, Target Properties
Ms. Nicole Subia, Target Properties
Mr. Tom Shapiro, TA Realty
Mr. Kendrick Leckband, TA Realty
Ms. Christine Ehrhardt, Greystar
Ms. Carol Owens, Greystar
Mr. Paul Rodolf, Hydraflow
Mr. Robinson Sioson, Hydraflow

TABLE 1
GROUNDWATER MONITORING PROGRAM

WELL IDENTIFIER	HYDROGEOLOGIC ZONE	SAMPLED NOV 2020	SAMPLING FREQUENCY			
			QUARTERLY FEB, MAY, AUG, NOV	SEMIANNUAL FEBRUARY, AUGUST	ANNUAL FEBRUARY	BIENNIAL FEB (EVEN YEARS)
P-07	Perched				VOCs; 1,4-Dioxane	
P-09	Perched				VOCs; 1,4-Dioxane	
MW-35A	Other					VOCs; 1,4-Dioxane
MW-17	A		PIEZOMETER - WATER LEVEL MEASUREMENT ONLY			
MW-18	A			VOCs; 1,4-Dioxane		
MW-19	A					VOCs
MW-22	A					VOCs; 1,4-Dioxane
MW-23	A					VOCs
MW-34A	A			VOCs; 1,4-Dioxane		
MW-35B	A					VOCs; 1,4-Dioxane
MW-38	A				VOCs; 1,4-Dioxane	
MW-13	AB				VOCs; 1,4-Dioxane	
MW-15	AB			VOCs		
MW-26A	AB		PIEZOMETER - WATER LEVEL MEASUREMENT ONLY			
MW-26B	AB		PIEZOMETER - WATER LEVEL MEASUREMENT ONLY			
MW-32A	AB			VOCs; 1,4-Dioxane		
EW-01	B	X	VOCs; 1,4-Dioxane			
EW-02*	B	X	VOCs; 1,4-Dioxane			
MW-16	B			VOCs; 1,4-Dioxane		
MW-26C	B	X	VOCs; 1,4-Dioxane			
MW-27	B				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-39	B	X	VOCs; 1,4-Dioxane			
MW-40	B	X	VOCs; 1,4-Dioxane			
MW-41	B	X	VOCs; 1,4-Dioxane			
MW-42	B	X	VOCs; 1,4-Dioxane			
MW-43	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			VOCs; 1,4-Dioxane		
MW-09	C			VOCs; 1,4-Dioxane		
MW-24	C				VOCs; 1,4-Dioxane	
MW-32C	C			VOCs; 1,4-Dioxane		
MW-06	D				VOCs	
MW-20	D			VOCs; 1,4-Dioxane		
MW-25	D		WATER LEVEL MEASUREMENT ONLY			
MW-37	D				VOCs; 1,4-Dioxane	

FOOTNOTES:

Groundwater Monitoring Program 2014/2015 Letter (Hargis + Associates, Inc., 2015)

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

VOCs = volatile organic compounds

TABLE 2
GROUNDWATER LEVELS
FOURTH QUARTER 2020

Well Identifier	Date Measured	Reference Point Elevation [(a)] (feet msl)	Depth to Water (feet btoc)	Water Level Elevation (feet msl)	Remediation System On
Regional Groundwater System Monitor and Extraction Wells					
MW-06	11/02/20	184.70	155.93	28.77	
MW-08	11/02/20	155.91	131.13	24.78	
MW-09	11/02/20	180.10	154.32	25.78	
MW-13	11/02/20	141.84	125.40	16.44	
MW-15	11/02/20	144.95	128.05	16.90	
MW-16	11/02/20	142.40	126.66	15.74	
MW-17	11/02/20	142.70	125.49	17.21	
MW-18	11/02/20	142.32	125.94	16.38	
MW-19	11/02/20	142.06	125.70	16.36	
MW-20	11/02/20	184.19	150.39	33.80	
MW-21	11/02/20	141.18	116.02	25.16	
MW-22	11/02/20	138.65	122.01	16.64	
MW-23	11/02/20	137.33	121.74	15.59	
MW-24	11/02/20	142.83	117.41	25.42	
MW-25	11/02/20	142.64	117.22	25.42	
MW-26A	11/02/20	137.04	119.94	17.10	
MW-26B	11/02/20	137.05	119.76	17.29	
MW-26C	11/02/20	137.22	122.96	14.26	
MW-27	11/02/20	137.16	122.49	14.67	
MW-28	11/02/20	140.77	126.67	14.10	
MW-29	09/03/20	139.81	156.90	-17.09	Pilot GETS
MW-29	09/17/20	139.81	159.52	-19.71	Pilot GETS
MW-29	10/01/20	139.81	159.92	-20.11	Pilot GETS
MW-29	10/15/20	139.81	160.81	-21.00	Pilot GETS
MW-29	11/02/20	139.81	186.65	-46.84	Pilot GETS
MW-29	11/05/20	139.81	186.01	-46.20	Pilot GETS
MW-29	11/19/20	139.81	187.19	-47.38	Pilot GETS
MW-30A	11/02/20	129.44	116.30	13.14	
MW-30B	11/02/20	129.39	112.95	16.44	
MW-31	11/02/20	119.60	105.70	13.90	
MW-32A	11/02/20	92.88	81.09	11.79	
MW-32B	11/02/20	92.89	80.06	12.83	

TABLE 2
GROUNDWATER LEVELS
FOURTH QUARTER 2020

Well Identifier	Date Measured	Reference Point Elevation [(a)] (feet msl)	Depth to Water (feet btoc)	Water Level Elevation (feet msl)	Remediation System On
Reginal Groundwater System Monitor and Extraction Wells (continued)					
MW-32C	11/02/20	92.88	71.60	21.28	
MW-33	11/02/20	83.19	72.42	10.77	
MW-34A	11/02/20	153.25	141.85	11.40	
MW-34B	11/02/20	153.11	140.24	12.87	
MW-34C	11/02/20	153.29	139.17	14.12	
MW-35A	11/02/20	93.57	71.70	21.87	
MW-35B	11/02/20	93.56	80.07	13.49	
MW-35C	11/02/20	93.55	81.88	11.67	
MW-36	11/02/20	86.65	76.28	10.37	
MW-37	11/02/20	155.60	136.72	18.88	
MW-38	11/02/20	154.90	147.10	7.80	
MW-39	11/02/20	84.25	74.41	9.84	
MW-40	11/02/20	123.40	108.90	14.50	
MW-41	11/02/20	155.60	142.62	12.98	
MW-42	11/02/20	82.80	73.39	9.41	
MW-43	11/02/20	76.64	67.57	9.07	
EW-01	11/02/20	141.07	125.05	16.02	
EW-02	09/03/20	132.97	118.78	14.19	Pilot GETS
EW-02	09/17/20	132.97	120.13	12.84	Pilot GETS
EW-02	10/01/20	132.97	121.53	11.44	Pilot GETS
EW-02	10/15/20	132.97	122.62	10.35	Pilot GETS
EW-02	11/02/20	132.97	123.65	9.32	Pilot GETS
EW-02	11/05/20	132.97	123.38	9.59	Pilot GETS
EW-02	11/19/20	132.97	124.77	8.20	Pilot GETS
Perched Zone Water Levels					
P-07	11/02/20	142.31	111.81	30.50	
P-09	11/02/20	183.86	120.85	63.01	

FOOTNOTES:

[(a)] Reference point elevations are relative to City of Fullerton datum.
btoc = Below top of casing
msl = Mean sea level
Pilot GETS = Pilot Groundwater Extraction and Treatment System On

TABLE 3

PREVALENT VOLATILE ORGANIC COMPOUNDS AND 1,4-DIOXANE IN GROUNDWATER
FOURTH QUARTER 2020

			Concentration (micrograms per liter)													
			VOLATILE ORGANIC COMPOUNDS (FEDERAL MCL/CALIFORNIA MCL)													Semi-VOCs
Well Identifier / Sample Identifier	Date Sampled	QA Code	Benzene (5/1)	Carbon Tetrachloride (5/0.5)	Chloroform (80/80)	1,1-DCA (--/5)	1,2-DCA (5/0.5)	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																
MW-08	11/03/2020	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	**27**	**2.6**	< 0.50	< 0.50	< 0.50	**55**	< 0.50	**0.22 J**	**1.9**
MW-0800	11/03/2020	DUP	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	**27**	**2.5**	< 0.50	< 0.50	< 0.50	**55**	< 0.50	**0.17 J**	**1.9**
MW-08[1]	11/03/2020	SPT	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	**23**	**2.3**	< 0.50	< 0.50	< 0.50	**52**	< 0.50	< 0.50	**1.4**
MW-08 Historical Range* **			< 0.50 - 0.95	< 0.50 - 0.50	< 0.50 - 0.86	< 0.50 - 5.1	< 0.50 - 0.99	< 0.50 - 500	< 0.50 - 13	< 0.50 - 2.6	< 0.50 - < 5.0	< 0.50 - < 5.0	< 0.50 - 480	< 0.50 - 1.0	< 0.50 - 2.3	< 0.20 - 130
MW-21	11/03/2020	ORG	< 0.50	**0.26 J**	**0.60**	**8.2**	**1.7**	**930**	**1.0**	**1.8**	< 0.50	**5.3**	**14**	**0.27 J**	< 0.50	**600**
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	0.96 - 46	< 0.50 - 0.53	< 0.50 - < 10	11 - 1,100
MW-26C	11/03/2020	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 - 57
MW-28	11/04/2020	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	**0.83**	< 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 - 0.20 J	< 0.50 - 0.94	< 0.50	< 0.50 - 76 E	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.20 - 19
MW-29	09/03/2020	ORG	< 0.50	< 0.50	< 0.50	**1.3**	< 0.50	**97**	< 0.50	**0.76**	< 0.50	< 0.50	**1.5**	< 0.50	< 0.50	**81**
MW-29[2]	09/17/2020	ORG	< 0.50	**1.8**	< 0.50	**1.5**	< 0.50	**130**	< 0.50	< 0.50	< 0.50	< 0.50	**1.9**	**1.8**	< 0.50	**94**
MW-29	10/01/2020	ORG	< 0.50	< 0.50	< 0.50	**1.4**	< 0.50	**160**	< 0.50	**0.53**	< 0.50	**0.52**	**1.8**	**0.77**	< 0.50	**87**
MW-29	10/15/2020	ORG	< 0.50	< 0.50	< 0.50	**1.6**	< 0.50	**180**	< 0.50	**0.51**	< 0.50	< 0.50	**2.1**	**0.90**	< 0.50	**100**
MW-29	11/05/2020	ORG	< 0.50	< 0.50	< 0.50	**1.4**	< 0.50	**170**	< 0.50	**0.50**	< 0.50	**0.57**	**2.0**	**0.90**	< 0.50	**100**
MW-29	11/19/2020	ORG	< 0.50	< 0.50	< 0.50	**1.7**	< 0.50	**180**	< 0.50	**0.61**	< 0.50	**0.56**	**2.4**	**1.2**	< 0.50	**96**
Historical High/Low				**High**												
MW-29 Historical Range* **			< 0.50 - 0.57	< 0.50 - < 5.0	< 0.50 - 0.80	< 0.50 - 9.2	< 0.50 - 1.4	99 - 900 E	< 0.50 - 0.61	< 0.50 - 6.6	< 0.50 - < 5.0	< 0.50 - 2.3	< 0.50 - 8.3	< 0.50 - 2.2	< 0.50 - < 5.0	26 BE - 301
MW-30A	11/03/2020	ORG	< 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	< 0.20
MW-30A Historical Range* **			< 0.50	< 0.50	< 0.50	< 0.50 - 2.9	< 0.50 - 0.67	< 0.50 - 270	< 0.50	< 0.50 - 0.58	< 0.50	< 0.50 - 1.1	< 0.50 - 1.9	< 0.50	< 0.50	< 0.20 - 95
MW-30B	11/03/2020	ORG	< 0.50	< 0.50	**0.34 J**	< 0.50	< 0.50	**24**	**4.8**	< 0.50	< 0.50	< 0.50	**100**	< 0.50	< 0.50	**0.43**
MW-3000B	11/03/2020	DUP	< 0.50	< 0.50	**0.35 J**	< 0.50	< 0.50	**23**	**4.9**	< 0.50	< 0.50	< 0.50	**110**	< 0.50	< 0.50	**0.43**
MW-30B	11/03/2020	SPT	< 0.50	< 0.50	**0.36 J**	< 0.50	< 0.50	**19**	**4.5**	< 0.50	< 0.50	< 0.50	**89**	< 0.50	< 0.50	< 0.50
MW-30B Historical Range* **			< 0.50	< 0.50	< 0.50 - 0.77	< 0.50	< 0.50	< 0.50 - 28	< 0.50 - 8.2	< 0.50 - 0.51	< 0.50	< 0.50	< 0.50 - 110	< 0.50	< 0.50 - 4.5	< 0.20 - 28 E
MW-31	11/03/2020	ORG	< 0.50	< 0.50	**0.20 J**	**2.4**	< 0.50	**350**	**0.67**	**0.51**	< 0.50	**0.52**	**13**	< 0.50	**0.25 J**	**15**
MW-31 Historical Range* **			< 0.50	< 0.50	< 0.50 - 0.58	< 0.50 - 5.0	< 0.50 - 0.51	25 - 430	< 0.50 - 3.0E	< 0.50 - 2.4E	< 0.50	< 0.50 - 1.2	0.50 - 21	< 0.50	< 0.50 - 1.0	< 0.20 - 16
MW-32B	11/03/2020	ORG	< 0.50	< 0.50	< 0.50	**0.64**	< 0.50	**76**	**2.3**	< 0.50	< 0.50	< 0.50	**18**	< 0.50	< 0.50	**1.6**
MW-32B Historical Range* **			< 0.50	< 0.50	< 0.50	< 0.50 - 3.6	< 0.50	16 - 290	1.4 - 7.9	< 0.50	< 0.50	< 0.50	13 - 75	< 0.50	< 0.50	< 2.0 - 8.0

TABLE 3

PREVALENT VOLATILE ORGANIC COMPOUNDS AND 1,4-DIOXANE IN GROUNDWATER
FOURTH QUARTER 2020

Concentration (micrograms per liter)

Well Identifier / Sample Identifier	Date Sampled	QA Code	VOLATILE ORGANIC COMPOUNDS (FEDERAL MCL/CALIFORNIA MCL) Benzene (5/1)	Carbon Tetrachloride (5/0.5)	Chloroform (80/80)	1,1-DCA (--/5)	1,2-DCA (5/0.5)	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)	Semi-VOCs 1,4-Dioxane (3*/1**)
Regional Groundwater System Monitor and Extraction Wells (cont'd)																
MW-33	11/03/2020	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	**4.6**	< 0.50	< 0.50	< 0.50	< 0.50	**0.42 J**	< 0.50	< 0.50	< 0.20
MW-33 Historical Range* **			< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50 - 12	< 0.50	< 0.50 - 0.32 J	< 0.50	< 0.50	< 0.50 - 2.0	< 0.50	< 0.50 - 1.4	< 0.20 - 0.22
MW-34B	11/03/2020	ORG	< 0.50	< 0.50	< 0.50	**0.65**	< 0.50	**68**	< 0.50	**0.24 J**	< 0.50	< 0.50	**0.22 J**	< 0.50	< 0.50	**29**
MW-34B Historical Range* **			< 0.50 - < 5.0	< 0.50 - < 5.0	< 0.50 - 0.50	< 0.50 - 9.8	< 0.50 - 1.4	20 E - 1,100	< 0.50 - < 5.0	< 0.50 - 1.1	< 0.50 - 1.0	< 0.50 - 2.6	< 0.50 - 2.1	< 0.50 - < 5.0	< 0.50 - 2.6	< 2.0 E - 196
MW-35C	11/03/2020	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 - 0.06 J
MW-36	11/04/2020	ORG	< 0.50	< 0.50	< 0.50	**0.62**	< 0.50	**72**	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	**6.4**
MW-36 Historical Range* **			< 0.50	< 0.50	< 0.50 - 0.15 J	< 0.50 - 1.9	< 0.50	2.9 - 220	< 0.50	< 0.50	< 0.50	< 0.50 - 0.24 J	< 0.50 - 0.26 J	< 0.50	< 0.50 - 5.9	< 0.20 - 15
MW-39	11/04/2020	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-39 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 - 1.4	< 0.20 - < 2.0
MW-40	11/04/2020	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-40 Historical Range* **			< 0.50	< 0.50	< 0.50 - 0.60	< 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-41	11/04/2020	ORG	< 0.50	< 0.50	**0.49 J**	< 0.50	< 0.50	**0.99**	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.20
MW-41 Historical Range* **			< 0.50	< 0.50	< 0.50 - 0.86	< 0.50 - 1.3	< 0.50	< 0.50 - 130	< 0.50	< 0.50 - 0.20 J	< 0.50	< 0.50 - 0.39 J	< 0.50 - 110	< 0.50	< 0.50	< 0.20 - 18
MW-42	11/04/2020	ORG	< 0.50	< 0.50	< 0.50	**0.42 J**	< 0.50	**32**	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	**0.83**
MW-42 Historical Range* **			< 0.50	< 0.50	< 0.50	< 0.50-0.46 J	< 0.50	0.41 J - 36	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.20 - 1.5
MW-43	11/04/2020	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-43 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
EW-01	11/03/2020	ORG	< 0.50	< 0.50	< 0.50	**1.0**	< 0.50	**86**	< 0.50	< 0.50	< 0.50	< 0.50	**0.46 J**	< 0.50	< 0.50	**46**
EW-01 Historical Range* **			< 0.50 - 2.0	< 0.50 - 0.55	< 0.50 - 1.2	< 0.50 - 16	< 0.50 - 4.0	< 0.50 - 1,600 E	< 0.50 - 0.52	< 0.50 - 4.3	< 0.50 - < 2.5	< 0.50 - 10	< 0.50 - 3.3	< 0.50 - 0.61	< 0.50 - 4.6	< 2.0 - 990 E
EW-02	09/03/2020	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	**8.7**
EW-02	09/17/2020	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	**5.1**
EW-02	10/01/2020	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	**11**
EW-02	10/15/2020	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	**12**
EW-02	11/05/2020	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	**8.6**
EW-02	11/19/2020	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	**6.8**
EW-02 Historical Range* **			< 0.50	< 0.50	< 0.50	< 0.50 - 1.5	< 0.50	2.3 - 160	< 0.50	< 0.50	< 0.50	< 0.50 - 0.59	< 0.50	< 0.50	< 0.50 - 0.85	< 2.0 - 48

TABLE 3

PREVALENT VOLATILE ORGANIC COMPOUNDS AND 1,4-DIOXANE IN GROUNDWATER
FOURTH QUARTER 2020

Concentration (micrograms per liter)

Well Identifier / Sample Identifier	Date Sampled	QA Code	VOLATILE ORGANIC COMPOUNDS (FEDERAL MCL/CALIFORNIA MCL) Benzene (5/1)	Carbon Tetrachloride (5/0.5)	Chloroform (80/80)	1,1-DCA (--/5)	1,2-DCA (5/0.5)	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)	Semi-VOCs 1,4-Dioxane (3*/1**)
Quality Assurance/Quality Control Samples																
TB-090320	09/03/2020	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-091720	09/17/2020	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-100120	10/01/2020	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-101520	10/15/2020	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-110320A	11/03/2020	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-110320B[3]	11/03/2020	TB-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
RB-110320	11/03/2020	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-11042020	11/04/2020	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-110520	11/05/2020	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-111920	11/19/2020	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

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

(1) 1,1,2-Trichloro-1,2,2-trifluoroethane was detected at a concentration of 1.1 ug/l in the split sample for monitor well MW-08 on 11/03/20

(2) Vinyl chloride was detected at a concentration of 0.55 ug/l in the original sample for monitor well MW-29 on 09/17/20

(3) Methylene Chloride was detected at a concentration of 0.68J ug/l in the split trip blank sample TB-11320B on 11/03/20

FOOTNOTES:

1,1-DCA = 1,1-Dichloroethane
1,2-DCA = 1,2-Dichloroethane
1,1-DCE = 1,1-Dichloroethene
cis-1,2-DCE = cis-1,2-Dichloroethene
PCE = Tetrachloroethene
1,1,1-TCA = 1,1,1-Trichloroethane
1,1,2-TCA = 1,1,2-Trichloroethane
TCE = Trichloroethene
TCFM = Trichlorofluoromethane
(<) = Less than; the value is the Limit of Detection for that compound
* = 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
Semi-VOCs = Semivolatile organic compounds
NA = Not analyzed for constituent
FD = Field duplicate sample
ORG = Original sample
E = Data qualified as Estimated in accordance with quality control criteria.
TB = Trip blank sample
RB = Rinsate blank sample
B = Analyte detected in the associated Method Blank
ug/l = Micrograms per liter
MCL = Maximum Contaminant Level
QA = Quality Assurance
SPT = Split sample
ug/l = micrograms per liter

TABLE 4

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%
2013[f]	21,148,029	40.2	45.7	7,713	8,760	88%
2014[g]	7,690,471	14.6	46.8	2,740	8,760	31%
2015[h]	18,019,312	34.3	47.9	6,275	8,760	72%
2016[i]	21,977,404	41.8	44.2	8,284	8,736	95%
2017[j]	18,364,603	34.6	39.8	7,684	8,835	87%
2018[k]	18,144,835	34.5	38.3	7,889	8,760	90%
2019[l]	18,725,398	35.8	40.3	7,737	8,710	89%
December 2019	1,525,727	34.1	39.0	653	746	87%
January 2020	1,939,910	38.6	38.7	836	837	100%
February 2020	1,272,146	31.4	34.9	608	675	90%
Q1 2020	**4,737,783**	**35.0**	**37.7**	**2,096**	**2,258**	**93%**
March 2020	1,516,218	37.8	39.7	636	669	95%
April 2020	1,929,588	38.3	39.0	825	840	98%
May 2020	1,603,929	38.5	39.0	686	695	99%
Q2 2020	**5,049,735**	**38.2**	**39.2**	**2,147**	**2,204**	**97%**
June 2020	1,513,729	38.8	38.9	649	651	100%
July 2020	1,870,920	37.1	37.1	841	841	100%
August 2020	1,509,954	37.7	37.8	667	668	100%
Q3 2020	**4,894,603**	**37.8**	**37.8**	**2,156**	**2,160**	**100%**
September 2020	1,380,060	34.3	37.8	609	671	91%
October 2020	1,856,020	36.7	36.8	842	844	100%
November 2020	1,582,248	39.4	39.5	668	670	100%
Q4 2020	**4,818,328**	**36.8**	**37.9**	**2,119**	**2,184**	**97%**
SINCE INCEPTION	207,148,193	31.7	40.6	84,942	108,864	78%

TABLE 4

PILOT GROUNDWATER EXTRACTION AND TREATMENT SYSTEM OPERATIONAL SUMMARY

FOOTNOTES:

(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.

(f) 2013 Calendar year is from 12/1/2012 through 11/30/2013.

(g) 2014 Calendar year is from 12/1/2013 through 11/30/2014.

(h) 2015 Calendar year is from 12/1/2014 through 11/30/2015

(i) 2016 Calendar year is from 12/1/2014 through 11/30/2015

(j) 2017 Calendar year is from 12/1/2014 through 11/30/2015

(k) 2018 Calendar year is from 12/1/2017 through 11/30/2018

(l) 2019 Calendar year is from 12/1/2018 through 11/30/2019

gpm = gallons per minute

CEFF = Carbon effluent

Refer to previous quarterly reports for detail of 2008 thru 2014 operational summary

Treatment of groundwater from EW-02 initiated in 2010

Treatment of groundwater from MW-29 initiated in 2014

TABLE 5

PILOT GROUNDWATER EXTRACTION AND TREATMENT SYSTEM SAMPLING SCHEDULE

COMPOUND(S) / CONSITITUENT	ANALYTICAL METHOD	SAMPLE CONTAINER	REPORTING DETECTION LIMITS (milligrams per liter)	SAMPLE FREQUENCY AND LOCATION: Daily Samples[1]: Days 1-5 — System Influent (**INF**)	Post-Filter (**PF**)	Post-Oxidation (**POX**)	Carbon Breakthrough (**CBT**)[3]	Post-Carbon (**CEFF**)	Weekly Samples[1]: Weeks 1-4 — System Influent (**INF**)	Post-Filter (**PF**)	Post-Oxidation (**POX**)	Carbon Breakthrough (**CBT**)[3]	Post-Carbon (**CEFF**)	Monthly Samples: Week 5+ — Extraction Wells (**Well ID**)[2]	System Influent (**INF**)	Post-Filter (**PF**)	Post-Oxidation (**POX**)	Carbon Breakthrough (**CBT**)[3]	Post-Carbon (**CEFF**)	Quarterly Samples: Week 1+ — Extraction Wells (**Well ID**)[2]	System Influent (**INF**)	Post-Oxidation (**POX**)	Post-Carbon (**CEFF**)
COMPOUNDS/CONSTITUENTS NORMALLY REQUIRED AS PART OF NPDES OR WDR PERMITS, PURSUANT TO CRWQCB REGION 8 ORDER NO. R8-2003-0085																								
Volatile Organic Compounds	EPA 8260B	3 - 40 mL VOA, HCl	QAPP[4]	X		X	X	X	X		X	X	X		X	X		X	X	X				
1,4-Dioxane	EPA 8270 Modified	1 L Amber	0.002	X					X						X	X								
1,4-Dioxane	EPA 8270 SIM	1 L Amber	0.0002			X					X							X	X	X				
Total Suspended Solids	SM2540D	1 L poly	10														X							
Total Dissolved Solids	SM2540C	125 mL poly	10																		X	X	X	X
SELECTED METALS																								
Dissolved Metals (Iron, Manganese, Calcium, Sodium, Magnesium)	EPA 6010B	500 mL poly	QAPP[4]	(a)																	X	X		
Selenium	EPA 6010B	500 mL poly, HNO_3	QAPP[4]																		X	X		
SELECTED INORGANIC CONSTITUENTS																								
Hydroxide Alkalinity	SM2320B	250 mL poly	2.0	(a)													X	X			X	X		
Bicarbonate Alkalinity	SM2320B	250 mL poly	2.0	(a)													X	X			X	X		
Carbonate Alkalinity	SM2320B	250 mL poly	2.0	(a)													X	X			X	X		
Total Alkalinity	SM2320B	250 mL poly	2.0	(a)													X	X			X	X		
BROMATE EVALUATION																								
Bromate	EPA 317.0	125 mL poly	0.0005			X					X					X		X						
Bromide	EPA 300.0	125 mL poly	0.05	(a)					(a)						X	X								
OTHER CONSTITUENTS/COMPOUNDS																								
Total Organic Carbon	SM5310B	2 - 40 mL VOA, H_2SO_4	3.0	(a)													X	X			X	X		
Anions (Chloride, Sulfate, Nitrate, Nitrite, and Phosphate)	EPA 300.0	125 mL poly	Varies	(a)																	X	X	X	
Chemical Oxygen Demand	EPA 410.4	125 mL amber, H_2SO_4	5.0	(a)																	X	X	X	
UV Absorption (UVA) @254nm	EPA 415.3	250 mL Glass	N/A		(a)												X				X	X	X	
Field Parameters																								
Dissolve Oxygen (DO)	N/A	N/A	N/A	X	X	X	X	X	X	X	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	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	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	X	X	X	X	X				
pH	N/A	N/A	N/A	X	X	X	X	X	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	X	X	X	X	X	X	X	X	X	X	X				
Flow-Meter	N/A	N/A	N/A	X				X	X				X	X	X					X				
Residual Hydrogen Peroxide	N/A	N/A	N/A			(a)	(a)	(a)			X	X	X					X	X	X				

TABLE 5

PILOT GROUNDWATER EXTRACTION AND TREATMENT SYSTEM SAMPLING SCHEDULE

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
HNO_3 = Nitric acid
H_2SO_4 = Sulfuric acid
nm = Nanometers
EPA = U.S. Environmental Protection Agency
SIM = Selected ion monitoring
SM = Standard Method
L = Liter
poly = High density polyethylene bottle
Amber = Amber glass bottle

TABLE 6

SELECT COMPOUNDS MONITORED IN
PILOT GROUNDWATER EXTRACTION AND TREATMENT SYSTEM SAMPLES
FOURTH QUARTER 2020

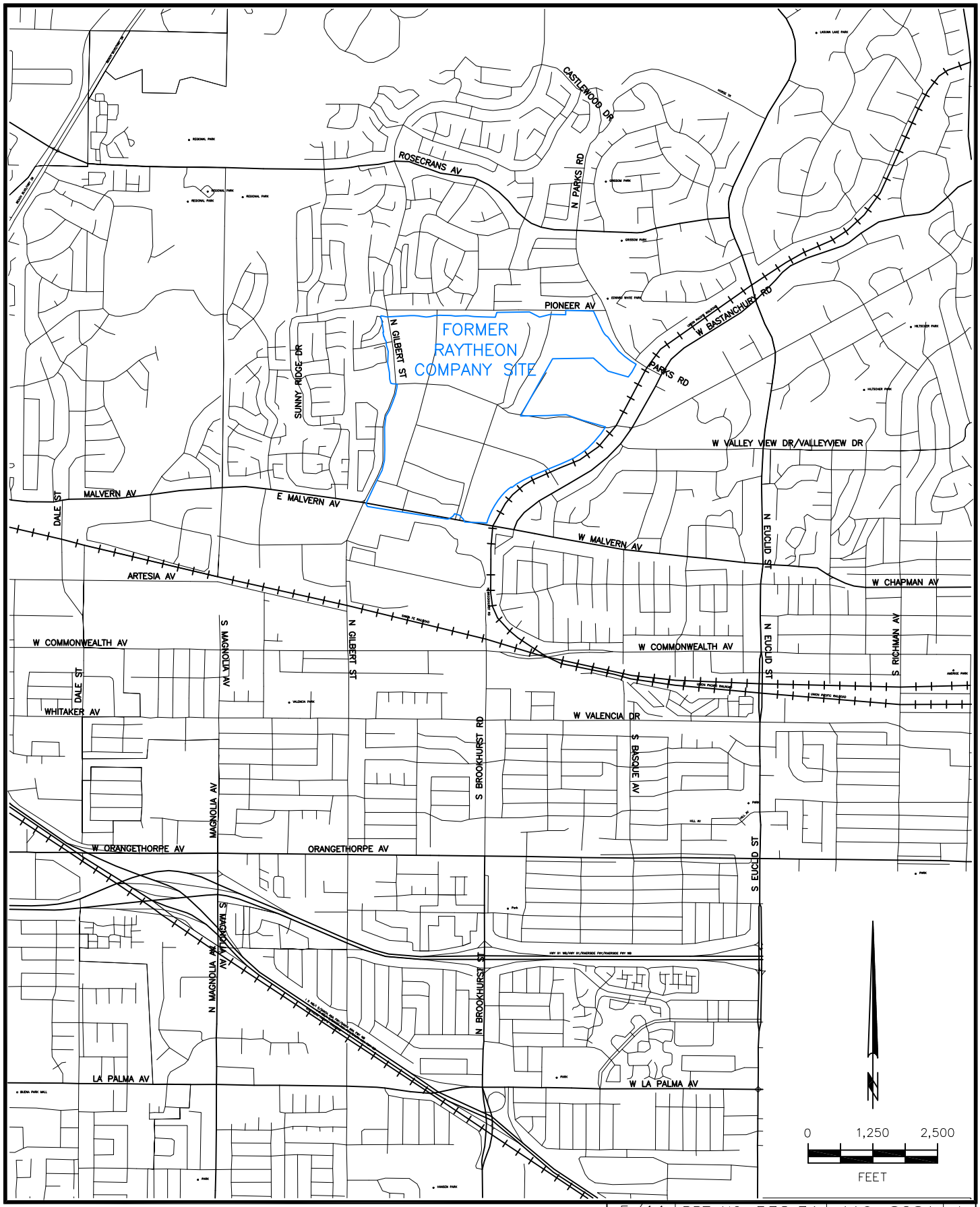
Compound	Date	Units	MW-21	MW-29	EW-01	EW-02	INF*	PF	POX	CBT	CEFF
1,1,2-Trichloroethane	09/03/20	ug/L	--	<0.50	--	<0.50	<0.50	--	<0.50	<0.50	<0.50
(5 ug/L MCL)	09/17/20	ug/L	--	<0.50	--	<0.50	<0.50	--	<0.50	<0.50	<0.50
	10/01/20	ug/L	--	0.52	--	<0.50	<0.50	--	<0.50	<0.50	<0.50
	10/15/20	ug/L	--	<0.50	--	<0.50	<0.50	--	<0.50	<0.50	<0.50
	11/03/20	ug/L	5.3	--	<0.50	--	--	--	--	--	--
	11/05/20	ug/L	--	0.57	--	<0.50	<0.50	--	<0.50	<0.50	<0.50
	11/19/20	ug/L	--	0.56	--	<0.50	<0.50		<0.50	<0.50	<0.50
1,1-Dichloroethane	09/03/20	ug/L	--	1.3	--	<0.50	<0.50	--	<0.50	<0.50	<0.50
(5 ug/L MCL)	09/17/20	ug/L	--	1.5	--	<0.50	<0.50	--	<0.50	<0.50	<0.50
	10/01/20	ug/L	--	1.4	--	<0.50	<0.50	--	<0.50	<0.50	<0.50
	10/15/20	ug/L	--	1.6	--	<0.50	<0.50	--	<0.50	<0.50	<0.50
	11/03/20	ug/L	8.2	--	1.0	--	--	--	--	--	--
	11/05/20	ug/L	--	1.4	--	<0.50	0.50	--	<0.50	<0.50	<0.50
	11/19/20	ug/L	--	1.7	--	<0.50	<0.50	--	<0.50	<0.50	<0.50
1,1-Dichloroethene	09/03/20	ug/L	--	97	--	15	39	--	<0.50	<0.50	<0.50
(6 ug/L MCL)	09/17/20	ug/L	--	130	--	18	43	--	<0.50	<0.50	<0.50
	10/01/20	ug/L	--	160	--	15	39	--	<0.50	<0.50	<0.50
	10/15/20	ug/L	--	180	--	17	45	--	<0.50	<0.50	<0.50
	11/03/20	ug/L	930	--	86	--	--	--	--	--	--
	11/05/20	ug/L	--	170	--	17	57	--	<0.50	<0.50	<0.50
	11/19/20	ug/L	--	180	--	17	55		<0.50	<0.50	<0.50
1,2-Dichloroethane	09/03/20	ug/L	--	<0.50	--	<0.50	<0.50	--	<0.50	<0.50	<0.50
(0.5 ug/L MCL)	09/17/20	ug/L	--	<0.50	--	<0.50	<0.50	--	<0.50	<0.50	<0.50
	10/01/20	ug/L	--	<0.50	--	<0.50	<0.50	--	<0.50	<0.50	<0.50
	10/15/20	ug/L	--	<0.50	--	<0.50	<0.50	--	<0.50	<0.50	<0.50
	11/03/20	ug/L	1.7	--	<0.50	--	--	--	--	--	--
	11/05/20	ug/L	--	<0.50	--	<0.50	<0.50	--	<0.50	<0.50	<0.50
	11/19/20	ug/L	--	<0.50	--	<0.50	<0.50		<0.50	<0.50	<0.50
cis-1,2-Dichloroethene	09/03/20	ug/L	--	<0.50	--	<0.50	<0.50	--	<0.50	<0.50	<0.50
(6 ug/L MCL)	09/17/20	ug/L	--	<0.50	--	<0.50	<0.50	--	<0.50	<0.50	<0.50
	10/01/20	ug/L	--	<0.50	--	<0.50	<0.50	--	<0.50	<0.50	<0.50
	10/15/20	ug/L	--	<0.50	--	<0.50	<0.50	--	<0.50	<0.50	<0.50
	11/03/20	ug/L	1.0	--	<0.50	--	--	--	--	--	--
	11/05/20	ug/L	--	<0.50	--	<0.50	<0.50	--	<0.50	<0.50	<0.50
	11/19/20	ug/L	--	<0.50	--	<0.50	<0.50		<0.50	<0.50	<0.50
Tetrachloroethene	09/03/20	ug/L	--	0.76	--	<0.50	<0.50	--	<0.50	<0.50	<0.50
(5 ug/L MCL)	09/17/20	ug/L	--	<0.50	--	<0.50	<0.50	--	<0.50	<0.50	<0.50
	10/01/20	ug/L	--	0.53	--	<0.50	<0.50	--	<0.50	<0.50	<0.50
	10/15/20	ug/L	--	0.51	--	<0.50	<0.50	--	<0.50	<0.50	<0.50
	11/03/20	ug/L	1.8	--	<0.50	--	--	--	--	--	--
	11/05/20	ug/L	--	0.50	--	<0.50	<0.50	--	<0.50	<0.50	<0.50
	11/19/20	ug/L	--	0.61	--	<0.50	<0.50		<0.50	<0.50	<0.50
Trichloroethene	09/03/20	ug/L	--	1.5	--	<0.50	<0.50	--	<0.50	<0.50	<0.50
(5 ug/L MCL)	09/17/20	ug/L	--	1.9	--	<0.50	<0.50	--	<0.50	<0.50	<0.50
	10/01/20	ug/L	--	1.8	--	<0.50	<0.50	--	<0.50	<0.50	<0.50
	10/15/20	ug/L	--	2.1	--	<0.50	<0.50	--	<0.50	<0.50	<0.50
	11/03/20	ug/L	14	--	0.46J	--	--	--	--	--	--
	11/05/20	ug/L	--	2.0	--	<0.50	0.73	--	<0.50	<0.50	<0.50
	11/19/20	ug/L	--	2.4	--	<0.50	0.70		<0.50	<0.50	<0.50
1,4-Dioxane	09/03/20	ug/L	--	81	--	8.7	20	--	<0.20	<0.20	--
	09/11/20	ug/L	--	--	--	--	--	--	--	--	<0.20
(1 ug/L California Notification Level)	09/17/20	ug/L	--	94	--	5.1	23	--	<0.20	<0.20	<0.20
	10/01/20	ug/L	--	87	--	11	24	--	<0.20	<0.20	<0.20
	10/15/20	ug/L	--	100	--	12	30	--	<0.20	<0.20	<0.20
	11/03/20	ug/L	600	--	46	--	--	--	--	--	--
	11/05/20	ug/L	--	100	--	8.6	34	--	<0.20	<0.20	<0.20
	11/19/20	ug/L	--	96	--	6.8	28		<0.20	<0.20	<0.20
Bromide	09/03/20	mg/L	--	0.95	--	0.52	0.59	--	--	--	--
	10/01/20	mg/L	--	1.0	--	0.60	0.64	--	--	--	--
	11/05/20	mg/L	--	2.2	--	1.1	1.5	--	--	--	--
Bromate	09/03/20	ug/L	--	--	--	--	<0.5	--	<0.5	--	--
(10 ug/L MCL)	10/01/20	ug/L	--	--	--	--	<0.5	--	<0.5	--	--
	11/05/20	ug/L	--	--	--	--	<0.5	--	<0.5	--	--

TABLE 6

SELECT COMPOUNDS MONITORED IN
PILOT GROUNDWATER EXTRACTION AND TREATMENT SYSTEM SAMPLES
FOURTH QUARTER 2020

Compound	Date	Units	MW-21	MW-29	EW-01	EW-02	INF*	PF	POX	CBT	CEFF
Total Non-Filterable Residue	09/03/20	mg/L	--	--	--	--	--	<1.0	--	--	--
	10/01/20	mg/L	--	--	--	--	--	<1.0	--	--	--
	11/05/20	mg/L	--	--	--	--	--	<2.0	--	--	--
Total Filterable Residue (500 mg/L MCL)	09/03/20	mg/L	--	850	--	660	700	--	710	--	690

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
MW = Monitor Well(s)
EW = Extraction Well(s)
INF* = Influent (same as EW-02, when active)
PF = Post Particulate Filter
POX = Post Hipox Oxidation
CBT = Carbon Breakthrough
CEFF = Carbon Effluent
J = Estimated value; detected at less than the Reporting Limit and greater than or equal to the Method Detection Limit



May 11, 2011 - 10:09am ADE - T:\2011\500-599\532 Raytheon\Hydrogeology\H+A BaseMaps\410-8281.dwg

HARGIS + ASSOCIATES, INC.
Hydrogeology/Engineering

5/11	RPT NO. 532.31	410-8281	A

FIGURE 1. SITE LOCATION

EXPLANATION

- MW-09 — GROUNDWATER MONITOR WELL
- MW-25 — GROUNDWATER PIEZOMETER
- P-09 — PERCHED ZONE PIEZOMETER
- EW-01 — GROUNDWATER EXTRACTION WELL
- MW-10 — FORMER GROUNDWATER MONITOR WELL (ABANDONED)
- P-04 — FORMER PERCHED ZONE PIEZOMETER (ABANDONED)
- DPE-05 — FORMER PERCHED ZONE DUAL-PHASE EXTRACTION WELL (ABANDONED)
- EB-01 — FORMER GROUNDWATER ASSESSMENT SOIL BORING (ABANDONED)
- PGETS — PILOT GROUNDWATER EXTRACTION AND TREATMENT SYSTEM FACILITY COMPOUND
- 609 — FORMER RAYTHEON BUILDING, DEMOLISHED MID-2000
- CURRENT RESIDENTIAL AND COMMERCIAL BUILDINGS
- DRIVEWAYS, PARKING LOTS AND OTHER HARDSCAPE OF SITE RE-DEVELOPMENT
- SITE BOUNDARY

MW-39 MW-36 MW-41 MW-37 MW-38 MW-34 MW-32 MW-33 MW-40 MW-43 MW-42 MW-35 MW-31 MW-29 MW-08 MW-15 MW-30 MW-23 MW-28 MW-26/EB-04 MW-27 MW-13 MW-18 MW-17 MW-19 MW-22 MW-12 MW-14 MW-11 MW-10 MW-09 MW-20 MW-06 P-09 P-01 P-02 P-03 P-04 DPE-01 DPE-02 DPE-03 DPE-04 DPE-05 DPE-06 P-06 P-07 MW-16 MW-24 MW-21 MW-25/EB-03 EW-01 EW-02 EB-01 EB-02

SEE DETAIL BELOW

EMERYWOOD DRIVE; KENWOOD AVENUE; MONTICELLO AVENUE; LINKS ROAD; MALVERN AVENUE; ROCKLEDGE DRIVE; VESTAVIA AVE; JONESBORO WAY; MCCOMBSBROOK WAY; NORTHAMPTON WAY; SHERIDAN RD; NEWCASTLE LN; WILLIAMSBURG RD; BAYBERRY WAY; BAYCREST PL; ROXBURY DR; BRIGHTON PL; ASHTON PL; FOXBOROUGH PL; BURNING TREE RD; N SEVILLE PL; FRANKLIN HILLS DR; MONTEREY PL; MONTEREY PL; CYPRESS POINT DR; SUNNY RIDGE DR; N CANDLEWOOD DR; N POST RD; SUNNY RIDGE DR; CARMEL CIR; CARMEL DR; RAMADA PLAZA; CREEKSIDE DR; WINDSONG WAY; SANDBAR DR; CREEKSIDE DR; W MILLSTREAM DR; WHITEWATER DR; BRAMBLE WAY; CREEKSIDE DR; NORTH GILBERT STREET; STARBUCK STREET; STERN-GOODMAN STREET; HUGHES DRIVE; COOLING TOWER; 609; 601; ROOS; OLD NAVY; LINENS 'N THINGS; CONSTRUCTION; OFFICE DEPOT; RETAIL; TARGET; ALBERTSONS; RETAIL; BANK OF AMERICA; BRIDGE; BREA CREEK; MALVERN AVENUE; BREA CREEK; MALVERN AVENUE; MOORE AVENUE; MOORE AVENUE; BURNING TREE ROAD; AIRPARK DRIVE; GILBERT STREET; RAYMER AVENUE; A. T. & S. F. ARTESIA RAILROAD; DALE STREET; LAKEKNOLL DRIVE; DALE PLACE; DALE STREET; FULLERTON MUNICIPAL AIRPORT; PRITCHARD AVENUE; CITY OF FULLERTON WELL NO. 9; OCWD AIRPORT TEST WELL 3S/11W-36A6

0 250 500 FEET

DETAIL AREA

DPE-06; EB-01; PGETS; MW-16; MW-24; MW-25/EB-03; MW-21; EW-01

0 50 100 FEET

Mar 19, 2020 - 4:21pm ESS - T:\2020\500-599\532 Raytheon\Hydrogeology\H+A Basemaps\410-10225.dwg

HARGIS + ASSOCIATES, INC
Hydrogeology/Engineering

03/20 | RPT NO. 532.31 | 410-10225 | A

FIGURE 2.
WELL AND PIEZOMETER LOCATIONS

EXPLANATION

- MW-16 — GROUNDWATER MONITOR WELL
- EW-01 — GROUNDWATER EXTRACTION WELL
- 16.02 — WATER LEVEL ELEVATION (FEET MEAN SEA LEVEL)
- 86/46/0.46J — CONCENTRATION OF 1,1-DICHLOROETHYLENE/1,4-DIOXANE/TRICHLOROETHYLENE IN GROUNDWATER (MICROGRAMS PER LITER)
- 15 — EQUAL WATER LEVEL ELEVATION CONTOUR
- 609 — FORMER RAYTHEON BUILDING, DEMOLISHED MID-2000
- CURRENT RESIDENTIAL AND COMMERCIAL BUILDINGS
- DRIVEWAYS, PARKING LOTS AND OTHER HARDSCAPE OF SITE RE-DEVELOPMENT
- APPROXIMATE DIRECTION OF GROUNDWATER FLOW, NOVEMBER 2020 (COLLECTED ON NOVEMBER 2, 2020)
- * — EXTRACTION WELLS EW-02 AND MW-29 PUMPING DURING WATER LEVEL GAUGING; ESTIMATED WATER LEVEL BASED ON THIEM EQUATION
- NS — NOT SAMPLED

LOS COYOTES COUNTRY CLUB

APPROXIMATE SATURATED EXTENT OF UNIT B

MW-41
12.98
0.99/<0.20/<0.50

MW-34B
12.87
68/29/0.22J

MW-29*
12.84
170/100/2.0

MW-28
14.10
0.83/<0.20/<0.50

MW-30A
13.14
<0.50/<0.20/0.66

EW-02*
11.58
17/8.6/<0.50

MW-16
15.74
NS

EW-01
16.02
86/46/0.46J

MW-27
14.67

MW-26C NS
14.26
<0.50/<0.20/<0.50

MW-31
13.90
350/15/13

MW-40
14.50
<0.50/<0.20/<0.50

MW-39
9.84
<0.50/<0.20/<0.50

MW-36
10.37
72/6.4/<0.50

MW-32B
12.83
76/1.6/18

MW-33
10.77
4.6/<0.20/0.42J

MW-35C
11.67
<0.50/<0.20/<0.50

MW-42
9.41
32/0.83/<0.50

CITY OF FULLERTON WELL NO. 9

MW-43
9.07
<0.50/<0.20/<0.50

OCWD AIRPORT TEST WELL 3S/11W-36A6

0 250 500
FEET
NOTE: NAD83 DATUM

Dec 03, 2020 - 12:40pm ESS - T:\2020\500-599\532 Raytheon\Hydrogeology\Water Lvl\220-2546.dwg

HARGIS + ASSOCIATES, INC.
Hydrogeology/Engineering

12/20	RPT NO. 532.31	220-2546	A

FIGURE 3.
WATER LEVEL AND WATER QUALITY UNIT B
NOVEMBER 2020

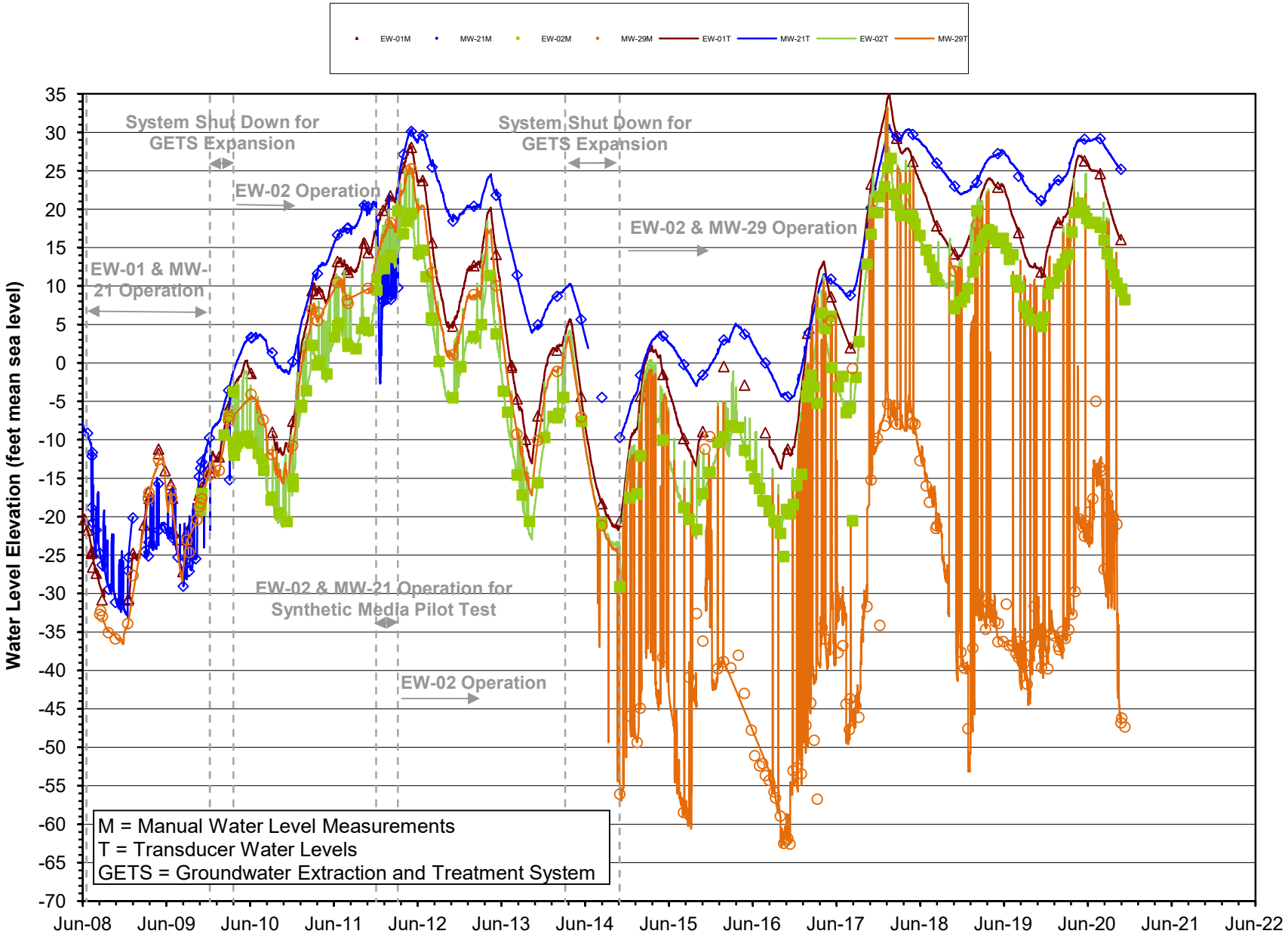


FIGURE 4.
PILOT GROUNDWATER EXTRACTION AND TREATMENT SYSTEM OPERATION AND EXTRACTION WELL WATER LEVELS

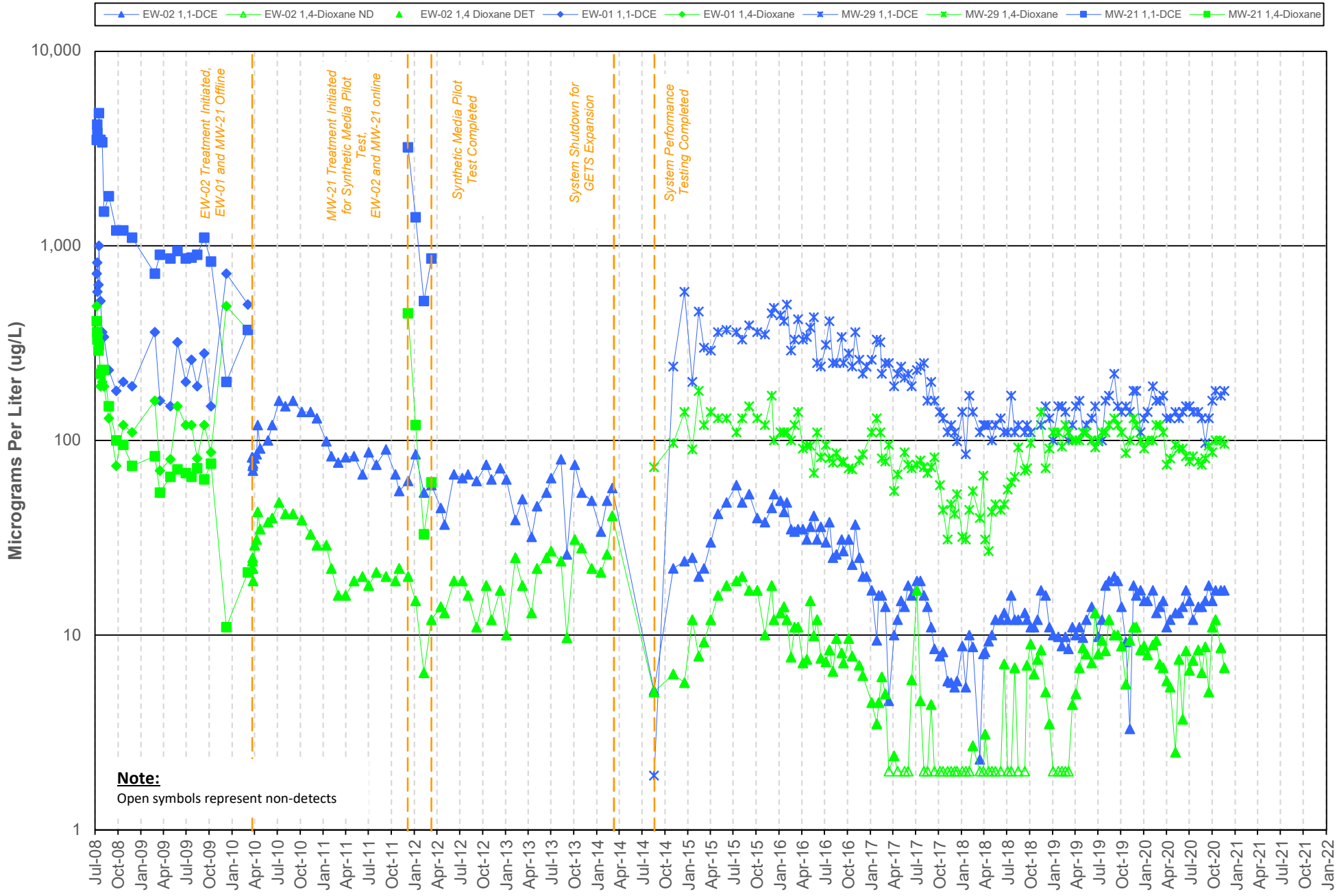
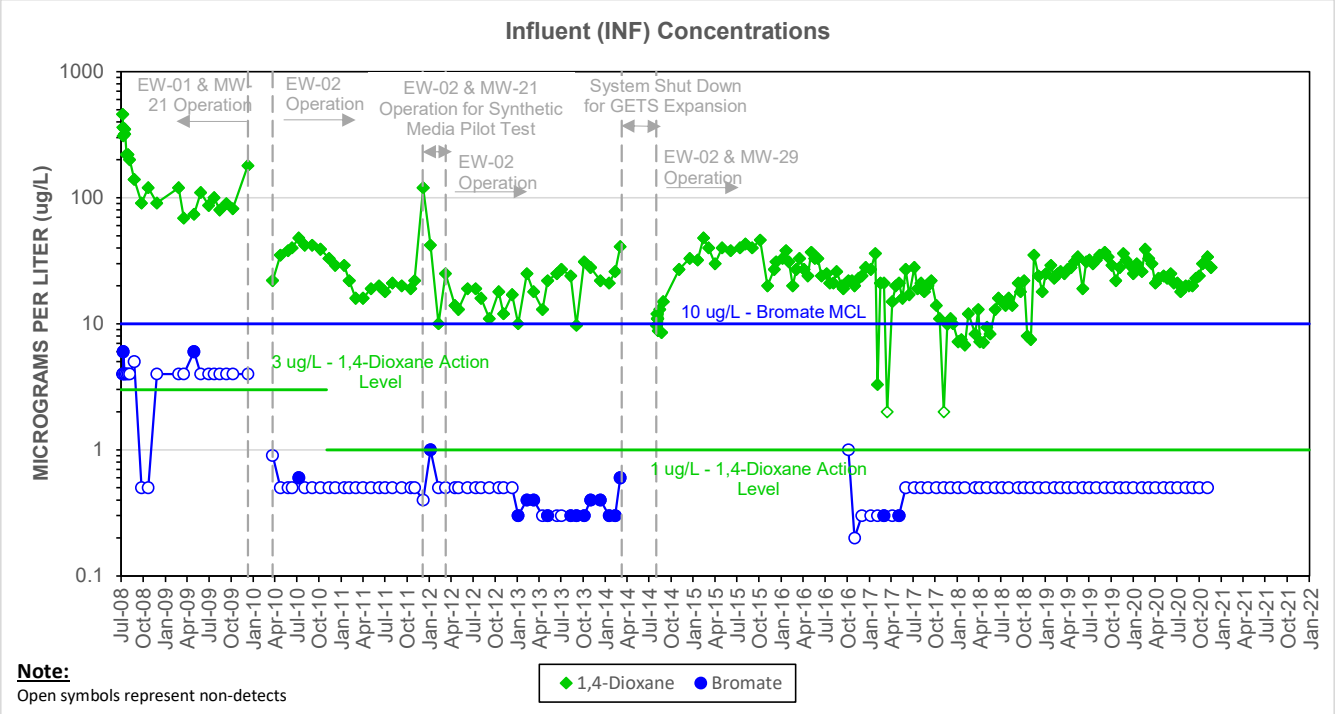
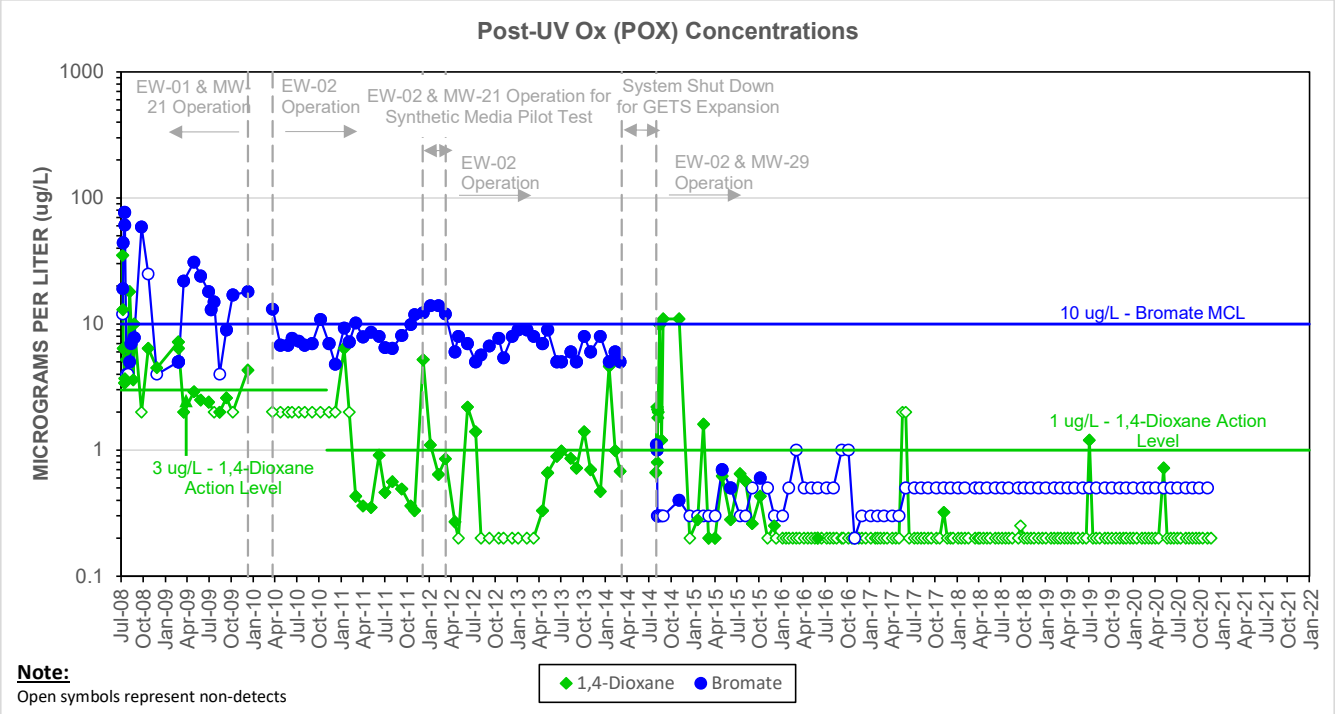


FIGURE 5.
1,1-DICHLOROETHYLENE AND 1,4-DIOXANE CONCENTRATIONS IN EXTRACTION WELLS



Note:
Open symbols represent non-detects



Note:
Open symbols represent non-detects

FIGURE 6.
1,4-DIOXANE AND BROMATE IN INFLUENT AND POST-OXIDATION SAMPLES

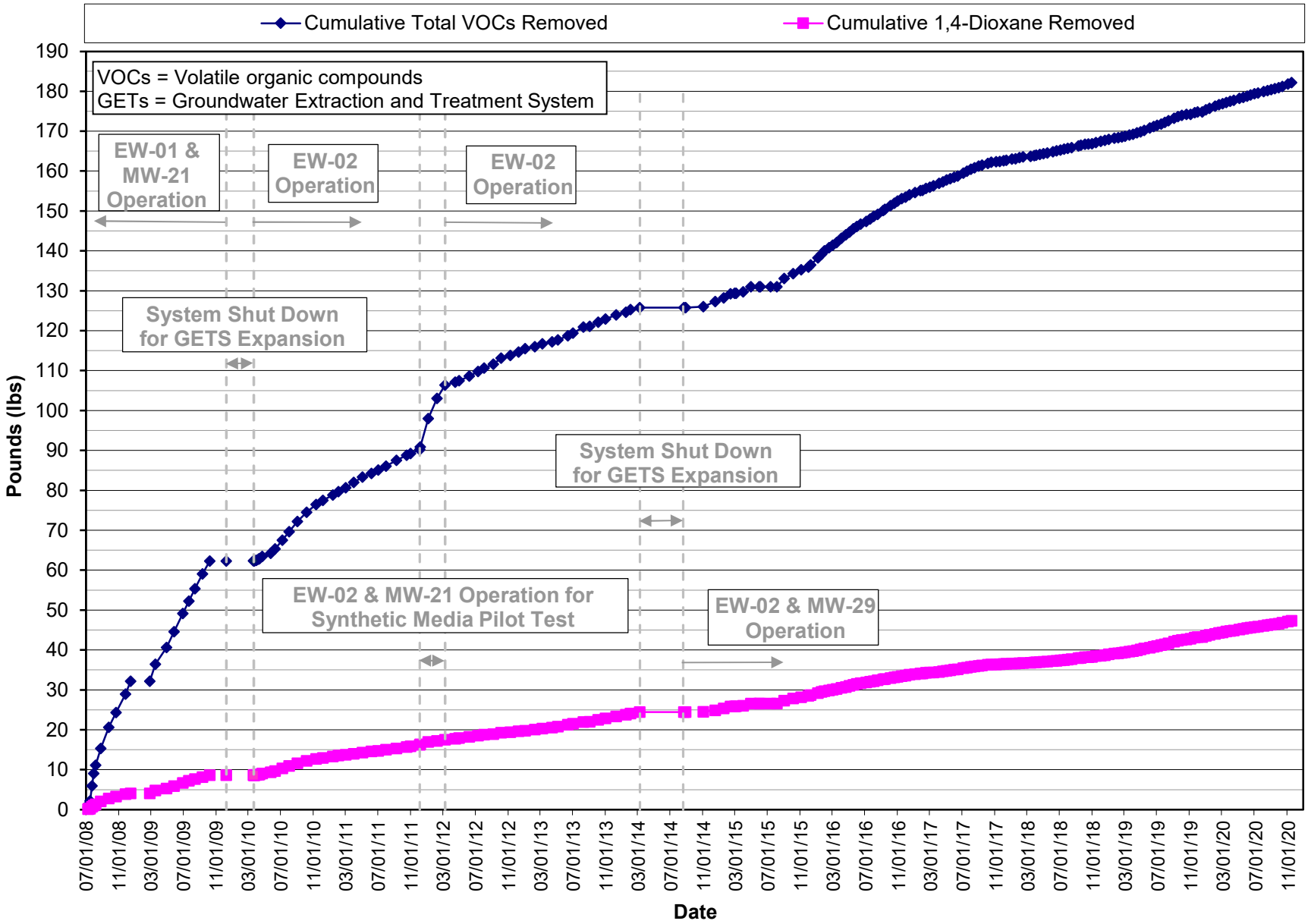


FIGURE 7.
PILOT GROUNDWATER EXTRACTION AND TREATMENT SYSTEM MASS REMOVAL

APPENDIX A

GROUNDWATER SAMPLING FIELD FORMS

SCANNED
11/10/20 - JAK

NOV 2020

QUARTERLY GROUNDWATER MONITORING

FIELD NOTEBOOK

LOW VOLUME MONITOR WELLS

RAYTHEON COMPANY

532.30

1901 MALVERN AVE.
FULLERTON, CALIFORNIA

HARGIS + ASSOCIATES, INC.
HYDROGEOLOGY • ENGINEERING

HARGIS + ASSOCIATES, INC.

DAILY FIELD SAFETY BRIEFING ATTENDANCE SHEET

Date: 11/2/2020

Location: FULLERTON, CA

Presented by: A. DONNELLY

A. GENERAL INTRODUCTION

1. Location of site Health and Safety Plan (HSP) and ensure everyone has read the site HSP.
2. Primary hazards and controls (chemical, physical, and biological).
3. Sanitation and decontamination (potable water, nonpotable water, toilet, sink, shower).
4. General Site Rules.
5. Emergency Response Plan (location where emergency telephone numbers and hospital route posted, shower, first aid kit, fire extinguisher, alarm system, evacuation, meeting place, contingencies, upwind).
6. Establish buddy system.

B. SPECIFIC PRECAUTIONS FOR DAY'S ACTIVITIES Go over the hospital route daily; wear traffic vests, use safety cones, and be aware of traffic whenever in or near the roadways; wear sunscreen and hydrate well; wear gloves and take appropriate precautions when handling contaminated groundwater; watch for black widow spiders in vaults. Notify your supervisor and field partner of any issues.

C. ON-SITE ORGANIZATION AND COORDINATION

D. OTHER TOPICS:

ATTENDEE LIST

PRINT NAME	SIGNATURE	COMPANY	DATE
Andrew Donnelly	A Donnelly	HARGIS + ASSOC., INC	11/2/20
Amanda Janzen		HARGIS + ASSOC., INC	11/2/20
Ryne Adams		HARGIS + ASSOC., INC	11/2/20
DJ Sealeo		H+A	11/2/20

HARGIS + ASSOCIATES, INC.

DAILY FIELD SAFETY BRIEFING ATTENDANCE SHEET

Date: 11/3/20

Location: FULLERTON, CA

Presented by: A. DONNELLY

A. GENERAL INTRODUCTION

1. Location of site Health and Safety Plan (HSP) and ensure everyone has read the site HSP.
2. Primary hazards and controls (chemical, physical, and biological).
3. Sanitation and decontamination (potable water, nonpotable water, toilet, sink, shower).
4. General Site Rules.
5. Emergency Response Plan (location where emergency telephone numbers and hospital route posted, shower, first aid kit, fire extinguisher, alarm system, evacuation, meeting place, contingencies, upwind).
6. Establish buddy system.

B. SPECIFIC PRECAUTIONS FOR DAY'S ACTIVITIES Go over the hospital route daily; wear traffic vests, use safety cones, and be aware of traffic whenever in or near the roadways; wear sunscreen and hydrate well; wear gloves and take appropriate precautions when handling contaminated groundwater; watch for black widow spiders in vaults. Notify your supervisor and field partner of any issues.

C. ON-SITE ORGANIZATION AND COORDINATION

D. OTHER TOPICS:

ATTENDEE LIST

PRINT NAME	SIGNATURE	COMPANY	DATE
Andrew Donnelly	A Donnelly	HARGIS + ASSOC., INC	11/3/20
Amanda Jewson	Amanda Jewson	HARGIS + ASSOC., INC	11/3/20
Ryne Adams	Ryne Adams	HARGIS + ASSOC., INC	11/3/20
DJ Sealer	DJ Sealer	H+A	11/3/20

HARGIS + ASSOCIATES, INC.

DAILY FIELD SAFETY BRIEFING ATTENDANCE SHEET

Date: 11/4/2020

Location: FULLERTON, CA

Presented by: A. DONNELLY

A. GENERAL INTRODUCTION

1. Location of site Health and Safety Plan (HSP) and ensure everyone has read the site HSP.
2. Primary hazards and controls (chemical, physical, and biological).
3. Sanitation and decontamination (potable water, nonpotable water, toilet, sink, shower).
4. General Site Rules.
5. Emergency Response Plan (location where emergency telephone numbers and hospital route posted, shower, first aid kit, fire extinguisher, alarm system, evacuation, meeting place, contingencies, upwind).
6. Establish buddy system.

B. SPECIFIC PRECAUTIONS FOR DAY'S ACTIVITIES Go over the hospital route daily; wear traffic vests, use safety cones, and be aware of traffic whenever in or near the roadways; wear sunscreen and hydrate well; wear gloves and take appropriate precautions when handling contaminated groundwater; watch for black widow spiders in vaults. Notify your supervisor and field partner of any issues.

C. ON-SITE ORGANIZATION AND COORDINATION

D. OTHER TOPICS:

ATTENDEE LIST

PRINT NAME	SIGNATURE	COMPANY	DATE
Andrew Donnelly	A Donnelly	HARGIS + ASSOC., INC	11/4/20
Amanda Janzon		HARGIS + ASSOC., INC	11/4/20
DJ Searce		HARGIS + ASSOC., INC	11/4/20
Ryne Adams		H+A	11/4/20
Alex Jans		H+A	11/4/20

HARGIS + ASSOCIATES, INC.

STATIC WATER LEVEL DATA SHEET

MONTH/YEAR: NOVEMBER 2020

METHOD OF MEASUREMENT/SOUNDER IDENTIFIER: **FLAT TAPE ELECTRIC SOUNDER #_____**

PROJECT NUMBER: **532.30**

WELL IDENTIFIER	DATE	TIME	MEASURING POINT	DEPTH TO WATER FROM REFERENCE POINT (+feet)	REFERENCE POINT ELEVATION (ft msl)	WATER LEVEL ELEVATION (ft msl)	AUG 2020 PREVIOUS DEPTH TO WATER (ft)	CHANGE IN WATER LEVEL (± ft)	COMMENTS	INITIALS
P-07	11/ 2 /20	1240	TOC	111.81	142.31	~~111.81~~ 30.5	111.07	-0.74		AMD/AMJ
P-09	11/ 2 /20	0927	TOC	120.85	183.86	63.01	120.70	-0.15		↓
MW-06	11/ 2 /20	0929	TOC	155.93	184.70	28.77	150.31	-5.62		↓
MW-08	11/ /20				155.91		127.84			
MW-09	11/ 2 /20	0918	TOC	154.32	180.10	25.78	149.01	-5.31		AMD/AMJ
MW-13	11/ 2 /20	0901	TOC	125.40	141.84	16.44	122.38	-3.02		↓
MW-15	11/ /20				144.95		125.83			
MW-16	11/ 2 /20	1228	TOC	126.66	142.40	15.74	118.13	-8.53		
MW-17	11/ 2 /20	0904	TOC	125.49	142.70	~~125.49~~ 17.21	122.31	-3.18		AMD/AMJ
MW-18	11/ 2 /20	0853	~~TOSI~~ TOC	125.94	142.32	16.38	122.76	-3.18		↓
MW-19	11/ 2 /20	0908	TOST	125.70	142.06	16.36	122.34	-3.36		↓
MW-20	11/ 2 /20	0934	TOC	150.39	184.19	33.80	145.66	-4.73		↓
MW-21	11/02 /20	1236	TOST	116.02	141.18	25.16	112.03	-3.99	Totalizer: — Pumping? —	↓
MW-22	11/ 02 /20	0817	TOST	122.01	138.65	16.64	119.06	-2.95		AMD/AMJ
MW-23	11/ 2 /20	0838	TOST	121.74	137.33	15.59	119.35	-2.39		↓
MW-24	11/ 2 /20	1227	TOST	117.41	142.83	25.42	111.76	-5.65		
MW-25	11/ 2 /20	1226	TOC	117.22	142.64	25.42	112.48	-4.74		
MW-26A	11/ 2 /20	0836	TOST	119.94	137.04	17.10	117.03	-2.91		AMD/AMJ
MW-26B	11/ 2 /20	0832	TOST	119.76	137.05	17.29	117.71	-2.05		↓
MW-26C	11/ 2 /20	0831	TOST	122.96	137.22	14.26	114.30	-8.66		↓

msl = Mean sea level
ft = feet

HARGIS + ASSOCIATES, INC.

STATIC WATER LEVEL DATA SHEET

MONTH/YEAR: NOVEMBER 2020

METHOD OF MEASUREMENT/SOUNDER IDENTIFIER: **FLAT TAPE ELECTRIC SOUNDER #_____**

PROJECT NUMBER: **532.30**

WELL IDENTIFIER	DATE	TIME	MEASURING POINT	DEPTH TO WATER FROM REFERENCE POINT (+feet)	REFERENCE POINT ELEVATION (ft msl)	WATER LEVEL ELEVATION (ft msl)	AUG 2020 PREVIOUS DEPTH TO WATER (ft)	CHANGE IN WATER LEVEL (± ft)	COMMENTS	INITIALS
MW-27	11/ 2 /20	0817	TOST	122.49	137.16	14.67	113.89	-8.60		AMD/AMJ
MW-28	11/ 2 /20	0849	TOST	126.67	140.77	14.10	117.92	-8.75		↓
MW-29	11/ /20				139.81		153.41		Totalizer: Pumping?	
MW-30A	11/ /20				129.44		107.69			
MW-30B	11/ /20				129.39		105.72			
MW-31	11/ /20				119.60		97.36			
MW-32A	11/ /20				92.88		72.57			
MW-32B	11/ /20				92.89		71.71			
MW-32C	11/ /20				92.88		64.45			
MW-33	11/ /20				83.19		63.83			
MW-34A	11/ 2 /20	0955	TOST	141.85	153.25	11.40	141.02	-0.83		
MW-34B	11/ 2 /20	0959	TOST	140.24	153.11	12.87	131.81	-8.43		
MW-34C	11/ 2 /20	0953	TOST	139.17	153.29	14.12	131.74	-7.43		
MW-35A	11/ /20				93.57		76.71			
MW-35B	11/ /20				93.56		80.14			
MW-35C	11/ /20				93.55		73.31			
MW-36	11/ 2 /20	1020	TOST	76.28	86.65	10.37	67.80	-8.48		
MW-37	11/ 2 /20	1100	TOST	136.72	155.60	18.88	129.43	-7.29		
MW-38	11/ 2 /20	1104	TOST	147.10	154.90	7.80	145.60	-1.50		
MW-39	11/ 2 /20	1034	TOST	74.41	84.25	9.84	66.11	-8.30		

msl = Mean sea level
ft = feet

HARGIS + ASSOCIATES, INC.

STATIC WATER LEVEL DATA SHEET

MONTH/YEAR: NOVEMBER 2020

METHOD OF MEASUREMENT/SOUNDER IDENTIFIER: **FLAT TAPE ELECTRIC SOUNDER #_____**

PROJECT NUMBER: **532.30**

WELL IDENTIFIER	DATE	TIME	MEASURING POINT	DEPTH TO WATER FROM REFERENCE POINT (+feet)	REFERENCE POINT ELEVATION (ft msl)	WATER LEVEL ELEVATION (ft msl)	AUG 2020 PREVIOUS DEPTH TO WATER (ft)	CHANGE IN WATER LEVEL (± ft)	COMMENTS	INITIALS
MW-40	11/ /20				123.40		99.28			
MW-41	11/ 2 /20	1118	TOST	142.62	155.60	12.98	134.73	-7.89		AND(AM)
MW-42	11/ /20				82.80		64.79			
MW-43	11/ /20				76.64		59.10			
EW-01	11/ 2 /20	1244	TOST	125.05	141.07	16.02	116.46	-8.59	SOUNDING TUBE TO 172.65 Totalizer: Pumping?	AND/AM)
EW-02	11/ /20				132.97		115.33		Totalizer: Pumping?	

msl = Mean sea level
ft = feet

HARGIS + ASSOCIATES, INC.

NOVEMBER 2020 GROUNDWATER SAMPLE PLAN
TEAM 1

QA/QC	Total VOC's µg/L	1,4-Dixoane µg/L	APROX. GALLONS	ESTIMATED TIME (minutes)	WELL IDENTIFIER	HYDROGEOLOGIC ZONE	NOVEMBER 2020 SAMPLING SCHEDULE	SAMPLE METHOD
	0	0	938	40	MW-43	Deep; B	VOCs; 1,4-Dioxane	Ded.240V
	0	0	858	42	MW-39	Deep; B	VOCs; 1,4-Dioxane	Ded.240V
	0	0	885	44	~~MW-35C~~	Deep; B	VOCs; 1,4-Dioxane	Ded.240V
~~2/3SV~~	3.7	0	929	53	~~MW-33~~	Deep; B	VOCs; 1,4-Dioxane	Ded.240V
	31	1.4	910	44	MW-42	Deep; B	VOCs; 1,4-Dioxane	Ded.240V
~~2/3SV~~	61	8.2	1079	83	MW-36	Deep; D	VOCs; 1,4-Dioxane	Ded.240V
	67	1.7	63	21	~~MW-32B~~	Deep; B	VOCs; 1,4-Dioxane	~~Ded.240V~~ REDI-FLO
	159	6.6	339	30	~~MW-31~~	Deep; B	VOCs; 1,4-Dioxane	Ded.240V

NOTES

A **MS** and **MSD** (3x40ml VOA and 1L amber) should be collected every day/ alternating 1,4-Dioxane methods as indicated.
1,4-Dioxane analysis method is 8270 SIM unless specified otherwise (if historical detect is > 5.0 ug/l MOD is used).
1 = Day - # refers to the day scheduled to sample and the corresponding dedicated pipestand to use: ND=1; 0-10=2; 10 - 100=3; >100=4
Wells with dedicated pumps should follow concentration order when possible.
MW-36 and MW-39 Gate Access Code: 3252

RB = Rinsate blank taken on non-dedicated equipment each day- will vary with schedule and should be confirmed with both teams each morning.

HARGIS + ASSOCIATES, INC.

NOVEMBER 2020 GROUNDWATER SAMPLE PLAN
TEAM 2

QA/QC	Total VOC's µg/L	1,4-Dixoane µg/L	APROX. GALLONS	ESTIMATED TIME (minutes)	WELL IDENTIFIER	HYDROGEOLOGIC ZONE	NOVEMBER 2020 SAMPLING SCHEDULE	SAMPLE METHOD
	26	18	300	25	~~EW-01~~	Deep; B	VOCs; 1,4-Dioxane (8270 MOD)	Dedicated
MS/MSD	1671	700	315	15	~~MW-21~~	Water Table; BC	VOCs; 1,4-Dioxane (8270 MOD)	Dedicated
	0	0	241	24	MW-40	Deep; B	VOCs; 1,4-Dioxane	Ded.240V
	0.36	0	99	16	~~MW-30A~~	Deep; B	VOCs; 1,4-Dioxane	Ded.240V
	0.51	0	107	12	MW-28	Deep; B	VOCs; 1,4-Dioxane	Ded.240V
	1.8	0.24	330	30	MW-41	Deep; B	VOCs; 1,4-Dioxane (8270 MOD)	Ded.240V
~~MS/MSD~~	55	13	180	10	~~MW-34B~~	Deep; B	VOCs; 1,4-Dioxane (8270 MOD)	Ded 240V
SPT/ DUP√	118	0.38	130	35	~~MW-30B~~	Deep; BC	VOCs; 1,4-Dioxane	Ded.240V
	0	0	165	55	~~MW-26C~~	Deep; B	VOCs; 1,4-Dioxane	Redi-flo
SPT/ DUP√	82	2.1	25	18	~~MW-08~~	Water Table; BC	VOCs; 1,4-Dioxane	Redi-flo

NOTE
1 = Day - # refers to the day scheduled to sample and the corresponding dedicated pipestand to use: ND=1; 0-10=2; 10 - 100=3; >100=4
A **MS** and **MSD** (3x40ml VOA and 1L amber) should be collected every day/ alternating 1,4-Dioxane methods as indicated.
1,4-Dioxane analysis method is 8270 SIM unless specified otherwise (if historical detect is > 5.0 ug/l MOD is used).
Wells with dedicated pumps should follow concentration order when possible.
MW-36 and MW-39 Gate Access Code: 3252

HARGIS + ASSOCIATES, INC.

GROUNDWATER SAMPLING INFORMATION

DATE: 11/03/2020 **TASK:** 532.30 **WELL ID:** MW-32B

Time 0841 Static DTW (ft below reference point)	80.15	screen SV Casing Volume (CV) (gallons) 19.2 3 SV (gallons) 57.6	Weather Conditions	Initials: AMS/AMD
Casing Total Depth (ft below reference point)	99.9	Purging Device ded. grundfos rediflo2 Sampling Device ded tubing	Time 0840 Temp. 70	Begin Purge 0855 End Purge 0917
pump to bottom screen Water Column (feet)	32	Pump: Depth (ft brp) 96.7 Type rediflo2 Voltage 46 HP	Skies overcast	Gallons Purged 6.6 5V CVs Purged 3.4
Casing Capacity (Diameter 4 ") (gallons per foot)	0.60	Monitor Well Recharge Rate: Slow Fast X	Wind (mph) - From -	DTW (ft brp) 82.39 Time 0911

Time	Depth to Water	Volume Purged (Gallons)	Casing Volumes Purged	....FIELD PARAMETERS.... Temp. (°C)	pH	EC (µS/cm)	O.R.P. (mV)	D.O. (mg/L)	Turbidity (NTU)	Pump Frequency Hz	COMMENTS
0855	80.15	0	0	~		pump on			~	299	Q ~ 3 gpm
0859	82.30	12	0.6	21.2	7.28	944	71.7	3.79	NM	299	
0901	82.31	18	0.9	21.2	7.33	953	68.1	1.29	5.36	299	
0904	82.35	27	1.4	21.1	7.39	939	65.3	0.82	5.72	299	
0908	82.36	39	2.0	21.1	7.42	928	63.3	0.66	5.43	299	
0911	82.39	48	2.5	21.1	7.43	920	62.4	0.61	5.10	299	
0914	NM	57	3.0	21.1	7.45	912	60.9	0.41	5.02	299	collect samples @ 0915
0917	NM	66	3.4	~		pump	off	~			

SAMPLE COLLECTION SAMPLE TIME 0915

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? If yes, complete appropriate forms. 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.)

HARGIS + ASSOCIATES, INC.

GROUNDWATER SAMPLING INFORMATION

DATE: 11/3/20 TASK: 532.30 WELL ID: MW-26C

Time 0947 Static DTW (ft below reference point)	123.01	screen SV Casing Volume (CV) (gallons) 49 3 SV (gallons) 147	Weather Conditions	Initials: AMD/AMJ
Casing Total Depth (ft below reference point)	499	Purging Device grundfos Sampling Device ded tubing	Time 1000 Temp. 70	Begin Purge 0958 End Purge 1100
pump to screen Water Column (feet)	299	Pump: Depth (ft brp) ~200 Type MP1 Voltage 115 HP 0.5	Skies overcast	Gallons Purged 155 CVs Purged 3.2
Casing Capacity (Diameter 2 ") (gallons per foot)	0.163	Monitor Well Recharge Rate: Slow ____ Fast X	Wind (mph) — From —	DTW (ft brp) ' Time 1057

Time	Depth to Water	Volume Purged (Gallons)	Casing Volumes Purged	....FIELD PARAMETERS.... Temp. (°C)	pH	EC (µS/cm)	O.R.P. (mV)	D.O. (mg/L)	Turbidity (NTU)	Pump Frequency Hz	COMMENTS
0958	123.01	0	0			PUMP ON					
1008	122.05	25	0.5	22.1	9.09	430.9	6.2	0.73	5.17	320	Q≈ 2.5gpm
1018	122.11	50	1.0	22.1	8.09	750	-99.9	0.60	4.88	320	
1028	122.11	75	1.5	22.2	7.75	881	-155.1	0.42	4.61	320	
1038	122.11	100	2.0	22.2	7.70	892	-165.8	0.38	4.22	320	
1048	122.23	125	2.5	22.3	7.66	880	-173.6	0.37	4.31	320	
1057	122.23	148	3.0	22.2	7.64	887	-175.5	0.37	4.81	320	COLLECT SAMPLE
1100	NM	155	3.2			PUMP OFF					

SAMPLE COLLECTION SAMPLE TIME 1057

ANALYSIS	QUANTITY	TYPE
8260B VOCs	6	40 ml VOA
8270 SIM 1,4 dioxane	2	1 L Amber
8270 MOD 1,4 dioxane		1 L Amber

DUPLICATES / SPLITS / BLANKS? If yes, complete appropriate forms. 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.)

RB-110320 @ (Rinsate blank collected after sample)

HARGIS + ASSOCIATES, INC.

GROUNDWATER SAMPLING INFORMATION

DATE: 11/3/20 **TASK:** 532.30 **WELL ID:** MW-08

Time 1210 Static DTW (ft below reference point)	130.90	Casing Volume (CV) (gallons) 5.7	3 CV (gallons) 17.2	Weather Conditions	Initials: AMD/AMJ
Casing Total Depth (ft below reference point)	166.10	Purging Device grundfos	Sampling Device ded. tubing	Time 1210 Temp. 70	Begin Purge 1221 End Purge 1240
Water Column (feet)	35.20	Pump: Depth (ft brp) ~164 Type MP1	Voltage 115 HP 0.5	Skies clear	Gallons Purged 20 CVs Purged 3.5
Casing Capacity (Diameter 2 ") (gallons per foot)	0.163	Monitor Well Recharge Rate: Slow	Fast X	Wind (mph) — From —	DTW (ft brp) 130.90 Time 1210

Time	Depth to Water	Volume Purged (Gallons)	Casing Volumes Purged	....FIELD PARAMETERS.... Temp. (°C)	pH	EC (µS/cm)	O.R.P. (mV)	D.O. (mg/L)	Turbidity (NTU)	Pump Frequency Hz	COMMENTS
1221	130.90	0	0			PUMP ON					
1224	*	3	0.5	25.4	7.59	1841	37.1	2.31	18.6	280	Q = 1.5 gpm
1227		6	1.0	23.4	7.04	1833	44.1	2.32	10.1	280	
1229		9	1.5	23.3	7.09	1863	50.7	2.53	9.6	280	
1232		12	2.0	23.5	7.13	1822	58.7	1.92	4.3	280	
1235		15	2.5	23.5	7.13	1841	60.4	1.94	4.6	280	
1238		18	3.0	23.5	7.15	1840	63.1	1.89	3.8	280	
1240		20	3.5			PUMP	OFF				

SAMPLE COLLECTION SAMPLE TIME 1238

ANALYSIS	QUANTITY	TYPE
8260B VOCs	9	40 ml VOA
8270 SIM 1,4 dioxane	3	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 0 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.)

MW-08 (Split sample @ 1239)
MW-0800 (duplicate sample @ 1245)
* Sounder unable to fit where pump is in the well

HARGIS + ASSOCIATES, INC.

GROUNDWATER SAMPLING INFORMATION

DATE: 11/3/20 **TASK:** 532.30 **WELL ID:** MW-21

Time 1302 Static DTW (ft below reference point)	116.02	Casing Volume (CV) (gallons) 76	3 CV (gallons) 230	Weather Conditions	Initials: AMJ/AMD
Casing Total Depth (ft below reference point)	232.1	Purging Device ded pump	Sampling Device ded. sample port	Time 1305 Temp. 70	Begin Purge 1332 End Purge 1349
Water Column (feet)	116.08	Pump: Depth (ft brp) – Type – Voltage – HP –		Skies clear	Gallons Purged 230 CVs Purged 3.0
Casing Capacity (Diameter 4 ") (gallons per foot)	0.66	Monitor Well Recharge Rate: Slow ____ Fast X		Wind (mph) – From –	DTW (ft brp) 116.02 Time 1302

Time	Depth to Water	Volume Purged (Gallons)	Casing Volumes Purged	....FIELD PARAMETERS.... Temp. (° C)	pH	EC (µS/cm)	O.R.P. (mV)	D.O. (mg/L)	Turbidity (NTU)	Pump Frequency Hz	COMMENTS
1332 ~~1330~~ 1331	116.02	0	0			Begin Purge					
1334	133.50	40	0.5	22.3	7.15	2120	77.3	1.48		–	Q ≈ 27 gpm
1336	135.28	80	1.0	21.9	7.15	2204	62.2	0.89		–	
1338	135.59	120	1.5	21.8	7.15	2221	61.2	1.16		–	
1340	136.08	160	2.0	21.8	7.13	2225	60.9	1.60		–	
1342	136.30	200	2.5	21.8	7.13	2220	62.4	2.01		–	
1344	NM	230	3.0							–	
						END PURGE					

SAMPLE COLLECTION SAMPLE TIME 1342

ANALYSIS	QUANTITY	TYPE
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? If yes, complete appropriate forms. (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.)

MS/MSD collected.

HARGIS + ASSOCIATES, INC.

GROUNDWATER SAMPLING INFORMATION

DATE: 11/3/20 **TASK:** 5323.30 **WELL ID:** EW-01

Time 1325 Static DTW (ft below reference point)	125.02	Casing Volume (CV) (gallons) 41.6	3 CV (gallons) 124.9	Weather Conditions	Initials: AMD/AMJ
Casing Total Depth (ft below reference point)	188.1	Purging Device ded pump	Sampling Device ded sample port	Time 1315 Temp. 70	Begin Purge 1347 End Purge 1402
~~Pond~~ Water Column (feet)	63.08	Pump: Depth (ft brp) – Type – Voltage – HP –		Skies clear	Gallons Purged 135 CVs Purged 3.2
Casing Capacity (Diameter 4 ") (gallons per foot)	0.66	Monitor Well Recharge Rate: Slow ____ Fast X		Wind (mph) – From –	DTW (ft brp) 125.02 Time 1325

Time	Depth to Water	Volume Purged (Gallons)	Casing Volumes Purged	....FIELD PARAMETERS.... Temp. (°C)	pH	EC (µS/cm)	O.R.P. (mV)	D.O. (mg/L)	Turbidity (NTU)	Pump Frequency Hz	COMMENTS
1347	125.02	0	0			begin purge					Q≈ 10 gpm
1349	NM	20	0.5	22.1	7.23	1467	71.3	6.05	8.61	–	
1351	125.63	40	1.0	22.1	7.21	1468	73.4	6.10	7.33	–	
1353	125.63	60	1.5	22.1	7.19	1413	80.2	6.14	6.11	–	
1355	125.63	80	2.0	22.2	7.19	1413	84.2	6.08	6.09	–	
1357	NM	100	2.5	22.1	7.19	1436	86.1	6.03	6.67	–	
1359	125.63	125	3.0	22.1	7.17	1421	87.5	6.07	7.08	–	
1402	NM	135	3.2			END	PURGE				

SAMPLE COLLECTION SAMPLE TIME 1359

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.)

HARGIS + ASSOCIATES, INC.

GROUNDWATER SAMPLING INFORMATION

DATE: 11/3/20 **TASK:** 532.30 **WELL ID:** MW-31

Time 1435 Static DTW (ft below reference point)	105.78	screen SV Casing Volume (CV) (gallons) 81	3 CV (gallons) 243	Weather Conditions	Initials: AMD/AMJ
Casing Total Depth (ft below reference point)	996	Purging Device ded pump	Sampling Device >100 pipestand	Time 1435 Temp. 70	Begin Purge 1444 End Purge 1509
pump to screen Water Column (feet)	54	Pump: Depth (ft brp) 942 Type grundfos Voltage 240 HP –		Skies clear	Gallons Purged 267 CVs Purged 3.29
Casing Capacity (Diameter 6 ") (gallons per foot)	1.5	Monitor Well Recharge Rate: Slow ____ Fast X		Wind (mph) – From –	DTW (ft brp) 109.85 Time 1506

Time	Depth to Water	Volume Purged (Gallons)	Casing Volumes Purged	....FIELD PARAMETERS.... Temp. (°C)	pH	EC (µS/cm)	O.R.P. (mV)	D.O. (mg/L)	Turbidity (NTU)	Pump Frequency Hz	COMMENTS
1444	105.78	0	0			PUMP ON					
1447	109.81	40	0.5	21.6	7.43	1078	132.9	0.62	7.08	–	Q ≈ 11 gpm
1451	109.81	80	1.0	21.3	7.55	1604	61.6	0.70	48.6	–	
1454	109.81	120	1.5	21.3	7.48	1401	54.4	0.61	31.3	–	
1458	109.81	160	2.0	21.4	7.48	1233	51.1	0.57	11.1	–	
1502	109.85	200	2.5	21.4	7.48	1195	49.3	0.62	6.61	–	
1506	109.85	243	3.0	21.4	7.49	1153	46.6	0.66	4.31	–	COLLECT SAMPLE
1509	NM	267	3.29			PUMP	OFF				

SAMPLE COLLECTION SAMPLE TIME 1506

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)
If yes, complete appropriate forms.

AIR MONITORING PID/FID ppm: VAULT NA 2 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.)

HARGIS + ASSOCIATES, INC.

GROUNDWATER SAMPLING INFORMATION

DATE: 11/3/20 **TASK:** 532.30 **WELL ID:** MW-34B

Time 1535 Static DTW (ft below reference point)	140.18	Screen ~~Casing~~ Volume (~~CV~~) (gallons) 46 SV 3 ~~CV~~ (gallons) 138 SV	Weather Conditions
Casing Total Depth (ft below reference point)	536	Purging Device ded pump Sampling Device 10-100 pipestand	Time 1535 Temp. 60
pump to screen Water Column (feet)	76	Pump: Depth (ft brp) 460 Type grundfos Voltage 240 HP —	Skies clear
Casing Capacity (Diameter 4 ") (gallons per foot)	0.60	Monitor Well Recharge Rate: Slow ____ Fast X	Wind (mph) — From —

Initials: AMD/AMJ
Begin Purge 1544 End Purge 1554
Gallons Purged 173 CVs Purged 3.86
DTW (ft brp) 146.15 Time 1535

Time	Depth to Water	Volume Purged (Gallons)	Casing Volumes Purged	....FIELD PARAMETERS.... Temp. (°C)	pH	EC (µS/cm)	O.R.P. (mV)	D.O. (mg/L)	Turbidity (NTU)	Pump Frequency Hz	COMMENTS
1544	140.18	0	0	Begin Purge							
1546	143.56	40	0.8	22.1	7.75	1,001	NM ~~287~~	2.50	30.6	—	Q ≈ 18 gpm
1547	NM	43	1.0	21.6	7.33	1003	133.3	2.31	25.6	—	
1548	142.72	69	1.5	21.7	7.32	1007	130.3	2.43	22.3	—	
1549	142.78	92	2.0	21.7	7.33	1006	127.7	2.21	16.3	—	
1550	142.81	115	2.5	21.7	7.34	1005	122.6	2.15	8.8	—	
1552	142.81	138	3.0	21.8	7.34	1005	122.4	2.11	5.6	—	COLLECT SAMPLE
1554	NM	173	3.7	END PURGE							

SAMPLE COLLECTION SAMPLE TIME 1552

ANALYSIS	QUANTITY	TYPE
8260B VOCs	3	40 ml VOA
8270 SIM 1,4 dioxane	P	1 L Amber
8270 MOD 1,4 dioxane	P	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.)

HARGIS + ASSOCIATES, INC.

GROUNDWATER SAMPLING INFORMATION

DATE: 11/4/20 TASK: 532.30 WELL ID: MW-28

Time 0820 Static DTW (ft below reference point)	126.80	Screen SV Casing Volume (CV) (gallons) 27 3 SV (gallons) 81	Weather Conditions
Casing Total Depth (ft below reference point)	375	Purging Device ded pump Sampling Device 0-10 pipestand	Time 0840 Temp. 60
pump to screen Water Column (feet)	45	Pump: Depth (ft brp) 330 Type grundfos Voltage 240 HP	Skies clear
Casing Capacity (Diameter 4 ") (gallons per foot)	0.60	Monitor Well Recharge Rate: Slow Fast	Wind (mph) - From -

Initials: AMD/RA/AJJ

Begin Purge 0831 End Purge 0843

Gallons Purged 81 CVs Purged 4.0

DTW (ft brp) 126.80 Time 0820

Time	Depth to Water	Volume Purged (Gallons)	Casing Volumes Purged	....FIELD PARAMETERS.... Temp. (°C)	pH	EC (µS/cm)	O.R.P. (mV)	D.O. (mg/L)	Turbidity (NTU)	Pump Frequency Hz	COMMENTS
0831	126.80	0	0			PUMP ON					
832	134.60	13.5	0.5	21.6	7.19	1000	83.2	2.50	4.80	-	Q≈ 8 gpm
0834	135.15	27	1.0	21.5	7.22	1107	81.1	3.05	1.68	-	
0836	135.30	40.5	1.5	21.4	7.30	1096	72.5	3.11	0.02	-	
0837	135.25	54	2.0	21.4	7.36	1074	71.0	2.91	0.72	-	
0839	135.25	67.5	2.5	21.4	7.39	1070	70.8	2.83	0.42	-	
0841	135.26	81	3.0	21.4	7.41	1070	71.0	2.75	0.02	-	COLLECT SAMPLE
0843	NM	108	4.0			PUMP OFF					

SAMPLE COLLECTION SAMPLE TIME 0841

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)
If yes, complete appropriate forms.

AIR MONITORING PID/FID ppm: VAULT NA 0 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.)

HARGIS + ASSOCIATES, INC.

GROUNDWATER SAMPLING INFORMATION

DATE: 11/4/20 **TASK:** 532.30 **WELL ID:** MW-40

Time 0940 Static DTW (ft below reference point)	108.02	screen ~~Casing~~ Volume (~~CV~~ SV) (gallons) 75 3 ~~CV~~ SV (gallons) 225	Weather Conditions	Initials: AMD/AJJ/RA
Casing Total Depth (ft below reference point)	970	Purging Device ded pump Sampling Device ND pipestand	Time 0940 Temp. 70	Begin Purge 0950 End Purge 1012
pump to screen Water Column (feet)	50	Pump: Depth (ft brp) 920 Type grundfos Voltage 240 HP -	Skies clear	Gallons Purged 245 CVs Purged 3.3
Casing Capacity (Diameter 6 ") (gallons per foot)	1.35	Monitor Well Recharge Rate: Slow ____ Fast X	Wind (mph) - From -	DTW (ft brp) 108.02 Time 0940

Time	Depth to Water	Volume Purged (Gallons)	Casing Volumes Purged	....FIELD PARAMETERS.... Temp. (°C)	pH	EC (µS/cm)	O.R.P. (mV)	D.O. (mg/L)	Turbidity (NTU)	Pump Frequency Hz	COMMENTS
0950	108.02	0	0			PUMP ON					
0953	109.20	37.5	0.5	21.0	7.51	930	112.4	1.29	1.13	-	Q ≈ 9 gpm
0957	109.02	75	1.0	21.4	7.41	852	13.9	0.84	1.03	-	
1001	109.10	112.5	1.5	21.6	7.42	852	19.5	0.70	0.45	-	
1005	109.00	150	2.0	21.6	7.42	848	22.1	0.63	0.02	-	
1008	109.04	187.5	2.5	21.7	7.42	848	23.7	0.61	0.02	-	
1012	109.02	225	3.0	21.6	7.44	849	25.0	0.60	0.02	-	
1014	NM	246	3.3			PUMP OFF					

SAMPLE COLLECTION SAMPLE TIME 1012

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? If yes, complete appropriate forms. Y (N)

AIR MONITORING PID/FID ppm: VAULT NA 2 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.)

G-Green, X-Black, Y-Red (starter box out cable)

HARGIS + ASSOCIATES, INC.

GROUNDWATER SAMPLING INFORMATION

DATE: 11/4/20 TASK: 532.30 WELL ID: MW-41

Time 1053 Static DTW (ft below reference point)	142.65	screen SV Casing Volume (CV) (gallons) 39 3 CV (gallons) 117	Weather Conditions
Casing Total Depth (ft below reference point)	425	Purging Device ded pump Sampling Device 0-10 pipestand	Time 1150 Temp. 80
pump to screen Water Column (feet)	65	Pump: Depth (ft brp) 360 Type grundfos Voltage 240 HP –	Skies clear
Casing Capacity (Diameter 4 ") (gallons per foot)	0.60	Monitor Well Recharge Rate: Slow ____ Fast X	Wind (mph) – From –

Initials: AMD/AJJ

Begin Purge 1157 End Purge 1218

Gallons Purged 230 CVs Purged 5.89

DTW (ft brp) 142.65 Time 1053

Time	Depth to Water	Volume Purged (Gallons)	Casing Volumes Purged	....FIELD PARAMETERS.... Temp. (°C)	pH	EC (µS/cm)	O.R.P. (mV)	D.O. (mg/L)	Turbidity (NTU)	Pump Frequency Hz	COMMENTS
1157	142.65	0	0			PUMP ON					
1159	151.35	20	0.5	22.0	6.77	2281	6.6	6.96	24.8	–	Q ≈ 10 gpm
1202	151.42	40	1.0	22.2	6.82	2264	32.3	6.55	108	–	
1203	151.40	60	1.5	22.2	6.85	2252	41.1	6.36	NM	–	
1207	151.45	100	2.5	22.3	6.88	2228	51.6	5.51	62.6	–	
1210	151.60	140	3.5	22.2	6.89	2228	56.2	5.26	58.9	–	
1214	151.58	180	4.5	22.2	6.90	2197	62.0	4.79	25.6	–	
1218	152.35	220	5.5	22.3	6.89	2198	66.0	4.65	12.1	–	COLLECT SAMPLE
1218	NM	230	5.89			PUMP	OFF				

SAMPLE COLLECTION SAMPLE TIME 1218

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)
If yes, complete appropriate forms.

AIR MONITORING PID/FID ppm: VAULT NA 7 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.)

HARGIS + ASSOCIATES, INC.

GROUNDWATER SAMPLING INFORMATION

DATE: 11/4/20 TASK: 532.30 WELL ID: MW-39

Time 1109 Static DTW (ft below reference point)	74.85	screen SV Casing Volume (CV) (gallons) 271 3 SV (gallons) 814	Weather Conditions
Casing Total Depth (ft below reference point)	1012	Purging Device ded pump Sampling Device ND pipe stand	Time 1110 Temp. 75
pump to screen Water Column (feet)	452	Pump: Depth (ft brp) 560 Type grundfos Voltage 240 HP -	Skies clear
Casing Capacity (Diameter 4 ") (gallons per foot)	0.60	Monitor Well Recharge Rate: Slow ____ Fast X	Wind (mph) - From -

Initials: AMD/AMJ/AJJ

Begin Purge 1110 End Purge 1348

Gallons Purged 850 CVs Purged 3.1

DTW (ft brp) 74.85 Time Near

Time	Depth to Water	Volume Purged (Gallons)	Casing Volumes Purged	....FIELD PARAMETERS.... Temp. (° C)	pH	EC (µS/cm)	O.R.P. (mV)	D.O. (mg/L)	Turbidity (NTU)	Pump Frequency Hz	COMMENTS
1310	74.85	0	0	———	———	PUMP	ON	———	———		
1315	89.77	136	0.5	21.8	8.06	450.8	-61.1	1.35	0.39	-	Q = 21 gpm
1321	90.00	271	1.0	22.4	8.19	443.5	-102.2	0.70	0.02	-	
1327	90.21	407	1.5	NM	NM	NM	NM	NM	0.02	-	
1334	90.31	542	2.0	22.8	8.08	450.3	-101.1	1.20	0.10	-	
1340	90.18	678	2.5	22.8	8.07	451.8	-106.7	0.23	0.02	-	
1346	90.42	814	3.0	22.8	8.09	453.2	-112.4	0.19	0	-	COLLECT SAMPLE
1348	NM	850	3.1	———	———	PUMP	OFF	———	———		

SAMPLE COLLECTION SAMPLE TIME 1346

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? If yes, complete appropriate forms. Y (N)

AIR MONITORING PID/FID ppm: VAULT NA 2 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.)

SCANNED
11/10/20 - JAK

NOV 2020

QUARTERLY GROUNDWATER MONITORING

FIELD NOTEBOOK

LARGE VOLUME MONITOR WELLS

RAYTHEON COMPANY

532.30

1901 MALVERN AVE.
FULLERTON, CALIFORNIA

HARGIS + ASSOCIATES, INC.
HYDROGEOLOGY • ENGINEERING

HARGIS + ASSOCIATES, INC.

WATER LEVEL INDICATOR
CALIBRATION DOCUMENTATION FORM

PROJECT NUMBER:**532.30**

	DATE	TIME	WATER LEVEL INDICATOR TYPE	WATER LEVEL INDICATOR NUMBER	CALIBRATION METHOD	CALIBRATED BY (INITIALS)	REMARKS
32B	11/2/20	0753	Geotech	#7094		AMD	DTW = 80.06' btoc
32A	11/2/20	0753	Solinst	#276946		↓	DTW = 81.09' btoc
32C	11/2/20	0753	Geotech	#7096		↓	DTW = 71.60' btoc
32A	11/2/20	0755	Geotech	#7094		AMD	DTW = 81.09' btoc
32A	11/2/20	0757	Geotech	#7096		↓	DTW = 81.09' btoc

HARGIS + ASSOCIATES, INC.

STATIC WATER LEVEL DATA SHEET

MONTH/YEAR: NOVEMBER 2020

METHOD OF MEASUREMENT/SOUNDER IDENTIFIER: **FLAT TAPE ELECTRIC SOUNDER #_____**

PROJECT NUMBER: **532.30**

WELL IDENTIFIER	DATE	TIME	MEASURING POINT	DEPTH TO WATER FROM REFERENCE POINT (+feet)	REFERENCE POINT ELEVATION (ft msl)	WATER LEVEL ELEVATION (ft msl)	AUG 2020 PREVIOUS DEPTH TO WATER (ft)	CHANGE IN WATER LEVEL (± ft)	COMMENTS	INITIALS
P-07	11/ 2 /20				142.31		111.07			
P-09	11/ /20				183.86		120.70			
MW-06	11/ /20				184.70		150.31			
MW-08	11/ 2 /20	1302	TOST	131.13	155.91	24.78	127.84	-3.29		DJS/RA
MW-09	11/ /20				180.10		149.01			
MW-13	11/ /20				141.84		122.38			
MW-15	11/ 2 /20	1334	TOC	128.05	144.95	16.9	125.83	-2.22		DJS/RA
MW-16	11/ /20				142.40		118.13			
MW-17	11/ /20				142.70		122.31			
MW-18	11/ /20				142.32		122.76			
MW-19	11/ /20				142.06		122.34			
MW-20	11/ /20				184.19		145.66			
MW-21	11/ /20				141.18		112.03		Totalizer: Pumping?	
MW-22	11/ /20				138.65		119.06			
MW-23	11/ /20				137.33		119.35			
MW-24	11/ /20				142.83		111.76			
MW-25	11/ /20				142.64		112.48			
MW-26A	11/ /20				137.04		117.03			
MW-26B	11/ /20				137.05		117.71			
MW-26C	11/ /20				137.22		114.30			

msl = Mean sea level
ft = feet

HARGIS + ASSOCIATES, INC.

STATIC WATER LEVEL DATA SHEET

MONTH/YEAR: NOVEMBER 2020

METHOD OF MEASUREMENT/SOUNDER IDENTIFIER: **FLAT TAPE ELECTRIC SOUNDER #_____**

PROJECT NUMBER: **532.30**

WELL IDENTIFIER	DATE	TIME	MEASURING POINT	DEPTH TO WATER FROM REFERENCE POINT (+feet)	REFERENCE POINT ELEVATION (ft msl)	WATER LEVEL ELEVATION (ft msl)	AUG 2020 PREVIOUS DEPTH TO WATER (ft)	CHANGE IN WATER LEVEL (± ft)	COMMENTS	INITIALS
MW-27	11/ /20				137.16		113.89			
MW-28	11/ /20				140.77		117.92			
MW-29	11/2 /20	1310	TOST	186.65	139.81	-46.84	153.41	-33.24	Totalizer: 868910~~3~~.2 Pumping? 4.8, 4.9	DJS/RA
MW-30A	11/2 /20	1112	TOST	116.30	129.44	13.14	107.69	-8.61		
MW-30B	11/2 /20	1113	TOST	112.95	129.39	17.00	105.72	-7.18		
MW-31	11/2 /20	1051	TOST	105.70	119.60	13.90	97.36	-8.34		
MW-32A	11/2 /20	0753 ~~1112~~	TOST	81.09 ~~118.30~~	92.88	11.79	72.57	-8.52		
MW-32B	11/2 /20	0753 ~~1113~~	TOST	80.06 ~~112.95~~	92.89	12.83	71.71	-8.35		
MW-32C	11/2 /20	0753	TOST	71.60	92.88	21.28	64.45	-7.15		
MW-33	11/2 /20	1007	TOST	72.42	83.19	10.77	63.83	-8.59		DJS/RA
MW-34A	11/2 /20	~~0946~~	~~TOC~~	~~71.70~~	153.25		141.02			
MW-34B	11/2 /20	~~0944~~	~~TOC~~	~~80.07~~	153.11		131.81			
MW-34C	11/ /20		~~TOC~~	~~81.88~~	153.29		131.74			
MW-35A	11/2 /20	0940	TOST	71.70	93.57	21.87	76.71	5.01		
MW-35B	11/2 /20	0944	TOST	80.07	93.56	13.49	80.14	0.07		
MW-35C	11/2 /20	0948	TOST	81.88	93.55	11.67	73.31	-8.57		
MW-36	11/ /20				86.65		67.80			
MW-37	11/ /20				155.60		129.43			
MW-38	11/ /20				154.90		145.60			
MW-39	11/ /20				84.25		66.11			

msl = Mean sea level
ft = feet

HARGIS + ASSOCIATES, INC.

STATIC WATER LEVEL DATA SHEET

MONTH/YEAR: NOVEMBER 2020

METHOD OF MEASUREMENT/SOUNDER IDENTIFIER: **FLAT TAPE ELECTRIC SOUNDER #_____**

PROJECT NUMBER: **532.30**

WELL IDENTIFIER	DATE	TIME	MEASURING POINT	DEPTH TO WATER FROM REFERENCE POINT (+feet)	REFERENCE POINT ELEVATION (ft msl)	WATER LEVEL ELEVATION (ft msl)	AUG 2020 PREVIOUS DEPTH TO WATER (ft)	CHANGE IN WATER LEVEL (± ft)	COMMENTS	INITIALS
MW-40	11/ 2 /20	1025	TOC ~~108.90~~	108.90	123.40	14.5	99.28	-9.62		DJS/RA
MW-41	11/ /20				155.60		134.73			
MW-42	11/ 02 /20	908	TOC	73.39	82.80	9.41	64.79	-8.6		
MW-43	11/ 02 /20	0830	TOC	67.57	76.64	9.07	59.10	-8.47		
EW-01	11/ 02 /20	~~0830~~	~~TOC~~	~~67.57~~	141.07		116.46		SOUNDING TUBE TO 172.65 Totalizer: Pumping?	
EW-02	11/ 2 /20	1237	TOST	123.65	132.97	9.32	115.33	-8.32	Totalizer: 7363661 Pumping? ~~On~~ No	

msl = Mean sea level
ft = feet

HARGIS + ASSOCIATES, INC.

NOVEMBER 2020 GROUNDWATER SAMPLE PLAN
TEAM 1

QA/QC	Total VOC's µg/L	1,4-Dixoane µg/L	APROX. GALLONS	ESTIMATED TIME (minutes)	WELL IDENTIFIER	HYDROGEOLOGIC ZONE	NOVEMBER 2020 SAMPLING SCHEDULE	SAMPLE METHOD
	0	0	938	40	MW-43	Deep; B	VOCs; 1,4-Dioxane	Ded.240V
	0	0	858	42	MW-39	Deep; B	VOCs; 1,4-Dioxane	Ded.240V
	0	0	885	44	MW-35C	Deep; B	VOCs; 1,4-Dioxane	Ded.240V
~~2/3SV~~	3.7	0	929	53	MW-33	Deep; B	VOCs; 1,4-Dioxane	Ded.240V
	31	1.4	910	44	MW-42	Deep; B	VOCs; 1,4-Dioxane	Ded.240V
~~2/3SV~~	61	8.2	1079	83	MW-36	Deep; D	VOCs; 1,4-Dioxane	Ded.240V
	67	1.7	63	21	MW-32B	Deep; B	VOCs; 1,4-Dioxane	~~Ded.240V~~ REDI-FLO
	159	6.6	339	30	MW-31	Deep; B	VOCs; 1,4-Dioxane	Ded.240V

NOTES

A **MS** and **MSD** (3x40ml VOA and 1L amber) should be collected every day/ alternating 1,4-Dioxane methods as indicated.
1,4-Dioxane analysis method is 8270 SIM unless specified otherwise (if historical detect is > 5.0 ug/l MOD is used).
1 = Day - # refers to the day scheduled to sample and the corresponding dedicated pipestand to use: ND=1; 0-10=2; 10 - 100=3; >100=4
Wells with dedicated pumps should follow concentration order when possible.
MW-36 and MW-39 Gate Access Code: 3252

RB = Rinsate blank taken on non-dedicated equipment each day- will vary with schedule and should be confirmed with both teams each morning.

HARGIS + ASSOCIATES, INC.

NOVEMBER 2020 GROUNDWATER SAMPLE PLAN
TEAM 2

QA/QC	Total VOC's µg/L	1,4-Dixoane µg/L	APROX. GALLONS	ESTIMATED TIME (minutes)	WELL IDENTIFIER	HYDROGEOLOGIC ZONE	NOVEMBER 2020 SAMPLING SCHEDULE	SAMPLE METHOD
	26	18	300	25	EW-01	Deep; B	VOCs; 1,4-Dioxane (8270 MOD)	Dedicated
	1671	700	315	15	MW-21	Water Table; BC	VOCs; 1,4-Dioxane (8270 MOD)	Dedicated
	0	0	241	24	MW-40	Deep; B	VOCs; 1,4-Dioxane	Ded.240V
	0.36	0	99	16	MW-30A	Deep; B	VOCs; 1,4-Dioxane	Ded.240V
	0.51	0	107	12	MW-28	Deep; B	VOCs; 1,4-Dioxane	Ded.240V
	1.8	0.24	330	30	MW-41	Deep; B	VOCs; 1,4-Dioxane (8270 MOD)	Ded.240V
opt. dup	55	13	180	10	MW-34B	Deep; B	VOCs; 1,4-Dioxane (8270 MOD)	Ded 240V
~~MSD~~ DUP	118	0.38	130	35	MW-30B	Deep; BC	VOCs; 1,4-Dioxane	Ded.240V
~~SPLT~~	0	0	165	55	MW-26C	Deep; B	VOCs; 1,4-Dioxane	Redi-flo
DUP	82	2.1	25	18	MW-08	Water Table; BC	VOCs; 1,4-Dioxane	Redi-flo

NOTE
1 = Day - # refers to the day scheduled to sample and the corresponding dedicated pipestand to use: ND=1; 0-10=2; 10 - 100=3; >100=4
A **MS** and **MSD** (3x40ml VOA and 1L amber) should be collected every day/ alternating 1,4-Dioxane methods as indicated.
1,4-Dioxane analysis method is 8270 SIM unless specified otherwise (if historical detect is > 5.0 ug/l MOD is used).
Wells with dedicated pumps should follow concentration order when possible.
MW-36 and MW-39 Gate Access Code: 3252

HARGIS + ASSOCIATES, INC.

GROUNDWATER SAMPLING INFORMATION

DATE: 11.3.2020 **TASK:** 532.30 **WELL ID:** MW-35C

Time 0856 Static DTW (ft below reference point)	82.0	Casing Volume (CV) (gallons) 287	3 CV (gallons) 861	Weather Conditions	Initials: DJS, RA
Casing Total Depth (ft below reference point)	1040	Purging Device Sub. Pump	Sampling Device ND P. Pesta	Time 0845 Temp. 68	Begin Purge 0920 End Purge 1005
Pump to Screen Water Column (feet)	478	Pump: Depth (ft brp) 560 Type grundfos Voltage 240 HP –		Skies overcast	Gallons Purged 921 CVs Purged 3.2
Casing Capacity (Diameter 4") (gallons per foot)	0.60	Monitor Well Recharge Rate: Slow ____ Fast ✓		Wind (mph) 3 From W	DTW (ft brp) 82.00 Time 0856

Time	Depth to Water	Volume Purged (Gallons)	Casing Volumes Purged	....FIELD PARAMETERS.... Temp. (°C)	pH	EC (uS/cm)	O.R.P. (mV)	D.O. (mg/L)	Turbidity (NTU)	Pump Frequency Hz	COMMENTS
0920	82.0	0	0	~	Bouncy	Purging	~			-	Q ≈ 2.0 GPM
0926	91.38	143.5	0.5	20.34	7.32	750	-132.4	0.01	4.69	-	
0933	91.41	287	1.0	20.44	7.37	703	-87.5	0.79	6.01	-	
0940	91.50	430	1.5	20.52	7.37	748	-3.2	2.87	7.49	-	
0947	91.55	574	2.0	20.54	7.37	749	27.4	3.01	5.86	-	
0954	91.70	717.5	2.5	20.52	7.37	749	37.8	3.04	3.9	-	
1002	91.78	861	3.0	20.52	7.37	749	*49.4	7.06	2.88	-	~~unable to collect reading due to~~
1005	NM	921	3.2	~		End	Purge	~		-	unable to gain extra readings due to volume * ORP not stabilized

SAMPLE COLLECTION SAMPLE TIME 1005

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)
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.)

HARGIS + ASSOCIATES, INC.

GROUNDWATER SAMPLING INFORMATION

DATE: 11·3·2020 **TASK:** 532.30 **WELL ID:** MW-33

Time 1215 Static DTW (ft below reference point)	72.49	Casing Volume (~~CV~~ SV) (gallons) 298	3 ~~CV~~ SV (gallons) 893	Weather Conditions Time 1200 Temp. 72
Casing Total Depth (ft below reference point)	1020	Purging Device ded. Pump	Sampling Device 0-10 pipeline	Skies Clear
Pump to Screen Water Column (feet)	485.51	Pump: Depth (ft brp) 535 Type grundfos	Voltage 240 HP —	Wind (mph) 2 From 2
Casing Capacity (Diameter 4 ") (gallons per foot)	0.60	Monitor Well Recharge Rate: Slow ____ Fast ✓		Initials: DJS, RA
				Begin Purge 1224 End Purge 1315
				Gallons Purged 932.5 CVs Purged 3.2
				DTW (ft brp) 72.69 Time 1315

Time	Depth to Water	Volume Purged (Gallons)	Casing Volumes Purged	....FIELD PARAMETERS.... Temp. (°C)	pH	EC (µS/cm)	O.R.P. (mV)	D.O. (mg/L)	Turbidity (NTU)	Pump Frequency Hz	COMMENTS
1224	72.49	0	0	~	Begin		Purge	~		-	Q ≈ 18 GPM
1232	74.80	145.5	0.5	20.81	7.62	669	26.3	0.22	3.1	-	
1240	74.88	291	1.0	21.04	7.54	661	36.6	0.16	2.26	-	
1248	74.89	445.5	1.5	21.08	7.44	672	47.0	0.36	2.56	-	
1256	74.90	591	2.0	21.14	7.42	672	52.8	0.35	2.38	-	
1304	74.90	736.5	2.5	21.21	7.40	671	58.2	0.33	2.91	-	
1312	74.90	873	3.0	21.15	7.40	671	61.3	0.30	2.60	-	
1315	NM	932.5	3.2	~	End		Purge	~		-	

SAMPLE COLLECTION SAMPLE TIME 1315

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)
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.)

HARGIS + ASSOCIATES, INC.

GROUNDWATER SAMPLING INFORMATION

DATE: 11.03.20 TASK: 532.30 WELL ID: MW-30A

Time 13:54 Static DTW (ft below reference point)	116.05	Casing Volume (SV) (gallons) 17.2 3 SV (gallons) 51.5	Weather Conditions
Casing Total Depth (ft below reference point)	560.4	Purging Device ded. pump Sampling Device 0-10 Pipette	Time 1350 Temp. 74
Water Column (feet)	44	Pump: Depth (ft brp) 520 Type grundfos Voltage 240 HP —	Skies Clear
Casing Capacity (Diameter 4") (gallons per foot)	0.60	Monitor Well Recharge Rate: Slow Fast ✓	Wind (mph) 7 From SW

Initials: DJS, RA

Begin Purge 1359 End Purge 1425

Gallons Purged 75.2 CVs Purged 4.4

DTW (ft brp) 116.05 Time 1354

Time	Depth to Water	Volume Purged (Gallons)	Casing Volumes Purged	....FIELD PARAMETERS.... Temp. (°C)	pH	EC (S/cm)	O.R.P. (mV)	D.O. (mg/L)	Turbidity (NTU)	Pump Frequency Hz	COMMENTS
1359	116.05	0	0			Begin	Purge			—	Q ≈ 5.5
1401	118.09	9	0.5	21.42	7.54	747	58.6	0.59	2.77	—	
1403	118.16	17	1.0	21.41	7.48	748	64.1	0.36	3.16	—	
1405	118.26	25	1.5	21.45	7.46	749	67.1	0.41	3.39	—	
1406	118.31	34	2.0	21.53	7.42	749	68.5	0.53	3.32	—	
1408	118.31	42	2.5	21.58	7.38	731	69.0	0.55	3.30	—	
1410	118.34	52	3.0	21.56	7.34	744	68.0	0.53	2.22	—	
1412	NM	75.2	4.4		End	Purge				—	

SAMPLE COLLECTION SAMPLE TIME 1415

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? If yes, complete appropriate forms. 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.)

HARGIS + ASSOCIATES, INC.

GROUNDWATER SAMPLING INFORMATION

DATE: 11.3.2020 TASK: 532.30 WELL ID: MW-30B

Time 1430 Static DTW (ft below reference point)	113.30	Screen Casing Volume (CV) (gallons) 37.4	3 CV (gallons) 112.3	Weather Conditions	Initials: DJS, RA
Casing Total Depth (ft below reference point)	616	Purging Device Sub. Pump	Sampling Device 100-1000 Peristaltic	Time 1428 Temp. 74	Begin Purge 1432 End Purge 1505
Pump to Screen Water Column (feet)	96	Pump: Depth (ft brp) 520 Type grundfos Voltage 240 HP —		Skies Clear	Gallons Purged 148 CVs Purged 3.95
Casing Capacity (Diameter 3 ") (gallons per foot)	0.39	Monitor Well Recharge Rate: Slow ____ Fast ✓		Wind (mph) 2 From E	DTW (ft brp) 113.30 Time 1430

Time	Depth to Water	Volume Purged (Gallons)	Casing Volumes Purged	....FIELD PARAMETERS.... Temp. (°C)	pH	EC (uS/cm)	O.R.P. (mV)	D.O. (mg/L)	Turbidity (NTU)	Pump Frequency Hz	COMMENTS
1432	113.30	0	0	~	Begin	Purge			~	-	Q ≈ 5 GPM
1437	135.32	19	0.5	21.43	7.04	1588	53.8	2.02	2.75	—	
1440	137.20	38	1.0	21.54	6.93	1803	56.3	4.18	2.55	—	
1445	138.41	57	1.5	21.58	7.05	1386	56.2	3.51	2.50	—	
1449	139.62	76	2.0	21.63	7.06	1349	58.5	3.34	3.54	—	
1454	140.19	95	2.5	21.63	7.06	1353	61.8	3.31	2.70	—	
1458	140.89	113	3.0	21.65	7.07	1358	64.3	3.38	2.65	—	
1505	NM	148	3.95	~	End	Purge			~	-	

SAMPLE COLLECTION SAMPLE TIME 1505

ANALYSIS	QUANTITY	TYPE
8260B VOCs	4	40 ml VOA
8270 SIM 1,4 dioxane	3	1 L Amber
8270 MOD 1,4 dioxane		1 L Amber

DUPLICATES / SPLITS / BLANKS? If yes, complete appropriate forms. (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.)

Split collected @ 1505 Samp ID: MW-30 (Eurofins)

Dup collected @ 1630 Samp ID: MW-3000B

HARGIS + ASSOCIATES, INC.

GROUNDWATER SAMPLING INFORMATION

DATE: 11-04-2020 **TASK:** 532.30 **WELL ID:** MW-43

Time 0826 Static DTW (ft below reference point)	67.55	Screen Casing Volume (~~CV~~ SV) (gallons) 291.6 3 ~~CV~~ SV (gallons) 874.8	Weather Conditions
Casing Total Depth (ft below reference point)	1046	Purging Device ded. pump Sampling Device ND Pipe sample	Time 0815 Temp. 68
pump to screen Water Column (feet)	486	Pump: Depth (ft brp) 560 Type grundfos Voltage 240 HP —	Skies Clear
Casing Capacity (Diameter 4") (gallons per foot)	0.60	Monitor Well Recharge Rate: Slow ____ Fast ✓	Wind (mph) 2 From 2

Initials: AMJ/DJS

Begin Purge 0839 End Purge 0924

Gallons Purged 926 ~~CVs~~ SV Purged 3.2

DTW (ft brp) 75.06 Time 0920

Time	Depth to Water	Volume Purged (Gallons)	Casing Volumes Purged	....FIELD PARAMETERS.... Temp. (°C)	pH	EC (uS/cm)	O.R.P. (mV)	D.O. (mg/L)	Turbidity (NTU)	Pump Frequency Hz	COMMENTS
0839	67.55	0	0			begin purge					
0846	74.81	145	0.5	20.7	9.43	505	23.7	0.25	4.46	—	Q ≃ 22 gpm
0853	74.69	292	1.0	21.3	8.28	482	-5.5	0.17	5.96	—	
0900	74.90	437	1.5	21.5	7.96	478	7.9	0.16	2.76	—	
0907	75.02	592	2.0	21.5	7.87	478	18.3	0.00	2.18	—	
0914	75.03	730	2.5	21.6	7.83	478	24.3	0.08	2.02	—	
0920	75.06	875	3.0	21.6	7.82	478	29.8	0.02	1.98	—	collect samples
0924	NM	926	3.2			pump off					

SAMPLE COLLECTION SAMPLE TIME 0921

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? If yes, complete appropriate forms. 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.)

HARGIS + ASSOCIATES, INC.

GROUNDWATER SAMPLING INFORMATION

DATE: 11/04/2020 **TASK:** 532.30 **WELL ID:** MW-42

Time 1021 Static DTW (ft below reference point)	73.42	Casing Volume (~~CV~~ SV) (gallons) 295	3 ~~CV~~ SV (gallons) 885	Weather Conditions	Initials: AMJ, DJ
Casing Total Depth (ft below reference point)	1056	Purging Device ded. Pump	Sampling Device Low-flow Pump	Time 1015 Temp. 78	Begin Purge 1026 End Purge 1115
Pump to Screen Water Column (feet)	491	Pump: Depth (ft brp) 560 Type grundfos	Voltage 240 HP —	Skies Clear	Gallons Purged 927 CVs Purged 3.14
Casing Capacity (Diameter 4 ") (gallons per foot)	0.60	Monitor Well Recharge Rate: Slow ____	Fast ✓	Wind (mph) 2 From S	DTW (ft brp) 73.42 Time 1021

Time	Depth to Water	Volume Purged (Gallons)	Casing Volumes Purged	....FIELD PARAMETERS.... Temp. (°C)	pH	EC (µS/cm)	O.R.P. (mV)	D.O. (mg/L)	Turbidity (NTU)	Pump Frequency Hz	COMMENTS
1026	73.42	0	0	~		Begin	Purge	~		-	Q ≈ 2l
1034	82.15	147.5	0.5	20.86	7.93	562	-35.2	0.07	2.42	-	
1042	82.23	295	1.0	21.44	7.82	566	-31.9	0.00	2.14	-	
1049	82.28	442.5	1.5	21.52	7.73	562	-24.4	0.03	2.66	-	
1056	82.34	590	2.0	21.55	7.77	563	-25.8	0.02	3.15	-	
1104	82.38	737.5	2.5	21.56	7.76	563	-26.7	0.02	3.21	-	
1110	82.4	885	3.0	21.56	7.76	563	-27.4	0.03	3.20	-	
1115	NM	927	3.14	~		End	Purge	~		-	* Sample

SAMPLE COLLECTION SAMPLE TIME 1115

ANALYSIS	QUANTITY	TYPE
8260B VOCs		40 ml VOA
8270 SIM 1,4 dioxane		1 L Amber
8270 MOD 1,4 dioxane		1 L Amber

DUPLICATES / SPLITS / BLANKS? If yes, complete appropriate forms. 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.)

HARGIS + ASSOCIATES, INC.

GROUNDWATER SAMPLING INFORMATION

DATE: 11.04.2020 **TASK:** 532.30 **WELL ID:** MW-36

Time 1304 Static DTW (ft below reference point)	76.24	Screen Casing Volume (CV) (gallons) 32.0 3 CV (gallons) 96.12	Weather Conditions: Time 1310 Temp. 78
Casing Total Depth (ft below reference point)	99.4	Purging Device Bladder Pump Sampling Device Low-flow pump	Skies Clear
Pump to Screen Water Column (feet)	53.4	Pump: Depth (ft brp) 46.0 Type Grundfos Voltage 240 HP —	Wind (mph) 2 From S
Casing Capacity (Diameter 4") (gallons per foot)	0.60	Monitor Well Recharge Rate: Slow ____ Fast ✓	Initials: AMS/DJS
			Begin Purge 1334 End Purge 1455
			Gallons Purged 973 CVs Purged 3.01
			DTW (ft brp) 76.24 Time 1350

Time	Depth to Water	Volume Purged (Gallons)	Casing Volumes Purged	....FIELD PARAMETERS.... Temp. (°C)	pH	EC (µS/cm)	O.R.P. (mV)	D.O. (mg/L)	Turbidity (NTU)	Pump Frequency Hz	COMMENTS
1334	76.24	0	0			Begin Purge				—	Q ≈ 13 GPM
1348	79.70	160	0.5	21.84	7.50	1070	50.7	0.06	3.04	—	
1401	79.78	320	1.0	22.20	7.61	721	48.6	0.00	4.67	—	
1413	79.82	480	1.5	22.31	7.46	1019	54.8	0.02	2.61	—	
1425	79.88	640	2.0	22.22	7.43	1096	56.7	0.02	2.30	—	
1439	79.91	800	2.5	22.22	7.42	1168	58.1	0.03	2.62	—	
1452	79.94	960	3.0	22.33	7.41	1147	59.6	0.03	3.30	—	
1453	NM	973	3.01			End Purge				—	

SAMPLE COLLECTION SAMPLE TIME 1453

ANALYSIS	QUANTITY	TYPE
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? If yes, complete appropriate forms. Y (N)

AIR MONITORING PID/FID ppm: VAULT NA ~~DKGD 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

LABORATORY ANALYTICAL REPORTS

GROUNDWATER SAMPLING ANALYTICAL RESULTS

November 16, 2020

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

ELAP No.: 1838
CSDLAC No.: 10196
ORELAP No.: CA300003

Re: ATL Work Order Number : 2002459

Client Reference : Raytheon Main, 532.30

Enclosed are the results for sample(s) received on November 03, 2020 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.

This is an amended report. Please disregard all previous documentation that corresponds to the page(s) enclosed.

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,

Edgar P. Caballero
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 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.	Project Number : Raytheon Main, 532.30
9171 Towne Centre Drive, Suite 375	Report To : Steve Netto
San Diego , CA 92122	Reported : 11/16/2020

SUMMARY OF SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
TB-110320A	2002459-01	Water	11/03/20 8:45	11/03/20 17:25
MW-32B	2002459-02	Groundwater	11/03/20 9:15	11/03/20 17:25
MW-26C	2002459-03	Groundwater	11/03/20 10:57	11/03/20 17:25
RB-110320	2002459-04	Groundwater	11/03/20 11:10	11/03/20 17:25
MW-08	2002459-05	Groundwater	11/03/20 12:38	11/03/20 17:25
MW-0800	2002459-06	Groundwater	11/03/20 12:45	11/03/20 17:25
MW-21	2002459-07	Groundwater	11/03/20 13:42	11/03/20 17:25
EW-01	2002459-08	Groundwater	11/03/20 13:59	11/03/20 17:25
MW-31	2002459-09	Groundwater	11/03/20 15:06	11/03/20 17:25
MW-35C	2002459-10	Groundwater	11/03/20 10:05	11/03/20 17:25
MW-33	2002459-11	Groundwater	11/03/20 13:15	11/03/20 17:25
MW-30A	2002459-12	Groundwater	11/03/20 14:15	11/03/20 17:25
MW-30B	2002459-13	Groundwater	11/03/20 15:05	11/03/20 17:25
MW-3000B	2002459-14	Groundwater	11/03/20 16:30	11/03/20 17:25
MW-34B	2002459-15	Groundwater	11/03/20 15:52	11/03/20 17:25

CASE NARRATIVE

Results were J-flagged. "J" is used to flag those results that are between the PQL (Practical Quantitation Limit) and the calculated MDL (Method Detection Limit). Results that are "J" flagged are estimated values since it becomes difficult to accurately quantitate the analyte near the MDL.

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 : 11/16/2020

Client Sample ID: TB-110320A

Lab ID: 2002459-01

Volatile Organic Compounds by EPA 8260B **Analyst: KL**

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	0.11	1	B0K0030	11/04/2020	11/04/20 12:50	
1,1,1-Trichloroethane	ND	0.50	0.21	1	B0K0030	11/04/2020	11/04/20 12:50	
1,1,2,2-Tetrachloroethane	ND	0.50	0.36	1	B0K0030	11/04/2020	11/04/20 12:50	
1,1,2-Trichloroethane	ND	0.50	0.25	1	B0K0030	11/04/2020	11/04/20 12:50	
1,1-Dichloroethane	ND	0.50	0.09	1	B0K0030	11/04/2020	11/04/20 12:50	
1,1-Dichloroethene	ND	0.50	0.13	1	B0K0030	11/04/2020	11/04/20 12:50	
1,1-Dichloropropene	ND	0.50	0.13	1	B0K0030	11/04/2020	11/04/20 12:50	
1,2,3-Trichloropropane	ND	0.50	0.39	1	B0K0030	11/04/2020	11/04/20 12:50	
1,2,3-Trichlorobenzene	ND	0.50	0.18	1	B0K0030	11/04/2020	11/04/20 12:50	
1,2,4-Trichlorobenzene	ND	0.50	0.16	1	B0K0030	11/04/2020	11/04/20 12:50	
1,2,4-Trimethylbenzene	ND	0.50	0.14	1	B0K0030	11/04/2020	11/04/20 12:50	
1,2-Dibromo-3-chloropropane	ND	0.50	0.41	1	B0K0030	11/04/2020	11/04/20 12:50	
1,2-Dibromoethane	ND	0.50	0.24	1	B0K0030	11/04/2020	11/04/20 12:50	
1,2-Dichlorobenzene	ND	0.50	0.20	1	B0K0030	11/04/2020	11/04/20 12:50	
1,2-Dichloroethane	ND	0.50	0.20	1	B0K0030	11/04/2020	11/04/20 12:50	
1,2-Dichloropropane	ND	0.50	0.15	1	B0K0030	11/04/2020	11/04/20 12:50	
1,3,5-Trimethylbenzene	ND	0.50	0.13	1	B0K0030	11/04/2020	11/04/20 12:50	
1,3-Dichlorobenzene	ND	0.50	0.16	1	B0K0030	11/04/2020	11/04/20 12:50	
1,3-Dichloropropane	ND	0.50	0.21	1	B0K0030	11/04/2020	11/04/20 12:50	
1,4-Dichlorobenzene	ND	0.50	0.17	1	B0K0030	11/04/2020	11/04/20 12:50	
2,2-Dichloropropane	ND	0.50	0.38	1	B0K0030	11/04/2020	11/04/20 12:50	
2-Chlorotoluene	ND	0.50	0.11	1	B0K0030	11/04/2020	11/04/20 12:50	
4-Chlorotoluene	ND	0.50	0.12	1	B0K0030	11/04/2020	11/04/20 12:50	
4-Isopropyltoluene	ND	0.50	0.11	1	B0K0030	11/04/2020	11/04/20 12:50	
Benzene	ND	0.50	0.13	1	B0K0030	11/04/2020	11/04/20 12:50	
Bromobenzene	ND	0.50	0.21	1	B0K0030	11/04/2020	11/04/20 12:50	
Bromodichloromethane	ND	0.50	0.14	1	B0K0030	11/04/2020	11/04/20 12:50	
Bromoform	ND	0.50	0.20	1	B0K0030	11/04/2020	11/04/20 12:50	
Bromomethane	ND	0.50	0.40	1	B0K0030	11/04/2020	11/04/20 12:50	
Carbon tetrachloride	ND	0.50	0.09	1	B0K0030	11/04/2020	11/04/20 12:50	
Chlorobenzene	ND	0.50	0.13	1	B0K0030	11/04/2020	11/04/20 12:50	
Chloroethane	ND	0.50	0.15	1	B0K0030	11/04/2020	11/04/20 12:50	
Chloroform	ND	0.50	0.11	1	B0K0030	11/04/2020	11/04/20 12:50	
Chloromethane	ND	0.50	0.12	1	B0K0030	11/04/2020	11/04/20 12:50	
cis-1,2-Dichloroethene	ND	0.50	0.14	1	B0K0030	11/04/2020	11/04/20 12:50	
cis-1,3-Dichloropropene	ND	0.50	0.13	1	B0K0030	11/04/2020	11/04/20 12:50	
Dibromochloromethane	ND	0.50	0.16	1	B0K0030	11/04/2020	11/04/20 12:50	

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 :	11/16/2020

Client Sample ID: TB-110320A

Lab ID: 2002459-01

Volatile Organic Compounds by EPA 8260B **Analyst: KL**

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Dibromomethane	ND	0.50	0.19	1	B0K0030	11/04/2020	11/04/20 12:50	
Dichlorodifluoromethane	ND	0.50	0.18	1	B0K0030	11/04/2020	11/04/20 12:50	
Ethylbenzene	ND	0.50	0.13	1	B0K0030	11/04/2020	11/04/20 12:50	
Hexachlorobutadiene	ND	0.50	0.15	1	B0K0030	11/04/2020	11/04/20 12:50	
Isopropylbenzene	ND	0.50	0.10	1	B0K0030	11/04/2020	11/04/20 12:50	
m,p-Xylene	ND	1.0	0.19	1	B0K0030	11/04/2020	11/04/20 12:50	
Methylene chloride	ND	1.0	0.71	1	B0K0030	11/04/2020	11/04/20 12:50	
n-Butylbenzene	ND	0.50	0.11	1	B0K0030	11/04/2020	11/04/20 12:50	
n-Propylbenzene	ND	0.50	0.10	1	B0K0030	11/04/2020	11/04/20 12:50	
Naphthalene	ND	0.50	0.41	1	B0K0030	11/04/2020	11/04/20 12:50	
o-Xylene	ND	0.50	0.13	1	B0K0030	11/04/2020	11/04/20 12:50	
sec-Butylbenzene	ND	0.50	0.09	1	B0K0030	11/04/2020	11/04/20 12:50	
Styrene	ND	0.50	0.13	1	B0K0030	11/04/2020	11/04/20 12:50	
tert-Butylbenzene	ND	0.50	0.09	1	B0K0030	11/04/2020	11/04/20 12:50	
Tetrachloroethene	ND	0.50	0.10	1	B0K0030	11/04/2020	11/04/20 12:50	
Toluene	ND	0.50	0.12	1	B0K0030	11/04/2020	11/04/20 12:50	
trans-1,2-Dichloroethene	ND	0.50	0.09	1	B0K0030	11/04/2020	11/04/20 12:50	
Trichloroethene	ND	0.50	0.10	1	B0K0030	11/04/2020	11/04/20 12:50	
Trichlorofluoromethane	ND	0.50	0.23	1	B0K0030	11/04/2020	11/04/20 12:50	
Vinyl chloride	ND	0.50	0.13	1	B0K0030	11/04/2020	11/04/20 12:50	
Surrogate: 1,2-Dichloroethane-d4	*108 %*	*64 - 155*			B0K0030	11/04/2020	*11/04/20 12:50*	
Surrogate: 4-Bromofluorobenzene	*82.8 %*	*73 - 124*			B0K0030	11/04/2020	*11/04/20 12:50*	
Surrogate: Dibromofluoromethane	*110 %*	*78 - 129*			B0K0030	11/04/2020	*11/04/20 12:50*	
Surrogate: Toluene-d8	*94.7 %*	*84 - 117*			B0K0030	11/04/2020	*11/04/20 12:50*	

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 : 11/16/2020

Client Sample ID: MW-32B

Lab ID: 2002459-02

Volatile Organic Compounds by EPA 8260B **Analyst: KL**

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	0.11	1	B0K0030	11/04/2020	11/04/20 19:34	
1,1,1-Trichloroethane	ND	0.50	0.21	1	B0K0030	11/04/2020	11/04/20 19:34	
1,1,2,2-Tetrachloroethane	ND	0.50	0.36	1	B0K0030	11/04/2020	11/04/20 19:34	
1,1,2-Trichloroethane	ND	0.50	0.25	1	B0K0030	11/04/2020	11/04/20 19:34	
1,1-Dichloroethane	**0.64**	0.50	0.09	1	B0K0030	11/04/2020	11/04/20 19:34	
1,1-Dichloroethene	**76**	0.50	0.13	1	B0K0030	11/04/2020	11/04/20 19:34	
1,1-Dichloropropene	ND	0.50	0.13	1	B0K0030	11/04/2020	11/04/20 19:34	
1,2,3-Trichloropropane	ND	0.50	0.39	1	B0K0030	11/04/2020	11/04/20 19:34	
1,2,3-Trichlorobenzene	ND	0.50	0.18	1	B0K0030	11/04/2020	11/04/20 19:34	
1,2,4-Trichlorobenzene	ND	0.50	0.16	1	B0K0030	11/04/2020	11/04/20 19:34	
1,2,4-Trimethylbenzene	ND	0.50	0.14	1	B0K0030	11/04/2020	11/04/20 19:34	
1,2-Dibromo-3-chloropropane	ND	0.50	0.41	1	B0K0030	11/04/2020	11/04/20 19:34	
1,2-Dibromoethane	ND	0.50	0.24	1	B0K0030	11/04/2020	11/04/20 19:34	
1,2-Dichlorobenzene	ND	0.50	0.20	1	B0K0030	11/04/2020	11/04/20 19:34	
1,2-Dichloroethane	ND	0.50	0.20	1	B0K0030	11/04/2020	11/04/20 19:34	
1,2-Dichloropropane	ND	0.50	0.15	1	B0K0030	11/04/2020	11/04/20 19:34	
1,3,5-Trimethylbenzene	ND	0.50	0.13	1	B0K0030	11/04/2020	11/04/20 19:34	
1,3-Dichlorobenzene	ND	0.50	0.16	1	B0K0030	11/04/2020	11/04/20 19:34	
1,3-Dichloropropane	ND	0.50	0.21	1	B0K0030	11/04/2020	11/04/20 19:34	
1,4-Dichlorobenzene	ND	0.50	0.17	1	B0K0030	11/04/2020	11/04/20 19:34	
2,2-Dichloropropane	ND	0.50	0.38	1	B0K0030	11/04/2020	11/04/20 19:34	
2-Chlorotoluene	ND	0.50	0.11	1	B0K0030	11/04/2020	11/04/20 19:34	
4-Chlorotoluene	ND	0.50	0.12	1	B0K0030	11/04/2020	11/04/20 19:34	
4-Isopropyltoluene	ND	0.50	0.11	1	B0K0030	11/04/2020	11/04/20 19:34	
Benzene	ND	0.50	0.13	1	B0K0030	11/04/2020	11/04/20 19:34	
Bromobenzene	ND	0.50	0.21	1	B0K0030	11/04/2020	11/04/20 19:34	
Bromodichloromethane	ND	0.50	0.14	1	B0K0030	11/04/2020	11/04/20 19:34	
Bromoform	ND	0.50	0.20	1	B0K0030	11/04/2020	11/04/20 19:34	
Bromomethane	ND	0.50	0.40	1	B0K0030	11/04/2020	11/04/20 19:34	
Carbon tetrachloride	ND	0.50	0.09	1	B0K0030	11/04/2020	11/04/20 19:34	
Chlorobenzene	ND	0.50	0.13	1	B0K0030	11/04/2020	11/04/20 19:34	
Chloroethane	ND	0.50	0.15	1	B0K0030	11/04/2020	11/04/20 19:34	
Chloroform	ND	0.50	0.11	1	B0K0030	11/04/2020	11/04/20 19:34	
Chloromethane	ND	0.50	0.12	1	B0K0030	11/04/2020	11/04/20 19:34	
cis-1,2-Dichloroethene	**2.3**	0.50	0.14	1	B0K0030	11/04/2020	11/04/20 19:34	
cis-1,3-Dichloropropene	ND	0.50	0.13	1	B0K0030	11/04/2020	11/04/20 19:34	
Dibromochloromethane	ND	0.50	0.16	1	B0K0030	11/04/2020	11/04/20 19:34	

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 :	11/16/2020

Client Sample ID: MW-32B

Lab ID: 2002459-02

Volatile Organic Compounds by EPA 8260B **Analyst: KL**

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Dibromomethane	ND	0.50	0.19	1	B0K0030	11/04/2020	11/04/20 19:34	
Dichlorodifluoromethane	ND	0.50	0.18	1	B0K0030	11/04/2020	11/04/20 19:34	
Ethylbenzene	ND	0.50	0.13	1	B0K0030	11/04/2020	11/04/20 19:34	
Hexachlorobutadiene	ND	0.50	0.15	1	B0K0030	11/04/2020	11/04/20 19:34	
Isopropylbenzene	ND	0.50	0.10	1	B0K0030	11/04/2020	11/04/20 19:34	
m,p-Xylene	ND	1.0	0.19	1	B0K0030	11/04/2020	11/04/20 19:34	
Methylene chloride	ND	1.0	0.71	1	B0K0030	11/04/2020	11/04/20 19:34	
n-Butylbenzene	ND	0.50	0.11	1	B0K0030	11/04/2020	11/04/20 19:34	
n-Propylbenzene	ND	0.50	0.10	1	B0K0030	11/04/2020	11/04/20 19:34	
Naphthalene	ND	0.50	0.41	1	B0K0030	11/04/2020	11/04/20 19:34	
o-Xylene	ND	0.50	0.13	1	B0K0030	11/04/2020	11/04/20 19:34	
sec-Butylbenzene	ND	0.50	0.09	1	B0K0030	11/04/2020	11/04/20 19:34	
Styrene	ND	0.50	0.13	1	B0K0030	11/04/2020	11/04/20 19:34	
tert-Butylbenzene	ND	0.50	0.09	1	B0K0030	11/04/2020	11/04/20 19:34	
Tetrachloroethene	ND	0.50	0.10	1	B0K0030	11/04/2020	11/04/20 19:34	
Toluene	ND	0.50	0.12	1	B0K0030	11/04/2020	11/04/20 19:34	
trans-1,2-Dichloroethene	ND	0.50	0.09	1	B0K0030	11/04/2020	11/04/20 19:34	
Trichloroethene	**18**	0.50	0.10	1	B0K0030	11/04/2020	11/04/20 19:34	
Trichlorofluoromethane	ND	0.50	0.23	1	B0K0030	11/04/2020	11/04/20 19:34	
Vinyl chloride	ND	0.50	0.13	1	B0K0030	11/04/2020	11/04/20 19:34	
Surrogate: 1,2-Dichloroethane-d4	*113 %*	*64 - 155*			B0K0030	11/04/2020	*11/04/20 19:34*	
Surrogate: 4-Bromofluorobenzene	*83.7 %*	*73 - 124*			B0K0030	11/04/2020	*11/04/20 19:34*	
Surrogate: Dibromofluoromethane	*112 %*	*78 - 129*			B0K0030	11/04/2020	*11/04/20 19:34*	
Surrogate: Toluene-d8	*94.3 %*	*84 - 117*			B0K0030	11/04/2020	*11/04/20 19:34*	

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 :	11/16/2020

Client Sample ID: MW-32B

Lab ID: 2002459-02

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

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,4-Dioxane	**1.6**	0.20	0.05	1	B0K0080	11/04/2020	11/05/20 19:01	
Surrogate: 1,2-Dichlorobenzene-d4	*56.2 %*		*13 - 99*		B0K0080	11/04/2020	*11/05/20 19:01*	
Surrogate: 2-Fluorobiphenyl	*74.4 %*		*8 - 111*		B0K0080	11/04/2020	*11/05/20 19:01*	
Surrogate: 4-Terphenyl-d14	*80.9 %*		*12 - 113*		B0K0080	11/04/2020	*11/05/20 19:01*	
Surrogate: Nitrobenzene-d5	*65.9 %*		*15 - 121*		B0K0080	11/04/2020	*11/05/20 19:01*	

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 : 11/16/2020

Client Sample ID: MW-26C

Lab ID: 2002459-03

Volatile Organic Compounds by EPA 8260B **Analyst: KL**

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	0.11	1	B0K0030	11/04/2020	11/04/20 16:52	
1,1,1-Trichloroethane	ND	0.50	0.21	1	B0K0030	11/04/2020	11/04/20 16:52	
1,1,2,2-Tetrachloroethane	ND	0.50	0.36	1	B0K0030	11/04/2020	11/04/20 16:52	
1,1,2-Trichloroethane	ND	0.50	0.25	1	B0K0030	11/04/2020	11/04/20 16:52	
1,1-Dichloroethane	ND	0.50	0.09	1	B0K0030	11/04/2020	11/04/20 16:52	
1,1-Dichloroethene	ND	0.50	0.13	1	B0K0030	11/04/2020	11/04/20 16:52	
1,1-Dichloropropene	ND	0.50	0.13	1	B0K0030	11/04/2020	11/04/20 16:52	
1,2,3-Trichloropropane	ND	0.50	0.39	1	B0K0030	11/04/2020	11/04/20 16:52	
1,2,3-Trichlorobenzene	ND	0.50	0.18	1	B0K0030	11/04/2020	11/04/20 16:52	
1,2,4-Trichlorobenzene	ND	0.50	0.16	1	B0K0030	11/04/2020	11/04/20 16:52	
1,2,4-Trimethylbenzene	ND	0.50	0.14	1	B0K0030	11/04/2020	11/04/20 16:52	
1,2-Dibromo-3-chloropropane	ND	0.50	0.41	1	B0K0030	11/04/2020	11/04/20 16:52	
1,2-Dibromoethane	ND	0.50	0.24	1	B0K0030	11/04/2020	11/04/20 16:52	
1,2-Dichlorobenzene	ND	0.50	0.20	1	B0K0030	11/04/2020	11/04/20 16:52	
1,2-Dichloroethane	ND	0.50	0.20	1	B0K0030	11/04/2020	11/04/20 16:52	
1,2-Dichloropropane	ND	0.50	0.15	1	B0K0030	11/04/2020	11/04/20 16:52	
1,3,5-Trimethylbenzene	ND	0.50	0.13	1	B0K0030	11/04/2020	11/04/20 16:52	
1,3-Dichlorobenzene	ND	0.50	0.16	1	B0K0030	11/04/2020	11/04/20 16:52	
1,3-Dichloropropane	ND	0.50	0.21	1	B0K0030	11/04/2020	11/04/20 16:52	
1,4-Dichlorobenzene	ND	0.50	0.17	1	B0K0030	11/04/2020	11/04/20 16:52	
2,2-Dichloropropane	ND	0.50	0.38	1	B0K0030	11/04/2020	11/04/20 16:52	
2-Chlorotoluene	ND	0.50	0.11	1	B0K0030	11/04/2020	11/04/20 16:52	
4-Chlorotoluene	ND	0.50	0.12	1	B0K0030	11/04/2020	11/04/20 16:52	
4-Isopropyltoluene	ND	0.50	0.11	1	B0K0030	11/04/2020	11/04/20 16:52	
Benzene	ND	0.50	0.13	1	B0K0030	11/04/2020	11/04/20 16:52	
Bromobenzene	ND	0.50	0.21	1	B0K0030	11/04/2020	11/04/20 16:52	
Bromodichloromethane	ND	0.50	0.14	1	B0K0030	11/04/2020	11/04/20 16:52	
Bromoform	ND	0.50	0.20	1	B0K0030	11/04/2020	11/04/20 16:52	
Bromomethane	ND	0.50	0.40	1	B0K0030	11/04/2020	11/04/20 16:52	
Carbon tetrachloride	ND	0.50	0.09	1	B0K0030	11/04/2020	11/04/20 16:52	
Chlorobenzene	ND	0.50	0.13	1	B0K0030	11/04/2020	11/04/20 16:52	
Chloroethane	ND	0.50	0.15	1	B0K0030	11/04/2020	11/04/20 16:52	
Chloroform	ND	0.50	0.11	1	B0K0030	11/04/2020	11/04/20 16:52	
Chloromethane	ND	0.50	0.12	1	B0K0030	11/04/2020	11/04/20 16:52	
cis-1,2-Dichloroethene	ND	0.50	0.14	1	B0K0030	11/04/2020	11/04/20 16:52	
cis-1,3-Dichloropropene	ND	0.50	0.13	1	B0K0030	11/04/2020	11/04/20 16:52	
Dibromochloromethane	ND	0.50	0.16	1	B0K0030	11/04/2020	11/04/20 16:52	

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 :	11/16/2020

Client Sample ID: MW-26C

Lab ID: 2002459-03

Volatile Organic Compounds by EPA 8260B **Analyst: KL**

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Dibromomethane	ND	0.50	0.19	1	B0K0030	11/04/2020	11/04/20 16:52	
Dichlorodifluoromethane	ND	0.50	0.18	1	B0K0030	11/04/2020	11/04/20 16:52	
Ethylbenzene	ND	0.50	0.13	1	B0K0030	11/04/2020	11/04/20 16:52	
Hexachlorobutadiene	ND	0.50	0.15	1	B0K0030	11/04/2020	11/04/20 16:52	
Isopropylbenzene	ND	0.50	0.10	1	B0K0030	11/04/2020	11/04/20 16:52	
m,p-Xylene	ND	1.0	0.19	1	B0K0030	11/04/2020	11/04/20 16:52	
Methylene chloride	ND	1.0	0.71	1	B0K0030	11/04/2020	11/04/20 16:52	
n-Butylbenzene	ND	0.50	0.11	1	B0K0030	11/04/2020	11/04/20 16:52	
n-Propylbenzene	ND	0.50	0.10	1	B0K0030	11/04/2020	11/04/20 16:52	
Naphthalene	ND	0.50	0.41	1	B0K0030	11/04/2020	11/04/20 16:52	
o-Xylene	ND	0.50	0.13	1	B0K0030	11/04/2020	11/04/20 16:52	
sec-Butylbenzene	ND	0.50	0.09	1	B0K0030	11/04/2020	11/04/20 16:52	
Styrene	ND	0.50	0.13	1	B0K0030	11/04/2020	11/04/20 16:52	
tert-Butylbenzene	ND	0.50	0.09	1	B0K0030	11/04/2020	11/04/20 16:52	
Tetrachloroethene	ND	0.50	0.10	1	B0K0030	11/04/2020	11/04/20 16:52	
Toluene	ND	0.50	0.12	1	B0K0030	11/04/2020	11/04/20 16:52	
trans-1,2-Dichloroethene	ND	0.50	0.09	1	B0K0030	11/04/2020	11/04/20 16:52	
Trichloroethene	ND	0.50	0.10	1	B0K0030	11/04/2020	11/04/20 16:52	
Trichlorofluoromethane	ND	0.50	0.23	1	B0K0030	11/04/2020	11/04/20 16:52	
Vinyl chloride	ND	0.50	0.13	1	B0K0030	11/04/2020	11/04/20 16:52	
Surrogate: 1,2-Dichloroethane-d4	*109 %*	*64 - 155*			B0K0030	11/04/2020	*11/04/20 16:52*	
Surrogate: 4-Bromofluorobenzene	*88.0 %*	*73 - 124*			B0K0030	11/04/2020	*11/04/20 16:52*	
Surrogate: Dibromofluoromethane	*112 %*	*78 - 129*			B0K0030	11/04/2020	*11/04/20 16:52*	
Surrogate: Toluene-d8	*94.8 %*	*84 - 117*			B0K0030	11/04/2020	*11/04/20 16:52*	

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 :	11/16/2020

Client Sample ID: MW-26C

Lab ID: 2002459-03

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

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,4-Dioxane	ND	0.20	0.05	1	B0K0080	11/04/2020	11/05/20 19:27	
Surrogate: 1,2-Dichlorobenzene-d4	*28.6 %*		*13 - 99*		B0K0080	11/04/2020	*11/05/20 19:27*	
Surrogate: 2-Fluorobiphenyl	*32.1 %*		*8 - 111*		B0K0080	11/04/2020	*11/05/20 19:27*	
Surrogate: 4-Terphenyl-d14	*37.4 %*		*12 - 113*		B0K0080	11/04/2020	*11/05/20 19:27*	
Surrogate: Nitrobenzene-d5	*28.4 %*		*15 - 121*		B0K0080	11/04/2020	*11/05/20 19:27*	

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 : 11/16/2020

Client Sample ID: RB-110320

Lab ID: 2002459-04

Volatile Organic Compounds by EPA 8260B **Analyst: KL**

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	0.11	1	B0K0030	11/04/2020	11/04/20 17:13	
1,1,1-Trichloroethane	ND	0.50	0.21	1	B0K0030	11/04/2020	11/04/20 17:13	
1,1,2,2-Tetrachloroethane	ND	0.50	0.36	1	B0K0030	11/04/2020	11/04/20 17:13	
1,1,2-Trichloroethane	ND	0.50	0.25	1	B0K0030	11/04/2020	11/04/20 17:13	
1,1-Dichloroethane	ND	0.50	0.09	1	B0K0030	11/04/2020	11/04/20 17:13	
1,1-Dichloroethene	ND	0.50	0.13	1	B0K0030	11/04/2020	11/04/20 17:13	
1,1-Dichloropropene	ND	0.50	0.13	1	B0K0030	11/04/2020	11/04/20 17:13	
1,2,3-Trichloropropane	ND	0.50	0.39	1	B0K0030	11/04/2020	11/04/20 17:13	
1,2,3-Trichlorobenzene	ND	0.50	0.18	1	B0K0030	11/04/2020	11/04/20 17:13	
1,2,4-Trichlorobenzene	ND	0.50	0.16	1	B0K0030	11/04/2020	11/04/20 17:13	
1,2,4-Trimethylbenzene	ND	0.50	0.14	1	B0K0030	11/04/2020	11/04/20 17:13	
1,2-Dibromo-3-chloropropane	ND	0.50	0.41	1	B0K0030	11/04/2020	11/04/20 17:13	
1,2-Dibromoethane	ND	0.50	0.24	1	B0K0030	11/04/2020	11/04/20 17:13	
1,2-Dichlorobenzene	ND	0.50	0.20	1	B0K0030	11/04/2020	11/04/20 17:13	
1,2-Dichloroethane	ND	0.50	0.20	1	B0K0030	11/04/2020	11/04/20 17:13	
1,2-Dichloropropane	ND	0.50	0.15	1	B0K0030	11/04/2020	11/04/20 17:13	
1,3,5-Trimethylbenzene	ND	0.50	0.13	1	B0K0030	11/04/2020	11/04/20 17:13	
1,3-Dichlorobenzene	ND	0.50	0.16	1	B0K0030	11/04/2020	11/04/20 17:13	
1,3-Dichloropropane	ND	0.50	0.21	1	B0K0030	11/04/2020	11/04/20 17:13	
1,4-Dichlorobenzene	ND	0.50	0.17	1	B0K0030	11/04/2020	11/04/20 17:13	
2,2-Dichloropropane	ND	0.50	0.38	1	B0K0030	11/04/2020	11/04/20 17:13	
2-Chlorotoluene	ND	0.50	0.11	1	B0K0030	11/04/2020	11/04/20 17:13	
4-Chlorotoluene	ND	0.50	0.12	1	B0K0030	11/04/2020	11/04/20 17:13	
4-Isopropyltoluene	ND	0.50	0.11	1	B0K0030	11/04/2020	11/04/20 17:13	
Benzene	ND	0.50	0.13	1	B0K0030	11/04/2020	11/04/20 17:13	
Bromobenzene	ND	0.50	0.21	1	B0K0030	11/04/2020	11/04/20 17:13	
Bromodichloromethane	ND	0.50	0.14	1	B0K0030	11/04/2020	11/04/20 17:13	
Bromoform	ND	0.50	0.20	1	B0K0030	11/04/2020	11/04/20 17:13	
Bromomethane	ND	0.50	0.40	1	B0K0030	11/04/2020	11/04/20 17:13	
Carbon tetrachloride	ND	0.50	0.09	1	B0K0030	11/04/2020	11/04/20 17:13	
Chlorobenzene	ND	0.50	0.13	1	B0K0030	11/04/2020	11/04/20 17:13	
Chloroethane	ND	0.50	0.15	1	B0K0030	11/04/2020	11/04/20 17:13	
Chloroform	ND	0.50	0.11	1	B0K0030	11/04/2020	11/04/20 17:13	
Chloromethane	ND	0.50	0.12	1	B0K0030	11/04/2020	11/04/20 17:13	
cis-1,2-Dichloroethene	ND	0.50	0.14	1	B0K0030	11/04/2020	11/04/20 17:13	
cis-1,3-Dichloropropene	ND	0.50	0.13	1	B0K0030	11/04/2020	11/04/20 17:13	
Dibromochloromethane	ND	0.50	0.16	1	B0K0030	11/04/2020	11/04/20 17:13	

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 :	11/16/2020

Client Sample ID: RB-110320

Lab ID: 2002459-04

Volatile Organic Compounds by EPA 8260B **Analyst: KL**

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Dibromomethane	ND	0.50	0.19	1	B0K0030	11/04/2020	11/04/20 17:13	
Dichlorodifluoromethane	ND	0.50	0.18	1	B0K0030	11/04/2020	11/04/20 17:13	
Ethylbenzene	ND	0.50	0.13	1	B0K0030	11/04/2020	11/04/20 17:13	
Hexachlorobutadiene	ND	0.50	0.15	1	B0K0030	11/04/2020	11/04/20 17:13	
Isopropylbenzene	ND	0.50	0.10	1	B0K0030	11/04/2020	11/04/20 17:13	
m,p-Xylene	ND	1.0	0.19	1	B0K0030	11/04/2020	11/04/20 17:13	
Methylene chloride	ND	1.0	0.71	1	B0K0030	11/04/2020	11/04/20 17:13	
n-Butylbenzene	ND	0.50	0.11	1	B0K0030	11/04/2020	11/04/20 17:13	
n-Propylbenzene	ND	0.50	0.10	1	B0K0030	11/04/2020	11/04/20 17:13	
Naphthalene	ND	0.50	0.41	1	B0K0030	11/04/2020	11/04/20 17:13	
o-Xylene	ND	0.50	0.13	1	B0K0030	11/04/2020	11/04/20 17:13	
sec-Butylbenzene	ND	0.50	0.09	1	B0K0030	11/04/2020	11/04/20 17:13	
Styrene	ND	0.50	0.13	1	B0K0030	11/04/2020	11/04/20 17:13	
tert-Butylbenzene	ND	0.50	0.09	1	B0K0030	11/04/2020	11/04/20 17:13	
Tetrachloroethene	ND	0.50	0.10	1	B0K0030	11/04/2020	11/04/20 17:13	
Toluene	ND	0.50	0.12	1	B0K0030	11/04/2020	11/04/20 17:13	
trans-1,2-Dichloroethene	ND	0.50	0.09	1	B0K0030	11/04/2020	11/04/20 17:13	
Trichloroethene	ND	0.50	0.10	1	B0K0030	11/04/2020	11/04/20 17:13	
Trichlorofluoromethane	ND	0.50	0.23	1	B0K0030	11/04/2020	11/04/20 17:13	
Vinyl chloride	ND	0.50	0.13	1	B0K0030	11/04/2020	11/04/20 17:13	
Surrogate: 1,2-Dichloroethane-d4	*107 %*	*64 - 155*			B0K0030	11/04/2020	*11/04/20 17:13*	
Surrogate: 4-Bromofluorobenzene	*87.0 %*	*73 - 124*			B0K0030	11/04/2020	*11/04/20 17:13*	
Surrogate: Dibromofluoromethane	*109 %*	*78 - 129*			B0K0030	11/04/2020	*11/04/20 17:13*	
Surrogate: Toluene-d8	*92.8 %*	*84 - 117*			B0K0030	11/04/2020	*11/04/20 17:13*	

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 :	11/16/2020

Client Sample ID: RB-110320

Lab ID: 2002459-04

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

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,4-Dioxane	ND	0.20	0.05	1	B0K0080	11/04/2020	11/05/20 19:54	
Surrogate: 1,2-Dichlorobenzene-d4	*58.6 %*	*13 - 99*			B0K0080	11/04/2020	*11/05/20 19:54*	
Surrogate: 2-Fluorobiphenyl	*66.1 %*	*8 - 111*			B0K0080	11/04/2020	*11/05/20 19:54*	
Surrogate: 4-Terphenyl-d14	*103 %*	*12 - 113*			B0K0080	11/04/2020	*11/05/20 19:54*	
Surrogate: Nitrobenzene-d5	*57.8 %*	*15 - 121*			B0K0080	11/04/2020	*11/05/20 19:54*	

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 : 11/16/2020

Client Sample ID: MW-08

Lab ID: 2002459-05

Volatile Organic Compounds by EPA 8260B **Analyst: KL**

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	0.11	1	B0K0030	11/04/2020	11/04/20 18:33	
1,1,1-Trichloroethane	ND	0.50	0.21	1	B0K0030	11/04/2020	11/04/20 18:33	
1,1,2,2-Tetrachloroethane	ND	0.50	0.36	1	B0K0030	11/04/2020	11/04/20 18:33	
1,1,2-Trichloroethane	ND	0.50	0.25	1	B0K0030	11/04/2020	11/04/20 18:33	
1,1-Dichloroethane	ND	0.50	0.09	1	B0K0030	11/04/2020	11/04/20 18:33	
1,1-Dichloroethene	**27**	0.50	0.13	1	B0K0030	11/04/2020	11/04/20 18:33	
1,1-Dichloropropene	ND	0.50	0.13	1	B0K0030	11/04/2020	11/04/20 18:33	
1,2,3-Trichloropropane	ND	0.50	0.39	1	B0K0030	11/04/2020	11/04/20 18:33	
1,2,3-Trichlorobenzene	ND	0.50	0.18	1	B0K0030	11/04/2020	11/04/20 18:33	
1,2,4-Trichlorobenzene	ND	0.50	0.16	1	B0K0030	11/04/2020	11/04/20 18:33	
1,2,4-Trimethylbenzene	ND	0.50	0.14	1	B0K0030	11/04/2020	11/04/20 18:33	
1,2-Dibromo-3-chloropropane	ND	0.50	0.41	1	B0K0030	11/04/2020	11/04/20 18:33	
1,2-Dibromoethane	ND	0.50	0.24	1	B0K0030	11/04/2020	11/04/20 18:33	
1,2-Dichlorobenzene	ND	0.50	0.20	1	B0K0030	11/04/2020	11/04/20 18:33	
1,2-Dichloroethane	ND	0.50	0.20	1	B0K0030	11/04/2020	11/04/20 18:33	
1,2-Dichloropropane	ND	0.50	0.15	1	B0K0030	11/04/2020	11/04/20 18:33	
1,3,5-Trimethylbenzene	ND	0.50	0.13	1	B0K0030	11/04/2020	11/04/20 18:33	
1,3-Dichlorobenzene	ND	0.50	0.16	1	B0K0030	11/04/2020	11/04/20 18:33	
1,3-Dichloropropane	ND	0.50	0.21	1	B0K0030	11/04/2020	11/04/20 18:33	
1,4-Dichlorobenzene	ND	0.50	0.17	1	B0K0030	11/04/2020	11/04/20 18:33	
2,2-Dichloropropane	ND	0.50	0.38	1	B0K0030	11/04/2020	11/04/20 18:33	
2-Chlorotoluene	ND	0.50	0.11	1	B0K0030	11/04/2020	11/04/20 18:33	
4-Chlorotoluene	ND	0.50	0.12	1	B0K0030	11/04/2020	11/04/20 18:33	
4-Isopropyltoluene	ND	0.50	0.11	1	B0K0030	11/04/2020	11/04/20 18:33	
Benzene	ND	0.50	0.13	1	B0K0030	11/04/2020	11/04/20 18:33	
Bromobenzene	ND	0.50	0.21	1	B0K0030	11/04/2020	11/04/20 18:33	
Bromodichloromethane	ND	0.50	0.14	1	B0K0030	11/04/2020	11/04/20 18:33	
Bromoform	ND	0.50	0.20	1	B0K0030	11/04/2020	11/04/20 18:33	
Bromomethane	ND	0.50	0.40	1	B0K0030	11/04/2020	11/04/20 18:33	
Carbon tetrachloride	ND	0.50	0.09	1	B0K0030	11/04/2020	11/04/20 18:33	
Chlorobenzene	ND	0.50	0.13	1	B0K0030	11/04/2020	11/04/20 18:33	
Chloroethane	ND	0.50	0.15	1	B0K0030	11/04/2020	11/04/20 18:33	
Chloroform	ND	0.50	0.11	1	B0K0030	11/04/2020	11/04/20 18:33	
Chloromethane	ND	0.50	0.12	1	B0K0030	11/04/2020	11/04/20 18:33	
cis-1,2-Dichloroethene	**2.6**	0.50	0.14	1	B0K0030	11/04/2020	11/04/20 18:33	
cis-1,3-Dichloropropene	ND	0.50	0.13	1	B0K0030	11/04/2020	11/04/20 18:33	
Dibromochloromethane	ND	0.50	0.16	1	B0K0030	11/04/2020	11/04/20 18:33	

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 :	11/16/2020

Client Sample ID: MW-08

Lab ID: 2002459-05

Volatile Organic Compounds by EPA 8260B **Analyst: KL**

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Dibromomethane	ND	0.50	0.19	1	B0K0030	11/04/2020	11/04/20 18:33	
Dichlorodifluoromethane	ND	0.50	0.18	1	B0K0030	11/04/2020	11/04/20 18:33	
Ethylbenzene	ND	0.50	0.13	1	B0K0030	11/04/2020	11/04/20 18:33	
Hexachlorobutadiene	ND	0.50	0.15	1	B0K0030	11/04/2020	11/04/20 18:33	
Isopropylbenzene	ND	0.50	0.10	1	B0K0030	11/04/2020	11/04/20 18:33	
m,p-Xylene	ND	1.0	0.19	1	B0K0030	11/04/2020	11/04/20 18:33	
Methylene chloride	ND	1.0	0.71	1	B0K0030	11/04/2020	11/04/20 18:33	
n-Butylbenzene	ND	0.50	0.11	1	B0K0030	11/04/2020	11/04/20 18:33	
n-Propylbenzene	ND	0.50	0.10	1	B0K0030	11/04/2020	11/04/20 18:33	
Naphthalene	ND	0.50	0.41	1	B0K0030	11/04/2020	11/04/20 18:33	
o-Xylene	ND	0.50	0.13	1	B0K0030	11/04/2020	11/04/20 18:33	
sec-Butylbenzene	ND	0.50	0.09	1	B0K0030	11/04/2020	11/04/20 18:33	
Styrene	ND	0.50	0.13	1	B0K0030	11/04/2020	11/04/20 18:33	
tert-Butylbenzene	ND	0.50	0.09	1	B0K0030	11/04/2020	11/04/20 18:33	
Tetrachloroethene	ND	0.50	0.10	1	B0K0030	11/04/2020	11/04/20 18:33	
Toluene	**0.22**	0.50	0.12	1	B0K0030	11/04/2020	11/04/20 18:33	J
trans-1,2-Dichloroethene	ND	0.50	0.09	1	B0K0030	11/04/2020	11/04/20 18:33	
Trichloroethene	**55**	0.50	0.10	1	B0K0030	11/04/2020	11/04/20 18:33	
Trichlorofluoromethane	ND	0.50	0.23	1	B0K0030	11/04/2020	11/04/20 18:33	
Vinyl chloride	ND	0.50	0.13	1	B0K0030	11/04/2020	11/04/20 18:33	
Surrogate: 1,2-Dichloroethane-d4	*110 %*	*64 - 155*			B0K0030	11/04/2020	*11/04/20 18:33*	
Surrogate: 4-Bromofluorobenzene	*84.0 %*	*73 - 124*			B0K0030	11/04/2020	*11/04/20 18:33*	
Surrogate: Dibromofluoromethane	*111 %*	*78 - 129*			B0K0030	11/04/2020	*11/04/20 18:33*	
Surrogate: Toluene-d8	*94.8 %*	*84 - 117*			B0K0030	11/04/2020	*11/04/20 18:33*	

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 :	11/16/2020

Client Sample ID: MW-08

Lab ID: 2002459-05

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

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,4-Dioxane	**1.9**	0.20	0.05	1	B0K0080	11/04/2020	11/05/20 20:20	
Surrogate: 1,2-Dichlorobenzene-d4	*47.6 %*		*13 - 99*		B0K0080	11/04/2020	*11/05/20 20:20*	
Surrogate: 2-Fluorobiphenyl	*53.7 %*		*8 - 111*		B0K0080	11/04/2020	*11/05/20 20:20*	
Surrogate: 4-Terphenyl-d14	*63.8 %*		*12 - 113*		B0K0080	11/04/2020	*11/05/20 20:20*	
Surrogate: Nitrobenzene-d5	*46.3 %*		*15 - 121*		B0K0080	11/04/2020	*11/05/20 20:20*	

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 : 11/16/2020

Client Sample ID: MW-0800

Lab ID: 2002459-06

Volatile Organic Compounds by EPA 8260B **Analyst: KL**

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	0.11	1	B0K0030	11/04/2020	11/04/20 18:54	
1,1,1-Trichloroethane	ND	0.50	0.21	1	B0K0030	11/04/2020	11/04/20 18:54	
1,1,2,2-Tetrachloroethane	ND	0.50	0.36	1	B0K0030	11/04/2020	11/04/20 18:54	
1,1,2-Trichloroethane	ND	0.50	0.25	1	B0K0030	11/04/2020	11/04/20 18:54	
1,1-Dichloroethane	ND	0.50	0.09	1	B0K0030	11/04/2020	11/04/20 18:54	
1,1-Dichloroethene	**27**	0.50	0.13	1	B0K0030	11/04/2020	11/04/20 18:54	
1,1-Dichloropropene	ND	0.50	0.13	1	B0K0030	11/04/2020	11/04/20 18:54	
1,2,3-Trichloropropane	ND	0.50	0.39	1	B0K0030	11/04/2020	11/04/20 18:54	
1,2,3-Trichlorobenzene	ND	0.50	0.18	1	B0K0030	11/04/2020	11/04/20 18:54	
1,2,4-Trichlorobenzene	ND	0.50	0.16	1	B0K0030	11/04/2020	11/04/20 18:54	
1,2,4-Trimethylbenzene	ND	0.50	0.14	1	B0K0030	11/04/2020	11/04/20 18:54	
1,2-Dibromo-3-chloropropane	ND	0.50	0.41	1	B0K0030	11/04/2020	11/04/20 18:54	
1,2-Dibromoethane	ND	0.50	0.24	1	B0K0030	11/04/2020	11/04/20 18:54	
1,2-Dichlorobenzene	ND	0.50	0.20	1	B0K0030	11/04/2020	11/04/20 18:54	
1,2-Dichloroethane	ND	0.50	0.20	1	B0K0030	11/04/2020	11/04/20 18:54	
1,2-Dichloropropane	ND	0.50	0.15	1	B0K0030	11/04/2020	11/04/20 18:54	
1,3,5-Trimethylbenzene	ND	0.50	0.13	1	B0K0030	11/04/2020	11/04/20 18:54	
1,3-Dichlorobenzene	ND	0.50	0.16	1	B0K0030	11/04/2020	11/04/20 18:54	
1,3-Dichloropropane	ND	0.50	0.21	1	B0K0030	11/04/2020	11/04/20 18:54	
1,4-Dichlorobenzene	ND	0.50	0.17	1	B0K0030	11/04/2020	11/04/20 18:54	
2,2-Dichloropropane	ND	0.50	0.38	1	B0K0030	11/04/2020	11/04/20 18:54	
2-Chlorotoluene	ND	0.50	0.11	1	B0K0030	11/04/2020	11/04/20 18:54	
4-Chlorotoluene	ND	0.50	0.12	1	B0K0030	11/04/2020	11/04/20 18:54	
4-Isopropyltoluene	ND	0.50	0.11	1	B0K0030	11/04/2020	11/04/20 18:54	
Benzene	ND	0.50	0.13	1	B0K0030	11/04/2020	11/04/20 18:54	
Bromobenzene	ND	0.50	0.21	1	B0K0030	11/04/2020	11/04/20 18:54	
Bromodichloromethane	ND	0.50	0.14	1	B0K0030	11/04/2020	11/04/20 18:54	
Bromoform	ND	0.50	0.20	1	B0K0030	11/04/2020	11/04/20 18:54	
Bromomethane	ND	0.50	0.40	1	B0K0030	11/04/2020	11/04/20 18:54	
Carbon tetrachloride	ND	0.50	0.09	1	B0K0030	11/04/2020	11/04/20 18:54	
Chlorobenzene	ND	0.50	0.13	1	B0K0030	11/04/2020	11/04/20 18:54	
Chloroethane	ND	0.50	0.15	1	B0K0030	11/04/2020	11/04/20 18:54	
Chloroform	ND	0.50	0.11	1	B0K0030	11/04/2020	11/04/20 18:54	
Chloromethane	ND	0.50	0.12	1	B0K0030	11/04/2020	11/04/20 18:54	
cis-1,2-Dichloroethene	**2.5**	0.50	0.14	1	B0K0030	11/04/2020	11/04/20 18:54	
cis-1,3-Dichloropropene	ND	0.50	0.13	1	B0K0030	11/04/2020	11/04/20 18:54	
Dibromochloromethane	ND	0.50	0.16	1	B0K0030	11/04/2020	11/04/20 18:54	

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 : 11/16/2020

Client Sample ID: MW-0800

Lab ID: 2002459-06

Volatile Organic Compounds by EPA 8260B **Analyst: KL**

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Dibromomethane	ND	0.50	0.19	1	B0K0030	11/04/2020	11/04/20 18:54	
Dichlorodifluoromethane	ND	0.50	0.18	1	B0K0030	11/04/2020	11/04/20 18:54	
Ethylbenzene	ND	0.50	0.13	1	B0K0030	11/04/2020	11/04/20 18:54	
Hexachlorobutadiene	ND	0.50	0.15	1	B0K0030	11/04/2020	11/04/20 18:54	
Isopropylbenzene	ND	0.50	0.10	1	B0K0030	11/04/2020	11/04/20 18:54	
m,p-Xylene	ND	1.0	0.19	1	B0K0030	11/04/2020	11/04/20 18:54	
Methylene chloride	ND	1.0	0.71	1	B0K0030	11/04/2020	11/04/20 18:54	
n-Butylbenzene	ND	0.50	0.11	1	B0K0030	11/04/2020	11/04/20 18:54	
n-Propylbenzene	ND	0.50	0.10	1	B0K0030	11/04/2020	11/04/20 18:54	
Naphthalene	ND	0.50	0.41	1	B0K0030	11/04/2020	11/04/20 18:54	
o-Xylene	ND	0.50	0.13	1	B0K0030	11/04/2020	11/04/20 18:54	
sec-Butylbenzene	ND	0.50	0.09	1	B0K0030	11/04/2020	11/04/20 18:54	
Styrene	ND	0.50	0.13	1	B0K0030	11/04/2020	11/04/20 18:54	
tert-Butylbenzene	ND	0.50	0.09	1	B0K0030	11/04/2020	11/04/20 18:54	
Tetrachloroethene	ND	0.50	0.10	1	B0K0030	11/04/2020	11/04/20 18:54	
Toluene	**0.17**	0.50	0.12	1	B0K0030	11/04/2020	11/04/20 18:54	J
trans-1,2-Dichloroethene	ND	0.50	0.09	1	B0K0030	11/04/2020	11/04/20 18:54	
Trichloroethene	**55**	0.50	0.10	1	B0K0030	11/04/2020	11/04/20 18:54	
Trichlorofluoromethane	ND	0.50	0.23	1	B0K0030	11/04/2020	11/04/20 18:54	
Vinyl chloride	ND	0.50	0.13	1	B0K0030	11/04/2020	11/04/20 18:54	
Surrogate: 1,2-Dichloroethane-d4	*111 %*	*64 - 155*			B0K0030	11/04/2020	*11/04/20 18:54*	
Surrogate: 4-Bromofluorobenzene	*85.8 %*	*73 - 124*			B0K0030	11/04/2020	*11/04/20 18:54*	
Surrogate: Dibromofluoromethane	*113 %*	*78 - 129*			B0K0030	11/04/2020	*11/04/20 18:54*	
Surrogate: Toluene-d8	*96.9 %*	*84 - 117*			B0K0030	11/04/2020	*11/04/20 18:54*	

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 :	11/16/2020

Client Sample ID: MW-0800

Lab ID: 2002459-06

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

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,4-Dioxane	**1.9**	0.20	0.05	1	B0K0080	11/04/2020	11/05/20 20:47	
Surrogate: 1,2-Dichlorobenzene-d4	*57.4 %*		*13 - 99*		B0K0080	11/04/2020	*11/05/20 20:47*	
Surrogate: 2-Fluorobiphenyl	*68.1 %*		*8 - 111*		B0K0080	11/04/2020	*11/05/20 20:47*	
Surrogate: 4-Terphenyl-d14	*79.0 %*		*12 - 113*		B0K0080	11/04/2020	*11/05/20 20:47*	
Surrogate: Nitrobenzene-d5	*59.3 %*		*15 - 121*		B0K0080	11/04/2020	*11/05/20 20:47*	

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 : 11/16/2020

Client Sample ID: MW-21

Lab ID: 2002459-07

Volatile Organic Compounds by EPA 8260B **Analyst: KL**

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	0.11	1	B0K0083	11/05/2020	11/05/20 15:50	
1,1,1-Trichloroethane	ND	0.50	0.21	1	B0K0083	11/05/2020	11/05/20 15:50	
1,1,2,2-Tetrachloroethane	ND	0.50	0.36	1	B0K0083	11/05/2020	11/05/20 15:50	
1,1,2-Trichloroethane	**5.3**	0.50	0.25	1	B0K0083	11/05/2020	11/05/20 15:50	
1,1-Dichloroethane	**8.2**	0.50	0.09	1	B0K0083	11/05/2020	11/05/20 15:50	
1,1-Dichloroethene	**930**	25	6.6	50	B0K0083	11/05/2020	11/05/20 16:10	
1,1-Dichloropropene	ND	0.50	0.13	1	B0K0083	11/05/2020	11/05/20 15:50	
1,2,3-Trichloropropane	ND	0.50	0.39	1	B0K0083	11/05/2020	11/05/20 15:50	
1,2,3-Trichlorobenzene	ND	0.50	0.18	1	B0K0083	11/05/2020	11/05/20 15:50	
1,2,4-Trichlorobenzene	ND	0.50	0.16	1	B0K0083	11/05/2020	11/05/20 15:50	
1,2,4-Trimethylbenzene	ND	0.50	0.14	1	B0K0083	11/05/2020	11/05/20 15:50	
1,2-Dibromo-3-chloropropane	ND	0.50	0.41	1	B0K0083	11/05/2020	11/05/20 15:50	
1,2-Dibromoethane	ND	0.50	0.24	1	B0K0083	11/05/2020	11/05/20 15:50	
1,2-Dichlorobenzene	ND	0.50	0.20	1	B0K0083	11/05/2020	11/05/20 15:50	
1,2-Dichloroethane	**1.7**	0.50	0.20	1	B0K0083	11/05/2020	11/05/20 15:50	
1,2-Dichloropropane	ND	0.50	0.15	1	B0K0083	11/05/2020	11/05/20 15:50	
1,3,5-Trimethylbenzene	ND	0.50	0.13	1	B0K0083	11/05/2020	11/05/20 15:50	
1,3-Dichlorobenzene	ND	0.50	0.16	1	B0K0083	11/05/2020	11/05/20 15:50	
1,3-Dichloropropane	ND	0.50	0.21	1	B0K0083	11/05/2020	11/05/20 15:50	
1,4-Dichlorobenzene	ND	0.50	0.17	1	B0K0083	11/05/2020	11/05/20 15:50	
2,2-Dichloropropane	ND	0.50	0.38	1	B0K0083	11/05/2020	11/05/20 15:50	
2-Chlorotoluene	ND	0.50	0.11	1	B0K0083	11/05/2020	11/05/20 15:50	
4-Chlorotoluene	ND	0.50	0.12	1	B0K0083	11/05/2020	11/05/20 15:50	
4-Isopropyltoluene	ND	0.50	0.11	1	B0K0083	11/05/2020	11/05/20 15:50	
Benzene	ND	0.50	0.13	1	B0K0083	11/05/2020	11/05/20 15:50	
Bromobenzene	ND	0.50	0.21	1	B0K0083	11/05/2020	11/05/20 15:50	
Bromodichloromethane	ND	0.50	0.14	1	B0K0083	11/05/2020	11/05/20 15:50	
Bromoform	ND	0.50	0.20	1	B0K0083	11/05/2020	11/05/20 15:50	
Bromomethane	ND	0.50	0.40	1	B0K0083	11/05/2020	11/05/20 15:50	
Carbon tetrachloride	**0.26**	0.50	0.09	1	B0K0083	11/05/2020	11/05/20 15:50	J
Chlorobenzene	ND	0.50	0.13	1	B0K0083	11/05/2020	11/05/20 15:50	
Chloroethane	ND	0.50	0.15	1	B0K0083	11/05/2020	11/05/20 15:50	
Chloroform	**0.60**	0.50	0.11	1	B0K0083	11/05/2020	11/05/20 15:50	
Chloromethane	ND	0.50	0.12	1	B0K0083	11/05/2020	11/05/20 15:50	
cis-1,2-Dichloroethene	**1.0**	0.50	0.14	1	B0K0083	11/05/2020	11/05/20 15:50	
cis-1,3-Dichloropropene	ND	0.50	0.13	1	B0K0083	11/05/2020	11/05/20 15:50	
Dibromochloromethane	ND	0.50	0.16	1	B0K0083	11/05/2020	11/05/20 15:50	

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 : 11/16/2020

Client Sample ID: MW-21

Lab ID: 2002459-07

Volatile Organic Compounds by EPA 8260B **Analyst: KL**

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Dibromomethane	ND	0.50	0.19	1	B0K0083	11/05/2020	11/05/20 15:50	
Dichlorodifluoromethane	ND	0.50	0.18	1	B0K0083	11/05/2020	11/05/20 15:50	
Ethylbenzene	ND	0.50	0.13	1	B0K0083	11/05/2020	11/05/20 15:50	
Hexachlorobutadiene	ND	0.50	0.15	1	B0K0083	11/05/2020	11/05/20 15:50	
Isopropylbenzene	ND	0.50	0.10	1	B0K0083	11/05/2020	11/05/20 15:50	
m,p-Xylene	ND	1.0	0.19	1	B0K0083	11/05/2020	11/05/20 15:50	
Methylene chloride	ND	1.0	0.71	1	B0K0083	11/05/2020	11/05/20 15:50	
n-Butylbenzene	ND	0.50	0.11	1	B0K0083	11/05/2020	11/05/20 15:50	
n-Propylbenzene	ND	0.50	0.10	1	B0K0083	11/05/2020	11/05/20 15:50	
Naphthalene	ND	0.50	0.41	1	B0K0083	11/05/2020	11/05/20 15:50	
o-Xylene	ND	0.50	0.13	1	B0K0083	11/05/2020	11/05/20 15:50	
sec-Butylbenzene	ND	0.50	0.09	1	B0K0083	11/05/2020	11/05/20 15:50	
Styrene	ND	0.50	0.13	1	B0K0083	11/05/2020	11/05/20 15:50	
tert-Butylbenzene	ND	0.50	0.09	1	B0K0083	11/05/2020	11/05/20 15:50	
Tetrachloroethene	**1.8**	0.50	0.10	1	B0K0083	11/05/2020	11/05/20 15:50	
Toluene	ND	0.50	0.12	1	B0K0083	11/05/2020	11/05/20 15:50	
trans-1,2-Dichloroethene	ND	0.50	0.09	1	B0K0083	11/05/2020	11/05/20 15:50	
Trichloroethene	**14**	0.50	0.10	1	B0K0083	11/05/2020	11/05/20 15:50	
Trichlorofluoromethane	**0.27**	0.50	0.23	1	B0K0083	11/05/2020	11/05/20 15:50	J
Vinyl chloride	ND	0.50	0.13	1	B0K0083	11/05/2020	11/05/20 15:50	
Surrogate: 1,2-Dichloroethane-d4	*89.2 %*	*64 - 155*			B0K0083	11/05/2020	*11/05/20 16:10*	
Surrogate: 1,2-Dichloroethane-d4	*106 %*	*64 - 155*			B0K0083	11/05/2020	*11/05/20 15:50*	
Surrogate: 4-Bromofluorobenzene	*80.9 %*	*73 - 124*			B0K0083	11/05/2020	*11/05/20 16:10*	
Surrogate: 4-Bromofluorobenzene	*82.2 %*	*73 - 124*			B0K0083	11/05/2020	*11/05/20 15:50*	
Surrogate: Dibromofluoromethane	*104 %*	*78 - 129*			B0K0083	11/05/2020	*11/05/20 16:10*	
Surrogate: Dibromofluoromethane	*110 %*	*78 - 129*			B0K0083	11/05/2020	*11/05/20 15:50*	
Surrogate: Toluene-d8	*94.2 %*	*84 - 117*			B0K0083	11/05/2020	*11/05/20 16:10*	
Surrogate: Toluene-d8	*94.5 %*	*84 - 117*			B0K0083	11/05/2020	*11/05/20 15:50*	

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 :	11/16/2020

Client Sample ID: MW-21

Lab ID: 2002459-07

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

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,4-Dioxane	**600**	4.0	1.7	2	B0K0094	11/05/2020	11/10/20 14:18	
Surrogate: 1,2-Dichlorobenzene-d4	*58.6 %*		*17 - 119*		B0K0094	11/05/2020	*11/10/20 14:18*	
Surrogate: 2-Fluorobiphenyl	*60.5 %*		*10 - 133*		B0K0094	11/05/2020	*11/10/20 14:18*	
Surrogate: 4-Terphenyl-d14	*93.5 %*		*5 - 139*		B0K0094	11/05/2020	*11/10/20 14:18*	
Surrogate: Nitrobenzene-d5	*70.7 %*		*13 - 150*		B0K0094	11/05/2020	*11/10/20 14:18*	

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 : 11/16/2020

Client Sample ID: EW-01

Lab ID: 2002459-08

Volatile Organic Compounds by EPA 8260B **Analyst: KL**

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	0.11	1	B0K0030	11/04/2020	11/04/20 19:14	
1,1,1-Trichloroethane	ND	0.50	0.21	1	B0K0030	11/04/2020	11/04/20 19:14	
1,1,2,2-Tetrachloroethane	ND	0.50	0.36	1	B0K0030	11/04/2020	11/04/20 19:14	
1,1,2-Trichloroethane	ND	0.50	0.25	1	B0K0030	11/04/2020	11/04/20 19:14	
1,1-Dichloroethane	**1.0**	0.50	0.09	1	B0K0030	11/04/2020	11/04/20 19:14	
1,1-Dichloroethene	**86**	0.50	0.13	1	B0K0030	11/04/2020	11/04/20 19:14	
1,1-Dichloropropene	ND	0.50	0.13	1	B0K0030	11/04/2020	11/04/20 19:14	
1,2,3-Trichloropropane	ND	0.50	0.39	1	B0K0030	11/04/2020	11/04/20 19:14	
1,2,3-Trichlorobenzene	ND	0.50	0.18	1	B0K0030	11/04/2020	11/04/20 19:14	
1,2,4-Trichlorobenzene	ND	0.50	0.16	1	B0K0030	11/04/2020	11/04/20 19:14	
1,2,4-Trimethylbenzene	ND	0.50	0.14	1	B0K0030	11/04/2020	11/04/20 19:14	
1,2-Dibromo-3-chloropropane	ND	0.50	0.41	1	B0K0030	11/04/2020	11/04/20 19:14	
1,2-Dibromoethane	ND	0.50	0.24	1	B0K0030	11/04/2020	11/04/20 19:14	
1,2-Dichlorobenzene	ND	0.50	0.20	1	B0K0030	11/04/2020	11/04/20 19:14	
1,2-Dichloroethane	ND	0.50	0.20	1	B0K0030	11/04/2020	11/04/20 19:14	
1,2-Dichloropropane	ND	0.50	0.15	1	B0K0030	11/04/2020	11/04/20 19:14	
1,3,5-Trimethylbenzene	ND	0.50	0.13	1	B0K0030	11/04/2020	11/04/20 19:14	
1,3-Dichlorobenzene	ND	0.50	0.16	1	B0K0030	11/04/2020	11/04/20 19:14	
1,3-Dichloropropane	ND	0.50	0.21	1	B0K0030	11/04/2020	11/04/20 19:14	
1,4-Dichlorobenzene	ND	0.50	0.17	1	B0K0030	11/04/2020	11/04/20 19:14	
2,2-Dichloropropane	ND	0.50	0.38	1	B0K0030	11/04/2020	11/04/20 19:14	
2-Chlorotoluene	ND	0.50	0.11	1	B0K0030	11/04/2020	11/04/20 19:14	
4-Chlorotoluene	ND	0.50	0.12	1	B0K0030	11/04/2020	11/04/20 19:14	
4-Isopropyltoluene	ND	0.50	0.11	1	B0K0030	11/04/2020	11/04/20 19:14	
Benzene	ND	0.50	0.13	1	B0K0030	11/04/2020	11/04/20 19:14	
Bromobenzene	ND	0.50	0.21	1	B0K0030	11/04/2020	11/04/20 19:14	
Bromodichloromethane	ND	0.50	0.14	1	B0K0030	11/04/2020	11/04/20 19:14	
Bromoform	ND	0.50	0.20	1	B0K0030	11/04/2020	11/04/20 19:14	
Bromomethane	ND	0.50	0.40	1	B0K0030	11/04/2020	11/04/20 19:14	
Carbon tetrachloride	ND	0.50	0.09	1	B0K0030	11/04/2020	11/04/20 19:14	
Chlorobenzene	ND	0.50	0.13	1	B0K0030	11/04/2020	11/04/20 19:14	
Chloroethane	ND	0.50	0.15	1	B0K0030	11/04/2020	11/04/20 19:14	
Chloroform	ND	0.50	0.11	1	B0K0030	11/04/2020	11/04/20 19:14	
Chloromethane	ND	0.50	0.12	1	B0K0030	11/04/2020	11/04/20 19:14	
cis-1,2-Dichloroethene	ND	0.50	0.14	1	B0K0030	11/04/2020	11/04/20 19:14	
cis-1,3-Dichloropropene	ND	0.50	0.13	1	B0K0030	11/04/2020	11/04/20 19:14	
Dibromochloromethane	ND	0.50	0.16	1	B0K0030	11/04/2020	11/04/20 19:14	

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 : 11/16/2020

Client Sample ID: EW-01

Lab ID: 2002459-08

Volatile Organic Compounds by EPA 8260B **Analyst: KL**

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Dibromomethane	ND	0.50	0.19	1	B0K0030	11/04/2020	11/04/20 19:14	
Dichlorodifluoromethane	ND	0.50	0.18	1	B0K0030	11/04/2020	11/04/20 19:14	
Ethylbenzene	ND	0.50	0.13	1	B0K0030	11/04/2020	11/04/20 19:14	
Hexachlorobutadiene	ND	0.50	0.15	1	B0K0030	11/04/2020	11/04/20 19:14	
Isopropylbenzene	ND	0.50	0.10	1	B0K0030	11/04/2020	11/04/20 19:14	
m,p-Xylene	ND	1.0	0.19	1	B0K0030	11/04/2020	11/04/20 19:14	
Methylene chloride	ND	1.0	0.71	1	B0K0030	11/04/2020	11/04/20 19:14	
n-Butylbenzene	ND	0.50	0.11	1	B0K0030	11/04/2020	11/04/20 19:14	
n-Propylbenzene	ND	0.50	0.10	1	B0K0030	11/04/2020	11/04/20 19:14	
Naphthalene	ND	0.50	0.41	1	B0K0030	11/04/2020	11/04/20 19:14	
o-Xylene	ND	0.50	0.13	1	B0K0030	11/04/2020	11/04/20 19:14	
sec-Butylbenzene	ND	0.50	0.09	1	B0K0030	11/04/2020	11/04/20 19:14	
Styrene	ND	0.50	0.13	1	B0K0030	11/04/2020	11/04/20 19:14	
tert-Butylbenzene	ND	0.50	0.09	1	B0K0030	11/04/2020	11/04/20 19:14	
Tetrachloroethene	ND	0.50	0.10	1	B0K0030	11/04/2020	11/04/20 19:14	
Toluene	ND	0.50	0.12	1	B0K0030	11/04/2020	11/04/20 19:14	
trans-1,2-Dichloroethene	ND	0.50	0.09	1	B0K0030	11/04/2020	11/04/20 19:14	
Trichloroethene	**0.46**	0.50	0.10	1	B0K0030	11/04/2020	11/04/20 19:14	J
Trichlorofluoromethane	ND	0.50	0.23	1	B0K0030	11/04/2020	11/04/20 19:14	
Vinyl chloride	ND	0.50	0.13	1	B0K0030	11/04/2020	11/04/20 19:14	
Surrogate: 1,2-Dichloroethane-d4	*112 %*	*64 - 155*			B0K0030	11/04/2020	*11/04/20 19:14*	
Surrogate: 4-Bromofluorobenzene	*84.2 %*	*73 - 124*			B0K0030	11/04/2020	*11/04/20 19:14*	
Surrogate: Dibromofluoromethane	*115 %*	*78 - 129*			B0K0030	11/04/2020	*11/04/20 19:14*	
Surrogate: Toluene-d8	*92.0 %*	*84 - 117*			B0K0030	11/04/2020	*11/04/20 19:14*	

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 :	11/16/2020

Client Sample ID: EW-01

Lab ID: 2002459-08

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

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,4-Dioxane	**46**	2.0	0.84	1	B0K0094	11/05/2020	11/10/20 13:52	
Surrogate: 1,2-Dichlorobenzene-d4	*62.6 %*		*17 - 119*		B0K0094	11/05/2020	*11/10/20 13:52*	
Surrogate: 2-Fluorobiphenyl	*67.7 %*		*10 - 133*		B0K0094	11/05/2020	*11/10/20 13:52*	
Surrogate: 4-Terphenyl-d14	*95.0 %*		*5 - 139*		B0K0094	11/05/2020	*11/10/20 13:52*	
Surrogate: Nitrobenzene-d5	*77.6 %*		*13 - 150*		B0K0094	11/05/2020	*11/10/20 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 : 11/16/2020

Client Sample ID: MW-31

Lab ID: 2002459-09

Volatile Organic Compounds by EPA 8260B **Analyst: KL**

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	0.11	1	B0K0083	11/05/2020	11/05/20 21:33	
1,1,1-Trichloroethane	ND	0.50	0.21	1	B0K0083	11/05/2020	11/05/20 21:33	
1,1,2,2-Tetrachloroethane	ND	0.50	0.36	1	B0K0083	11/05/2020	11/05/20 21:33	
1,1,2-Trichloroethane	**0.52**	0.50	0.25	1	B0K0083	11/05/2020	11/05/20 21:33	
1,1-Dichloroethane	**2.4**	0.50	0.09	1	B0K0083	11/05/2020	11/05/20 21:33	
1,1-Dichloroethene	**350**	2.5	0.66	5	B0K0083	11/05/2020	11/05/20 21:53	
1,1-Dichloropropene	ND	0.50	0.13	1	B0K0083	11/05/2020	11/05/20 21:33	
1,2,3-Trichloropropane	ND	0.50	0.39	1	B0K0083	11/05/2020	11/05/20 21:33	
1,2,3-Trichlorobenzene	ND	0.50	0.18	1	B0K0083	11/05/2020	11/05/20 21:33	
1,2,4-Trichlorobenzene	ND	0.50	0.16	1	B0K0083	11/05/2020	11/05/20 21:33	
1,2,4-Trimethylbenzene	ND	0.50	0.14	1	B0K0083	11/05/2020	11/05/20 21:33	
1,2-Dibromo-3-chloropropane	ND	0.50	0.41	1	B0K0083	11/05/2020	11/05/20 21:33	
1,2-Dibromoethane	ND	0.50	0.24	1	B0K0083	11/05/2020	11/05/20 21:33	
1,2-Dichlorobenzene	ND	0.50	0.20	1	B0K0083	11/05/2020	11/05/20 21:33	
1,2-Dichloroethane	ND	0.50	0.20	1	B0K0083	11/05/2020	11/05/20 21:33	
1,2-Dichloropropane	ND	0.50	0.15	1	B0K0083	11/05/2020	11/05/20 21:33	
1,3,5-Trimethylbenzene	ND	0.50	0.13	1	B0K0083	11/05/2020	11/05/20 21:33	
1,3-Dichlorobenzene	ND	0.50	0.16	1	B0K0083	11/05/2020	11/05/20 21:33	
1,3-Dichloropropane	ND	0.50	0.21	1	B0K0083	11/05/2020	11/05/20 21:33	
1,4-Dichlorobenzene	ND	0.50	0.17	1	B0K0083	11/05/2020	11/05/20 21:33	
2,2-Dichloropropane	ND	0.50	0.38	1	B0K0083	11/05/2020	11/05/20 21:33	
2-Chlorotoluene	ND	0.50	0.11	1	B0K0083	11/05/2020	11/05/20 21:33	
4-Chlorotoluene	ND	0.50	0.12	1	B0K0083	11/05/2020	11/05/20 21:33	
4-Isopropyltoluene	ND	0.50	0.11	1	B0K0083	11/05/2020	11/05/20 21:33	
Benzene	ND	0.50	0.13	1	B0K0083	11/05/2020	11/05/20 21:33	
Bromobenzene	ND	0.50	0.21	1	B0K0083	11/05/2020	11/05/20 21:33	
Bromodichloromethane	ND	0.50	0.14	1	B0K0083	11/05/2020	11/05/20 21:33	
Bromoform	ND	0.50	0.20	1	B0K0083	11/05/2020	11/05/20 21:33	
Bromomethane	ND	0.50	0.40	1	B0K0083	11/05/2020	11/05/20 21:33	
Carbon tetrachloride	ND	0.50	0.09	1	B0K0083	11/05/2020	11/05/20 21:33	
Chlorobenzene	ND	0.50	0.13	1	B0K0083	11/05/2020	11/05/20 21:33	
Chloroethane	ND	0.50	0.15	1	B0K0083	11/05/2020	11/05/20 21:33	
Chloroform	**0.20**	0.50	0.11	1	B0K0083	11/05/2020	11/05/20 21:33	J
Chloromethane	ND	0.50	0.12	1	B0K0083	11/05/2020	11/05/20 21:33	
cis-1,2-Dichloroethene	**0.67**	0.50	0.14	1	B0K0083	11/05/2020	11/05/20 21:33	
cis-1,3-Dichloropropene	ND	0.50	0.13	1	B0K0083	11/05/2020	11/05/20 21:33	
Dibromochloromethane	ND	0.50	0.16	1	B0K0083	11/05/2020	11/05/20 21:33	

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 : 11/16/2020

Client Sample ID: MW-31

Lab ID: 2002459-09

Volatile Organic Compounds by EPA 8260B **Analyst: KL**

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Dibromomethane	ND	0.50	0.19	1	B0K0083	11/05/2020	11/05/20 21:33	
Dichlorodifluoromethane	ND	0.50	0.18	1	B0K0083	11/05/2020	11/05/20 21:33	
Ethylbenzene	ND	0.50	0.13	1	B0K0083	11/05/2020	11/05/20 21:33	
Hexachlorobutadiene	ND	0.50	0.15	1	B0K0083	11/05/2020	11/05/20 21:33	
Isopropylbenzene	ND	0.50	0.10	1	B0K0083	11/05/2020	11/05/20 21:33	
m,p-Xylene	ND	1.0	0.19	1	B0K0083	11/05/2020	11/05/20 21:33	
Methylene chloride	ND	1.0	0.71	1	B0K0083	11/05/2020	11/05/20 21:33	
n-Butylbenzene	ND	0.50	0.11	1	B0K0083	11/05/2020	11/05/20 21:33	
n-Propylbenzene	ND	0.50	0.10	1	B0K0083	11/05/2020	11/05/20 21:33	
Naphthalene	ND	0.50	0.41	1	B0K0083	11/05/2020	11/05/20 21:33	
o-Xylene	ND	0.50	0.13	1	B0K0083	11/05/2020	11/05/20 21:33	
sec-Butylbenzene	ND	0.50	0.09	1	B0K0083	11/05/2020	11/05/20 21:33	
Styrene	ND	0.50	0.13	1	B0K0083	11/05/2020	11/05/20 21:33	
tert-Butylbenzene	ND	0.50	0.09	1	B0K0083	11/05/2020	11/05/20 21:33	
Tetrachloroethene	**0.51**	0.50	0.10	1	B0K0083	11/05/2020	11/05/20 21:33	
Toluene	**0.25**	0.50	0.12	1	B0K0083	11/05/2020	11/05/20 21:33	J
trans-1,2-Dichloroethene	ND	0.50	0.09	1	B0K0083	11/05/2020	11/05/20 21:33	
Trichloroethene	**13**	0.50	0.10	1	B0K0083	11/05/2020	11/05/20 21:33	
Trichlorofluoromethane	ND	0.50	0.23	1	B0K0083	11/05/2020	11/05/20 21:33	
Vinyl chloride	ND	0.50	0.13	1	B0K0083	11/05/2020	11/05/20 21:33	
Surrogate: 1,2-Dichloroethane-d4	*90.9 %*	*64 - 155*			B0K0083	11/05/2020	*11/05/20 21:33*	
Surrogate: 1,2-Dichloroethane-d4	*91.4 %*	*64 - 155*			B0K0083	11/05/2020	*11/05/20 21:53*	
Surrogate: 4-Bromofluorobenzene	*78.8 %*	*73 - 124*			B0K0083	11/05/2020	*11/05/20 21:33*	
Surrogate: 4-Bromofluorobenzene	*79.9 %*	*73 - 124*			B0K0083	11/05/2020	*11/05/20 21:53*	
Surrogate: Dibromofluoromethane	*103 %*	*78 - 129*			B0K0083	11/05/2020	*11/05/20 21:33*	
Surrogate: Dibromofluoromethane	*104 %*	*78 - 129*			B0K0083	11/05/2020	*11/05/20 21:53*	
Surrogate: Toluene-d8	*93.6 %*	*84 - 117*			B0K0083	11/05/2020	*11/05/20 21:53*	
Surrogate: Toluene-d8	*94.4 %*	*84 - 117*			B0K0083	11/05/2020	*11/05/20 21:33*	

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 :	11/16/2020

Client Sample ID: MW-31

Lab ID: 2002459-09

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

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,4-Dioxane	**15**	0.20	0.05	1	B0K0080	11/04/2020	11/05/20 21:13	
Surrogate: 1,2-Dichlorobenzene-d4	*56.5 %*		*13 - 99*		B0K0080	11/04/2020	*11/05/20 21:13*	
Surrogate: 2-Fluorobiphenyl	*61.0 %*		*8 - 111*		B0K0080	11/04/2020	*11/05/20 21:13*	
Surrogate: 4-Terphenyl-d14	*78.3 %*		*12 - 113*		B0K0080	11/04/2020	*11/05/20 21:13*	
Surrogate: Nitrobenzene-d5	*62.0 %*		*15 - 121*		B0K0080	11/04/2020	*11/05/20 21:13*	

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 : 11/16/2020

Client Sample ID: MW-35C

Lab ID: 2002459-10

Volatile Organic Compounds by EPA 8260B **Analyst: KL**

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	0.11	1	B0K0030	11/04/2020	11/04/20 17:33	
1,1,1-Trichloroethane	ND	0.50	0.21	1	B0K0030	11/04/2020	11/04/20 17:33	
1,1,2,2-Tetrachloroethane	ND	0.50	0.36	1	B0K0030	11/04/2020	11/04/20 17:33	
1,1,2-Trichloroethane	ND	0.50	0.25	1	B0K0030	11/04/2020	11/04/20 17:33	
1,1-Dichloroethane	ND	0.50	0.09	1	B0K0030	11/04/2020	11/04/20 17:33	
1,1-Dichloroethene	ND	0.50	0.13	1	B0K0030	11/04/2020	11/04/20 17:33	
1,1-Dichloropropene	ND	0.50	0.13	1	B0K0030	11/04/2020	11/04/20 17:33	
1,2,3-Trichloropropane	ND	0.50	0.39	1	B0K0030	11/04/2020	11/04/20 17:33	
1,2,3-Trichlorobenzene	ND	0.50	0.18	1	B0K0030	11/04/2020	11/04/20 17:33	
1,2,4-Trichlorobenzene	ND	0.50	0.16	1	B0K0030	11/04/2020	11/04/20 17:33	
1,2,4-Trimethylbenzene	ND	0.50	0.14	1	B0K0030	11/04/2020	11/04/20 17:33	
1,2-Dibromo-3-chloropropane	ND	0.50	0.41	1	B0K0030	11/04/2020	11/04/20 17:33	
1,2-Dibromoethane	ND	0.50	0.24	1	B0K0030	11/04/2020	11/04/20 17:33	
1,2-Dichlorobenzene	ND	0.50	0.20	1	B0K0030	11/04/2020	11/04/20 17:33	
1,2-Dichloroethane	ND	0.50	0.20	1	B0K0030	11/04/2020	11/04/20 17:33	
1,2-Dichloropropane	ND	0.50	0.15	1	B0K0030	11/04/2020	11/04/20 17:33	
1,3,5-Trimethylbenzene	ND	0.50	0.13	1	B0K0030	11/04/2020	11/04/20 17:33	
1,3-Dichlorobenzene	ND	0.50	0.16	1	B0K0030	11/04/2020	11/04/20 17:33	
1,3-Dichloropropane	ND	0.50	0.21	1	B0K0030	11/04/2020	11/04/20 17:33	
1,4-Dichlorobenzene	ND	0.50	0.17	1	B0K0030	11/04/2020	11/04/20 17:33	
2,2-Dichloropropane	ND	0.50	0.38	1	B0K0030	11/04/2020	11/04/20 17:33	
2-Chlorotoluene	ND	0.50	0.11	1	B0K0030	11/04/2020	11/04/20 17:33	
4-Chlorotoluene	ND	0.50	0.12	1	B0K0030	11/04/2020	11/04/20 17:33	
4-Isopropyltoluene	ND	0.50	0.11	1	B0K0030	11/04/2020	11/04/20 17:33	
Benzene	ND	0.50	0.13	1	B0K0030	11/04/2020	11/04/20 17:33	
Bromobenzene	ND	0.50	0.21	1	B0K0030	11/04/2020	11/04/20 17:33	
Bromodichloromethane	ND	0.50	0.14	1	B0K0030	11/04/2020	11/04/20 17:33	
Bromoform	ND	0.50	0.20	1	B0K0030	11/04/2020	11/04/20 17:33	
Bromomethane	ND	0.50	0.40	1	B0K0030	11/04/2020	11/04/20 17:33	
Carbon tetrachloride	ND	0.50	0.09	1	B0K0030	11/04/2020	11/04/20 17:33	
Chlorobenzene	ND	0.50	0.13	1	B0K0030	11/04/2020	11/04/20 17:33	
Chloroethane	ND	0.50	0.15	1	B0K0030	11/04/2020	11/04/20 17:33	
Chloroform	ND	0.50	0.11	1	B0K0030	11/04/2020	11/04/20 17:33	
Chloromethane	ND	0.50	0.12	1	B0K0030	11/04/2020	11/04/20 17:33	
cis-1,2-Dichloroethene	ND	0.50	0.14	1	B0K0030	11/04/2020	11/04/20 17:33	
cis-1,3-Dichloropropene	ND	0.50	0.13	1	B0K0030	11/04/2020	11/04/20 17:33	
Dibromochloromethane	ND	0.50	0.16	1	B0K0030	11/04/2020	11/04/20 17:33	

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 :	11/16/2020

Client Sample ID: MW-35C

Lab ID: 2002459-10

Volatile Organic Compounds by EPA 8260B **Analyst: KL**

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Dibromomethane	ND	0.50	0.19	1	B0K0030	11/04/2020	11/04/20 17:33	
Dichlorodifluoromethane	ND	0.50	0.18	1	B0K0030	11/04/2020	11/04/20 17:33	
Ethylbenzene	ND	0.50	0.13	1	B0K0030	11/04/2020	11/04/20 17:33	
Hexachlorobutadiene	ND	0.50	0.15	1	B0K0030	11/04/2020	11/04/20 17:33	
Isopropylbenzene	ND	0.50	0.10	1	B0K0030	11/04/2020	11/04/20 17:33	
m,p-Xylene	ND	1.0	0.19	1	B0K0030	11/04/2020	11/04/20 17:33	
Methylene chloride	ND	1.0	0.71	1	B0K0030	11/04/2020	11/04/20 17:33	
n-Butylbenzene	ND	0.50	0.11	1	B0K0030	11/04/2020	11/04/20 17:33	
n-Propylbenzene	ND	0.50	0.10	1	B0K0030	11/04/2020	11/04/20 17:33	
Naphthalene	ND	0.50	0.41	1	B0K0030	11/04/2020	11/04/20 17:33	
o-Xylene	ND	0.50	0.13	1	B0K0030	11/04/2020	11/04/20 17:33	
sec-Butylbenzene	ND	0.50	0.09	1	B0K0030	11/04/2020	11/04/20 17:33	
Styrene	ND	0.50	0.13	1	B0K0030	11/04/2020	11/04/20 17:33	
tert-Butylbenzene	ND	0.50	0.09	1	B0K0030	11/04/2020	11/04/20 17:33	
Tetrachloroethene	ND	0.50	0.10	1	B0K0030	11/04/2020	11/04/20 17:33	
Toluene	ND	0.50	0.12	1	B0K0030	11/04/2020	11/04/20 17:33	
trans-1,2-Dichloroethene	ND	0.50	0.09	1	B0K0030	11/04/2020	11/04/20 17:33	
Trichloroethene	ND	0.50	0.10	1	B0K0030	11/04/2020	11/04/20 17:33	
Trichlorofluoromethane	ND	0.50	0.23	1	B0K0030	11/04/2020	11/04/20 17:33	
Vinyl chloride	ND	0.50	0.13	1	B0K0030	11/04/2020	11/04/20 17:33	
Surrogate: 1,2-Dichloroethane-d4	*108 %*	*64 - 155*			B0K0030	11/04/2020	*11/04/20 17:33*	
Surrogate: 4-Bromofluorobenzene	*86.2 %*	*73 - 124*			B0K0030	11/04/2020	*11/04/20 17:33*	
Surrogate: Dibromofluoromethane	*111 %*	*78 - 129*			B0K0030	11/04/2020	*11/04/20 17:33*	
Surrogate: Toluene-d8	*95.0 %*	*84 - 117*			B0K0030	11/04/2020	*11/04/20 17:33*	

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 :	11/16/2020

Client Sample ID: MW-35C

Lab ID: 2002459-10

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

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,4-Dioxane	ND	0.20	0.05	1	B0K0080	11/04/2020	11/05/20 21:39	
Surrogate: 1,2-Dichlorobenzene-d4	*65.7 %*		*13 - 99*		B0K0080	11/04/2020	*11/05/20 21:39*	
Surrogate: 2-Fluorobiphenyl	*75.2 %*		*8 - 111*		B0K0080	11/04/2020	*11/05/20 21:39*	
Surrogate: 4-Terphenyl-d14	*87.3 %*		*12 - 113*		B0K0080	11/04/2020	*11/05/20 21:39*	
Surrogate: Nitrobenzene-d5	*70.4 %*		*15 - 121*		B0K0080	11/04/2020	*11/05/20 21:39*	

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 : 11/16/2020

Client Sample ID: MW-33

Lab ID: 2002459-11

Volatile Organic Compounds by EPA 8260B **Analyst: KL**

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	0.11	1	B0K0030	11/04/2020	11/04/20 17:53	
1,1,1-Trichloroethane	ND	0.50	0.21	1	B0K0030	11/04/2020	11/04/20 17:53	
1,1,2,2-Tetrachloroethane	ND	0.50	0.36	1	B0K0030	11/04/2020	11/04/20 17:53	
1,1,2-Trichloroethane	ND	0.50	0.25	1	B0K0030	11/04/2020	11/04/20 17:53	
1,1-Dichloroethane	ND	0.50	0.09	1	B0K0030	11/04/2020	11/04/20 17:53	
1,1-Dichloroethene	**4.6**	0.50	0.13	1	B0K0030	11/04/2020	11/04/20 17:53	
1,1-Dichloropropene	ND	0.50	0.13	1	B0K0030	11/04/2020	11/04/20 17:53	
1,2,3-Trichloropropane	ND	0.50	0.39	1	B0K0030	11/04/2020	11/04/20 17:53	
1,2,3-Trichlorobenzene	ND	0.50	0.18	1	B0K0030	11/04/2020	11/04/20 17:53	
1,2,4-Trichlorobenzene	ND	0.50	0.16	1	B0K0030	11/04/2020	11/04/20 17:53	
1,2,4-Trimethylbenzene	ND	0.50	0.14	1	B0K0030	11/04/2020	11/04/20 17:53	
1,2-Dibromo-3-chloropropane	ND	0.50	0.41	1	B0K0030	11/04/2020	11/04/20 17:53	
1,2-Dibromoethane	ND	0.50	0.24	1	B0K0030	11/04/2020	11/04/20 17:53	
1,2-Dichlorobenzene	ND	0.50	0.20	1	B0K0030	11/04/2020	11/04/20 17:53	
1,2-Dichloroethane	ND	0.50	0.20	1	B0K0030	11/04/2020	11/04/20 17:53	
1,2-Dichloropropane	ND	0.50	0.15	1	B0K0030	11/04/2020	11/04/20 17:53	
1,3,5-Trimethylbenzene	ND	0.50	0.13	1	B0K0030	11/04/2020	11/04/20 17:53	
1,3-Dichlorobenzene	ND	0.50	0.16	1	B0K0030	11/04/2020	11/04/20 17:53	
1,3-Dichloropropane	ND	0.50	0.21	1	B0K0030	11/04/2020	11/04/20 17:53	
1,4-Dichlorobenzene	ND	0.50	0.17	1	B0K0030	11/04/2020	11/04/20 17:53	
2,2-Dichloropropane	ND	0.50	0.38	1	B0K0030	11/04/2020	11/04/20 17:53	
2-Chlorotoluene	ND	0.50	0.11	1	B0K0030	11/04/2020	11/04/20 17:53	
4-Chlorotoluene	ND	0.50	0.12	1	B0K0030	11/04/2020	11/04/20 17:53	
4-Isopropyltoluene	ND	0.50	0.11	1	B0K0030	11/04/2020	11/04/20 17:53	
Benzene	ND	0.50	0.13	1	B0K0030	11/04/2020	11/04/20 17:53	
Bromobenzene	ND	0.50	0.21	1	B0K0030	11/04/2020	11/04/20 17:53	
Bromodichloromethane	ND	0.50	0.14	1	B0K0030	11/04/2020	11/04/20 17:53	
Bromoform	ND	0.50	0.20	1	B0K0030	11/04/2020	11/04/20 17:53	
Bromomethane	ND	0.50	0.40	1	B0K0030	11/04/2020	11/04/20 17:53	
Carbon tetrachloride	ND	0.50	0.09	1	B0K0030	11/04/2020	11/04/20 17:53	
Chlorobenzene	ND	0.50	0.13	1	B0K0030	11/04/2020	11/04/20 17:53	
Chloroethane	ND	0.50	0.15	1	B0K0030	11/04/2020	11/04/20 17:53	
Chloroform	ND	0.50	0.11	1	B0K0030	11/04/2020	11/04/20 17:53	
Chloromethane	ND	0.50	0.12	1	B0K0030	11/04/2020	11/04/20 17:53	
cis-1,2-Dichloroethene	ND	0.50	0.14	1	B0K0030	11/04/2020	11/04/20 17:53	
cis-1,3-Dichloropropene	ND	0.50	0.13	1	B0K0030	11/04/2020	11/04/20 17:53	
Dibromochloromethane	ND	0.50	0.16	1	B0K0030	11/04/2020	11/04/20 17:53	

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 : 11/16/2020

Client Sample ID: MW-33

Lab ID: 2002459-11

Volatile Organic Compounds by EPA 8260B **Analyst: KL**

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Dibromomethane	ND	0.50	0.19	1	B0K0030	11/04/2020	11/04/20 17:53	
Dichlorodifluoromethane	ND	0.50	0.18	1	B0K0030	11/04/2020	11/04/20 17:53	
Ethylbenzene	ND	0.50	0.13	1	B0K0030	11/04/2020	11/04/20 17:53	
Hexachlorobutadiene	ND	0.50	0.15	1	B0K0030	11/04/2020	11/04/20 17:53	
Isopropylbenzene	ND	0.50	0.10	1	B0K0030	11/04/2020	11/04/20 17:53	
m,p-Xylene	ND	1.0	0.19	1	B0K0030	11/04/2020	11/04/20 17:53	
Methylene chloride	ND	1.0	0.71	1	B0K0030	11/04/2020	11/04/20 17:53	
n-Butylbenzene	ND	0.50	0.11	1	B0K0030	11/04/2020	11/04/20 17:53	
n-Propylbenzene	ND	0.50	0.10	1	B0K0030	11/04/2020	11/04/20 17:53	
Naphthalene	ND	0.50	0.41	1	B0K0030	11/04/2020	11/04/20 17:53	
o-Xylene	ND	0.50	0.13	1	B0K0030	11/04/2020	11/04/20 17:53	
sec-Butylbenzene	ND	0.50	0.09	1	B0K0030	11/04/2020	11/04/20 17:53	
Styrene	ND	0.50	0.13	1	B0K0030	11/04/2020	11/04/20 17:53	
tert-Butylbenzene	ND	0.50	0.09	1	B0K0030	11/04/2020	11/04/20 17:53	
Tetrachloroethene	ND	0.50	0.10	1	B0K0030	11/04/2020	11/04/20 17:53	
Toluene	ND	0.50	0.12	1	B0K0030	11/04/2020	11/04/20 17:53	
trans-1,2-Dichloroethene	ND	0.50	0.09	1	B0K0030	11/04/2020	11/04/20 17:53	
Trichloroethene	**0.42**	0.50	0.10	1	B0K0030	11/04/2020	11/04/20 17:53	J
Trichlorofluoromethane	ND	0.50	0.23	1	B0K0030	11/04/2020	11/04/20 17:53	
Vinyl chloride	ND	0.50	0.13	1	B0K0030	11/04/2020	11/04/20 17:53	
Surrogate: 1,2-Dichloroethane-d4	*107 %*	*64 - 155*			B0K0030	11/04/2020	*11/04/20 17:53*	
Surrogate: 4-Bromofluorobenzene	*86.5 %*	*73 - 124*			B0K0030	11/04/2020	*11/04/20 17:53*	
Surrogate: Dibromofluoromethane	*108 %*	*78 - 129*			B0K0030	11/04/2020	*11/04/20 17:53*	
Surrogate: Toluene-d8	*96.0 %*	*84 - 117*			B0K0030	11/04/2020	*11/04/20 17:53*	

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 :	11/16/2020

Client Sample ID: MW-33

Lab ID: 2002459-11

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

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,4-Dioxane	ND	0.20	0.05	1	B0K0080	11/04/2020	11/05/20 22:05	
Surrogate: 1,2-Dichlorobenzene-d4	*67.9 %*		*13 - 99*		B0K0080	11/04/2020	*11/05/20 22:05*	
Surrogate: 2-Fluorobiphenyl	*80.2 %*		*8 - 111*		B0K0080	11/04/2020	*11/05/20 22:05*	
Surrogate: 4-Terphenyl-d14	*86.0 %*		*12 - 113*		B0K0080	11/04/2020	*11/05/20 22:05*	
Surrogate: Nitrobenzene-d5	*70.2 %*		*15 - 121*		B0K0080	11/04/2020	*11/05/20 22:05*	

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 : 11/16/2020

Client Sample ID: MW-30A

Lab ID: 2002459-12

Volatile Organic Compounds by EPA 8260B **Analyst: KL**

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	0.11	1	B0K0030	11/04/2020	11/04/20 18:13	
1,1,1-Trichloroethane	ND	0.50	0.21	1	B0K0030	11/04/2020	11/04/20 18:13	
1,1,2,2-Tetrachloroethane	ND	0.50	0.36	1	B0K0030	11/04/2020	11/04/20 18:13	
1,1,2-Trichloroethane	ND	0.50	0.25	1	B0K0030	11/04/2020	11/04/20 18:13	
1,1-Dichloroethane	ND	0.50	0.09	1	B0K0030	11/04/2020	11/04/20 18:13	
1,1-Dichloroethene	ND	0.50	0.13	1	B0K0030	11/04/2020	11/04/20 18:13	
1,1-Dichloropropene	ND	0.50	0.13	1	B0K0030	11/04/2020	11/04/20 18:13	
1,2,3-Trichloropropane	ND	0.50	0.39	1	B0K0030	11/04/2020	11/04/20 18:13	
1,2,3-Trichlorobenzene	ND	0.50	0.18	1	B0K0030	11/04/2020	11/04/20 18:13	
1,2,4-Trichlorobenzene	ND	0.50	0.16	1	B0K0030	11/04/2020	11/04/20 18:13	
1,2,4-Trimethylbenzene	ND	0.50	0.14	1	B0K0030	11/04/2020	11/04/20 18:13	
1,2-Dibromo-3-chloropropane	ND	0.50	0.41	1	B0K0030	11/04/2020	11/04/20 18:13	
1,2-Dibromoethane	ND	0.50	0.24	1	B0K0030	11/04/2020	11/04/20 18:13	
1,2-Dichlorobenzene	ND	0.50	0.20	1	B0K0030	11/04/2020	11/04/20 18:13	
1,2-Dichloroethane	ND	0.50	0.20	1	B0K0030	11/04/2020	11/04/20 18:13	
1,2-Dichloropropane	ND	0.50	0.15	1	B0K0030	11/04/2020	11/04/20 18:13	
1,3,5-Trimethylbenzene	ND	0.50	0.13	1	B0K0030	11/04/2020	11/04/20 18:13	
1,3-Dichlorobenzene	ND	0.50	0.16	1	B0K0030	11/04/2020	11/04/20 18:13	
1,3-Dichloropropane	ND	0.50	0.21	1	B0K0030	11/04/2020	11/04/20 18:13	
1,4-Dichlorobenzene	ND	0.50	0.17	1	B0K0030	11/04/2020	11/04/20 18:13	
2,2-Dichloropropane	ND	0.50	0.38	1	B0K0030	11/04/2020	11/04/20 18:13	
2-Chlorotoluene	ND	0.50	0.11	1	B0K0030	11/04/2020	11/04/20 18:13	
4-Chlorotoluene	ND	0.50	0.12	1	B0K0030	11/04/2020	11/04/20 18:13	
4-Isopropyltoluene	ND	0.50	0.11	1	B0K0030	11/04/2020	11/04/20 18:13	
Benzene	ND	0.50	0.13	1	B0K0030	11/04/2020	11/04/20 18:13	
Bromobenzene	ND	0.50	0.21	1	B0K0030	11/04/2020	11/04/20 18:13	
Bromodichloromethane	ND	0.50	0.14	1	B0K0030	11/04/2020	11/04/20 18:13	
Bromoform	ND	0.50	0.20	1	B0K0030	11/04/2020	11/04/20 18:13	
Bromomethane	ND	0.50	0.40	1	B0K0030	11/04/2020	11/04/20 18:13	
Carbon tetrachloride	ND	0.50	0.09	1	B0K0030	11/04/2020	11/04/20 18:13	
Chlorobenzene	ND	0.50	0.13	1	B0K0030	11/04/2020	11/04/20 18:13	
Chloroethane	ND	0.50	0.15	1	B0K0030	11/04/2020	11/04/20 18:13	
Chloroform	ND	0.50	0.11	1	B0K0030	11/04/2020	11/04/20 18:13	
Chloromethane	ND	0.50	0.12	1	B0K0030	11/04/2020	11/04/20 18:13	
cis-1,2-Dichloroethene	ND	0.50	0.14	1	B0K0030	11/04/2020	11/04/20 18:13	
cis-1,3-Dichloropropene	ND	0.50	0.13	1	B0K0030	11/04/2020	11/04/20 18:13	
Dibromochloromethane	ND	0.50	0.16	1	B0K0030	11/04/2020	11/04/20 18:13	

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 :	11/16/2020

Client Sample ID: MW-30A

Lab ID: 2002459-12

Volatile Organic Compounds by EPA 8260B **Analyst: KL**

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Dibromomethane	ND	0.50	0.19	1	B0K0030	11/04/2020	11/04/20 18:13	
Dichlorodifluoromethane	ND	0.50	0.18	1	B0K0030	11/04/2020	11/04/20 18:13	
Ethylbenzene	ND	0.50	0.13	1	B0K0030	11/04/2020	11/04/20 18:13	
Hexachlorobutadiene	ND	0.50	0.15	1	B0K0030	11/04/2020	11/04/20 18:13	
Isopropylbenzene	ND	0.50	0.10	1	B0K0030	11/04/2020	11/04/20 18:13	
m,p-Xylene	ND	1.0	0.19	1	B0K0030	11/04/2020	11/04/20 18:13	
Methylene chloride	ND	1.0	0.71	1	B0K0030	11/04/2020	11/04/20 18:13	
n-Butylbenzene	ND	0.50	0.11	1	B0K0030	11/04/2020	11/04/20 18:13	
n-Propylbenzene	ND	0.50	0.10	1	B0K0030	11/04/2020	11/04/20 18:13	
Naphthalene	ND	0.50	0.41	1	B0K0030	11/04/2020	11/04/20 18:13	
o-Xylene	ND	0.50	0.13	1	B0K0030	11/04/2020	11/04/20 18:13	
sec-Butylbenzene	ND	0.50	0.09	1	B0K0030	11/04/2020	11/04/20 18:13	
Styrene	ND	0.50	0.13	1	B0K0030	11/04/2020	11/04/20 18:13	
tert-Butylbenzene	ND	0.50	0.09	1	B0K0030	11/04/2020	11/04/20 18:13	
Tetrachloroethene	ND	0.50	0.10	1	B0K0030	11/04/2020	11/04/20 18:13	
Toluene	ND	0.50	0.12	1	B0K0030	11/04/2020	11/04/20 18:13	
trans-1,2-Dichloroethene	ND	0.50	0.09	1	B0K0030	11/04/2020	11/04/20 18:13	
Trichloroethene	**0.66**	0.50	0.10	1	B0K0030	11/04/2020	11/04/20 18:13	
Trichlorofluoromethane	ND	0.50	0.23	1	B0K0030	11/04/2020	11/04/20 18:13	
Vinyl chloride	ND	0.50	0.13	1	B0K0030	11/04/2020	11/04/20 18:13	
Surrogate: 1,2-Dichloroethane-d4	*112 %*	*64 - 155*			B0K0030	11/04/2020	*11/04/20 18:13*	
Surrogate: 4-Bromofluorobenzene	*86.8 %*	*73 - 124*			B0K0030	11/04/2020	*11/04/20 18:13*	
Surrogate: Dibromofluoromethane	*110 %*	*78 - 129*			B0K0030	11/04/2020	*11/04/20 18:13*	
Surrogate: Toluene-d8	*94.4 %*	*84 - 117*			B0K0030	11/04/2020	*11/04/20 18:13*	

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 :	11/16/2020

Client Sample ID: MW-30A

Lab ID: 2002459-12

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

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,4-Dioxane	ND	0.20	0.05	1	B0K0080	11/04/2020	11/05/20 22:32	
Surrogate: 1,2-Dichlorobenzene-d4	*65.9 %*		*13 - 99*		B0K0080	11/04/2020	*11/05/20 22:32*	
Surrogate: 2-Fluorobiphenyl	*75.1 %*		*8 - 111*		B0K0080	11/04/2020	*11/05/20 22:32*	
Surrogate: 4-Terphenyl-d14	*82.0 %*		*12 - 113*		B0K0080	11/04/2020	*11/05/20 22:32*	
Surrogate: Nitrobenzene-d5	*64.3 %*		*15 - 121*		B0K0080	11/04/2020	*11/05/20 22:32*	

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 : 11/16/2020

Client Sample ID: MW-30B

Lab ID: 2002459-13

Volatile Organic Compounds by EPA 8260B **Analyst: KL**

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	0.11	1	B0K0083	11/05/2020	11/05/20 22:34	
1,1,1-Trichloroethane	ND	0.50	0.21	1	B0K0083	11/05/2020	11/05/20 22:34	
1,1,2,2-Tetrachloroethane	ND	0.50	0.36	1	B0K0083	11/05/2020	11/05/20 22:34	
1,1,2-Trichloroethane	ND	0.50	0.25	1	B0K0083	11/05/2020	11/05/20 22:34	
1,1-Dichloroethane	ND	0.50	0.09	1	B0K0083	11/05/2020	11/05/20 22:34	
1,1-Dichloroethene	**24**	0.50	0.13	1	B0K0083	11/05/2020	11/05/20 22:34	
1,1-Dichloropropene	ND	0.50	0.13	1	B0K0083	11/05/2020	11/05/20 22:34	
1,2,3-Trichloropropane	ND	0.50	0.39	1	B0K0083	11/05/2020	11/05/20 22:34	
1,2,3-Trichlorobenzene	ND	0.50	0.18	1	B0K0083	11/05/2020	11/05/20 22:34	
1,2,4-Trichlorobenzene	ND	0.50	0.16	1	B0K0083	11/05/2020	11/05/20 22:34	
1,2,4-Trimethylbenzene	ND	0.50	0.14	1	B0K0083	11/05/2020	11/05/20 22:34	
1,2-Dibromo-3-chloropropane	ND	0.50	0.41	1	B0K0083	11/05/2020	11/05/20 22:34	
1,2-Dibromoethane	ND	0.50	0.24	1	B0K0083	11/05/2020	11/05/20 22:34	
1,2-Dichlorobenzene	ND	0.50	0.20	1	B0K0083	11/05/2020	11/05/20 22:34	
1,2-Dichloroethane	ND	0.50	0.20	1	B0K0083	11/05/2020	11/05/20 22:34	
1,2-Dichloropropane	ND	0.50	0.15	1	B0K0083	11/05/2020	11/05/20 22:34	
1,3,5-Trimethylbenzene	ND	0.50	0.13	1	B0K0083	11/05/2020	11/05/20 22:34	
1,3-Dichlorobenzene	ND	0.50	0.16	1	B0K0083	11/05/2020	11/05/20 22:34	
1,3-Dichloropropane	ND	0.50	0.21	1	B0K0083	11/05/2020	11/05/20 22:34	
1,4-Dichlorobenzene	ND	0.50	0.17	1	B0K0083	11/05/2020	11/05/20 22:34	
2,2-Dichloropropane	ND	0.50	0.38	1	B0K0083	11/05/2020	11/05/20 22:34	
2-Chlorotoluene	ND	0.50	0.11	1	B0K0083	11/05/2020	11/05/20 22:34	
4-Chlorotoluene	ND	0.50	0.12	1	B0K0083	11/05/2020	11/05/20 22:34	
4-Isopropyltoluene	ND	0.50	0.11	1	B0K0083	11/05/2020	11/05/20 22:34	
Benzene	ND	0.50	0.13	1	B0K0083	11/05/2020	11/05/20 22:34	
Bromobenzene	ND	0.50	0.21	1	B0K0083	11/05/2020	11/05/20 22:34	
Bromodichloromethane	ND	0.50	0.14	1	B0K0083	11/05/2020	11/05/20 22:34	
Bromoform	ND	0.50	0.20	1	B0K0083	11/05/2020	11/05/20 22:34	
Bromomethane	ND	0.50	0.40	1	B0K0083	11/05/2020	11/05/20 22:34	
Carbon tetrachloride	ND	0.50	0.09	1	B0K0083	11/05/2020	11/05/20 22:34	
Chlorobenzene	ND	0.50	0.13	1	B0K0083	11/05/2020	11/05/20 22:34	
Chloroethane	ND	0.50	0.15	1	B0K0083	11/05/2020	11/05/20 22:34	
Chloroform	**0.34**	0.50	0.11	1	B0K0083	11/05/2020	11/05/20 22:34	J
Chloromethane	ND	0.50	0.12	1	B0K0083	11/05/2020	11/05/20 22:34	
cis-1,2-Dichloroethene	**4.8**	0.50	0.14	1	B0K0083	11/05/2020	11/05/20 22:34	
cis-1,3-Dichloropropene	ND	0.50	0.13	1	B0K0083	11/05/2020	11/05/20 22:34	
Dibromochloromethane	ND	0.50	0.16	1	B0K0083	11/05/2020	11/05/20 22:34	

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 : 11/16/2020

Client Sample ID: MW-30B

Lab ID: 2002459-13

Volatile Organic Compounds by EPA 8260B **Analyst: KL**

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Dibromomethane	ND	0.50	0.19	1	B0K0083	11/05/2020	11/05/20 22:34	
Dichlorodifluoromethane	ND	0.50	0.18	1	B0K0083	11/05/2020	11/05/20 22:34	
Ethylbenzene	ND	0.50	0.13	1	B0K0083	11/05/2020	11/05/20 22:34	
Hexachlorobutadiene	ND	0.50	0.15	1	B0K0083	11/05/2020	11/05/20 22:34	
Isopropylbenzene	ND	0.50	0.10	1	B0K0083	11/05/2020	11/05/20 22:34	
m,p-Xylene	ND	1.0	0.19	1	B0K0083	11/05/2020	11/05/20 22:34	
Methylene chloride	ND	1.0	0.71	1	B0K0083	11/05/2020	11/05/20 22:34	
n-Butylbenzene	ND	0.50	0.11	1	B0K0083	11/05/2020	11/05/20 22:34	
n-Propylbenzene	ND	0.50	0.10	1	B0K0083	11/05/2020	11/05/20 22:34	
Naphthalene	ND	0.50	0.41	1	B0K0083	11/05/2020	11/05/20 22:34	
o-Xylene	ND	0.50	0.13	1	B0K0083	11/05/2020	11/05/20 22:34	
sec-Butylbenzene	ND	0.50	0.09	1	B0K0083	11/05/2020	11/05/20 22:34	
Styrene	ND	0.50	0.13	1	B0K0083	11/05/2020	11/05/20 22:34	
tert-Butylbenzene	ND	0.50	0.09	1	B0K0083	11/05/2020	11/05/20 22:34	
Tetrachloroethene	ND	0.50	0.10	1	B0K0083	11/05/2020	11/05/20 22:34	
Toluene	ND	0.50	0.12	1	B0K0083	11/05/2020	11/05/20 22:34	
trans-1,2-Dichloroethene	ND	0.50	0.09	1	B0K0083	11/05/2020	11/05/20 22:34	
Trichloroethene	**100**	2.5	0.50	5	B0K0109	11/06/2020	11/06/20 14:49	
Trichlorofluoromethane	ND	0.50	0.23	1	B0K0083	11/05/2020	11/05/20 22:34	
Vinyl chloride	ND	0.50	0.13	1	B0K0083	11/05/2020	11/05/20 22:34	
Surrogate: 1,2-Dichloroethane-d4	*92.1 %*	*64 - 155*			B0K0109	11/06/2020	*11/06/20 14:49*	
Surrogate: 1,2-Dichloroethane-d4	*93.2 %*	*64 - 155*			B0K0083	11/05/2020	*11/05/20 22:34*	
Surrogate: 4-Bromofluorobenzene	*79.0 %*	*73 - 124*			B0K0109	11/06/2020	*11/06/20 14:49*	
Surrogate: 4-Bromofluorobenzene	*79.9 %*	*73 - 124*			B0K0083	11/05/2020	*11/05/20 22:34*	
Surrogate: Dibromofluoromethane	*103 %*	*78 - 129*			B0K0083	11/05/2020	*11/05/20 22:34*	
Surrogate: Dibromofluoromethane	*104 %*	*78 - 129*			B0K0109	11/06/2020	*11/06/20 14:49*	
Surrogate: Toluene-d8	*92.6 %*	*84 - 117*			B0K0109	11/06/2020	*11/06/20 14:49*	
Surrogate: Toluene-d8	*97.6 %*	*84 - 117*			B0K0083	11/05/2020	*11/05/20 22:34*	

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 :	11/16/2020

Client Sample ID: MW-30B

Lab ID: 2002459-13

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

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,4-Dioxane	**0.43**	0.20	0.05	1	B0K0080	11/04/2020	11/05/20 22:58	
Surrogate: 1,2-Dichlorobenzene-d4	*70.3 %*		*13 - 99*		B0K0080	11/04/2020	*11/05/20 22:58*	
Surrogate: 2-Fluorobiphenyl	*83.3 %*		*8 - 111*		B0K0080	11/04/2020	*11/05/20 22:58*	
Surrogate: 4-Terphenyl-d14	*77.5 %*		*12 - 113*		B0K0080	11/04/2020	*11/05/20 22:58*	
Surrogate: Nitrobenzene-d5	*71.1 %*		*15 - 121*		B0K0080	11/04/2020	*11/05/20 22:58*	

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 : 11/16/2020

Client Sample ID: MW-3000B

Lab ID: 2002459-14

Volatile Organic Compounds by EPA 8260B **Analyst: KL**

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	0.11	1	B0K0083	11/05/2020	11/05/20 20:12	
1,1,1-Trichloroethane	ND	0.50	0.21	1	B0K0083	11/05/2020	11/05/20 20:12	
1,1,2,2-Tetrachloroethane	ND	0.50	0.36	1	B0K0083	11/05/2020	11/05/20 20:12	
1,1,2-Trichloroethane	ND	0.50	0.25	1	B0K0083	11/05/2020	11/05/20 20:12	
1,1-Dichloroethane	ND	0.50	0.09	1	B0K0083	11/05/2020	11/05/20 20:12	
1,1-Dichloroethene	**23**	0.50	0.13	1	B0K0083	11/05/2020	11/05/20 20:12	
1,1-Dichloropropene	ND	0.50	0.13	1	B0K0083	11/05/2020	11/05/20 20:12	
1,2,3-Trichloropropane	ND	0.50	0.39	1	B0K0083	11/05/2020	11/05/20 20:12	
1,2,3-Trichlorobenzene	ND	0.50	0.18	1	B0K0083	11/05/2020	11/05/20 20:12	
1,2,4-Trichlorobenzene	ND	0.50	0.16	1	B0K0083	11/05/2020	11/05/20 20:12	
1,2,4-Trimethylbenzene	ND	0.50	0.14	1	B0K0083	11/05/2020	11/05/20 20:12	
1,2-Dibromo-3-chloropropane	ND	0.50	0.41	1	B0K0083	11/05/2020	11/05/20 20:12	
1,2-Dibromoethane	ND	0.50	0.24	1	B0K0083	11/05/2020	11/05/20 20:12	
1,2-Dichlorobenzene	ND	0.50	0.20	1	B0K0083	11/05/2020	11/05/20 20:12	
1,2-Dichloroethane	ND	0.50	0.20	1	B0K0083	11/05/2020	11/05/20 20:12	
1,2-Dichloropropane	ND	0.50	0.15	1	B0K0083	11/05/2020	11/05/20 20:12	
1,3,5-Trimethylbenzene	ND	0.50	0.13	1	B0K0083	11/05/2020	11/05/20 20:12	
1,3-Dichlorobenzene	ND	0.50	0.16	1	B0K0083	11/05/2020	11/05/20 20:12	
1,3-Dichloropropane	ND	0.50	0.21	1	B0K0083	11/05/2020	11/05/20 20:12	
1,4-Dichlorobenzene	ND	0.50	0.17	1	B0K0083	11/05/2020	11/05/20 20:12	
2,2-Dichloropropane	ND	0.50	0.38	1	B0K0083	11/05/2020	11/05/20 20:12	
2-Chlorotoluene	ND	0.50	0.11	1	B0K0083	11/05/2020	11/05/20 20:12	
4-Chlorotoluene	ND	0.50	0.12	1	B0K0083	11/05/2020	11/05/20 20:12	
4-Isopropyltoluene	ND	0.50	0.11	1	B0K0083	11/05/2020	11/05/20 20:12	
Benzene	ND	0.50	0.13	1	B0K0083	11/05/2020	11/05/20 20:12	
Bromobenzene	ND	0.50	0.21	1	B0K0083	11/05/2020	11/05/20 20:12	
Bromodichloromethane	ND	0.50	0.14	1	B0K0083	11/05/2020	11/05/20 20:12	
Bromoform	ND	0.50	0.20	1	B0K0083	11/05/2020	11/05/20 20:12	
Bromomethane	ND	0.50	0.40	1	B0K0083	11/05/2020	11/05/20 20:12	
Carbon tetrachloride	ND	0.50	0.09	1	B0K0083	11/05/2020	11/05/20 20:12	
Chlorobenzene	ND	0.50	0.13	1	B0K0083	11/05/2020	11/05/20 20:12	
Chloroethane	ND	0.50	0.15	1	B0K0083	11/05/2020	11/05/20 20:12	
Chloroform	**0.35**	0.50	0.11	1	B0K0083	11/05/2020	11/05/20 20:12	J
Chloromethane	ND	0.50	0.12	1	B0K0083	11/05/2020	11/05/20 20:12	
cis-1,2-Dichloroethene	**4.9**	0.50	0.14	1	B0K0083	11/05/2020	11/05/20 20:12	
cis-1,3-Dichloropropene	ND	0.50	0.13	1	B0K0083	11/05/2020	11/05/20 20:12	
Dibromochloromethane	ND	0.50	0.16	1	B0K0083	11/05/2020	11/05/20 20:12	

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 : 11/16/2020

Client Sample ID: MW-3000B

Lab ID: 2002459-14

Volatile Organic Compounds by EPA 8260B **Analyst: KL**

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Dibromomethane	ND	0.50	0.19	1	B0K0083	11/05/2020	11/05/20 20:12	
Dichlorodifluoromethane	ND	0.50	0.18	1	B0K0083	11/05/2020	11/05/20 20:12	
Ethylbenzene	ND	0.50	0.13	1	B0K0083	11/05/2020	11/05/20 20:12	
Hexachlorobutadiene	ND	0.50	0.15	1	B0K0083	11/05/2020	11/05/20 20:12	
Isopropylbenzene	ND	0.50	0.10	1	B0K0083	11/05/2020	11/05/20 20:12	
m,p-Xylene	ND	1.0	0.19	1	B0K0083	11/05/2020	11/05/20 20:12	
Methylene chloride	ND	1.0	0.71	1	B0K0083	11/05/2020	11/05/20 20:12	
n-Butylbenzene	ND	0.50	0.11	1	B0K0083	11/05/2020	11/05/20 20:12	
n-Propylbenzene	ND	0.50	0.10	1	B0K0083	11/05/2020	11/05/20 20:12	
Naphthalene	ND	0.50	0.41	1	B0K0083	11/05/2020	11/05/20 20:12	
o-Xylene	ND	0.50	0.13	1	B0K0083	11/05/2020	11/05/20 20:12	
sec-Butylbenzene	ND	0.50	0.09	1	B0K0083	11/05/2020	11/05/20 20:12	
Styrene	ND	0.50	0.13	1	B0K0083	11/05/2020	11/05/20 20:12	
tert-Butylbenzene	ND	0.50	0.09	1	B0K0083	11/05/2020	11/05/20 20:12	
Tetrachloroethene	ND	0.50	0.10	1	B0K0083	11/05/2020	11/05/20 20:12	
Toluene	ND	0.50	0.12	1	B0K0083	11/05/2020	11/05/20 20:12	
trans-1,2-Dichloroethene	ND	0.50	0.09	1	B0K0083	11/05/2020	11/05/20 20:12	
Trichloroethene	**110**	2.5	0.50	5	B0K0109	11/06/2020	11/06/20 15:09	
Trichlorofluoromethane	ND	0.50	0.23	1	B0K0083	11/05/2020	11/05/20 20:12	
Vinyl chloride	ND	0.50	0.13	1	B0K0083	11/05/2020	11/05/20 20:12	
Surrogate: 1,2-Dichloroethane-d4	*89.6 %*	*64 - 155*			B0K0083	11/05/2020	*11/05/20 20:12*	
Surrogate: 1,2-Dichloroethane-d4	*94.1 %*	*64 - 155*			B0K0109	11/06/2020	*11/06/20 15:09*	
Surrogate: 4-Bromofluorobenzene	*75.7 %*	*73 - 124*			B0K0109	11/06/2020	*11/06/20 15:09*	
Surrogate: 4-Bromofluorobenzene	*81.7 %*	*73 - 124*			B0K0083	11/05/2020	*11/05/20 20:12*	
Surrogate: Dibromofluoromethane	*103 %*	*78 - 129*			B0K0083	11/05/2020	*11/05/20 20:12*	
Surrogate: Dibromofluoromethane	*106 %*	*78 - 129*			B0K0109	11/06/2020	*11/06/20 15:09*	
Surrogate: Toluene-d8	*95.2 %*	*84 - 117*			B0K0109	11/06/2020	*11/06/20 15:09*	
Surrogate: Toluene-d8	*96.6 %*	*84 - 117*			B0K0083	11/05/2020	*11/05/20 20:12*	

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 :	11/16/2020

Client Sample ID: MW-3000B

Lab ID: 2002459-14

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

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,4-Dioxane	**0.43**	0.20	0.05	1	B0K0080	11/04/2020	11/05/20 23:24	
Surrogate: 1,2-Dichlorobenzene-d4	*63.2 %*		*13 - 99*		B0K0080	11/04/2020	*11/05/20 23:24*	
Surrogate: 2-Fluorobiphenyl	*71.4 %*		*8 - 111*		B0K0080	11/04/2020	*11/05/20 23:24*	
Surrogate: 4-Terphenyl-d14	*82.6 %*		*12 - 113*		B0K0080	11/04/2020	*11/05/20 23:24*	
Surrogate: Nitrobenzene-d5	*63.3 %*		*15 - 121*		B0K0080	11/04/2020	*11/05/20 23:24*	

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 : 11/16/2020

Client Sample ID: MW-34B

Lab ID: 2002459-15

Volatile Organic Compounds by EPA 8260B **Analyst: KL**

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	0.11	1	B0K0109	11/06/2020	11/06/20 14:28	
1,1,1-Trichloroethane	ND	0.50	0.21	1	B0K0109	11/06/2020	11/06/20 14:28	
1,1,2,2-Tetrachloroethane	ND	0.50	0.36	1	B0K0109	11/06/2020	11/06/20 14:28	
1,1,2-Trichloroethane	ND	0.50	0.25	1	B0K0109	11/06/2020	11/06/20 14:28	
1,1-Dichloroethane	**0.65**	0.50	0.09	1	B0K0109	11/06/2020	11/06/20 14:28	
1,1-Dichloroethene	**68**	0.50	0.13	1	B0K0109	11/06/2020	11/06/20 14:28	
1,1-Dichloropropene	ND	0.50	0.13	1	B0K0109	11/06/2020	11/06/20 14:28	
1,2,3-Trichloropropane	ND	0.50	0.39	1	B0K0109	11/06/2020	11/06/20 14:28	
1,2,3-Trichlorobenzene	ND	0.50	0.18	1	B0K0109	11/06/2020	11/06/20 14:28	
1,2,4-Trichlorobenzene	ND	0.50	0.16	1	B0K0109	11/06/2020	11/06/20 14:28	
1,2,4-Trimethylbenzene	ND	0.50	0.14	1	B0K0109	11/06/2020	11/06/20 14:28	
1,2-Dibromo-3-chloropropane	ND	0.50	0.41	1	B0K0109	11/06/2020	11/06/20 14:28	
1,2-Dibromoethane	ND	0.50	0.24	1	B0K0109	11/06/2020	11/06/20 14:28	
1,2-Dichlorobenzene	ND	0.50	0.20	1	B0K0109	11/06/2020	11/06/20 14:28	
1,2-Dichloroethane	ND	0.50	0.20	1	B0K0109	11/06/2020	11/06/20 14:28	
1,2-Dichloropropane	ND	0.50	0.15	1	B0K0109	11/06/2020	11/06/20 14:28	
1,3,5-Trimethylbenzene	ND	0.50	0.13	1	B0K0109	11/06/2020	11/06/20 14:28	
1,3-Dichlorobenzene	ND	0.50	0.16	1	B0K0109	11/06/2020	11/06/20 14:28	
1,3-Dichloropropane	ND	0.50	0.21	1	B0K0109	11/06/2020	11/06/20 14:28	
1,4-Dichlorobenzene	ND	0.50	0.17	1	B0K0109	11/06/2020	11/06/20 14:28	
2,2-Dichloropropane	ND	0.50	0.38	1	B0K0109	11/06/2020	11/06/20 14:28	
2-Chlorotoluene	ND	0.50	0.11	1	B0K0109	11/06/2020	11/06/20 14:28	
4-Chlorotoluene	ND	0.50	0.12	1	B0K0109	11/06/2020	11/06/20 14:28	
4-Isopropyltoluene	ND	0.50	0.11	1	B0K0109	11/06/2020	11/06/20 14:28	
Benzene	ND	0.50	0.13	1	B0K0109	11/06/2020	11/06/20 14:28	
Bromobenzene	ND	0.50	0.21	1	B0K0109	11/06/2020	11/06/20 14:28	
Bromodichloromethane	ND	0.50	0.14	1	B0K0109	11/06/2020	11/06/20 14:28	
Bromoform	ND	0.50	0.20	1	B0K0109	11/06/2020	11/06/20 14:28	
Bromomethane	ND	0.50	0.40	1	B0K0109	11/06/2020	11/06/20 14:28	
Carbon tetrachloride	ND	0.50	0.09	1	B0K0109	11/06/2020	11/06/20 14:28	
Chlorobenzene	ND	0.50	0.13	1	B0K0109	11/06/2020	11/06/20 14:28	
Chloroethane	ND	0.50	0.15	1	B0K0109	11/06/2020	11/06/20 14:28	
Chloroform	ND	0.50	0.11	1	B0K0109	11/06/2020	11/06/20 14:28	
Chloromethane	ND	0.50	0.12	1	B0K0109	11/06/2020	11/06/20 14:28	
cis-1,2-Dichloroethene	ND	0.50	0.14	1	B0K0109	11/06/2020	11/06/20 14:28	
cis-1,3-Dichloropropene	ND	0.50	0.13	1	B0K0109	11/06/2020	11/06/20 14:28	
Dibromochloromethane	ND	0.50	0.16	1	B0K0109	11/06/2020	11/06/20 14:28	

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 :	11/16/2020

Client Sample ID: MW-34B

Lab ID: 2002459-15

Volatile Organic Compounds by EPA 8260B **Analyst: KL**

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Dibromomethane	ND	0.50	0.19	1	B0K0109	11/06/2020	11/06/20 14:28	
Dichlorodifluoromethane	ND	0.50	0.18	1	B0K0109	11/06/2020	11/06/20 14:28	
Ethylbenzene	ND	0.50	0.13	1	B0K0109	11/06/2020	11/06/20 14:28	
Hexachlorobutadiene	ND	0.50	0.15	1	B0K0109	11/06/2020	11/06/20 14:28	
Isopropylbenzene	ND	0.50	0.10	1	B0K0109	11/06/2020	11/06/20 14:28	
m,p-Xylene	ND	1.0	0.19	1	B0K0109	11/06/2020	11/06/20 14:28	
Methylene chloride	ND	1.0	0.71	1	B0K0109	11/06/2020	11/06/20 14:28	
n-Butylbenzene	ND	0.50	0.11	1	B0K0109	11/06/2020	11/06/20 14:28	
n-Propylbenzene	ND	0.50	0.10	1	B0K0109	11/06/2020	11/06/20 14:28	
Naphthalene	ND	0.50	0.41	1	B0K0109	11/06/2020	11/06/20 14:28	
o-Xylene	ND	0.50	0.13	1	B0K0109	11/06/2020	11/06/20 14:28	
sec-Butylbenzene	ND	0.50	0.09	1	B0K0109	11/06/2020	11/06/20 14:28	
Styrene	ND	0.50	0.13	1	B0K0109	11/06/2020	11/06/20 14:28	
tert-Butylbenzene	ND	0.50	0.09	1	B0K0109	11/06/2020	11/06/20 14:28	
Tetrachloroethene	**0.24**	0.50	0.10	1	B0K0109	11/06/2020	11/06/20 14:28	J
Toluene	ND	0.50	0.12	1	B0K0109	11/06/2020	11/06/20 14:28	
trans-1,2-Dichloroethene	ND	0.50	0.09	1	B0K0109	11/06/2020	11/06/20 14:28	
Trichloroethene	**0.22**	0.50	0.10	1	B0K0109	11/06/2020	11/06/20 14:28	J
Trichlorofluoromethane	ND	0.50	0.23	1	B0K0109	11/06/2020	11/06/20 14:28	
Vinyl chloride	ND	0.50	0.13	1	B0K0109	11/06/2020	11/06/20 14:28	
Surrogate: 1,2-Dichloroethane-d4	*95.3 %*	*64 - 155*			B0K0109	11/06/2020	*11/06/20 14:28*	
Surrogate: 4-Bromofluorobenzene	*80.5 %*	*73 - 124*			B0K0109	11/06/2020	*11/06/20 14:28*	
Surrogate: Dibromofluoromethane	*103 %*	*78 - 129*			B0K0109	11/06/2020	*11/06/20 14:28*	
Surrogate: Toluene-d8	*94.4 %*	*84 - 117*			B0K0109	11/06/2020	*11/06/20 14:28*	

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 :	11/16/2020

Client Sample ID: MW-34B

Lab ID: 2002459-15

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

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,4-Dioxane	**29**	2.0	0.84	1	B0K0094	11/05/2020	11/06/20 19:27	
Surrogate: 1,2-Dichlorobenzene-d4	*54.6 %*		*17 - 119*		B0K0094	11/05/2020	*11/06/20 19:27*	
Surrogate: 2-Fluorobiphenyl	*59.7 %*		*10 - 133*		B0K0094	11/05/2020	*11/06/20 19:27*	
Surrogate: 4-Terphenyl-d14	*111 %*		*5 - 139*		B0K0094	11/05/2020	*11/06/20 19:27*	
Surrogate: Nitrobenzene-d5	*62.6 %*		*13 - 150*		B0K0094	11/05/2020	*11/06/20 19:27*	

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 : 11/16/2020

QUALITY CONTROL SECTION

Volatile Organic Compounds by EPA 8260B - Quality Control

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B0K0030 - MSVOA_LL_W										
Blank (B0K0030-BLK1)					Prepared: 11/4/2020 Analyzed: 11/4/2020					
1,1,1,2-Tetrachloroethane	ND	0.50	0.11							
1,1,1-Trichloroethane	ND	0.50	0.21							
1,1,2,2-Tetrachloroethane	ND	0.50	0.36							
1,1,2-Trichloroethane	ND	0.50	0.25							
1,1-Dichloroethane	ND	0.50	0.09							
1,1-Dichloroethene	ND	0.50	0.13							
1,1-Dichloropropene	ND	0.50	0.13							
1,2,3-Trichloropropane	ND	0.50	0.39							
1,2,3-Trichlorobenzene	ND	0.50	0.18							
1,2,4-Trichlorobenzene	ND	0.50	0.16							
1,2,4-Trimethylbenzene	ND	0.50	0.14							
1,2-Dibromo-3-chloropropane	ND	0.50	0.41							
1,2-Dibromoethane	ND	0.50	0.24							
1,2-Dichlorobenzene	ND	0.50	0.20							
1,2-Dichloroethane	ND	0.50	0.20							
1,2-Dichloropropane	ND	0.50	0.15							
1,3,5-Trimethylbenzene	ND	0.50	0.13							
1,3-Dichlorobenzene	ND	0.50	0.16							
1,3-Dichloropropane	ND	0.50	0.21							
1,4-Dichlorobenzene	ND	0.50	0.17							
2,2-Dichloropropane	ND	0.50	0.38							
2-Chlorotoluene	ND	0.50	0.11							
4-Chlorotoluene	ND	0.50	0.12							
4-Isopropyltoluene	ND	0.50	0.11							
Benzene	ND	0.50	0.13							
Bromobenzene	ND	0.50	0.21							
Bromodichloromethane	ND	0.50	0.14							
Bromoform	ND	0.50	0.20							
Bromomethane	ND	0.50	0.40							
Carbon tetrachloride	ND	0.50	0.09							
Chlorobenzene	ND	0.50	0.13							
Chloroethane	ND	0.50	0.15							
Chloroform	ND	0.50	0.11							
Chloromethane	ND	0.50	0.12							
cis-1,2-Dichloroethene	ND	0.50	0.14							
cis-1,3-Dichloropropene	ND	0.50	0.13							
Dibromochloromethane	ND	0.50	0.16							
Dibromomethane	ND	0.50	0.19							
Dichlorodifluoromethane	ND	0.50	0.18							

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

Project Number : Raytheon Main, 532.30
Report To : Steve Netto
Reported : 11/16/2020

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

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B0K0030 - MSVOA_LL_W (continued)										
Blank (B0K0030-BLK1) - Continued					Prepared: 11/4/2020 Analyzed: 11/4/2020					
Ethylbenzene	ND	0.50	0.13							
Hexachlorobutadiene	ND	0.50	0.15							
Isopropylbenzene	ND	0.50	0.10							
m,p-Xylene	ND	1.0	0.19							
Methylene chloride	ND	1.0	0.71							
n-Butylbenzene	ND	0.50	0.11							
n-Propylbenzene	ND	0.50	0.10							
Naphthalene	ND	0.50	0.41							
o-Xylene	ND	0.50	0.13							
sec-Butylbenzene	ND	0.50	0.09							
Styrene	ND	0.50	0.13							
tert-Butylbenzene	ND	0.50	0.09							
Tetrachloroethene	ND	0.50	0.10							
Toluene	ND	0.50	0.12							
trans-1,2-Dichloroethene	ND	0.50	0.09							
Trichloroethene	ND	0.50	0.10							
Trichlorofluoromethane	ND	0.50	0.23							
Vinyl chloride	ND	0.50	0.13							
Surrogate: 1,2-Dichloroethane-d4	*26.55*			*25.0000*		*106*	*64 - 155*			
Surrogate: 4-Bromofluorobenzene	*21.19*			*25.0000*		*84.8*	*73 - 124*			
Surrogate: Dibromofluoromethane	*26.70*			*25.0000*		*107*	*78 - 129*			
Surrogate: Toluene-d8	*23.77*			*25.0000*		*95.1*	*84 - 117*			
LCS (B0K0030-BS1)					Prepared: 11/4/2020 Analyzed: 11/4/2020					
1,1,1,2-Tetrachloroethane	20.4400	0.50	0.11	20.0000		102	79 - 116			
1,1,1-Trichloroethane	20.0400	0.50	0.21	20.0000		100	73 - 130			
1,1,2,2-Tetrachloroethane	20.5300	0.50	0.36	20.0000		103	71 - 122			
1,1,2-Trichloroethane	19.5600	0.50	0.25	20.0000		97.8	70 - 124			
1,1-Dichloroethane	21.0000	0.50	0.09	20.0000		105	69 - 128			
1,1-Dichloroethene	19.1500	0.50	0.13	20.0000		95.8	65 - 137			
1,1-Dichloropropene	19.6800	0.50	0.13	20.0000		98.4	74 - 129			
1,2,3-Trichloropropane	20.3700	0.50	0.39	20.0000		102	74 - 123			
1,2,3-Trichlorobenzene	20.2100	0.50	0.18	20.0000		101	59 - 130			
1,2,4-Trichlorobenzene	19.2200	0.50	0.16	20.0000		96.1	65 - 125			
1,2,4-Trimethylbenzene	18.9100	0.50	0.14	20.0000		94.6	88 - 124			
1,2-Dibromo-3-chloropropane	21.1000	0.50	0.41	20.0000		106	61 - 127			
1,2-Dibromoethane	19.9900	0.50	0.24	20.0000		100	72 - 125			
1,2-Dichlorobenzene	19.3200	0.50	0.20	20.0000		96.6	84 - 113			
1,2-Dichloroethane	20.5400	0.50	0.20	20.0000		103	68 - 130			
1,2-Dichloropropane	20.1400	0.50	0.15	20.0000		101	77 - 121			
1,3,5-Trimethylbenzene	20.2100	0.50	0.13	20.0000		101	83 - 124			

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 : 11/16/2020

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

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B0K0030 - MSVOA_LL_W (continued)										
LCS (B0K0030-BS1) - Continued					Prepared: 11/4/2020 Analyzed: 11/4/2020					
1,3-Dichlorobenzene	19.1300	0.50	0.16	20.0000		95.6	83 - 112			
1,3-Dichloropropane	20.6700	0.50	0.21	20.0000		103	77 - 119			
1,4-Dichlorobenzene	19.1500	0.50	0.17	20.0000		95.8	79 - 115			
2,2-Dichloropropane	21.1400	0.50	0.38	20.0000		106	67 - 149			
2-Chlorotoluene	19.2300	0.50	0.11	20.0000		96.2	81 - 119			
4-Chlorotoluene	19.5500	0.50	0.12	20.0000		97.8	86 - 117			
4-Isopropyltoluene	20.7400	0.50	0.11	20.0000		104	82 - 131			
Benzene	19.4700	0.50	0.13	20.0000		97.4	75 - 124			
Bromobenzene	18.8200	0.50	0.21	20.0000		94.1	82 - 108			
Bromodichloromethane	19.3400	0.50	0.14	20.0000		96.7	80 - 120			
Bromoform	20.5600	0.50	0.20	20.0000		103	70 - 123			
Bromomethane	19.9400	0.50	0.40	20.0000		99.7	44 - 151			
Carbon tetrachloride	20.2300	0.50	0.09	20.0000		101	62 - 140			
Chlorobenzene	19.6500	0.50	0.13	20.0000		98.2	80 - 112			
Chloroethane	21.4000	0.50	0.15	20.0000		107	42 - 167			
Chloroform	16.9100	0.50	0.11	20.0000		84.6	77 - 122			
Chloromethane	21.6500	0.50	0.12	20.0000		108	33 - 153			
cis-1,2-Dichloroethene	20.4700	0.50	0.14	20.0000		102	75 - 121			
cis-1,3-Dichloropropene	18.8900	0.50	0.13	20.0000		94.4	73 - 127			
Dibromochloromethane	19.0800	0.50	0.16	20.0000		95.4	77 - 122			
Dibromomethane	18.5200	0.50	0.19	20.0000		92.6	75 - 121			
Dichlorodifluoromethane	19.9900	0.50	0.18	20.0000		100	0 - 171			
Ethylbenzene	19.8700	0.50	0.13	20.0000		99.4	82 - 119			
Hexachlorobutadiene	18.7700	0.50	0.15	20.0000		93.8	71 - 131			
Isopropylbenzene	18.7700	0.50	0.10	20.0000		93.8	75 - 126			
m,p-Xylene	40.1500	1.0	0.19	40.0000		100	86 - 119			
Methylene chloride	19.0100	1.0	0.71	20.0000		95.0	76 - 125			
n-Butylbenzene	21.3200	0.50	0.11	20.0000		107	81 - 125			
n-Propylbenzene	20.3200	0.50	0.10	20.0000		102	78 - 130			
Naphthalene	18.0400	0.50	0.41	20.0000		90.2	47 - 128			
o-Xylene	19.9500	0.50	0.13	20.0000		99.8	85 - 119			
sec-Butylbenzene	20.4900	0.50	0.09	20.0000		102	78 - 130			
Styrene	18.0500	0.50	0.13	20.0000		90.2	62 - 148			
tert-Butylbenzene	19.0400	0.50	0.09	20.0000		95.2	77 - 125			
Tetrachloroethene	19.6500	0.50	0.10	20.0000		98.2	73 - 120			
Toluene	19.7300	0.50	0.12	20.0000		98.6	79 - 119			
trans-1,2-Dichloroethene	18.8900	0.50	0.09	20.0000		94.4	70 - 129			
Trichloroethene	18.6800	0.50	0.10	20.0000		93.4	73 - 117			
Trichlorofluoromethane	21.9200	0.50	0.23	20.0000		110	59 - 135			
Vinyl chloride	21.0000	0.50	0.13	20.0000		105	58 - 132			
Surrogate: 1,2-Dichloroethane-d4	*26.48*			*25.0000*		*106*	*64 - 155*			

Hargis & Associates, Inc.	Project Number : Raytheon Main, 532.30
9171 Towne Centre Drive, Suite 375	Report To : Steve Netto
San Diego , CA 92122	Reported : 11/16/2020

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

Analyte	Result (ug/L)	PQL (ug/L)		Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B0K0030 - MSVOA_LL_W (continued)										
LCS (B0K0030-BS1) - Continued						Prepared: 11/4/2020 Analyzed: 11/4/2020				
Surrogate: 4-Bromofluorobenzene	*24.30*			*25.0000*		*97.2*	*73 - 124*			
Surrogate: Dibromofluoromethane	*25.54*			*25.0000*		*102*	*78 - 129*			
Surrogate: Toluene-d8	*24.57*			*25.0000*		*98.3*	*84 - 117*			
LCS Dup (B0K0030-BSD1)						Prepared: 11/4/2020 Analyzed: 11/4/2020				
1,1,1,2-Tetrachloroethane	18.6000	0.50	0.11	20.0000		93.0	79 - 116	9.43	20	
1,1,1-Trichloroethane	19.0500	0.50	0.21	20.0000		95.2	73 - 130	5.07	20	
1,1,2,2-Tetrachloroethane	21.3100	0.50	0.36	20.0000		107	71 - 122	3.73	20	
1,1,2-Trichloroethane	20.0800	0.50	0.25	20.0000		100	70 - 124	2.62	20	
1,1-Dichloroethane	19.9500	0.50	0.09	20.0000		99.8	69 - 128	5.13	20	
1,1-Dichloroethene	17.6700	0.50	0.13	20.0000		88.4	65 - 137	8.04	20	
1,1-Dichloropropene	18.1700	0.50	0.13	20.0000		90.8	74 - 129	7.98	20	
1,2,3-Trichloropropane	21.8500	0.50	0.39	20.0000		109	74 - 123	7.01	20	
1,2,3-Trichlorobenzene	19.3600	0.50	0.18	20.0000		96.8	59 - 130	4.30	20	
1,2,4-Trichlorobenzene	18.3200	0.50	0.16	20.0000		91.6	65 - 125	4.79	20	
1,2,4-Trimethylbenzene	18.2600	0.50	0.14	20.0000		91.3	88 - 124	3.50	20	
1,2-Dibromo-3-chloropropane	22.4800	0.50	0.41	20.0000		112	61 - 127	6.33	20	
1,2-Dibromoethane	20.7000	0.50	0.24	20.0000		104	72 - 125	3.49	20	
1,2-Dichlorobenzene	19.3100	0.50	0.20	20.0000		96.6	84 - 113	0.0518	20	
1,2-Dichloroethane	20.0000	0.50	0.20	20.0000		100	68 - 130	2.66	20	
1,2-Dichloropropane	19.5600	0.50	0.15	20.0000		97.8	77 - 121	2.92	20	
1,3,5-Trimethylbenzene	19.7400	0.50	0.13	20.0000		98.7	83 - 124	2.35	20	
1,3-Dichlorobenzene	18.5300	0.50	0.16	20.0000		92.6	83 - 112	3.19	20	
1,3-Dichloropropane	20.4300	0.50	0.21	20.0000		102	77 - 119	1.17	20	
1,4-Dichlorobenzene	18.8900	0.50	0.17	20.0000		94.4	79 - 115	1.37	20	
2,2-Dichloropropane	19.6200	0.50	0.38	20.0000		98.1	67 - 149	7.46	20	
2-Chlorotoluene	18.6000	0.50	0.11	20.0000		93.0	81 - 119	3.33	20	
4-Chlorotoluene	18.9100	0.50	0.12	20.0000		94.6	86 - 117	3.33	20	
4-Isopropyltoluene	19.3400	0.50	0.11	20.0000		96.7	82 - 131	6.99	20	
Benzene	18.7000	0.50	0.13	20.0000		93.5	75 - 124	4.03	20	
Bromobenzene	18.1600	0.50	0.21	20.0000		90.8	82 - 108	3.57	20	
Bromodichloromethane	19.2900	0.50	0.14	20.0000		96.4	80 - 120	0.259	20	
Bromoform	21.1000	0.50	0.20	20.0000		106	70 - 123	2.59	20	
Bromomethane	18.4200	0.50	0.40	20.0000		92.1	44 - 151	7.92	20	
Carbon tetrachloride	19.3400	0.50	0.09	20.0000		96.7	62 - 140	4.50	20	
Chlorobenzene	18.7100	0.50	0.13	20.0000		93.6	80 - 112	4.90	20	
Chloroethane	20.9400	0.50	0.15	20.0000		105	42 - 167	2.17	20	
Chloroform	16.4600	0.50	0.11	20.0000		82.3	77 - 122	2.70	20	
Chloromethane	19.6700	0.50	0.12	20.0000		98.4	33 - 153	9.58	20	
cis-1,2-Dichloroethene	19.3800	0.50	0.14	20.0000		96.9	75 - 121	5.47	20	
cis-1,3-Dichloropropene	18.6500	0.50	0.13	20.0000		93.2	73 - 127	1.28	20	
Dibromochloromethane	18.2700	0.50	0.16	20.0000		91.4	77 - 122	4.34	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 : 11/16/2020

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

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B0K0030 - MSVOA_LL_W (continued)										
LCS Dup (B0K0030-BSD1) - Continued					Prepared: 11/4/2020 Analyzed: 11/4/2020					
Dibromomethane	19.0800	0.50	0.19	20.0000		95.4	75 - 121	2.98	20	
Dichlorodifluoromethane	18.2200	0.50	0.18	20.0000		91.1	0 - 171	9.26	20	
Ethylbenzene	18.5300	0.50	0.13	20.0000		92.6	82 - 119	6.98	20	
Hexachlorobutadiene	16.6400	0.50	0.15	20.0000		83.2	71 - 131	12.0	20	
Isopropylbenzene	17.9200	0.50	0.10	20.0000		89.6	75 - 126	4.63	20	
m,p-Xylene	37.2500	1.0	0.19	40.0000		93.1	86 - 119	7.49	20	
Methylene chloride	19.0600	1.0	0.71	20.0000		95.3	76 - 125	0.263	20	
n-Butylbenzene	20.2400	0.50	0.11	20.0000		101	81 - 125	5.20	20	
n-Propylbenzene	19.1900	0.50	0.10	20.0000		96.0	78 - 130	5.72	20	
Naphthalene	18.0600	0.50	0.41	20.0000		90.3	47 - 128	0.111	20	
o-Xylene	19.0000	0.50	0.13	20.0000		95.0	85 - 119	4.88	20	
sec-Butylbenzene	19.3000	0.50	0.09	20.0000		96.5	78 - 130	5.98	20	
Styrene	17.2700	0.50	0.13	20.0000		86.4	62 - 148	4.42	20	
tert-Butylbenzene	18.0800	0.50	0.09	20.0000		90.4	77 - 125	5.17	20	
Tetrachloroethene	18.3100	0.50	0.10	20.0000		91.6	73 - 120	7.06	20	
Toluene	18.8000	0.50	0.12	20.0000		94.0	79 - 119	4.83	20	
trans-1,2-Dichloroethene	18.0200	0.50	0.09	20.0000		90.1	70 - 129	4.71	20	
Trichloroethene	17.8400	0.50	0.10	20.0000		89.2	73 - 117	4.60	20	
Trichlorofluoromethane	20.6500	0.50	0.23	20.0000		103	59 - 135	5.97	20	
Vinyl chloride	19.8400	0.50	0.13	20.0000		99.2	58 - 132	5.68	20	
Surrogate: 1,2-Dichloroethane-d4	*26.45*			*25.0000*		*106*	*64 - 155*			
Surrogate: 4-Bromofluorobenzene	*23.85*			*25.0000*		*95.4*	*73 - 124*			
Surrogate: Dibromofluoromethane	*25.24*			*25.0000*		*101*	*78 - 129*			
Surrogate: Toluene-d8	*24.21*			*25.0000*		*96.8*	*84 - 117*			
Matrix Spike (B0K0030-MS1)				**Source: 2002456-03**	Prepared: 11/4/2020 Analyzed: 11/4/2020					
1,1,1,2-Tetrachloroethane	23.0800	0.50	0.11	20.0000	ND	115	81 - 133			
1,1,1-Trichloroethane	24.2400	0.50	0.21	20.0000	ND	121	93 - 149			
1,1,2,2-Tetrachloroethane	23.0700	0.50	0.36	20.0000	ND	115	69 - 151			
1,1,2-Trichloroethane	20.6600	0.50	0.25	20.0000	ND	103	78 - 130			
1,1-Dichloroethane	24.8400	0.50	0.09	20.0000	ND	124	68 - 135			
1,1-Dichloroethene	22.9800	0.50	0.13	20.0000	ND	115	77 - 134			
1,1-Dichloropropene	22.0400	0.50	0.13	20.0000	ND	110	91 - 138			
1,2,3-Trichloropropane	23.1900	0.50	0.39	20.0000	ND	116	77 - 136			
1,2,3-Trichlorobenzene	21.1500	0.50	0.18	20.0000	ND	106	72 - 129			
1,2,4-Trichlorobenzene	19.9300	0.50	0.16	20.0000	ND	99.6	64 - 135			
1,2,4-Trimethylbenzene	20.0400	0.50	0.14	20.0000	ND	100	10 - 179			
1,2-Dibromo-3-chloropropane	21.1500	0.50	0.41	20.0000	ND	106	62 - 153			
1,2-Dibromoethane	22.4900	0.50	0.24	20.0000	ND	112	80 - 132			
1,2-Dichlorobenzene	20.6800	0.50	0.20	20.0000	ND	103	81 - 131			
1,2-Dichloroethane	22.1100	0.50	0.20	20.0000	ND	111	68 - 146			

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 : 11/16/2020

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

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B0K0030 - MSVOA_LL_W (continued)										
Matrix Spike (B0K0030-MS1) - Continued			**Source: 2002456-03**		Prepared: 11/4/2020 Analyzed: 11/4/2020					
1,2-Dichloropropane	22.2600	0.50	0.15	20.0000	ND	111	74 - 136			
1,3,5-Trimethylbenzene	21.6600	0.50	0.13	20.0000	ND	108	66 - 149			
1,3-Dichlorobenzene	20.1700	0.50	0.16	20.0000	ND	101	79 - 128			
1,3-Dichloropropane	22.9500	0.50	0.21	20.0000	ND	115	80 - 129			
1,4-Dichlorobenzene	20.6500	0.50	0.17	20.0000	ND	103	84 - 121			
2,2-Dichloropropane	23.4500	0.50	0.38	20.0000	ND	117	63 - 179			
2-Chlorotoluene	20.4700	0.50	0.11	20.0000	ND	102	76 - 142			
4-Chlorotoluene	21.2100	0.50	0.12	20.0000	ND	106	72 - 152			
4-Isopropyltoluene	21.6600	0.50	0.11	20.0000	ND	108	84 - 141			
Benzene	22.0000	0.50	0.13	20.0000	ND	110	79 - 131			
Bromobenzene	20.6300	0.50	0.21	20.0000	ND	103	82 - 121			
Bromodichloromethane	21.8500	0.50	0.14	20.0000	ND	109	86 - 138			
Bromoform	23.1100	0.50	0.20	20.0000	ND	116	80 - 136			
Bromomethane	23.2400	0.50	0.40	20.0000	ND	116	35 - 194			
Carbon tetrachloride	23.5200	0.50	0.09	20.0000	ND	118	73 - 176			
Chlorobenzene	22.0300	0.50	0.13	20.0000	ND	110	81 - 124			
Chloroethane	26.1800	0.50	0.15	20.0000	ND	131	0 - 257			
Chloroform	19.1400	0.50	0.11	20.0000	ND	95.7	76 - 139			
Chloromethane	27.1800	0.50	0.12	20.0000	ND	136	27 - 144			
cis-1,2-Dichloroethene	23.5400	0.50	0.14	20.0000	ND	118	69 - 139			
cis-1,3-Dichloropropene	20.2200	0.50	0.13	20.0000	ND	101	67 - 149			
Dibromochloromethane	20.5400	0.50	0.16	20.0000	ND	103	91 - 131			
Dibromomethane	21.1900	0.50	0.19	20.0000	ND	106	70 - 134			
Dichlorodifluoromethane	23.9100	0.50	0.18	20.0000	ND	120	0 - 161			
Ethylbenzene	21.6400	0.50	0.13	20.0000	ND	108	89 - 134			
Hexachlorobutadiene	18.9400	0.50	0.15	20.0000	ND	94.7	73 - 137			
Isopropylbenzene	19.8300	0.50	0.10	20.0000	ND	99.2	72 - 152			
m,p-Xylene	44.4300	1.0	0.19	40.0000	ND	111	82 - 141			
Methylene chloride	22.3400	1.0	0.71	20.0000	ND	112	74 - 133			
n-Butylbenzene	22.7200	0.50	0.11	20.0000	ND	114	65 - 164			
n-Propylbenzene	20.9200	0.50	0.10	20.0000	ND	105	73 - 161			
Naphthalene	19.1200	0.50	0.41	20.0000	ND	95.6	59 - 105			
o-Xylene	21.8500	0.50	0.13	20.0000	ND	109	90 - 134			
sec-Butylbenzene	21.4000	0.50	0.09	20.0000	ND	107	80 - 157			
Styrene	18.0900	0.50	0.13	20.0000	ND	90.4	0 - 222			
tert-Butylbenzene	20.2200	0.50	0.09	20.0000	ND	101	88 - 141			
Tetrachloroethene	21.7200	0.50	0.10	20.0000	ND	109	75 - 136			
Toluene	21.7400	0.50	0.12	20.0000	ND	109	82 - 132			
trans-1,2-Dichloroethene	22.8600	0.50	0.09	20.0000	ND	114	65 - 135			
Trichloroethene	20.5900	0.50	0.10	20.0000	ND	103	75 - 128			
Trichlorofluoromethane	26.0100	0.50	0.23	20.0000	ND	130	89 - 143			
Vinyl chloride	25.1900	0.50	0.13	20.0000	ND	126	50 - 148			

Hargis & Associates, Inc.	Project Number : Raytheon Main, 532.30
9171 Towne Centre Drive, Suite 375	Report To : Steve Netto
San Diego , CA 92122	Reported : 11/16/2020

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

Analyte	Result (ug/L)	PQL (ug/L)		Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B0K0030 - MSVOA_LL_W (continued)										
Matrix Spike (B0K0030-MS1) - Continued			**Source: 2002456-03**		Prepared: 11/4/2020 Analyzed: 11/4/2020					
Surrogate: 1,2-Dichloroethane-d4	*28.25*			*25.0000*		*113*	*64 - 155*			
Surrogate: 4-Bromofluorobenzene	*24.27*			*25.0000*		*97.1*	*73 - 124*			
Surrogate: Dibromofluoromethane	*27.11*			*25.0000*		*108*	*78 - 129*			
Surrogate: Toluene-d8	*24.32*			*25.0000*		*97.3*	*84 - 117*			
Matrix Spike Dup (B0K0030-MSD1)			**Source: 2002456-03**		Prepared: 11/4/2020 Analyzed: 11/4/2020					
1,1,1,2-Tetrachloroethane	22.4600	0.50	0.11	20.0000	ND	112	81 - 133	2.72	20	
1,1,1-Trichloroethane	24.1100	0.50	0.21	20.0000	ND	121	93 - 149	0.538	20	
1,1,2,2-Tetrachloroethane	24.4800	0.50	0.36	20.0000	ND	122	69 - 151	5.93	20	
1,1,2-Trichloroethane	22.2400	0.50	0.25	20.0000	ND	111	78 - 130	7.37	20	
1,1-Dichloroethane	24.6900	0.50	0.09	20.0000	ND	123	68 - 135	0.606	20	
1,1-Dichloroethene	23.1100	0.50	0.13	20.0000	ND	116	77 - 134	0.564	20	
1,1-Dichloropropene	21.5700	0.50	0.13	20.0000	ND	108	91 - 138	2.16	20	
1,2,3-Trichloropropane	25.2900	0.50	0.39	20.0000	ND	126	77 - 136	8.66	20	
1,2,3-Trichlorobenzene	22.8800	0.50	0.18	20.0000	ND	114	72 - 129	7.86	20	
1,2,4-Trichlorobenzene	21.2200	0.50	0.16	20.0000	ND	106	64 - 135	6.27	20	
1,2,4-Trimethylbenzene	21.3800	0.50	0.14	20.0000	ND	107	10 - 179	6.47	20	
1,2-Dibromo-3-chloropropane	25.4500	0.50	0.41	20.0000	ND	127	62 - 153	18.5	20	
1,2-Dibromoethane	21.7800	0.50	0.24	20.0000	ND	109	80 - 132	3.21	20	
1,2-Dichlorobenzene	23.1900	0.50	0.20	20.0000	ND	116	81 - 131	11.4	20	
1,2-Dichloroethane	22.6700	0.50	0.20	20.0000	ND	113	68 - 146	2.50	20	
1,2-Dichloropropane	22.8200	0.50	0.15	20.0000	ND	114	74 - 136	2.48	20	
1,3,5-Trimethylbenzene	23.2200	0.50	0.13	20.0000	ND	116	66 - 149	6.95	20	
1,3-Dichlorobenzene	21.8400	0.50	0.16	20.0000	ND	109	79 - 128	7.95	20	
1,3-Dichloropropane	23.2400	0.50	0.21	20.0000	ND	116	80 - 129	1.26	20	
1,4-Dichlorobenzene	22.2200	0.50	0.17	20.0000	ND	111	84 - 121	7.32	20	
2,2-Dichloropropane	22.8400	0.50	0.38	20.0000	ND	114	63 - 179	2.64	20	
2-Chlorotoluene	22.0800	0.50	0.11	20.0000	ND	110	76 - 142	7.57	20	
4-Chlorotoluene	22.6000	0.50	0.12	20.0000	ND	113	72 - 152	6.35	20	
4-Isopropyltoluene	22.8500	0.50	0.11	20.0000	ND	114	84 - 141	5.35	20	
Benzene	22.2900	0.50	0.13	20.0000	ND	111	79 - 131	1.31	20	
Bromobenzene	21.2500	0.50	0.21	20.0000	ND	106	82 - 121	2.96	20	
Bromodichloromethane	22.2400	0.50	0.14	20.0000	ND	111	86 - 138	1.77	20	
Bromoform	24.6200	0.50	0.20	20.0000	ND	123	80 - 136	6.33	20	
Bromomethane	23.1600	0.50	0.40	20.0000	ND	116	35 - 194	0.345	20	
Carbon tetrachloride	23.5600	0.50	0.09	20.0000	ND	118	73 - 176	0.170	20	
Chlorobenzene	22.1400	0.50	0.13	20.0000	ND	111	81 - 124	0.498	20	
Chloroethane	25.3800	0.50	0.15	20.0000	ND	127	0 - 257	3.10	20	
Chloroform	19.9100	0.50	0.11	20.0000	ND	99.6	76 - 139	3.94	20	
Chloromethane	26.4600	0.50	0.12	20.0000	ND	132	27 - 144	2.68	20	
cis-1,2-Dichloroethene	23.9800	0.50	0.14	20.0000	ND	120	69 - 139	1.85	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 : 11/16/2020

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

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B0K0030 - MSVOA_LL_W (continued)										
Matrix Spike Dup (B0K0030-MSD1) - Continued			**Source: 2002456-03**		Prepared: 11/4/2020 Analyzed: 11/4/2020					
cis-1,3-Dichloropropene	20.8000	0.50	0.13	20.0000	ND	104	67 - 149	2.83	20	
Dibromochloromethane	20.5900	0.50	0.16	20.0000	ND	103	91 - 131	0.243	20	
Dibromomethane	21.9400	0.50	0.19	20.0000	ND	110	70 - 134	3.48	20	
Dichlorodifluoromethane	23.9900	0.50	0.18	20.0000	ND	120	0 - 161	0.334	20	
Ethylbenzene	22.0100	0.50	0.13	20.0000	ND	110	89 - 134	1.70	20	
Hexachlorobutadiene	20.2600	0.50	0.15	20.0000	ND	101	73 - 137	6.73	20	
Isopropylbenzene	21.6600	0.50	0.10	20.0000	ND	108	72 - 152	8.82	20	
m,p-Xylene	44.5200	1.0	0.19	40.0000	ND	111	82 - 141	0.202	20	
Methylene chloride	23.3700	1.0	0.71	20.0000	ND	117	74 - 133	4.51	20	
n-Butylbenzene	24.0100	0.50	0.11	20.0000	ND	120	65 - 164	5.52	20	
n-Propylbenzene	22.5800	0.50	0.10	20.0000	ND	113	73 - 161	7.63	20	
Naphthalene	21.3700	0.50	0.41	20.0000	ND	107	59 - 105	11.1	20	M2
o-Xylene	22.2200	0.50	0.13	20.0000	ND	111	90 - 134	1.68	20	
sec-Butylbenzene	23.3000	0.50	0.09	20.0000	ND	116	80 - 157	8.50	20	
Styrene	18.3800	0.50	0.13	20.0000	ND	91.9	0 - 222	1.59	20	
tert-Butylbenzene	21.9500	0.50	0.09	20.0000	ND	110	88 - 141	8.20	20	
Tetrachloroethene	21.7700	0.50	0.10	20.0000	ND	109	75 - 136	0.230	20	
Toluene	21.8000	0.50	0.12	20.0000	ND	109	82 - 132	0.276	20	
trans-1,2-Dichloroethene	23.0100	0.50	0.09	20.0000	ND	115	65 - 135	0.654	20	
Trichloroethene	21.3200	0.50	0.10	20.0000	ND	107	75 - 128	3.48	20	
Trichlorofluoromethane	26.4600	0.50	0.23	20.0000	ND	132	89 - 143	1.72	20	
Vinyl chloride	25.3800	0.50	0.13	20.0000	ND	127	50 - 148	0.751	20	
Surrogate: 1,2-Dichloroethane-d4	*26.97*			*25.0000*		*108*	*64 - 155*			
Surrogate: 4-Bromofluorobenzene	*23.27*			*25.0000*		*93.1*	*73 - 124*			
Surrogate: Dibromofluoromethane	*27.15*			*25.0000*		*109*	*78 - 129*			
Surrogate: Toluene-d8	*24.27*			*25.0000*		*97.1*	*84 - 117*			

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 : 11/16/2020

Volatile Organic Compounds by EPA 8260B - Quality Control

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B0K0083 - MSVOA_LL_W										
Blank (B0K0083-BLK1)							Prepared: 11/5/2020 Analyzed: 11/5/2020			
1,1,1,2-Tetrachloroethane	ND	0.50	0.11							
1,1,1-Trichloroethane	ND	0.50	0.21							
1,1,2,2-Tetrachloroethane	ND	0.50	0.36							
1,1,2-Trichloroethane	ND	0.50	0.25							
1,1-Dichloroethane	ND	0.50	0.09							
1,1-Dichloroethene	ND	0.50	0.13							
1,1-Dichloropropene	ND	0.50	0.13							
1,2,3-Trichloropropane	ND	0.50	0.39							
1,2,3-Trichlorobenzene	ND	0.50	0.18							
1,2,4-Trichlorobenzene	ND	0.50	0.16							
1,2,4-Trimethylbenzene	ND	0.50	0.14							
1,2-Dibromo-3-chloropropane	ND	0.50	0.41							
1,2-Dibromoethane	ND	0.50	0.24							
1,2-Dichlorobenzene	ND	0.50	0.20							
1,2-Dichloroethane	ND	0.50	0.20							
1,2-Dichloropropane	ND	0.50	0.15							
1,3,5-Trimethylbenzene	ND	0.50	0.13							
1,3-Dichlorobenzene	ND	0.50	0.16							
1,3-Dichloropropane	ND	0.50	0.21							
1,4-Dichlorobenzene	ND	0.50	0.17							
2,2-Dichloropropane	ND	0.50	0.38							
2-Chlorotoluene	ND	0.50	0.11							
4-Chlorotoluene	ND	0.50	0.12							
4-Isopropyltoluene	ND	0.50	0.11							
Benzene	ND	0.50	0.13							
Bromobenzene	ND	0.50	0.21							
Bromodichloromethane	ND	0.50	0.14							
Bromoform	ND	0.50	0.20							
Bromomethane	ND	0.50	0.40							
Carbon tetrachloride	ND	0.50	0.09							
Chlorobenzene	ND	0.50	0.13							
Chloroethane	ND	0.50	0.15							
Chloroform	ND	0.50	0.11							
Chloromethane	ND	0.50	0.12							
cis-1,2-Dichloroethene	ND	0.50	0.14							
cis-1,3-Dichloropropene	ND	0.50	0.13							
Dibromochloromethane	ND	0.50	0.16							
Dibromomethane	ND	0.50	0.19							
Dichlorodifluoromethane	ND	0.50	0.18							
Ethylbenzene	ND	0.50	0.13							
Hexachlorobutadiene	ND	0.50	0.15							

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

Project Number : Raytheon Main, 532.30
Report To : Steve Netto
Reported : 11/16/2020

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

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B0K0083 - MSVOA_LL_W (continued)										
Blank (B0K0083-BLK1) - Continued					Prepared: 11/5/2020 Analyzed: 11/5/2020					
Isopropylbenzene	ND	0.50	0.10							
m,p-Xylene	ND	1.0	0.19							
Methylene chloride	ND	1.0	0.71							
n-Butylbenzene	ND	0.50	0.11							
n-Propylbenzene	ND	0.50	0.10							
Naphthalene	ND	0.50	0.41							
o-Xylene	ND	0.50	0.13							
sec-Butylbenzene	ND	0.50	0.09							
Styrene	ND	0.50	0.13							
tert-Butylbenzene	ND	0.50	0.09							
Tetrachloroethene	ND	0.50	0.10							
Toluene	ND	0.50	0.12							
trans-1,2-Dichloroethene	ND	0.50	0.09							
Trichloroethene	ND	0.50	0.10							
Trichlorofluoromethane	ND	0.50	0.23							
Vinyl chloride	ND	0.50	0.13							
Surrogate: 1,2-Dichloroethane-d4	*23.24*			*25.0000*		*93.0*	*64 - 155*			
Surrogate: 4-Bromofluorobenzene	*20.02*			*25.0000*		*80.1*	*73 - 124*			
Surrogate: Dibromofluoromethane	*25.74*			*25.0000*		*103*	*78 - 129*			
Surrogate: Toluene-d8	*23.61*			*25.0000*		*94.4*	*84 - 117*			
LCS (B0K0083-BS1)					Prepared: 11/5/2020 Analyzed: 11/5/2020					
1,1,1,2-Tetrachloroethane	19.4000	0.50	0.11	20.0000		97.0	79 - 116			
1,1,1-Trichloroethane	18.7000	0.50	0.21	20.0000		93.5	73 - 130			
1,1,2,2-Tetrachloroethane	19.4000	0.50	0.36	20.0000		97.0	71 - 122			
1,1,2-Trichloroethane	19.0500	0.50	0.25	20.0000		95.2	70 - 124			
1,1-Dichloroethane	18.0100	0.50	0.09	20.0000		90.0	69 - 128			
1,1-Dichloroethene	18.8500	0.50	0.13	20.0000		94.2	65 - 137			
1,1-Dichloropropene	18.5500	0.50	0.13	20.0000		92.8	74 - 129			
1,2,3-Trichloropropane	18.8100	0.50	0.39	20.0000		94.0	74 - 123			
1,2,3-Trichlorobenzene	19.1900	0.50	0.18	20.0000		96.0	59 - 130			
1,2,4-Trichlorobenzene	18.5900	0.50	0.16	20.0000		93.0	65 - 125			
1,2,4-Trimethylbenzene	18.0800	0.50	0.14	20.0000		90.4	88 - 124			
1,2-Dibromo-3-chloropropane	18.1400	0.50	0.41	20.0000		90.7	61 - 127			
1,2-Dibromoethane	19.3500	0.50	0.24	20.0000		96.8	72 - 125			
1,2-Dichlorobenzene	19.0700	0.50	0.20	20.0000		95.4	84 - 113			
1,2-Dichloroethane	17.6400	0.50	0.20	20.0000		88.2	68 - 130			
1,2-Dichloropropane	18.0900	0.50	0.15	20.0000		90.4	77 - 121			
1,3,5-Trimethylbenzene	18.8800	0.50	0.13	20.0000		94.4	83 - 124			
1,3-Dichlorobenzene	18.4500	0.50	0.16	20.0000		92.2	83 - 112			
1,3-Dichloropropane	18.2400	0.50	0.21	20.0000		91.2	77 - 119			

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

Project Number : Raytheon Main, 532.30
Report To : Steve Netto
Reported : 11/16/2020

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

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B0K0083 - MSVOA_LL_W (continued)										
LCS (B0K0083-BS1) - Continued					Prepared: 11/5/2020 Analyzed: 11/5/2020					
1,4-Dichlorobenzene	18.8900	0.50	0.17	20.0000		94.4	79 - 115			
2,2-Dichloropropane	19.3200	0.50	0.38	20.0000		96.6	67 - 149			
2-Chlorotoluene	17.5800	0.50	0.11	20.0000		87.9	81 - 119			
4-Chlorotoluene	18.1300	0.50	0.12	20.0000		90.6	86 - 117			
4-Isopropyltoluene	19.4800	0.50	0.11	20.0000		97.4	82 - 131			
Benzene	19.4000	0.50	0.13	20.0000		97.0	75 - 124			
Bromobenzene	18.6200	0.50	0.21	20.0000		93.1	82 - 108			
Bromodichloromethane	19.0800	0.50	0.14	20.0000		95.4	80 - 120			
Bromoform	20.6100	0.50	0.20	20.0000		103	70 - 123			
Bromomethane	17.9300	0.50	0.40	20.0000		89.6	44 - 151			
Carbon tetrachloride	20.2100	0.50	0.09	20.0000		101	62 - 140			
Chlorobenzene	18.4200	0.50	0.13	20.0000		92.1	80 - 112			
Chloroethane	19.4300	0.50	0.15	20.0000		97.2	42 - 167			
Chloroform	15.7000	0.50	0.11	20.0000		78.5	77 - 122			
Chloromethane	17.8500	0.50	0.12	20.0000		89.2	33 - 153			
cis-1,2-Dichloroethene	19.4600	0.50	0.14	20.0000		97.3	75 - 121			
cis-1,3-Dichloropropene	17.7000	0.50	0.13	20.0000		88.5	73 - 127			
Dibromochloromethane	17.6700	0.50	0.16	20.0000		88.4	77 - 122			
Dibromomethane	18.6800	0.50	0.19	20.0000		93.4	75 - 121			
Dichlorodifluoromethane	17.2900	0.50	0.18	20.0000		86.4	0 - 171			
Ethylbenzene	17.9600	0.50	0.13	20.0000		89.8	82 - 119			
Hexachlorobutadiene	18.5800	0.50	0.15	20.0000		92.9	71 - 131			
Isopropylbenzene	17.7900	0.50	0.10	20.0000		89.0	75 - 126			
m,p-Xylene	36.8400	1.0	0.19	40.0000		92.1	86 - 119			
Methylene chloride	17.6200	1.0	0.71	20.0000		88.1	76 - 125			
n-Butylbenzene	18.8700	0.50	0.11	20.0000		94.4	81 - 125			
n-Propylbenzene	18.1100	0.50	0.10	20.0000		90.6	78 - 130			
Naphthalene	16.7500	0.50	0.41	20.0000		83.8	47 - 128			
o-Xylene	17.8000	0.50	0.13	20.0000		89.0	85 - 119			
sec-Butylbenzene	18.6300	0.50	0.09	20.0000		93.2	78 - 130			
Styrene	16.7800	0.50	0.13	20.0000		83.9	62 - 148			
tert-Butylbenzene	18.3200	0.50	0.09	20.0000		91.6	77 - 125			
Tetrachloroethene	19.5200	0.50	0.10	20.0000		97.6	73 - 120			
Toluene	19.0800	0.50	0.12	20.0000		95.4	79 - 119			
trans-1,2-Dichloroethene	18.4700	0.50	0.09	20.0000		92.4	70 - 129			
Trichloroethene	19.2000	0.50	0.10	20.0000		96.0	73 - 117			
Trichlorofluoromethane	19.8700	0.50	0.23	20.0000		99.4	59 - 135			
Vinyl chloride	17.8100	0.50	0.13	20.0000		89.0	58 - 132			
Surrogate: 1,2-Dichloroethane-d4	*21.71*			*25.0000*		*86.8*	*64 - 155*			
Surrogate: 4-Bromofluorobenzene	*22.73*			*25.0000*		*90.9*	*73 - 124*			
Surrogate: Dibromofluoromethane	*24.82*			*25.0000*		*99.3*	*78 - 129*			

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

Project Number : Raytheon Main, 532.30
Report To : Steve Netto
Reported : 11/16/2020

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

Analyte	Result (ug/L)	PQL (ug/L)		Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B0K0083 - MSVOA_LL_W (continued)										
LCS (B0K0083-BS1) - Continued					Prepared: 11/5/2020 Analyzed: 11/5/2020					
Surrogate: Toluene-d8	*24.42*			*25.0000*		*97.7*	*84 - 117*			
LCS Dup (B0K0083-BSD1)					Prepared: 11/5/2020 Analyzed: 11/5/2020					
1,1,1,2-Tetrachloroethane	18.8600	0.50	0.11	20.0000		94.3	79 - 116	2.82	20	
1,1,1-Trichloroethane	17.7700	0.50	0.21	20.0000		88.8	73 - 130	5.10	20	
1,1,2,2-Tetrachloroethane	19.3900	0.50	0.36	20.0000		97.0	71 - 122	0.0516	20	
1,1,2-Trichloroethane	18.3800	0.50	0.25	20.0000		91.9	70 - 124	3.58	20	
1,1-Dichloroethane	16.7000	0.50	0.09	20.0000		83.5	69 - 128	7.55	20	
1,1-Dichloroethene	17.7500	0.50	0.13	20.0000		88.8	65 - 137	6.01	20	
1,1-Dichloropropene	17.5000	0.50	0.13	20.0000		87.5	74 - 129	5.83	20	
1,2,3-Trichloropropane	18.8000	0.50	0.39	20.0000		94.0	74 - 123	0.0532	20	
1,2,3-Trichlorobenzene	19.0800	0.50	0.18	20.0000		95.4	59 - 130	0.575	20	
1,2,4-Trichlorobenzene	18.5200	0.50	0.16	20.0000		92.6	65 - 125	0.377	20	
1,2,4-Trimethylbenzene	17.2200	0.50	0.14	20.0000		86.1	88 - 124	4.87	20	L3
1,2-Dibromo-3-chloropropane	19.3300	0.50	0.41	20.0000		96.6	61 - 127	6.35	20	
1,2-Dibromoethane	19.0600	0.50	0.24	20.0000		95.3	72 - 125	1.51	20	
1,2-Dichlorobenzene	19.6600	0.50	0.20	20.0000		98.3	84 - 113	3.05	20	
1,2-Dichloroethane	17.8100	0.50	0.20	20.0000		89.0	68 - 130	0.959	20	
1,2-Dichloropropane	17.4500	0.50	0.15	20.0000		87.2	77 - 121	3.60	20	
1,3,5-Trimethylbenzene	18.8300	0.50	0.13	20.0000		94.2	83 - 124	0.265	20	
1,3-Dichlorobenzene	18.8200	0.50	0.16	20.0000		94.1	83 - 112	1.99	20	
1,3-Dichloropropane	18.7900	0.50	0.21	20.0000		94.0	77 - 119	2.97	20	
1,4-Dichlorobenzene	18.9600	0.50	0.17	20.0000		94.8	79 - 115	0.370	20	
2,2-Dichloropropane	17.9700	0.50	0.38	20.0000		89.8	67 - 149	7.24	20	
2-Chlorotoluene	17.2200	0.50	0.11	20.0000		86.1	81 - 119	2.07	20	
4-Chlorotoluene	17.8100	0.50	0.12	20.0000		89.0	86 - 117	1.78	20	
4-Isopropyltoluene	19.2100	0.50	0.11	20.0000		96.0	82 - 131	1.40	20	
Benzene	18.5200	0.50	0.13	20.0000		92.6	75 - 124	4.64	20	
Bromobenzene	19.0700	0.50	0.21	20.0000		95.4	82 - 108	2.39	20	
Bromodichloromethane	18.5500	0.50	0.14	20.0000		92.8	80 - 120	2.82	20	
Bromoform	20.1000	0.50	0.20	20.0000		100	70 - 123	2.51	20	
Bromomethane	17.2100	0.50	0.40	20.0000		86.0	44 - 151	4.10	20	
Carbon tetrachloride	19.3400	0.50	0.09	20.0000		96.7	62 - 140	4.40	20	
Chlorobenzene	17.8400	0.50	0.13	20.0000		89.2	80 - 112	3.20	20	
Chloroethane	17.8100	0.50	0.15	20.0000		89.0	42 - 167	8.70	20	
Chloroform	15.0000	0.50	0.11	20.0000		75.0	77 - 122	4.56	20	L3
Chloromethane	16.7300	0.50	0.12	20.0000		83.6	33 - 153	6.48	20	
cis-1,2-Dichloroethene	18.3500	0.50	0.14	20.0000		91.8	75 - 121	5.87	20	
cis-1,3-Dichloropropene	17.0400	0.50	0.13	20.0000		85.2	73 - 127	3.80	20	
Dibromochloromethane	17.7000	0.50	0.16	20.0000		88.5	77 - 122	0.170	20	
Dibromomethane	20.5100	0.50	0.19	20.0000		103	75 - 121	9.34	20	
Dichlorodifluoromethane	16.4900	0.50	0.18	20.0000		82.4	0 - 171	4.74	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 : 11/16/2020

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

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B0K0083 - MSVOA_LL_W (continued)										
LCS Dup (B0K0083-BSD1) - Continued					Prepared: 11/5/2020 Analyzed: 11/5/2020					
Ethylbenzene	16.8900	0.50	0.13	20.0000		84.4	82 - 119	6.14	20	
Hexachlorobutadiene	18.3500	0.50	0.15	20.0000		91.8	71 - 131	1.25	20	
Isopropylbenzene	17.5200	0.50	0.10	20.0000		87.6	75 - 126	1.53	20	
m,p-Xylene	34.8400	1.0	0.19	40.0000		87.1	86 - 119	5.58	20	
Methylene chloride	17.4800	1.0	0.71	20.0000		87.4	76 - 125	0.798	20	
n-Butylbenzene	18.6000	0.50	0.11	20.0000		93.0	81 - 125	1.44	20	
n-Propylbenzene	17.5000	0.50	0.10	20.0000		87.5	78 - 130	3.43	20	
Naphthalene	16.6700	0.50	0.41	20.0000		83.4	47 - 128	0.479	20	
o-Xylene	17.1900	0.50	0.13	20.0000		86.0	85 - 119	3.49	20	
sec-Butylbenzene	18.5000	0.50	0.09	20.0000		92.5	78 - 130	0.700	20	
Styrene	16.4500	0.50	0.13	20.0000		82.2	62 - 148	1.99	20	
tert-Butylbenzene	18.3000	0.50	0.09	20.0000		91.5	77 - 125	0.109	20	
Tetrachloroethene	18.0000	0.50	0.10	20.0000		90.0	73 - 120	8.10	20	
Toluene	17.5800	0.50	0.12	20.0000		87.9	79 - 119	8.18	20	
trans-1,2-Dichloroethene	17.1300	0.50	0.09	20.0000		85.6	70 - 129	7.53	20	
Trichloroethene	17.7600	0.50	0.10	20.0000		88.8	73 - 117	7.79	20	
Trichlorofluoromethane	18.7800	0.50	0.23	20.0000		93.9	59 - 135	5.64	20	
Vinyl chloride	16.4000	0.50	0.13	20.0000		82.0	58 - 132	8.24	20	
Surrogate: 1,2-Dichloroethane-d4	*21.21*			*25.0000*		*84.8*	*64 - 155*			
Surrogate: 4-Bromofluorobenzene	*22.98*			*25.0000*		*91.9*	*73 - 124*			
Surrogate: Dibromofluoromethane	*24.82*			*25.0000*		*99.3*	*78 - 129*			
Surrogate: Toluene-d8	*24.49*			*25.0000*		*98.0*	*84 - 117*			
Matrix Spike (B0K0083-MS1)			**Source: 2002461-02**		Prepared: 11/5/2020 Analyzed: 11/5/2020					
1,1,1,2-Tetrachloroethane	21.1200	0.50	0.11	20.0000	ND	106	81 - 133			
1,1,1-Trichloroethane	20.6200	0.50	0.21	20.0000	ND	103	93 - 149			
1,1,2,2-Tetrachloroethane	19.8200	0.50	0.36	20.0000	ND	99.1	69 - 151			
1,1,2-Trichloroethane	19.7400	0.50	0.25	20.0000	ND	98.7	78 - 130			
1,1-Dichloroethane	19.1700	0.50	0.09	20.0000	ND	95.8	68 - 135			
1,1-Dichloroethene	20.8200	0.50	0.13	20.0000	0.830000	100	77 - 134			
1,1-Dichloropropene	20.2500	0.50	0.13	20.0000	ND	101	91 - 138			
1,2,3-Trichloropropane	20.3200	0.50	0.39	20.0000	ND	102	77 - 136			
1,2,3-Trichlorobenzene	21.0900	0.50	0.18	20.0000	ND	105	72 - 129			
1,2,4-Trichlorobenzene	21.1600	0.50	0.16	20.0000	ND	106	64 - 135			
1,2,4-Trimethylbenzene	19.7600	0.50	0.14	20.0000	ND	98.8	10 - 179			
1,2-Dibromo-3-chloropropane	18.7100	0.50	0.41	20.0000	ND	93.6	62 - 153			
1,2-Dibromoethane	19.9200	0.50	0.24	20.0000	ND	99.6	80 - 132			
1,2-Dichlorobenzene	20.7600	0.50	0.20	20.0000	ND	104	81 - 131			
1,2-Dichloroethane	18.2700	0.50	0.20	20.0000	ND	91.4	68 - 146			
1,2-Dichloropropane	18.8600	0.50	0.15	20.0000	ND	94.3	74 - 136			
1,3,5-Trimethylbenzene	21.2600	0.50	0.13	20.0000	ND	106	66 - 149			

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 : 11/16/2020

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

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B0K0083 - MSVOA_LL_W (continued)										
Matrix Spike (B0K0083-MS1) - Continued			**Source: 2002461-02**		Prepared: 11/5/2020 Analyzed: 11/5/2020					
1,3-Dichlorobenzene	21.3100	0.50	0.16	20.0000	ND	107	79 - 128			
1,3-Dichloropropane	19.3900	0.50	0.21	20.0000	ND	97.0	80 - 129			
1,4-Dichlorobenzene	20.5700	0.50	0.17	20.0000	ND	103	84 - 121			
2,2-Dichloropropane	20.9800	0.50	0.38	20.0000	ND	105	63 - 179			
2-Chlorotoluene	19.6200	0.50	0.11	20.0000	ND	98.1	76 - 142			
4-Chlorotoluene	19.7400	0.50	0.12	20.0000	ND	98.7	72 - 152			
4-Isopropyltoluene	22.4000	0.50	0.11	20.0000	ND	112	84 - 141			
Benzene	20.8500	0.50	0.13	20.0000	ND	104	79 - 131			
Bromobenzene	20.2500	0.50	0.21	20.0000	ND	101	82 - 121			
Bromodichloromethane	19.7800	0.50	0.14	20.0000	ND	98.9	86 - 138			
Bromoform	21.4400	0.50	0.20	20.0000	ND	107	80 - 136			
Bromomethane	19.3400	0.50	0.40	20.0000	ND	96.7	35 - 194			
Carbon tetrachloride	22.6100	0.50	0.09	20.0000	ND	113	73 - 176			
Chlorobenzene	19.6100	0.50	0.13	20.0000	ND	98.0	81 - 124			
Chloroethane	20.4300	0.50	0.15	20.0000	ND	102	0 - 257			
Chloroform	16.3400	0.50	0.11	20.0000	ND	81.7	76 - 139			
Chloromethane	18.3400	0.50	0.12	20.0000	ND	91.7	27 - 144			
cis-1,2-Dichloroethene	20.4600	0.50	0.14	20.0000	ND	102	69 - 139			
cis-1,3-Dichloropropene	18.9900	0.50	0.13	20.0000	ND	95.0	67 - 149			
Dibromochloromethane	18.2500	0.50	0.16	20.0000	ND	91.2	91 - 131			
Dibromomethane	20.6100	0.50	0.19	20.0000	ND	103	70 - 134			
Dichlorodifluoromethane	20.2300	0.50	0.18	20.0000	ND	101	0 - 161			
Ethylbenzene	19.6800	0.50	0.13	20.0000	ND	98.4	89 - 134			
Hexachlorobutadiene	21.2200	0.50	0.15	20.0000	ND	106	73 - 137			
Isopropylbenzene	19.9800	0.50	0.10	20.0000	ND	99.9	72 - 152			
m,p-Xylene	40.0400	1.0	0.19	40.0000	ND	100	82 - 141			
Methylene chloride	18.1900	1.0	0.71	20.0000	ND	91.0	74 - 133			
n-Butylbenzene	21.9300	0.50	0.11	20.0000	ND	110	65 - 164			
n-Propylbenzene	20.2900	0.50	0.10	20.0000	ND	101	73 - 161			
Naphthalene	18.1800	0.50	0.41	20.0000	ND	90.9	59 - 105			
o-Xylene	19.5600	0.50	0.13	20.0000	ND	97.8	90 - 134			
sec-Butylbenzene	21.5400	0.50	0.09	20.0000	ND	108	80 - 157			
Styrene	17.9300	0.50	0.13	20.0000	ND	89.6	0 - 222			
tert-Butylbenzene	21.1000	0.50	0.09	20.0000	ND	106	88 - 141			
Tetrachloroethene	21.4900	0.50	0.10	20.0000	ND	107	75 - 136			
Toluene	20.2100	0.50	0.12	20.0000	ND	101	82 - 132			
trans-1,2-Dichloroethene	20.1000	0.50	0.09	20.0000	ND	100	65 - 135			
Trichloroethene	20.9200	0.50	0.10	20.0000	ND	105	75 - 128			
Trichlorofluoromethane	24.7200	0.50	0.23	20.0000	ND	124	89 - 143			
Vinyl chloride	19.2300	0.50	0.13	20.0000	ND	96.2	50 - 148			
Surrogate: 1,2-Dichloroethane-d4	*21.43*			*25.0000*		*85.7*	*64 - 155*			

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

Project Number : Raytheon Main, 532.30
Report To : Steve Netto
Reported : 11/16/2020

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

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B0K0083 - MSVOA_LL_W (continued)									
Matrix Spike (B0K0083-MS1) - Continued			**Source: 2002461-02**		Prepared: 11/5/2020 Analyzed: 11/5/2020				
Surrogate: 4-Bromofluorobenzene	*22.54*		*25.0000*		*90.2*	*73 - 124*			
Surrogate: Dibromofluoromethane	*24.68*		*25.0000*		*98.7*	*78 - 129*			
Surrogate: Toluene-d8	*24.11*		*25.0000*		*96.4*	*84 - 117*			
Matrix Spike (B0K0083-MS2)			**Source: 2002459-07**		Prepared: 11/5/2020 Analyzed: 11/5/2020				
1,1,1,2-Tetrachloroethane	22.5200	0.50	0.11	20.0000	ND	113	81 - 133		
1,1,1-Trichloroethane	21.2100	0.50	0.21	20.0000	ND	106	93 - 149		
1,1,2,2-Tetrachloroethane	21.1600	0.50	0.36	20.0000	ND	106	69 - 151		
1,1,2-Trichloroethane	28.6500	0.50	0.25	20.0000	5.29000	117	78 - 130		
1,1-Dichloroethane	31.6800	0.50	0.09	20.0000	8.19000	117	68 - 135		
1,1-Dichloroethene	988.390	0.50	0.13	20.0000	650.740	1690	77 - 134		M2
1,1-Dichloropropene	20.7300	0.50	0.13	20.0000	ND	104	91 - 138		
1,2,3-Trichloropropane	20.5300	0.50	0.39	20.0000	ND	103	77 - 136		
1,2,3-Trichlorobenzene	22.0400	0.50	0.18	20.0000	ND	110	72 - 129		
1,2,4-Trichlorobenzene	21.5500	0.50	0.16	20.0000	ND	108	64 - 135		
1,2,4-Trimethylbenzene	19.6500	0.50	0.14	20.0000	ND	98.2	10 - 179		
1,2-Dibromo-3-chloropropane	20.5500	0.50	0.41	20.0000	ND	103	62 - 153		
1,2-Dibromoethane	20.4500	0.50	0.24	20.0000	ND	102	80 - 132		
1,2-Dichlorobenzene	21.5800	0.50	0.20	20.0000	ND	108	81 - 131		
1,2-Dichloroethane	21.4100	0.50	0.20	20.0000	1.71000	98.5	68 - 146		
1,2-Dichloropropane	19.8600	0.50	0.15	20.0000	ND	99.3	74 - 136		
1,3,5-Trimethylbenzene	21.9600	0.50	0.13	20.0000	ND	110	66 - 149		
1,3-Dichlorobenzene	21.6900	0.50	0.16	20.0000	ND	108	79 - 128		
1,3-Dichloropropane	20.7100	0.50	0.21	20.0000	ND	104	80 - 129		
1,4-Dichlorobenzene	21.2700	0.50	0.17	20.0000	ND	106	84 - 121		
2,2-Dichloropropane	21.2300	0.50	0.38	20.0000	ND	106	63 - 179		
2-Chlorotoluene	20.2400	0.50	0.11	20.0000	ND	101	76 - 142		
4-Chlorotoluene	20.3300	0.50	0.12	20.0000	ND	102	72 - 152		
4-Isopropyltoluene	22.7200	0.50	0.11	20.0000	ND	114	84 - 141		
Benzene	21.3600	0.50	0.13	20.0000	ND	107	79 - 131		
Bromobenzene	21.3300	0.50	0.21	20.0000	ND	107	82 - 121		
Bromodichloromethane	20.2500	0.50	0.14	20.0000	ND	101	86 - 138		
Bromoform	23.3000	0.50	0.20	20.0000	ND	116	80 - 136		
Bromomethane	19.5000	0.50	0.40	20.0000	ND	97.5	35 - 194		
Carbon tetrachloride	23.7400	0.50	0.09	20.0000	0.260000	117	73 - 176		
Chlorobenzene	20.8200	0.50	0.13	20.0000	ND	104	81 - 124		
Chloroethane	21.1700	0.50	0.15	20.0000	ND	106	0 - 257		
Chloroform	17.4200	0.50	0.11	20.0000	0.600000	84.1	76 - 139		
Chloromethane	18.9300	0.50	0.12	20.0000	ND	94.6	27 - 144		
cis-1,2-Dichloroethene	22.6300	0.50	0.14	20.0000	1.01000	108	69 - 139		
cis-1,3-Dichloropropene	19.6900	0.50	0.13	20.0000	ND	98.4	67 - 149		
Dibromochloromethane	20.2500	0.50	0.16	20.0000	ND	101	91 - 131		

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 : 11/16/2020

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

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B0K0083 - MSVOA_LL_W (continued)										
Matrix Spike (B0K0083-MS2) - Continued			**Source: 2002459-07**			Prepared: 11/5/2020 Analyzed: 11/5/2020				
Dibromomethane	21.0000	0.50	0.19	20.0000	ND	105	70 - 134			
Dichlorodifluoromethane	20.5200	0.50	0.18	20.0000	ND	103	0 - 161			
Ethylbenzene	20.1300	0.50	0.13	20.0000	ND	101	89 - 134			
Hexachlorobutadiene	21.2200	0.50	0.15	20.0000	ND	106	73 - 137			
Isopropylbenzene	20.6300	0.50	0.10	20.0000	ND	103	72 - 152			
m,p-Xylene	41.6600	1.0	0.19	40.0000	ND	104	82 - 141			
Methylene chloride	18.5800	1.0	0.71	20.0000	ND	92.9	74 - 133			
n-Butylbenzene	21.8300	0.50	0.11	20.0000	ND	109	65 - 164			
n-Propylbenzene	20.8900	0.50	0.10	20.0000	ND	104	73 - 161			
Naphthalene	19.4700	0.50	0.41	20.0000	ND	97.4	59 - 105			
o-Xylene	20.4500	0.50	0.13	20.0000	ND	102	90 - 134			
sec-Butylbenzene	21.8000	0.50	0.09	20.0000	ND	109	80 - 157			
Styrene	18.1400	0.50	0.13	20.0000	ND	90.7	0 - 222			
tert-Butylbenzene	21.1800	0.50	0.09	20.0000	ND	106	88 - 141			
Tetrachloroethene	24.7700	0.50	0.10	20.0000	1.82000	115	75 - 136			
Toluene	20.3400	0.50	0.12	20.0000	ND	102	82 - 132			
trans-1,2-Dichloroethene	21.1100	0.50	0.09	20.0000	ND	106	65 - 135			
Trichloroethene	41.0400	0.50	0.10	20.0000	13.5600	137	75 - 128			M2
Trichlorofluoromethane	23.0300	0.50	0.23	20.0000	0.270000	114	89 - 143			
Vinyl chloride	20.3300	0.50	0.13	20.0000	ND	102	50 - 148			
Surrogate: 1,2-Dichloroethane-d4	*22.18*			*25.0000*		*88.7*	*64 - 155*			
Surrogate: 4-Bromofluorobenzene	*23.04*			*25.0000*		*92.2*	*73 - 124*			
Surrogate: Dibromofluoromethane	*24.87*			*25.0000*		*99.5*	*78 - 129*			
Surrogate: Toluene-d8	*23.96*			*25.0000*		*95.8*	*84 - 117*			
Matrix Spike Dup (B0K0083-MSD2)			**Source: 2002459-07**			Prepared: 11/5/2020 Analyzed: 11/5/2020				
1,1,1,2-Tetrachloroethane	22.4800	0.50	0.11	20.0000	ND	112	81 - 133	0.178	20	
1,1,1-Trichloroethane	21.8100	0.50	0.21	20.0000	ND	109	93 - 149	2.79	20	
1,1,2,2-Tetrachloroethane	20.9800	0.50	0.36	20.0000	ND	105	69 - 151	0.854	20	
1,1,2-Trichloroethane	28.8600	0.50	0.25	20.0000	5.29000	118	78 - 130	0.730	20	
1,1-Dichloroethane	31.1300	0.50	0.09	20.0000	8.19000	115	68 - 135	1.75	20	
1,1-Dichloroethene	927.080	0.50	0.13	20.0000	650.740	1380	77 - 134	6.40	20	M2
1,1-Dichloropropene	21.3300	0.50	0.13	20.0000	ND	107	91 - 138	2.85	20	
1,2,3-Trichloropropane	21.4100	0.50	0.39	20.0000	ND	107	77 - 136	4.20	20	
1,2,3-Trichlorobenzene	22.1900	0.50	0.18	20.0000	ND	111	72 - 129	0.678	20	
1,2,4-Trichlorobenzene	22.3300	0.50	0.16	20.0000	ND	112	64 - 135	3.56	20	
1,2,4-Trimethylbenzene	20.2500	0.50	0.14	20.0000	ND	101	10 - 179	3.01	20	
1,2-Dibromo-3-chloropropane	22.1000	0.50	0.41	20.0000	ND	110	62 - 153	7.27	20	
1,2-Dibromoethane	21.6000	0.50	0.24	20.0000	ND	108	80 - 132	5.47	20	
1,2-Dichlorobenzene	21.6300	0.50	0.20	20.0000	ND	108	81 - 131	0.231	20	
1,2-Dichloroethane	21.9200	0.50	0.20	20.0000	1.71000	101	68 - 146	2.35	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 : 11/16/2020

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

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B0K0083 - MSVOA_LL_W (continued)										
Matrix Spike Dup (B0K0083-MSD2) - Continued			**Source: 2002459-07**		Prepared: 11/5/2020 Analyzed: 11/5/2020					
1,2-Dichloropropane	20.4900	0.50	0.15	20.0000	ND	102	74 - 136	3.12	20	
1,3,5-Trimethylbenzene	21.8600	0.50	0.13	20.0000	ND	109	66 - 149	0.456	20	
1,3-Dichlorobenzene	21.7800	0.50	0.16	20.0000	ND	109	79 - 128	0.414	20	
1,3-Dichloropropane	21.0800	0.50	0.21	20.0000	ND	105	80 - 129	1.77	20	
1,4-Dichlorobenzene	21.5000	0.50	0.17	20.0000	ND	108	84 - 121	1.08	20	
2,2-Dichloropropane	21.3400	0.50	0.38	20.0000	ND	107	63 - 179	0.517	20	
2-Chlorotoluene	20.4900	0.50	0.11	20.0000	ND	102	76 - 142	1.23	20	
4-Chlorotoluene	20.6800	0.50	0.12	20.0000	ND	103	72 - 152	1.71	20	
4-Isopropyltoluene	23.0100	0.50	0.11	20.0000	ND	115	84 - 141	1.27	20	
Benzene	21.8500	0.50	0.13	20.0000	ND	109	79 - 131	2.27	20	
Bromobenzene	21.3700	0.50	0.21	20.0000	ND	107	82 - 121	0.187	20	
Bromodichloromethane	20.8500	0.50	0.14	20.0000	ND	104	86 - 138	2.92	20	
Bromoform	23.6400	0.50	0.20	20.0000	ND	118	80 - 136	1.45	20	
Bromomethane	20.2200	0.50	0.40	20.0000	ND	101	35 - 194	3.63	20	
Carbon tetrachloride	23.9800	0.50	0.09	20.0000	0.260000	119	73 - 176	1.01	20	
Chlorobenzene	21.1800	0.50	0.13	20.0000	ND	106	81 - 124	1.71	20	
Chloroethane	20.4200	0.50	0.15	20.0000	ND	102	0 - 257	3.61	20	
Chloroform	18.0000	0.50	0.11	20.0000	0.600000	87.0	76 - 139	3.27	20	
Chloromethane	19.0900	0.50	0.12	20.0000	ND	95.4	27 - 144	0.842	20	
cis-1,2-Dichloroethene	22.8600	0.50	0.14	20.0000	1.01000	109	69 - 139	1.01	20	
cis-1,3-Dichloropropene	19.9200	0.50	0.13	20.0000	ND	99.6	67 - 149	1.16	20	
Dibromochloromethane	19.9100	0.50	0.16	20.0000	ND	99.6	91 - 131	1.69	20	
Dibromomethane	21.5000	0.50	0.19	20.0000	ND	108	70 - 134	2.35	20	
Dichlorodifluoromethane	20.7700	0.50	0.18	20.0000	ND	104	0 - 161	1.21	20	
Ethylbenzene	20.7100	0.50	0.13	20.0000	ND	104	89 - 134	2.84	20	
Hexachlorobutadiene	22.0300	0.50	0.15	20.0000	ND	110	73 - 137	3.75	20	
Isopropylbenzene	20.5500	0.50	0.10	20.0000	ND	103	72 - 152	0.389	20	
m,p-Xylene	42.2400	1.0	0.19	40.0000	ND	106	82 - 141	1.38	20	
Methylene chloride	18.8200	1.0	0.71	20.0000	ND	94.1	74 - 133	1.28	20	
n-Butylbenzene	22.5400	0.50	0.11	20.0000	ND	113	65 - 164	3.20	20	
n-Propylbenzene	20.6900	0.50	0.10	20.0000	ND	103	73 - 161	0.962	20	
Naphthalene	20.3200	0.50	0.41	20.0000	ND	102	59 - 105	4.27	20	
o-Xylene	20.9000	0.50	0.13	20.0000	ND	104	90 - 134	2.18	20	
sec-Butylbenzene	21.8900	0.50	0.09	20.0000	ND	109	80 - 157	0.412	20	
Styrene	18.7400	0.50	0.13	20.0000	ND	93.7	0 - 222	3.25	20	
tert-Butylbenzene	21.4400	0.50	0.09	20.0000	ND	107	88 - 141	1.22	20	
Tetrachloroethene	24.3700	0.50	0.10	20.0000	1.82000	113	75 - 136	1.63	20	
Toluene	21.0900	0.50	0.12	20.0000	ND	105	82 - 132	3.62	20	
trans-1,2-Dichloroethene	21.0900	0.50	0.09	20.0000	ND	105	65 - 135	0.0948	20	
Trichloroethene	43.1200	0.50	0.10	20.0000	13.5600	148	75 - 128	4.94	20	M2
Trichlorofluoromethane	23.8700	0.50	0.23	20.0000	0.270000	118	89 - 143	3.58	20	
Vinyl chloride	20.1400	0.50	0.13	20.0000	ND	101	50 - 148	0.939	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 : 11/16/2020

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

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B0K0083 - MSVOA_LL_W (continued)									
Matrix Spike Dup (B0K0083-MSD2) - Continued			**Source: 2002459-07**		Prepared: 11/5/2020 Analyzed: 11/5/2020				
Surrogate: 1,2-Dichloroethane-d4	*21.67*		*25.0000*		*86.7*	*64 - 155*			
Surrogate: 4-Bromofluorobenzene	*22.66*		*25.0000*		*90.6*	*73 - 124*			
Surrogate: Dibromofluoromethane	*24.30*		*25.0000*		*97.2*	*78 - 129*			
Surrogate: Toluene-d8	*24.06*		*25.0000*		*96.2*	*84 - 117*			

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 : 11/16/2020

Volatile Organic Compounds by EPA 8260B - Quality Control

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B0K0109 - MSVOA_LL_W										
Blank (B0K0109-BLK1)							Prepared: 11/6/2020 Analyzed: 11/6/2020			
1,1,1,2-Tetrachloroethane	ND	0.50	0.11							
1,1,1-Trichloroethane	ND	0.50	0.21							
1,1,2,2-Tetrachloroethane	ND	0.50	0.36							
1,1,2-Trichloroethane	ND	0.50	0.25							
1,1-Dichloroethane	ND	0.50	0.09							
1,1-Dichloroethene	ND	0.50	0.13							
1,1-Dichloropropene	ND	0.50	0.13							
1,2,3-Trichloropropane	ND	0.50	0.39							
1,2,3-Trichlorobenzene	ND	0.50	0.18							
1,2,4-Trichlorobenzene	ND	0.50	0.16							
1,2,4-Trimethylbenzene	ND	0.50	0.14							
1,2-Dibromo-3-chloropropane	ND	0.50	0.41							
1,2-Dibromoethane	ND	0.50	0.24							
1,2-Dichlorobenzene	ND	0.50	0.20							
1,2-Dichloroethane	ND	0.50	0.20							
1,2-Dichloropropane	ND	0.50	0.15							
1,3,5-Trimethylbenzene	ND	0.50	0.13							
1,3-Dichlorobenzene	ND	0.50	0.16							
1,3-Dichloropropane	ND	0.50	0.21							
1,4-Dichlorobenzene	ND	0.50	0.17							
2,2-Dichloropropane	ND	0.50	0.38							
2-Chlorotoluene	ND	0.50	0.11							
4-Chlorotoluene	ND	0.50	0.12							
4-Isopropyltoluene	ND	0.50	0.11							
Benzene	ND	0.50	0.13							
Bromobenzene	ND	0.50	0.21							
Bromodichloromethane	ND	0.50	0.14							
Bromoform	ND	0.50	0.20							
Bromomethane	ND	0.50	0.40							
Carbon tetrachloride	ND	0.50	0.09							
Chlorobenzene	ND	0.50	0.13							
Chloroethane	ND	0.50	0.15							
Chloroform	ND	0.50	0.11							
Chloromethane	ND	0.50	0.12							
cis-1,2-Dichloroethene	ND	0.50	0.14							
cis-1,3-Dichloropropene	ND	0.50	0.13							
Dibromochloromethane	ND	0.50	0.16							
Dibromomethane	ND	0.50	0.19							
Dichlorodifluoromethane	ND	0.50	0.18							
Ethylbenzene	ND	0.50	0.13							
Hexachlorobutadiene	ND	0.50	0.15							

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

Project Number : Raytheon Main, 532.30
Report To : Steve Netto
Reported : 11/16/2020

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

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B0K0109 - MSVOA_LL_W (continued)										
Blank (B0K0109-BLK1) - Continued					Prepared: 11/6/2020 Analyzed: 11/6/2020					
Isopropylbenzene	ND	0.50	0.10							
m,p-Xylene	ND	1.0	0.19							
Methylene chloride	ND	1.0	0.71							
n-Butylbenzene	ND	0.50	0.11							
n-Propylbenzene	ND	0.50	0.10							
Naphthalene	ND	0.50	0.41							
o-Xylene	ND	0.50	0.13							
sec-Butylbenzene	ND	0.50	0.09							
Styrene	ND	0.50	0.13							
tert-Butylbenzene	ND	0.50	0.09							
Tetrachloroethene	ND	0.50	0.10							
Toluene	ND	0.50	0.12							
trans-1,2-Dichloroethene	ND	0.50	0.09							
Trichloroethene	ND	0.50	0.10							
Trichlorofluoromethane	ND	0.50	0.23							
Vinyl chloride	ND	0.50	0.13							
Surrogate: 1,2-Dichloroethane-d4	*22.70*			*25.0000*		*90.8*	*64 - 155*			
Surrogate: 4-Bromofluorobenzene	*19.63*			*25.0000*		*78.5*	*73 - 124*			
Surrogate: Dibromofluoromethane	*25.77*			*25.0000*		*103*	*78 - 129*			
Surrogate: Toluene-d8	*23.50*			*25.0000*		*94.0*	*84 - 117*			
LCS (B0K0109-BS1)					Prepared: 11/6/2020 Analyzed: 11/6/2020					
1,1,1,2-Tetrachloroethane	19.9400	0.50	0.11	20.0000		99.7	79 - 116			
1,1,1-Trichloroethane	18.4600	0.50	0.21	20.0000		92.3	73 - 130			
1,1,2,2-Tetrachloroethane	18.7900	0.50	0.36	20.0000		94.0	71 - 122			
1,1,2-Trichloroethane	19.1600	0.50	0.25	20.0000		95.8	70 - 124			
1,1-Dichloroethane	17.5000	0.50	0.09	20.0000		87.5	69 - 128			
1,1-Dichloroethene	17.5000	0.50	0.13	20.0000		87.5	65 - 137			
1,1-Dichloropropene	18.2400	0.50	0.13	20.0000		91.2	74 - 129			
1,2,3-Trichloropropane	19.0000	0.50	0.39	20.0000		95.0	74 - 123			
1,2,3-Trichlorobenzene	18.5400	0.50	0.18	20.0000		92.7	59 - 130			
1,2,4-Trichlorobenzene	18.2900	0.50	0.16	20.0000		91.4	65 - 125			
1,2,4-Trimethylbenzene	17.6500	0.50	0.14	20.0000		88.2	88 - 124			
1,2-Dibromo-3-chloropropane	18.1300	0.50	0.41	20.0000		90.6	61 - 127			
1,2-Dibromoethane	19.1000	0.50	0.24	20.0000		95.5	72 - 125			
1,2-Dichlorobenzene	19.5900	0.50	0.20	20.0000		98.0	84 - 113			
1,2-Dichloroethane	17.3300	0.50	0.20	20.0000		86.6	68 - 130			
1,2-Dichloropropane	17.4600	0.50	0.15	20.0000		87.3	77 - 121			
1,3,5-Trimethylbenzene	19.1500	0.50	0.13	20.0000		95.8	83 - 124			
1,3-Dichlorobenzene	18.7000	0.50	0.16	20.0000		93.5	83 - 112			
1,3-Dichloropropane	18.6900	0.50	0.21	20.0000		93.4	77 - 119			

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

Project Number : Raytheon Main, 532.30
Report To : Steve Netto
Reported : 11/16/2020

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

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B0K0109 - MSVOA_LL_W (continued)										
LCS (B0K0109-BS1) - Continued					Prepared: 11/6/2020 Analyzed: 11/6/2020					
1,4-Dichlorobenzene	18.8200	0.50	0.17	20.0000		94.1	79 - 115			
2,2-Dichloropropane	18.7800	0.50	0.38	20.0000		93.9	67 - 149			
2-Chlorotoluene	17.9000	0.50	0.11	20.0000		89.5	81 - 119			
4-Chlorotoluene	18.2400	0.50	0.12	20.0000		91.2	86 - 117			
4-Isopropyltoluene	20.1100	0.50	0.11	20.0000		101	82 - 131			
Benzene	19.1500	0.50	0.13	20.0000		95.8	75 - 124			
Bromobenzene	19.0200	0.50	0.21	20.0000		95.1	82 - 108			
Bromodichloromethane	18.4100	0.50	0.14	20.0000		92.0	80 - 120			
Bromoform	20.1700	0.50	0.20	20.0000		101	70 - 123			
Bromomethane	17.2200	0.50	0.40	20.0000		86.1	44 - 151			
Carbon tetrachloride	19.9700	0.50	0.09	20.0000		99.8	62 - 140			
Chlorobenzene	18.4500	0.50	0.13	20.0000		92.2	80 - 112			
Chloroethane	17.3100	0.50	0.15	20.0000		86.6	42 - 167			
Chloroform	15.4200	0.50	0.11	20.0000		77.1	77 - 122			
Chloromethane	17.8300	0.50	0.12	20.0000		89.2	33 - 153			
cis-1,2-Dichloroethene	18.3700	0.50	0.14	20.0000		91.8	75 - 121			
cis-1,3-Dichloropropene	17.1000	0.50	0.13	20.0000		85.5	73 - 127			
Dibromochloromethane	17.6800	0.50	0.16	20.0000		88.4	77 - 122			
Dibromomethane	19.2100	0.50	0.19	20.0000		96.0	75 - 121			
Dichlorodifluoromethane	17.0000	0.50	0.18	20.0000		85.0	0 - 171			
Ethylbenzene	18.1300	0.50	0.13	20.0000		90.6	82 - 119			
Hexachlorobutadiene	18.4400	0.50	0.15	20.0000		92.2	71 - 131			
Isopropylbenzene	18.1100	0.50	0.10	20.0000		90.6	75 - 126			
m,p-Xylene	37.6100	1.0	0.19	40.0000		94.0	86 - 119			
Methylene chloride	17.4100	1.0	0.71	20.0000		87.0	76 - 125			
n-Butylbenzene	19.4700	0.50	0.11	20.0000		97.4	81 - 125			
n-Propylbenzene	18.7000	0.50	0.10	20.0000		93.5	78 - 130			
Naphthalene	16.0500	0.50	0.41	20.0000		80.2	47 - 128			
o-Xylene	18.0900	0.50	0.13	20.0000		90.4	85 - 119			
sec-Butylbenzene	18.8500	0.50	0.09	20.0000		94.2	78 - 130			
Styrene	16.7700	0.50	0.13	20.0000		83.8	62 - 148			
tert-Butylbenzene	18.5000	0.50	0.09	20.0000		92.5	77 - 125			
Tetrachloroethene	20.0600	0.50	0.10	20.0000		100	73 - 120			
Toluene	18.8700	0.50	0.12	20.0000		94.4	79 - 119			
trans-1,2-Dichloroethene	17.0100	0.50	0.09	20.0000		85.0	70 - 129			
Trichloroethene	19.1600	0.50	0.10	20.0000		95.8	73 - 117			
Trichlorofluoromethane	21.3800	0.50	0.23	20.0000		107	59 - 135			
Vinyl chloride	16.8100	0.50	0.13	20.0000		84.0	58 - 132			
Surrogate: 1,2-Dichloroethane-d4	*21.07*			*25.0000*		*84.3*	*64 - 155*			
Surrogate: 4-Bromofluorobenzene	*22.90*			*25.0000*		*91.6*	*73 - 124*			
Surrogate: Dibromofluoromethane	*24.27*			*25.0000*		*97.1*	*78 - 129*			

Hargis & Associates, Inc.	Project Number : Raytheon Main, 532.30
9171 Towne Centre Drive, Suite 375	Report To : Steve Netto
San Diego , CA 92122	Reported : 11/16/2020

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

Analyte	Result (ug/L)	PQL (ug/L)		Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B0K0109 - MSVOA_LL_W (continued)										
LCS (B0K0109-BS1) - Continued						Prepared: 11/6/2020 Analyzed: 11/6/2020				
Surrogate: Toluene-d8	*24.32*			*25.0000*		*97.3*	*84 - 117*			
LCS Dup (B0K0109-BSD1)						Prepared: 11/6/2020 Analyzed: 11/6/2020				
1,1,1,2-Tetrachloroethane	18.5600	0.50	0.11	20.0000		92.8	79 - 116	7.17	20	
1,1,1-Trichloroethane	16.7900	0.50	0.21	20.0000		84.0	73 - 130	9.48	20	
1,1,2,2-Tetrachloroethane	18.3400	0.50	0.36	20.0000		91.7	71 - 122	2.42	20	
1,1,2-Trichloroethane	17.5600	0.50	0.25	20.0000		87.8	70 - 124	8.71	20	
1,1-Dichloroethane	16.7900	0.50	0.09	20.0000		84.0	69 - 128	4.14	20	
1,1-Dichloroethene	16.2400	0.50	0.13	20.0000		81.2	65 - 137	7.47	20	
1,1-Dichloropropene	16.9700	0.50	0.13	20.0000		84.8	74 - 129	7.21	20	
1,2,3-Trichloropropane	18.6200	0.50	0.39	20.0000		93.1	74 - 123	2.02	20	
1,2,3-Trichlorobenzene	17.1700	0.50	0.18	20.0000		85.8	59 - 130	7.67	20	
1,2,4-Trichlorobenzene	16.8200	0.50	0.16	20.0000		84.1	65 - 125	8.37	20	
1,2,4-Trimethylbenzene	16.4400	0.50	0.14	20.0000		82.2	88 - 124	7.10	20	L3
1,2-Dibromo-3-chloropropane	15.8900	0.50	0.41	20.0000		79.4	61 - 127	13.2	20	
1,2-Dibromoethane	18.3300	0.50	0.24	20.0000		91.6	72 - 125	4.11	20	
1,2-Dichlorobenzene	17.8100	0.50	0.20	20.0000		89.0	84 - 113	9.52	20	
1,2-Dichloroethane	17.1500	0.50	0.20	20.0000		85.8	68 - 130	1.04	20	
1,2-Dichloropropane	17.0000	0.50	0.15	20.0000		85.0	77 - 121	2.67	20	
1,3,5-Trimethylbenzene	17.7500	0.50	0.13	20.0000		88.8	83 - 124	7.59	20	
1,3-Dichlorobenzene	17.4500	0.50	0.16	20.0000		87.2	83 - 112	6.92	20	
1,3-Dichloropropane	18.0300	0.50	0.21	20.0000		90.2	77 - 119	3.59	20	
1,4-Dichlorobenzene	17.7300	0.50	0.17	20.0000		88.6	79 - 115	5.96	20	
2,2-Dichloropropane	17.0700	0.50	0.38	20.0000		85.4	67 - 149	9.54	20	
2-Chlorotoluene	16.2100	0.50	0.11	20.0000		81.0	81 - 119	9.91	20	
4-Chlorotoluene	16.8000	0.50	0.12	20.0000		84.0	86 - 117	8.22	20	L3
4-Isopropyltoluene	18.2000	0.50	0.11	20.0000		91.0	82 - 131	9.97	20	
Benzene	17.9900	0.50	0.13	20.0000		90.0	75 - 124	6.25	20	
Bromobenzene	17.7200	0.50	0.21	20.0000		88.6	82 - 108	7.08	20	
Bromodichloromethane	17.2800	0.50	0.14	20.0000		86.4	80 - 120	6.33	20	
Bromoform	20.2900	0.50	0.20	20.0000		101	70 - 123	0.593	20	
Bromomethane	14.8700	0.50	0.40	20.0000		74.4	44 - 151	14.6	20	
Carbon tetrachloride	18.4000	0.50	0.09	20.0000		92.0	62 - 140	8.18	20	
Chlorobenzene	17.9100	0.50	0.13	20.0000		89.6	80 - 112	2.97	20	
Chloroethane	15.9800	0.50	0.15	20.0000		79.9	42 - 167	7.99	20	
Chloroform	14.3700	0.50	0.11	20.0000		71.8	77 - 122	7.05	20	L3
Chloromethane	16.2500	0.50	0.12	20.0000		81.2	33 - 153	9.27	20	
cis-1,2-Dichloroethene	17.3000	0.50	0.14	20.0000		86.5	75 - 121	6.00	20	
cis-1,3-Dichloropropene	16.5500	0.50	0.13	20.0000		82.8	73 - 127	3.27	20	
Dibromochloromethane	17.1800	0.50	0.16	20.0000		85.9	77 - 122	2.87	20	
Dibromomethane	18.7900	0.50	0.19	20.0000		94.0	75 - 121	2.21	20	
Dichlorodifluoromethane	15.2900	0.50	0.18	20.0000		76.4	0 - 171	10.6	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 : 11/16/2020

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

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B0K0109 - MSVOA_LL_W (continued)										
LCS Dup (B0K0109-BSD1) - Continued					Prepared: 11/6/2020 Analyzed: 11/6/2020					
Ethylbenzene	16.9400	0.50	0.13	20.0000		84.7	82 - 119	6.79	20	
Hexachlorobutadiene	16.5100	0.50	0.15	20.0000		82.6	71 - 131	11.0	20	
Isopropylbenzene	16.5500	0.50	0.10	20.0000		82.8	75 - 126	9.00	20	
m,p-Xylene	34.9800	1.0	0.19	40.0000		87.4	86 - 119	7.25	20	
Methylene chloride	16.0900	1.0	0.71	20.0000		80.4	76 - 125	7.88	20	
n-Butylbenzene	17.2700	0.50	0.11	20.0000		86.4	81 - 125	12.0	20	
n-Propylbenzene	16.8200	0.50	0.10	20.0000		84.1	78 - 130	10.6	20	
Naphthalene	15.7300	0.50	0.41	20.0000		78.6	47 - 128	2.01	20	
o-Xylene	16.7600	0.50	0.13	20.0000		83.8	85 - 119	7.63	20	L3
sec-Butylbenzene	17.2400	0.50	0.09	20.0000		86.2	78 - 130	8.92	20	
Styrene	16.1500	0.50	0.13	20.0000		80.8	62 - 148	3.77	20	
tert-Butylbenzene	16.9900	0.50	0.09	20.0000		85.0	77 - 125	8.51	20	
Tetrachloroethene	18.1600	0.50	0.10	20.0000		90.8	73 - 120	9.94	20	
Toluene	17.0400	0.50	0.12	20.0000		85.2	79 - 119	10.2	20	
trans-1,2-Dichloroethene	16.3000	0.50	0.09	20.0000		81.5	70 - 129	4.26	20	
Trichloroethene	17.5100	0.50	0.10	20.0000		87.6	73 - 117	9.00	20	
Trichlorofluoromethane	20.4900	0.50	0.23	20.0000		102	59 - 135	4.25	20	
Vinyl chloride	14.5300	0.50	0.13	20.0000		72.6	58 - 132	14.6	20	
Surrogate: 1,2-Dichloroethane-d4	*21.02*			*25.0000*		*84.1*	*64 - 155*			
Surrogate: 4-Bromofluorobenzene	*23.30*			*25.0000*		*93.2*	*73 - 124*			
Surrogate: Dibromofluoromethane	*24.66*			*25.0000*		*98.6*	*78 - 129*			
Surrogate: Toluene-d8	*24.30*			*25.0000*		*97.2*	*84 - 117*			

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 :	11/16/2020

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

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B0K0094 - MSSEMI_W										
Blank (B0K0094-BLK1)						Prepared: 11/5/2020 Analyzed: 11/6/2020				
1,4-Dioxane	ND	2.0	0.84							
Surrogate: 1,2-Dichlorobenzene-d4	*61.01*			*100.000*		*61.0*	*17 - 119*			
Surrogate: 2-Fluorobiphenyl	*65.17*			*100.000*		*65.2*	*10 - 133*			
Surrogate: 4-Terphenyl-d14	*114.6*			*100.000*		*115*	*5 - 139*			
Surrogate: Nitrobenzene-d5	*68.88*			*100.000*		*68.9*	*13 - 150*			
LCS (B0K0094-BS1)						Prepared: 11/5/2020 Analyzed: 11/6/2020				
1,4-Dioxane	113.410	2.0	0.84	100.000		113	75 - 155			
Surrogate: 1,2-Dichlorobenzene-d4	*66.03*			*100.000*		*66.0*	*17 - 119*			
Surrogate: 2-Fluorobiphenyl	*77.84*			*100.000*		*77.8*	*10 - 133*			
Surrogate: 4-Terphenyl-d14	*120.2*			*100.000*		*120*	*5 - 139*			
Surrogate: Nitrobenzene-d5	*80.92*			*100.000*		*80.9*	*13 - 150*			
LCS Dup (B0K0094-BSD1)						Prepared: 11/5/2020 Analyzed: 11/6/2020				
1,4-Dioxane	106.570	2.0	0.84	100.000		107	75 - 155	6.22	20	
Surrogate: 1,2-Dichlorobenzene-d4	*65.26*			*100.000*		*65.3*	*17 - 119*			
Surrogate: 2-Fluorobiphenyl	*75.54*			*100.000*		*75.5*	*10 - 133*			
Surrogate: 4-Terphenyl-d14	*115.9*			*100.000*		*116*	*5 - 139*			
Surrogate: Nitrobenzene-d5	*79.16*			*100.000*		*79.2*	*13 - 150*			

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 : 11/16/2020

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

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B0K0080 - MSSEMI_W										
Blank (B0K0080-BLK1)					Prepared: 11/4/2020 Analyzed: 11/5/2020					
1,4-Dioxane	ND	0.20	0.05							
Surrogate: 1,2-Dichlorobenzene-d4	*0.5380*			*1.00000*		*53.8*	*13 - 99*			
Surrogate: 2-Fluorobiphenyl	*0.6089*			*1.00000*		*60.9*	*8 - 111*			
Surrogate: 4-Terphenyl-d14	*0.7291*			*1.00000*		*72.9*	*12 - 113*			
Surrogate: Nitrobenzene-d5	*0.5406*			*1.00000*		*54.1*	*15 - 121*			
LCS (B0K0080-BS1)					Prepared: 11/4/2020 Analyzed: 11/5/2020					
1,4-Dioxane	0.925300	0.20	0.05	1.00000		92.5	75 - 155			
Surrogate: 1,2-Dichlorobenzene-d4	*0.5447*			*1.00000*		*54.5*	*13 - 99*			
Surrogate: 2-Fluorobiphenyl	*0.6245*			*1.00000*		*62.5*	*8 - 111*			
Surrogate: 4-Terphenyl-d14	*0.6627*			*1.00000*		*66.3*	*12 - 113*			
Surrogate: Nitrobenzene-d5	*0.6168*			*1.00000*		*61.7*	*15 - 121*			
Matrix Spike (B0K0080-MS1)			**Source: 2002456-03**		Prepared: 11/4/2020 Analyzed: 11/5/2020					
1,4-Dioxane	0.947070	0.20	0.05	1.00000	ND	94.7	75 - 155			
Surrogate: 1,2-Dichlorobenzene-d4	*0.3825*			*1.00000*		*38.3*	*13 - 99*			
Surrogate: 2-Fluorobiphenyl	*0.4642*			*1.00000*		*46.4*	*8 - 111*			
Surrogate: 4-Terphenyl-d14	*0.4869*			*1.00000*		*48.7*	*12 - 113*			
Surrogate: Nitrobenzene-d5	*0.4626*			*1.00000*		*46.3*	*15 - 121*			
Matrix Spike Dup (B0K0080-MSD1)			**Source: 2002456-03**		Prepared: 11/4/2020 Analyzed: 11/5/2020					
1,4-Dioxane	0.936210	0.20	0.05	1.00000	ND	93.6	75 - 155	1.15	20	
Surrogate: 1,2-Dichlorobenzene-d4	*0.3784*			*1.00000*		*37.8*	*13 - 99*			
Surrogate: 2-Fluorobiphenyl	*0.4700*			*1.00000*		*47.0*	*8 - 111*			
Surrogate: 4-Terphenyl-d14	*0.4912*			*1.00000*		*49.1*	*12 - 113*			
Surrogate: Nitrobenzene-d5	*0.4675*			*1.00000*		*46.7*	*15 - 121*			

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 :	11/16/2020

Notes and Definitions

M2	Matrix spike recovery outside of acceptance limit due to possible matrix interference. The analytical batch was validated by the laboratory control sample.
L3	Laboratory control sample outside in-house established limits but within method criteria.
J	Analyte detected below the Practical Quantitation Limit but above or equal to the Method Detection Limit. Result is an estimated concentration.
ND	Analyte is not detected at or above the Practical Quantitation Limit (PQL). When client requests quantitation against MDL, analyte is not detected at or above the Method Detection Limit (MDL)
PQL	Practical Quantitation Limit
MDL	Method Detection Limit
NR	Not Reported
RPD	Relative Percent Difference
CA2	CA-ELAP (CDPH)
OR1	OR-NELAP (OSPHL)

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.
(3) Results are wet unless otherwise specified.

HARGIS + ASSOCIATES, INC.
HYDROGEOLOGY • ENGINEERING

Date: 11/03/2020
Page 1 of 2

PROJECT: Raytheon Main

TASK NO.: 532.30

Project Manager: Steve Netto
QA Manager: Andrew Donnelly
Phone: 858.455.6500
Fax: 858.455.6533

Sampled By: A. Janzen, A. Donnelly

SAMPLE COLLECTION

LAB ID	SAMPLE ID	Date	Time	MATRIX: Groundwater	MATRIX: Lab prepared water	PRESERVATION: Hydrochloric Acid (HCl)	PRESERVATION: NaOH/AlCl3	PRESERVATION: NaOH/Zn	PRESERVATION: Ice	CONTAINERS: 40-ml VOA	CONTAINERS: 1 L Amber	CONTAINERS: 250-ml poly	CONTAINERS: 250-ml Amber	ANALYSIS REQUESTED: VOCs by EPA 8260B	ANALYSIS REQUESTED: 1,4 Dioxane 8270 SIM	ANALYSIS REQUESTED: 1,4-Dioxane 8270 MOD	ANALYSIS REQUESTED: CO2 by SM4500	ANALYSIS REQUESTED: Dissolved Sulfide by SM4500 S2-d	ANALYSIS REQUESTED: Total Sulfide by SM-4500 S2-d	Expected Concetration Range (ppb) for VOA's: 0 - 10	10- 100	100 - 1,000	>1,000	SPECIAL HANDLING: 24 hr TAT	48 hr TAT	Standard TAT	Level IV Data Validation Requested	MS/MSD Requested	REMARKS
2002459-01	TB-110320A	11/03/2020	0845		X	X			X	2				X						X						X			Report J Flags
02	MW-32B		0915	X		X			X	3				X							X					X			
	↓		↓	X					X		1				X											X			
03	MW-26C		1057	X		X			X	3				X						X						X			
	↓		↓	X					X		1				X											X			
04	BB-110320		1110		X	X			X	3				X						X						X			
	↓		↓		X				X		1				X											X			
05	MW-08		1238	X		X			X	3				X							X					X			
	↓		↓	X					X		1				X											X			
06	MW-0800		1245	X		X			X	3				X							X					X			
	↓		↓	X					X		1				X											X			
07	MW-21		1342	X		X			X	9				X									X			X		X	
	↓		↓	X					X		3					X										X		X	
08	EW-01		1359	X		X			X	3				X							X					X			
	↓		↓	X					X		1					X										X			
09	MW-31		1506	X		X			X	3				X								X				X			
	↓		↓	X					X		1				X											X			
Total number of containers per analysis:																													Total No. of Containers:

Relinquished By: / Company	Date / Time	Received By: / Company	Date / Time
aDonnelly / H+A	11/3/20 1725	ATL	11-3-20 17:23
ATL	11-3-20 18:29		11/3/20 18:29

- [ ] No. of containers correct
- [ ] Received in good condition
- [ ] Custody seals secure
- [ ] Conforms to COC document

3.6, 4.2 °C Temperature on receipt

Laboratory
ATL
Attn: Tina Nguyen
3257 Walnut Ave
Signal Hill, CA 90755
562-989-4045

Send Results to:
Steve Netto
9171 Towne Centre Drive
Suite 375
San Diego, CA 92122
Ph: 858.455.5400
snetto@hargis.com

Instructions

Fill out form completely and sign only after verified for completeness
Complete in ballpoint pen. Draw one line through error, initial and date correction
Indicate the number of sample containers in analytical request space; indicate choice with ✓or ×
Note applicable preservatives, special instructions, and deviations from typical environmental samples.
Consult project QA documents for specific instructions.

HARGIS + ASSOCIATES, INC.
HYDROGEOLOGY • ENGINEERING

Date: 11·3·2020
Page 2 of 2

PROJECT: Raytheon Main

TASK NO.: 532.30

Project Manager Steve Netto
QA Manager Andrew Donnelly
Phone 858.455.6500
Fax 858.455.6533

Sampled By: DJSEALEE, R. ADAMS

SAMPLE COLLECTION

LAB ID	SAMPLE ID	Date	Time	MATRIX: Groundwater	MATRIX: Lab prepared water	PRESERVATION: Hydrochloric Acid (HCl)	PRESERVATION: NaOH/AlCl3	PRESERVATION: NaOH/Zn	PRESERVATION: Ice	CONTAINERS: 40-ml VOA	CONTAINERS: 1 L Amber	CONTAINERS: 250-ml poly	CONTAINERS: 250-ml Amber	ANALYSIS REQUESTED: VOCs by EPA 8260B	ANALYSIS REQUESTED: 1,4 Dioxane 8270 SIM	ANALYSIS REQUESTED: 1,4-Dioxane 8270 MOD	ANALYSIS REQUESTED: CO2 by SM4500	ANALYSIS REQUESTED: Dissolved Sulfide by SM4500 S2-d	ANALYSIS REQUESTED: Total Sulfide by SM-4500 S2-d	Expected Concetration Range (ppb) for VOA's: 0 - 10	10- 100	100 - 1,000	>1,000	SPECIAL HANDLING: 24 hr TAT	48 hr TAT	Standard TAT	Level IV Data Validation Requested	MS/MSD Requested	REMARKS
2002459 10	MW-35C	11·3·2020	1005	X		X			X	3				X						X					X			Report J Flags
11	MW-33	11-3-2020	1315	X		X			X	3	1			X	X					X					X			
12	MW-30A	11-3-2020	1415	X		X				3	1			X	X					X					X			
13	MW-30B	11-3-2020	1503	X		X				3	1			X	X							X			X			
14	MW-3000B	11·3·2020	1630	X		X				3	1			X	X							X			X			
15	MW-34B	11·3·2020	1552	X		X				3	1			X		X					X				X			

Total number of containers per analysis:

Total No. of Containers:

Relinquished By: / Company:	Date / Time	Received By: / Company	Date / Time
ADonnelly / H+A	11/3/20 1725	ATL	11-7-20 17:25
Relinquished By: / Company:	Date / Time	Received By: / Company	Date / Time
ATL	11-3-20 18:29		4/13/20 18:29

- [x] No. of containers correct
- [x] Received in good condition
- [ ] Custody seals secure
- [x] Conforms to COC document

3.6, 4.2 °C Temperature on receipt

Laboratory
ATL
Attn: Tina Nguyen
3257 Walnut Ave
Signal Hill, CA 90755
562-989-4045

Send Results to:
Steve Netto
9171 Towne Centre Drive
Suite 375
San Diego, CA 92122
Ph: 858.455.5400
snetto@hargis.com

Instructions

Fill out form completely and sign only after verified for completeness
Complete in ballpoint pen. Draw one line through error, initial and date correction
Indicate the number of sample containers in analytical request space; indicate choice with ✓or ×
Note applicable preservatives, special instructions, and deviations from typical environmental samples.
Consult project QA documents for specific instructions.

eurofins | Environment Testing America

ANALYTICAL REPORT

Eurofins Calscience LLC
7440 Lincoln Way
Garden Grove, CA 92841
Tel: (714)895-5494

Laboratory Job ID: 570-42805-1
Client Project/Site: Raytheon / 532.30

For:
Hargis + Associates, Inc.
La Jolla Gateway
9171 Towne Centre Drive
Suite 375
San Diego, California 92122

Attn: Julie Kelly

Virendra R Patel

Authorized for release by:
11/16/2020 10:52:21 AM

Virendra Patel, Project Manager I
(714)895-5494
Virendra.Patel@eurofinset.com

LINKS

Review your project results through TotalAccess

Have a Question? Ask The Expert

Visit us at:
www.eurofinsus.com/Env

The test results in this report meet all 2003 NELAC, 2009 TNI, and 2016 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

Table of Contents

Cover Page 1
Table of Contents 2
Definitions/Glossary 3
Case Narrative 4
Detection Summary 5
Client Sample Results 6
Surrogate Summary 12
Isotope Dilution Summary 13
QC Sample Results 14
QC Association Summary 21
Lab Chronicle 22
Certification Summary 23
Method Summary 24
Sample Summary 25
Chain of Custody 26
Receipt Checklists 27

Definitions/Glossary

Client: Hargis + Associates, Inc.
Project/Site: Raytheon / 532.30

Job ID: 570-42805-1

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Case Narrative

Client: Hargis + Associates, Inc.
Project/Site: Raytheon / 532.30

Job ID: 570-42805-1

Job ID: 570-42805-1

Laboratory: Eurofins Calscience LLC

Narrative

Job Narrative
570-42805-1

Comments
No additional comments.

Receipt
The samples were received on 11/3/2020 6:05 PM; the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 2.8º C.

GC/MS VOA
Method 8260B: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate/sample duplicate (MS/MSD/DUP) associated with analytical batch 570-108936.

Method 8260B: The lot test of the laboratory trip blank water associated with job 42805-1 indicated a detection above the method detection limit (MDL) for the following analyte(s): Methylene chloride. No ECI# provided. Associated samples ND for methylene chloride.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

GC/MS Semi VOA
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Organic Prep
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

VOA Prep
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Detection Summary

Client: Hargis + Associates, Inc.
Project/Site: Raytheon / 532.30

Job ID: 570-42805-1

Client Sample ID: TB-110320B — Lab Sample ID: 570-42805-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Methylene Chloride	0.68	J	1.0	0.20	ug/L	1		8260B	Total/NA

Client Sample ID: MW-08 — Lab Sample ID: 570-42805-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,1,2-Trichloro-1,2,2-trifluoroethane	1.1		0.50	0.25	ug/L	1		8260B	Total/NA
1,1-Dichloroethene	23		0.50	0.39	ug/L	1		8260B	Total/NA
cis-1,2-Dichloroethene	2.3		0.50	0.30	ug/L	1		8260B	Total/NA
Trichloroethene	52		0.50	0.29	ug/L	1		8260B	Total/NA
1,4-Dioxane	1.4		0.50	0.34	ug/L	1		8270C SIM ID	Total/NA

Client Sample ID: MW-30B — Lab Sample ID: 570-42805-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,1-Dichloroethene	19		0.50	0.39	ug/L	1		8260B	Total/NA
cis-1,2-Dichloroethene	4.5		0.50	0.30	ug/L	1		8260B	Total/NA
Chloroform	0.36	J	0.50	0.28	ug/L	1		8260B	Total/NA
Trichloroethene	89		0.50	0.29	ug/L	1		8260B	Total/NA

This Detection Summary does not include radiochemical test results.

Method: 8260B - Volatile Organic Compounds (GC/MS)

Client Sample ID: TB-110320B
Date Collected: 11/03/20 09:00
Date Received: 11/03/20 18:05

Lab Sample ID: 570-42805-1
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		0.50	0.26	ug/L			11/12/20 07:33	1
1,1,1-Trichloroethane	ND		0.50	0.27	ug/L			11/12/20 07:33	1
1,1,2,2-Tetrachloroethane	ND		0.50	0.19	ug/L			11/12/20 07:33	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.50	0.25	ug/L			11/12/20 07:33	1
1,1,2-Trichloroethane	ND		0.50	0.085	ug/L			11/12/20 07:33	1
1,1-Dichloroethane	ND		0.50	0.35	ug/L			11/12/20 07:33	1
1,1-Dichloroethene	ND		0.50	0.39	ug/L			11/12/20 07:33	1
1,1-Dichloropropene	ND		0.50	0.24	ug/L			11/12/20 07:33	1
1,2,3-Trichlorobenzene	ND		0.50	0.28	ug/L			11/12/20 07:33	1
1,2,3-Trichloropropane	ND		1.0	0.32	ug/L			11/12/20 07:33	1
1,2,4-Trichlorobenzene	ND		0.50	0.38	ug/L			11/12/20 07:33	1
1,2,4-Trimethylbenzene	ND		0.50	0.29	ug/L			11/12/20 07:33	1
1,2-Dibromo-3-Chloropropane	ND		5.0	0.64	ug/L			11/12/20 07:33	1
1,2-Dibromoethane	ND		0.50	0.14	ug/L			11/12/20 07:33	1
1,2-Dichlorobenzene	ND		0.50	0.23	ug/L			11/12/20 07:33	1
1,2-Dichloroethane	ND		0.50	0.15	ug/L			11/12/20 07:33	1
1,2-Dichloropropane	ND		0.50	0.24	ug/L			11/12/20 07:33	1
1,3,5-Trimethylbenzene	ND		0.50	0.28	ug/L			11/12/20 07:33	1
1,3-Dichlorobenzene	ND		0.50	0.26	ug/L			11/12/20 07:33	1
1,3-Dichloropropane	ND		1.0	0.20	ug/L			11/12/20 07:33	1
1,4-Dichlorobenzene	ND		0.50	0.22	ug/L			11/12/20 07:33	1
2,2-Dichloropropane	ND		1.0	0.40	ug/L			11/12/20 07:33	1
2-Butanone	ND		5.0	3.0	ug/L			11/12/20 07:33	1
2-Chlorotoluene	ND		0.50	0.31	ug/L			11/12/20 07:33	1
2-Hexanone	ND		10	4.3	ug/L			11/12/20 07:33	1
4-Chlorotoluene	ND		0.50	0.34	ug/L			11/12/20 07:33	1
4-Methyl-2-pentanone	ND		5.0	2.2	ug/L			11/12/20 07:33	1
Acetone	ND		10	4.0	ug/L			11/12/20 07:33	1
Benzene	ND		0.50	0.27	ug/L			11/12/20 07:33	1
Bromobenzene	ND		0.50	0.26	ug/L			11/12/20 07:33	1
Bromochloromethane	ND		1.0	0.35	ug/L			11/12/20 07:33	1
Bromodichloromethane	ND		0.50	0.22	ug/L			11/12/20 07:33	1
Bromoform	ND		0.50	0.39	ug/L			11/12/20 07:33	1
Bromomethane	ND		2.0	0.93	ug/L			11/12/20 07:33	1
cis-1,2-Dichloroethene	ND		0.50	0.30	ug/L			11/12/20 07:33	1
cis-1,3-Dichloropropene	ND		0.50	0.19	ug/L			11/12/20 07:33	1
Carbon disulfide	ND		10	0.24	ug/L			11/12/20 07:33	1
Carbon tetrachloride	ND		0.50	0.27	ug/L			11/12/20 07:33	1
Chlorobenzene	ND		0.50	0.24	ug/L			11/12/20 07:33	1
Chloroethane	ND		0.50	0.44	ug/L			11/12/20 07:33	1
Chloroform	ND		0.50	0.28	ug/L			11/12/20 07:33	1
Chloromethane	ND		5.0	0.29	ug/L			11/12/20 07:33	1
Dibromochloromethane	ND		0.50	0.27	ug/L			11/12/20 07:33	1
Dibromomethane	ND		0.50	0.23	ug/L			11/12/20 07:33	1
Dichlorodifluoromethane	ND		1.0	0.68	ug/L			11/12/20 07:33	1
Ethylbenzene	ND		0.50	0.36	ug/L			11/12/20 07:33	1
Isopropylbenzene	ND		0.50	0.38	ug/L			11/12/20 07:33	1
Methylene Chloride	**0.68**	**J**	1.0	0.20	ug/L			11/12/20 07:33	1
Methyl-t-Butyl Ether (MTBE)	ND		0.50	0.21	ug/L			11/12/20 07:33	1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: TB-110320B
Date Collected: 11/03/20 09:00
Date Received: 11/03/20 18:05

Lab Sample ID: 570-42805-1
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	ND		1.0	0.32	ug/L			11/12/20 07:33	1
n-Butylbenzene	ND		0.50	0.29	ug/L			11/12/20 07:33	1
N-Propylbenzene	ND		0.50	0.39	ug/L			11/12/20 07:33	1
o-Xylene	ND		0.50	0.35	ug/L			11/12/20 07:33	1
m,p-Xylene	ND		1.0	0.78	ug/L			11/12/20 07:33	1
p-Isopropyltoluene	ND		0.50	0.28	ug/L			11/12/20 07:33	1
sec-Butylbenzene	ND		0.50	0.34	ug/L			11/12/20 07:33	1
Styrene	ND		0.50	0.28	ug/L			11/12/20 07:33	1
trans-1,2-Dichloroethene	ND		0.50	0.36	ug/L			11/12/20 07:33	1
trans-1,3-Dichloropropene	ND		0.50	0.17	ug/L			11/12/20 07:33	1
tert-Butylbenzene	ND		0.50	0.34	ug/L			11/12/20 07:33	1
Tetrachloroethene	ND		0.50	0.29	ug/L			11/12/20 07:33	1
Toluene	ND		0.50	0.33	ug/L			11/12/20 07:33	1
Trichloroethene	ND		0.50	0.29	ug/L			11/12/20 07:33	1
Trichlorofluoromethane	ND		0.50	0.30	ug/L			11/12/20 07:33	1
Vinyl acetate	ND		5.0	3.1	ug/L			11/12/20 07:33	1
Vinyl chloride	ND		0.50	0.40	ug/L			11/12/20 07:33	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*100*		*80 - 128*		*11/12/20 07:33*	*1*
4-Bromofluorobenzene (Surr)	*98*		*68 - 120*		*11/12/20 07:33*	*1*
Dibromofluoromethane	*95*		*80 - 127*		*11/12/20 07:33*	*1*
Toluene-d8 (Surr)	*98*		*80 - 120*		*11/12/20 07:33*	*1*

Client Sample ID: MW-08
Date Collected: 11/03/20 12:39
Date Received: 11/03/20 18:05

Lab Sample ID: 570-42805-2
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		0.50	0.26	ug/L			11/12/20 09:25	1
1,1,1-Trichloroethane	ND		0.50	0.27	ug/L			11/12/20 09:25	1
1,1,2,2-Tetrachloroethane	ND		0.50	0.19	ug/L			11/12/20 09:25	1
1,1,2-Trichloro-1,2,2-trifluoroethane	**1.1**		0.50	0.25	ug/L			11/12/20 09:25	1
1,1,2-Trichloroethane	ND		0.50	0.085	ug/L			11/12/20 09:25	1
1,1-Dichloroethane	ND		0.50	0.35	ug/L			11/12/20 09:25	1
1,1-Dichloroethene	**23**		0.50	0.39	ug/L			11/12/20 09:25	1
1,1-Dichloropropene	ND		0.50	0.24	ug/L			11/12/20 09:25	1
1,2,3-Trichlorobenzene	ND		0.50	0.28	ug/L			11/12/20 09:25	1
1,2,3-Trichloropropane	ND		1.0	0.32	ug/L			11/12/20 09:25	1
1,2,4-Trichlorobenzene	ND		0.50	0.38	ug/L			11/12/20 09:25	1
1,2,4-Trimethylbenzene	ND		0.50	0.29	ug/L			11/12/20 09:25	1
1,2-Dibromo-3-Chloropropane	ND		5.0	0.64	ug/L			11/12/20 09:25	1
1,2-Dibromoethane	ND		0.50	0.14	ug/L			11/12/20 09:25	1
1,2-Dichlorobenzene	ND		0.50	0.23	ug/L			11/12/20 09:25	1
1,2-Dichloroethane	ND		0.50	0.15	ug/L			11/12/20 09:25	1
1,2-Dichloropropane	ND		0.50	0.24	ug/L			11/12/20 09:25	1
1,3,5-Trimethylbenzene	ND		0.50	0.28	ug/L			11/12/20 09:25	1
1,3-Dichlorobenzene	ND		0.50	0.26	ug/L			11/12/20 09:25	1
1,3-Dichloropropane	ND		1.0	0.20	ug/L			11/12/20 09:25	1
1,4-Dichlorobenzene	ND		0.50	0.22	ug/L			11/12/20 09:25	1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: MW-08
Date Collected: 11/03/20 12:39
Date Received: 11/03/20 18:05

Lab Sample ID: 570-42805-2
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,2-Dichloropropane	ND		1.0	0.40	ug/L			11/12/20 09:25	1
2-Butanone	ND		5.0	3.0	ug/L			11/12/20 09:25	1
2-Chlorotoluene	ND		0.50	0.31	ug/L			11/12/20 09:25	1
2-Hexanone	ND		10	4.3	ug/L			11/12/20 09:25	1
4-Chlorotoluene	ND		0.50	0.34	ug/L			11/12/20 09:25	1
4-Methyl-2-pentanone	ND		5.0	2.2	ug/L			11/12/20 09:25	1
Acetone	ND		10	4.0	ug/L			11/12/20 09:25	1
Benzene	ND		0.50	0.27	ug/L			11/12/20 09:25	1
Bromobenzene	ND		0.50	0.26	ug/L			11/12/20 09:25	1
Bromochloromethane	ND		1.0	0.35	ug/L			11/12/20 09:25	1
Bromodichloromethane	ND		0.50	0.22	ug/L			11/12/20 09:25	1
Bromoform	ND		0.50	0.39	ug/L			11/12/20 09:25	1
Bromomethane	ND		2.0	0.93	ug/L			11/12/20 09:25	1
cis-1,2-Dichloroethene	**2.3**		0.50	0.30	ug/L			11/12/20 09:25	1
cis-1,3-Dichloropropene	ND		0.50	0.19	ug/L			11/12/20 09:25	1
Carbon disulfide	ND		10	0.24	ug/L			11/12/20 09:25	1
Carbon tetrachloride	ND		0.50	0.27	ug/L			11/12/20 09:25	1
Chlorobenzene	ND		0.50	0.24	ug/L			11/12/20 09:25	1
Chloroethane	ND		0.50	0.44	ug/L			11/12/20 09:25	1
Chloroform	ND		0.50	0.28	ug/L			11/12/20 09:25	1
Chloromethane	ND		5.0	0.29	ug/L			11/12/20 09:25	1
Dibromochloromethane	ND		0.50	0.27	ug/L			11/12/20 09:25	1
Dibromomethane	ND		0.50	0.23	ug/L			11/12/20 09:25	1
Dichlorodifluoromethane	ND		1.0	0.68	ug/L			11/12/20 09:25	1
Ethylbenzene	ND		0.50	0.36	ug/L			11/12/20 09:25	1
Isopropylbenzene	ND		0.50	0.38	ug/L			11/12/20 09:25	1
Methylene Chloride	ND		1.0	0.20	ug/L			11/12/20 09:25	1
Methyl-t-Butyl Ether (MTBE)	ND		0.50	0.21	ug/L			11/12/20 09:25	1
Naphthalene	ND		1.0	0.32	ug/L			11/12/20 09:25	1
n-Butylbenzene	ND		0.50	0.29	ug/L			11/12/20 09:25	1
N-Propylbenzene	ND		0.50	0.39	ug/L			11/12/20 09:25	1
o-Xylene	ND		0.50	0.35	ug/L			11/12/20 09:25	1
m,p-Xylene	ND		1.0	0.78	ug/L			11/12/20 09:25	1
p-Isopropyltoluene	ND		0.50	0.28	ug/L			11/12/20 09:25	1
sec-Butylbenzene	ND		0.50	0.34	ug/L			11/12/20 09:25	1
Styrene	ND		0.50	0.28	ug/L			11/12/20 09:25	1
trans-1,2-Dichloroethene	ND		0.50	0.36	ug/L			11/12/20 09:25	1
trans-1,3-Dichloropropene	ND		0.50	0.17	ug/L			11/12/20 09:25	1
tert-Butylbenzene	ND		0.50	0.34	ug/L			11/12/20 09:25	1
Tetrachloroethene	ND		0.50	0.29	ug/L			11/12/20 09:25	1
Toluene	ND		0.50	0.33	ug/L			11/12/20 09:25	1
Trichloroethene	**52**		0.50	0.29	ug/L			11/12/20 09:25	1
Trichlorofluoromethane	ND		0.50	0.30	ug/L			11/12/20 09:25	1
Vinyl acetate	ND		5.0	3.1	ug/L			11/12/20 09:25	1
Vinyl chloride	ND		0.50	0.40	ug/L			11/12/20 09:25	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*102*		*80 - 128*		*11/12/20 09:25*	*1*
4-Bromofluorobenzene (Surr)	*95*		*68 - 120*		*11/12/20 09:25*	*1*
Dibromofluoromethane	*98*		*80 - 127*		*11/12/20 09:25*	*1*

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: MW-08
Date Collected: 11/03/20 12:39
Date Received: 11/03/20 18:05

Lab Sample ID: 570-42805-2
Matrix: Water

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*101*		*80 - 120*		*11/12/20 09:25*	*1*

Client Sample ID: MW-30B
Date Collected: 11/03/20 15:05
Date Received: 11/03/20 18:05

Lab Sample ID: 570-42805-3
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		0.50	0.26	ug/L			11/12/20 08:57	1
1,1,1-Trichloroethane	ND		0.50	0.27	ug/L			11/12/20 08:57	1
1,1,2,2-Tetrachloroethane	ND		0.50	0.19	ug/L			11/12/20 08:57	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.50	0.25	ug/L			11/12/20 08:57	1
1,1,2-Trichloroethane	ND		0.50	0.085	ug/L			11/12/20 08:57	1
1,1-Dichloroethane	ND		0.50	0.35	ug/L			11/12/20 08:57	1
1,1-Dichloroethene	**19**		0.50	0.39	ug/L			11/12/20 08:57	1
1,1-Dichloropropene	ND		0.50	0.24	ug/L			11/12/20 08:57	1
1,2,3-Trichlorobenzene	ND		0.50	0.28	ug/L			11/12/20 08:57	1
1,2,3-Trichloropropane	ND		1.0	0.32	ug/L			11/12/20 08:57	1
1,2,4-Trichlorobenzene	ND		0.50	0.38	ug/L			11/12/20 08:57	1
1,2,4-Trimethylbenzene	ND		0.50	0.29	ug/L			11/12/20 08:57	1
1,2-Dibromo-3-Chloropropane	ND		5.0	0.64	ug/L			11/12/20 08:57	1
1,2-Dibromoethane	ND		0.50	0.14	ug/L			11/12/20 08:57	1
1,2-Dichlorobenzene	ND		0.50	0.23	ug/L			11/12/20 08:57	1
1,2-Dichloroethane	ND		0.50	0.15	ug/L			11/12/20 08:57	1
1,2-Dichloropropane	ND		0.50	0.24	ug/L			11/12/20 08:57	1
1,3,5-Trimethylbenzene	ND		0.50	0.28	ug/L			11/12/20 08:57	1
1,3-Dichlorobenzene	ND		0.50	0.26	ug/L			11/12/20 08:57	1
1,3-Dichloropropane	ND		1.0	0.20	ug/L			11/12/20 08:57	1
1,4-Dichlorobenzene	ND		0.50	0.22	ug/L			11/12/20 08:57	1
2,2-Dichloropropane	ND		1.0	0.40	ug/L			11/12/20 08:57	1
2-Butanone	ND		5.0	3.0	ug/L			11/12/20 08:57	1
2-Chlorotoluene	ND		0.50	0.31	ug/L			11/12/20 08:57	1
2-Hexanone	ND		10	4.3	ug/L			11/12/20 08:57	1
4-Chlorotoluene	ND		0.50	0.34	ug/L			11/12/20 08:57	1
4-Methyl-2-pentanone	ND		5.0	2.2	ug/L			11/12/20 08:57	1
Acetone	ND		10	4.0	ug/L			11/12/20 08:57	1
Benzene	ND		0.50	0.27	ug/L			11/12/20 08:57	1
Bromobenzene	ND		0.50	0.26	ug/L			11/12/20 08:57	1
Bromochloromethane	ND		1.0	0.35	ug/L			11/12/20 08:57	1
Bromodichloromethane	ND		0.50	0.22	ug/L			11/12/20 08:57	1
Bromoform	ND		0.50	0.39	ug/L			11/12/20 08:57	1
Bromomethane	ND		2.0	0.93	ug/L			11/12/20 08:57	1
cis-1,2-Dichloroethene	**4.5**		0.50	0.30	ug/L			11/12/20 08:57	1
cis-1,3-Dichloropropene	ND		0.50	0.19	ug/L			11/12/20 08:57	1
Carbon disulfide	ND		10	0.24	ug/L			11/12/20 08:57	1
Carbon tetrachloride	ND		0.50	0.27	ug/L			11/12/20 08:57	1
Chlorobenzene	ND		0.50	0.24	ug/L			11/12/20 08:57	1
Chloroethane	ND		0.50	0.44	ug/L			11/12/20 08:57	1
Chloroform	**0.36**	**J**	0.50	0.28	ug/L			11/12/20 08:57	1
Chloromethane	ND		5.0	0.29	ug/L			11/12/20 08:57	1
Dibromochloromethane	ND		0.50	0.27	ug/L			11/12/20 08:57	1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: MW-30B
Date Collected: 11/03/20 15:05
Date Received: 11/03/20 18:05

Lab Sample ID: 570-42805-3
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dibromomethane	ND		0.50	0.23	ug/L			11/12/20 08:57	1
Dichlorodifluoromethane	ND		1.0	0.68	ug/L			11/12/20 08:57	1
Ethylbenzene	ND		0.50	0.36	ug/L			11/12/20 08:57	1
Isopropylbenzene	ND		0.50	0.38	ug/L			11/12/20 08:57	1
Methylene Chloride	ND		1.0	0.20	ug/L			11/12/20 08:57	1
Methyl-t-Butyl Ether (MTBE)	ND		0.50	0.21	ug/L			11/12/20 08:57	1
Naphthalene	ND		1.0	0.32	ug/L			11/12/20 08:57	1
n-Butylbenzene	ND		0.50	0.29	ug/L			11/12/20 08:57	1
N-Propylbenzene	ND		0.50	0.39	ug/L			11/12/20 08:57	1
o-Xylene	ND		0.50	0.35	ug/L			11/12/20 08:57	1
m,p-Xylene	ND		1.0	0.78	ug/L			11/12/20 08:57	1
p-Isopropyltoluene	ND		0.50	0.28	ug/L			11/12/20 08:57	1
sec-Butylbenzene	ND		0.50	0.34	ug/L			11/12/20 08:57	1
Styrene	ND		0.50	0.28	ug/L			11/12/20 08:57	1
trans-1,2-Dichloroethene	ND		0.50	0.36	ug/L			11/12/20 08:57	1
trans-1,3-Dichloropropene	ND		0.50	0.17	ug/L			11/12/20 08:57	1
tert-Butylbenzene	ND		0.50	0.34	ug/L			11/12/20 08:57	1
Tetrachloroethene	ND		0.50	0.29	ug/L			11/12/20 08:57	1
Toluene	ND		0.50	0.33	ug/L			11/12/20 08:57	1
Trichloroethene	**89**		0.50	0.29	ug/L			11/12/20 08:57	1
Trichlorofluoromethane	ND		0.50	0.30	ug/L			11/12/20 08:57	1
Vinyl acetate	ND		5.0	3.1	ug/L			11/12/20 08:57	1
Vinyl chloride	ND		0.50	0.40	ug/L			11/12/20 08:57	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*100*		*80 - 128*		*11/12/20 08:57*	*1*
4-Bromofluorobenzene (Surr)	*97*		*68 - 120*		*11/12/20 08:57*	*1*
Dibromofluoromethane	*98*		*80 - 127*		*11/12/20 08:57*	*1*
Toluene-d8 (Surr)	*101*		*80 - 120*		*11/12/20 08:57*	*1*

Method: 8270C SIM ID - Semivolatile Organic Compounds (GC/MS SIM / Isotope Dilution)

Client Sample ID: MW-08
Date Collected: 11/03/20 12:39
Date Received: 11/03/20 18:05

Lab Sample ID: 570-42805-2
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	**1.4**		0.50	0.34	ug/L		11/05/20 06:59	11/05/20 12:56	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Dioxane-d8	*47*		*15 - 150*	*11/05/20 06:59*	*11/05/20 12:56*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Nitrobenzene-d5	*53*		*46 - 128*	*11/05/20 06:59*	*11/05/20 12:56*	*1*

Client Sample ID: MW-30B
Date Collected: 11/03/20 15:05
Date Received: 11/03/20 18:05

Lab Sample ID: 570-42805-3
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	ND		0.50	0.34	ug/L		11/05/20 06:59	11/05/20 13:11	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Dioxane-d8	*52*		*15 - 150*	*11/05/20 06:59*	*11/05/20 13:11*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Nitrobenzene-d5	*63*		*46 - 128*	*11/05/20 06:59*	*11/05/20 13:11*	*1*

Surrogate Summary

Client: Hargis + Associates, Inc.
Project/Site: Raytheon / 532.30

Job ID: 570-42805-1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Matrix: Water

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)			
		DCA	BFB	DBFM	TOL
Lab Sample ID	Client Sample ID	(80-128)	(68-120)	(80-127)	(80-120)
570-42805-1	TB-110320B	100	98	95	98
570-42805-2	MW-08	102	95	98	101
570-42805-3	MW-30B	100	97	98	101
LCS 570-108936/3	Lab Control Sample	100	101	97	99
LCSD 570-108936/4	Lab Control Sample Dup	99	99	97	99
MB 570-108936/7	Method Blank	99	97	96	100

Surrogate Legend

DCA = 1,2-Dichloroethane-d4 (Surr)
BFB = 4-Bromofluorobenzene (Surr)
DBFM = Dibromofluoromethane
TOL = Toluene-d8 (Surr)

Method: 8270C SIM ID - Semivolatile Organic Compounds (GC/MS SIM / Isotope Dilution)

Matrix: Water

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)
		NBZ
Lab Sample ID	Client Sample ID	(46-128)
570-42805-2	MW-08	53
570-42805-2 MS	MW-08	56
570-42805-2 MSD	MW-08	60
570-42805-3	MW-30B	63
LCS 570-107171/2-A	Lab Control Sample	67
LCSD 570-107171/3-A	Lab Control Sample Dup	66
MB 570-107171/1-A	Method Blank	58

Surrogate Legend

NBZ = Nitrobenzene-d5

Isotope Dilution Summary

Client: Hargis + Associates, Inc.
Project/Site: Raytheon / 532.30

Job ID: 570-42805-1

Method: 8270C SIM ID - Semivolatile Organic Compounds (GC/MS SIM / Isotope Dilution)

Matrix: Water

Prep Type: Total/NA

		Percent Isotope Dilution Recovery (Acceptance Limits)										
Lab Sample ID	Client Sample ID	DXE (15-150)										
570-42805-2	MW-08	47										
570-42805-2 MS	MW-08	51										
570-42805-2 MSD	MW-08	50										
570-42805-3	MW-30B	52										
LCS 570-107171/2-A	Lab Control Sample	40										
LCSD 570-107171/3-A	Lab Control Sample Dup	43										
MB 570-107171/1-A	Method Blank	41										

Surrogate Legend

DXE = 1,4-Dioxane-d8

Client: Hargis + Associates, Inc.
Project/Site: Raytheon / 532.30

Job ID: 570-42805-1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 570-108936/7
Matrix: Water
Analysis Batch: 108936

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		0.50	0.26	ug/L			11/12/20 06:09	1
1,1,1-Trichloroethane	ND		0.50	0.27	ug/L			11/12/20 06:09	1
1,1,2,2-Tetrachloroethane	ND		0.50	0.19	ug/L			11/12/20 06:09	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.50	0.25	ug/L			11/12/20 06:09	1
1,1,2-Trichloroethane	ND		0.50	0.085	ug/L			11/12/20 06:09	1
1,1-Dichloroethane	ND		0.50	0.35	ug/L			11/12/20 06:09	1
1,1-Dichloroethene	ND		0.50	0.39	ug/L			11/12/20 06:09	1
1,1-Dichloropropene	ND		0.50	0.24	ug/L			11/12/20 06:09	1
1,2,3-Trichlorobenzene	ND		0.50	0.28	ug/L			11/12/20 06:09	1
1,2,3-Trichloropropane	ND		1.0	0.32	ug/L			11/12/20 06:09	1
1,2,4-Trichlorobenzene	ND		0.50	0.38	ug/L			11/12/20 06:09	1
1,2,4-Trimethylbenzene	ND		0.50	0.29	ug/L			11/12/20 06:09	1
1,2-Dibromo-3-Chloropropane	ND		5.0	0.64	ug/L			11/12/20 06:09	1
1,2-Dibromoethane	ND		0.50	0.14	ug/L			11/12/20 06:09	1
1,2-Dichlorobenzene	ND		0.50	0.23	ug/L			11/12/20 06:09	1
1,2-Dichloroethane	ND		0.50	0.15	ug/L			11/12/20 06:09	1
1,2-Dichloropropane	ND		0.50	0.24	ug/L			11/12/20 06:09	1
1,3,5-Trimethylbenzene	ND		0.50	0.28	ug/L			11/12/20 06:09	1
1,3-Dichlorobenzene	ND		0.50	0.26	ug/L			11/12/20 06:09	1
1,3-Dichloropropane	ND		1.0	0.20	ug/L			11/12/20 06:09	1
1,4-Dichlorobenzene	ND		0.50	0.22	ug/L			11/12/20 06:09	1
2,2-Dichloropropane	ND		1.0	0.40	ug/L			11/12/20 06:09	1
2-Butanone	ND		5.0	3.0	ug/L			11/12/20 06:09	1
2-Chlorotoluene	ND		0.50	0.31	ug/L			11/12/20 06:09	1
2-Hexanone	ND		10	4.3	ug/L			11/12/20 06:09	1
4-Chlorotoluene	ND		0.50	0.34	ug/L			11/12/20 06:09	1
4-Methyl-2-pentanone	ND		5.0	2.2	ug/L			11/12/20 06:09	1
Acetone	ND		10	4.0	ug/L			11/12/20 06:09	1
Benzene	ND		0.50	0.27	ug/L			11/12/20 06:09	1
Bromobenzene	ND		0.50	0.26	ug/L			11/12/20 06:09	1
Bromochloromethane	ND		1.0	0.35	ug/L			11/12/20 06:09	1
Bromodichloromethane	ND		0.50	0.22	ug/L			11/12/20 06:09	1
Bromoform	ND		0.50	0.39	ug/L			11/12/20 06:09	1
Bromomethane	ND		2.0	0.93	ug/L			11/12/20 06:09	1
cis-1,2-Dichloroethene	ND		0.50	0.30	ug/L			11/12/20 06:09	1
cis-1,3-Dichloropropene	ND		0.50	0.19	ug/L			11/12/20 06:09	1
Carbon disulfide	ND		10	0.24	ug/L			11/12/20 06:09	1
Carbon tetrachloride	ND		0.50	0.27	ug/L			11/12/20 06:09	1
Chlorobenzene	ND		0.50	0.24	ug/L			11/12/20 06:09	1
Chloroethane	ND		0.50	0.44	ug/L			11/12/20 06:09	1
Chloroform	ND		0.50	0.28	ug/L			11/12/20 06:09	1
Chloromethane	ND		5.0	0.29	ug/L			11/12/20 06:09	1
Dibromochloromethane	ND		0.50	0.27	ug/L			11/12/20 06:09	1
Dibromomethane	ND		0.50	0.23	ug/L			11/12/20 06:09	1
Dichlorodifluoromethane	ND		1.0	0.68	ug/L			11/12/20 06:09	1
Ethylbenzene	ND		0.50	0.36	ug/L			11/12/20 06:09	1
Isopropylbenzene	ND		0.50	0.38	ug/L			11/12/20 06:09	1
Methylene Chloride	ND		1.0	0.20	ug/L			11/12/20 06:09	1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 570-108936/7
Matrix: Water
Analysis Batch: 108936

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl-t-Butyl Ether (MTBE)	ND		0.50	0.21	ug/L			11/12/20 06:09	1
Naphthalene	ND		1.0	0.32	ug/L			11/12/20 06:09	1
n-Butylbenzene	ND		0.50	0.29	ug/L			11/12/20 06:09	1
N-Propylbenzene	ND		0.50	0.39	ug/L			11/12/20 06:09	1
o-Xylene	ND		0.50	0.35	ug/L			11/12/20 06:09	1
m,p-Xylene	ND		1.0	0.78	ug/L			11/12/20 06:09	1
p-Isopropyltoluene	ND		0.50	0.28	ug/L			11/12/20 06:09	1
sec-Butylbenzene	ND		0.50	0.34	ug/L			11/12/20 06:09	1
Styrene	ND		0.50	0.28	ug/L			11/12/20 06:09	1
trans-1,2-Dichloroethene	ND		0.50	0.36	ug/L			11/12/20 06:09	1
trans-1,3-Dichloropropene	ND		0.50	0.17	ug/L			11/12/20 06:09	1
tert-Butylbenzene	ND		0.50	0.34	ug/L			11/12/20 06:09	1
Tetrachloroethene	ND		0.50	0.29	ug/L			11/12/20 06:09	1
Toluene	ND		0.50	0.33	ug/L			11/12/20 06:09	1
Trichloroethene	ND		0.50	0.29	ug/L			11/12/20 06:09	1
Trichlorofluoromethane	ND		0.50	0.30	ug/L			11/12/20 06:09	1
Vinyl acetate	ND		5.0	3.1	ug/L			11/12/20 06:09	1
Vinyl chloride	ND		0.50	0.40	ug/L			11/12/20 06:09	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*99*		*80 - 128*		*11/12/20 06:09*	*1*
4-Bromofluorobenzene (Surr)	*97*		*68 - 120*		*11/12/20 06:09*	*1*
Dibromofluoromethane	*96*		*80 - 127*		*11/12/20 06:09*	*1*
Toluene-d8 (Surr)	*100*		*80 - 120*		*11/12/20 06:09*	*1*

Lab Sample ID: LCS 570-108936/3
Matrix: Water
Analysis Batch: 108936

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1,2-Tetrachloroethane	10.0	9.722		ug/L		97	80 - 126
1,1,1-Trichloroethane	10.0	9.157		ug/L		92	80 - 125
1,1,2,2-Tetrachloroethane	10.0	9.537		ug/L		95	80 - 120
1,1,2-Trichloro-1,2,2-trifluoroethane	10.0	10.17		ug/L		102	51 - 140
1,1,2-Trichloroethane	10.0	9.948		ug/L		99	80 - 120
1,1-Dichloroethane	10.0	9.128		ug/L		91	77 - 120
1,1-Dichloroethene	10.0	9.544		ug/L		95	74 - 128
1,1-Dichloropropene	10.0	9.573		ug/L		96	79 - 125
1,2,3-Trichlorobenzene	10.0	9.757		ug/L		98	80 - 121
1,2,3-Trichloropropane	10.0	8.904		ug/L		89	80 - 120
1,2,4-Trichlorobenzene	10.0	9.751		ug/L		98	80 - 120
1,2,4-Trimethylbenzene	10.0	9.856		ug/L		99	80 - 122
1,2-Dibromo-3-Chloropropane	10.0	8.008		ug/L		80	67 - 120
1,2-Dibromoethane	10.0	9.858		ug/L		99	80 - 120
1,2-Dichlorobenzene	10.0	9.704		ug/L		97	80 - 120
1,2-Dichloroethane	10.0	10.14		ug/L		101	80 - 123
1,2-Dichloropropane	10.0	9.986		ug/L		100	80 - 120
1,3,5-Trimethylbenzene	10.0	9.867		ug/L		99	80 - 121

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 570-108936/3
Matrix: Water
Analysis Batch: 108936

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,3-Dichlorobenzene	10.0	9.410		ug/L		94	80 - 120
1,3-Dichloropropane	10.0	9.799		ug/L		98	80 - 120
1,4-Dichlorobenzene	10.0	9.461		ug/L		95	80 - 120
2,2-Dichloropropane	10.0	8.760		ug/L		88	77 - 139
2-Butanone	10.0	9.788		ug/L		98	50 - 127
2-Chlorotoluene	10.0	9.708		ug/L		97	80 - 120
2-Hexanone	10.0	9.386	J	ug/L		94	66 - 129
4-Chlorotoluene	10.0	9.443		ug/L		94	80 - 120
4-Methyl-2-pentanone	10.0	9.550		ug/L		95	72 - 120
Acetone	10.0	8.816	J	ug/L		88	58 - 131
Benzene	10.0	9.830		ug/L		98	80 - 120
Bromobenzene	10.0	9.898		ug/L		99	80 - 120
Bromochloromethane	10.0	9.383		ug/L		94	80 - 120
Bromodichloromethane	10.0	9.746		ug/L		97	80 - 126
Bromoform	10.0	8.708		ug/L		87	70 - 141
Bromomethane	10.0	9.557		ug/L		96	50 - 150
cis-1,2-Dichloroethene	10.0	9.516		ug/L		95	80 - 121
cis-1,3-Dichloropropene	10.0	9.185		ug/L		92	80 - 120
Carbon disulfide	10.0	9.335	J	ug/L		93	65 - 136
Carbon tetrachloride	10.0	9.466		ug/L		95	75 - 142
Chlorobenzene	10.0	9.729		ug/L		97	80 - 120
Chloroethane	10.0	9.189		ug/L		92	74 - 123
Chloroform	10.0	9.383		ug/L		94	80 - 120
Chloromethane	10.0	9.856		ug/L		99	54 - 140
Dibromochloromethane	10.0	9.304		ug/L		93	80 - 128
Dibromomethane	10.0	10.12		ug/L		101	80 - 120
Dichlorodifluoromethane	10.0	7.277		ug/L		73	63 - 135
Ethylbenzene	10.0	9.915		ug/L		99	80 - 120
Isopropylbenzene	10.0	9.949		ug/L		99	80 - 121
Methylene Chloride	10.0	9.270		ug/L		93	71 - 125
Methyl-t-Butyl Ether (MTBE)	10.0	8.762		ug/L		88	70 - 121
Naphthalene	10.0	9.596		ug/L		96	80 - 125
n-Butylbenzene	10.0	9.842		ug/L		98	80 - 124
N-Propylbenzene	10.0	9.876		ug/L		99	80 - 121
o-Xylene	10.0	9.950		ug/L		100	80 - 120
m,p-Xylene	20.0	20.00		ug/L		100	80 - 120
p-Isopropyltoluene	10.0	9.720		ug/L		97	80 - 121
sec-Butylbenzene	10.0	9.552		ug/L		96	80 - 120
Styrene	10.0	10.00		ug/L		100	80 - 120
trans-1,2-Dichloroethene	10.0	9.360		ug/L		94	74 - 121
trans-1,3-Dichloropropene	10.0	9.809		ug/L		98	80 - 123
tert-Butylbenzene	10.0	9.263		ug/L		93	80 - 120
Tetrachloroethene	10.0	9.931		ug/L		99	80 - 126
Toluene	10.0	9.724		ug/L		97	80 - 120
Trichloroethene	10.0	9.836		ug/L		98	80 - 120
Trichlorofluoromethane	10.0	8.232		ug/L		82	74 - 137
Vinyl acetate	10.0	9.104		ug/L		91	50 - 150
Vinyl chloride	10.0	8.605		ug/L		86	72 - 126

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 570-108936/3
Matrix: Water
Analysis Batch: 108936

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	*100*		*80 - 128*
4-Bromofluorobenzene (Surr)	*101*		*68 - 120*
Dibromofluoromethane	*97*		*80 - 127*
Toluene-d8 (Surr)	*99*		*80 - 120*

Lab Sample ID: LCSD 570-108936/4
Matrix: Water
Analysis Batch: 108936

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,1,1,2-Tetrachloroethane			10.0	9.350		ug/L		94	80 - 126	4	11
1,1,1-Trichloroethane			10.0	8.704		ug/L		87	80 - 125	5	14
1,1,2,2-Tetrachloroethane			10.0	9.500		ug/L		95	80 - 120	0	16
1,1,2-Trichloro-1,2,2-trifluoroethane			10.0	9.523		ug/L		95	51 - 140	7	18
1,1,2-Trichloroethane			10.0	9.811		ug/L		98	80 - 120	1	13
1,1-Dichloroethane			10.0	8.663		ug/L		87	77 - 120	5	14
1,1-Dichloroethene			10.0	8.990		ug/L		90	74 - 128	6	17
1,1-Dichloropropene			10.0	8.769		ug/L		88	79 - 125	9	14
1,2,3-Trichlorobenzene			10.0	9.625		ug/L		96	80 - 121	1	15
1,2,3-Trichloropropane			10.0	8.591		ug/L		86	80 - 120	4	14
1,2,4-Trichlorobenzene			10.0	9.511		ug/L		95	80 - 120	2	16
1,2,4-Trimethylbenzene			10.0	9.415		ug/L		94	80 - 122	5	15
1,2-Dibromo-3-Chloropropane			10.0	8.471		ug/L		85	67 - 120	6	20
1,2-Dibromoethane			10.0	9.762		ug/L		98	80 - 120	1	12
1,2-Dichlorobenzene			10.0	9.432		ug/L		94	80 - 120	3	14
1,2-Dichloroethane			10.0	9.805		ug/L		98	80 - 123	3	10
1,2-Dichloropropane			10.0	9.396		ug/L		94	80 - 120	6	11
1,3,5-Trimethylbenzene			10.0	9.374		ug/L		94	80 - 121	5	13
1,3-Dichlorobenzene			10.0	9.243		ug/L		92	80 - 120	2	15
1,3-Dichloropropane			10.0	9.625		ug/L		96	80 - 120	2	13
1,4-Dichlorobenzene			10.0	9.162		ug/L		92	80 - 120	3	15
2,2-Dichloropropane			10.0	8.006		ug/L		80	77 - 139	9	16
2-Butanone			10.0	8.186		ug/L		82	50 - 127	18	26
2-Chlorotoluene			10.0	9.233		ug/L		92	80 - 120	5	13
2-Hexanone			10.0	8.468	J	ug/L		85	66 - 129	10	21
4-Chlorotoluene			10.0	9.216		ug/L		92	80 - 120	2	16
4-Methyl-2-pentanone			10.0	8.570		ug/L		86	72 - 120	11	14
Acetone			10.0	9.198	J	ug/L		92	58 - 131	4	30
Benzene			10.0	9.263		ug/L		93	80 - 120	6	12
Bromobenzene			10.0	9.569		ug/L		96	80 - 120	3	11
Bromochloromethane			10.0	8.929		ug/L		89	80 - 120	5	12
Bromodichloromethane			10.0	9.227		ug/L		92	80 - 126	5	11
Bromoform			10.0	9.006		ug/L		90	70 - 141	3	15
Bromomethane			10.0	8.970		ug/L		90	50 - 150	6	22
cis-1,2-Dichloroethene			10.0	9.142		ug/L		91	80 - 121	4	13
cis-1,3-Dichloropropene			10.0	8.975		ug/L		90	80 - 120	2	12
Carbon disulfide			10.0	8.912	J	ug/L		89	65 - 136	5	17
Carbon tetrachloride			10.0	8.960		ug/L		90	75 - 142	5	15

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 570-108936/4
Matrix: Water
Analysis Batch: 108936

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chlorobenzene			10.0	9.349		ug/L		93	80 - 120	4	12
Chloroethane			10.0	8.475		ug/L		85	74 - 123	8	17
Chloroform			10.0	8.926		ug/L		89	80 - 120	5	12
Chloromethane			10.0	9.420		ug/L		94	54 - 140	5	19
Dibromochloromethane			10.0	9.074		ug/L		91	80 - 128	3	11
Dibromomethane			10.0	9.691		ug/L		97	80 - 120	4	11
Dichlorodifluoromethane			10.0	6.742		ug/L		67	63 - 135	8	17
Ethylbenzene			10.0	9.295		ug/L		93	80 - 120	6	13
Isopropylbenzene			10.0	9.303		ug/L		93	80 - 121	7	13
Methylene Chloride			10.0	8.814		ug/L		88	71 - 125	5	19
Methyl-t-Butyl Ether (MTBE)			10.0	8.495		ug/L		85	70 - 121	3	11
Naphthalene			10.0	9.420		ug/L		94	80 - 125	2	16
n-Butylbenzene			10.0	9.329		ug/L		93	80 - 124	5	16
N-Propylbenzene			10.0	9.289		ug/L		93	80 - 121	6	14
o-Xylene			10.0	9.444		ug/L		94	80 - 120	5	12
m,p-Xylene			20.0	19.09		ug/L		95	80 - 120	5	13
p-Isopropyltoluene			10.0	9.371		ug/L		94	80 - 121	4	16
sec-Butylbenzene			10.0	9.081		ug/L		91	80 - 120	5	16
Styrene			10.0	9.622		ug/L		96	80 - 120	4	12
trans-1,2-Dichloroethene			10.0	8.847		ug/L		88	74 - 121	6	14
trans-1,3-Dichloropropene			10.0	9.545		ug/L		95	80 - 123	3	13
tert-Butylbenzene			10.0	8.909		ug/L		89	80 - 120	4	16
Tetrachloroethene			10.0	9.299		ug/L		93	80 - 126	7	15
Toluene			10.0	9.208		ug/L		92	80 - 120	5	13
Trichloroethene			10.0	9.155		ug/L		92	80 - 120	7	14
Trichlorofluoromethane			10.0	7.707		ug/L		77	74 - 137	7	16
Vinyl acetate			10.0	9.693		ug/L		97	50 - 150	6	28
Vinyl chloride			10.0	8.283		ug/L		83	72 - 126	4	17

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*99*		*80 - 128*
4-Bromofluorobenzene (Surr)	*99*		*68 - 120*
Dibromofluoromethane	*97*		*80 - 127*
Toluene-d8 (Surr)	*99*		*80 - 120*

Method: 8270C SIM ID - Semivolatile Organic Compounds (GC/MS SIM / Isotope Dilution)

Lab Sample ID: MB 570-107171/1-A
Matrix: Water
Analysis Batch: 107275

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 107171

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	ND		0.50	0.34	ug/L		11/05/20 06:59	11/05/20 11:42	1

Isotope Dilution	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Dioxane-d8	*41*		*15 - 150*	*11/05/20 06:59*	*11/05/20 11:42*	*1*

Method: 8270C SIM ID - Semivolatile Organic Compounds (GC/MS SIM / Isotope Dilution) (Continued)

Lab Sample ID: MB 570-107171/1-A
Matrix: Water
Analysis Batch: 107275

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 107171

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Nitrobenzene-d5	58		46 - 128	11/05/20 06:59	11/05/20 11:42	1

Lab Sample ID: LCS 570-107171/2-A
Matrix: Water
Analysis Batch: 107275

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 107171

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
1,4-Dioxane			20.0	15.28		ug/L		76	57 - 136		

Isotope Dilution	LCS %Recovery	LCS Qualifier	Limits
1,4-Dioxane-d8	40		15 - 150

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Nitrobenzene-d5	67		46 - 128

Lab Sample ID: LCSD 570-107171/3-A
Matrix: Water
Analysis Batch: 107275

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 107171

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,4-Dioxane			20.0	17.97		ug/L		90	57 - 136	16	20

Isotope Dilution	LCSD %Recovery	LCSD Qualifier	Limits
1,4-Dioxane-d8	43		15 - 150

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
Nitrobenzene-d5	66		46 - 128

Lab Sample ID: 570-42805-2 MS
Matrix: Water
Analysis Batch: 107275

Client Sample ID: MW-08
Prep Type: Total/NA
Prep Batch: 107171

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
1,4-Dioxane	1.4		19.9	18.61		ug/L		86	45 - 139		

Isotope Dilution	MS %Recovery	MS Qualifier	Limits
1,4-Dioxane-d8	51		15 - 150

Surrogate	MS %Recovery	MS Qualifier	Limits
Nitrobenzene-d5	56		46 - 128

Method: 8270C SIM ID - Semivolatile Organic Compounds (GC/MS SIM / Isotope Dilution) (Continued)

Lab Sample ID: 570-42805-2 MSD
Matrix: Water
Analysis Batch: 107275

Client Sample ID: MW-08
Prep Type: Total/NA
Prep Batch: 107171

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,4-Dioxane	1.4		19.9	18.57		ug/L		86	45 - 139	0	17

Isotope Dilution	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1,4-Dioxane-d8	*50*		*15 - 150*

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
Nitrobenzene-d5	*60*		*46 - 128*

QC Association Summary

Client: Hargis + Associates, Inc.
Project/Site: Raytheon / 532.30

Job ID: 570-42805-1

GC/MS VOA

Analysis Batch: 108936

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-42805-1	TB-110320B	Total/NA	Water	8260B	
570-42805-2	MW-08	Total/NA	Water	8260B	
570-42805-3	MW-30B	Total/NA	Water	8260B	
MB 570-108936/7	Method Blank	Total/NA	Water	8260B	
LCS 570-108936/3	Lab Control Sample	Total/NA	Water	8260B	
LCSD 570-108936/4	Lab Control Sample Dup	Total/NA	Water	8260B	

GC/MS Semi VOA

Prep Batch: 107171

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-42805-2	MW-08	Total/NA	Water	3510C	
570-42805-3	MW-30B	Total/NA	Water	3510C	
MB 570-107171/1-A	Method Blank	Total/NA	Water	3510C	
LCS 570-107171/2-A	Lab Control Sample	Total/NA	Water	3510C	
LCSD 570-107171/3-A	Lab Control Sample Dup	Total/NA	Water	3510C	
570-42805-2 MS	MW-08	Total/NA	Water	3510C	
570-42805-2 MSD	MW-08	Total/NA	Water	3510C	

Analysis Batch: 107275

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-42805-2	MW-08	Total/NA	Water	8270C SIM ID	107171
570-42805-3	MW-30B	Total/NA	Water	8270C SIM ID	107171
MB 570-107171/1-A	Method Blank	Total/NA	Water	8270C SIM ID	107171
LCS 570-107171/2-A	Lab Control Sample	Total/NA	Water	8270C SIM ID	107171
LCSD 570-107171/3-A	Lab Control Sample Dup	Total/NA	Water	8270C SIM ID	107171
570-42805-2 MS	MW-08	Total/NA	Water	8270C SIM ID	107171
570-42805-2 MSD	MW-08	Total/NA	Water	8270C SIM ID	107171

Lab Chronicle

Client: Hargis + Associates, Inc.
Project/Site: Raytheon / 532.30

Job ID: 570-42805-1

Client Sample ID: TB-110320B

Lab Sample ID: 570-42805-1

Date Collected: 11/03/20 09:00

Matrix: Water

Date Received: 11/03/20 18:05

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	20 mL	20 mL	108936	11/12/20 07:33	UX77	ECL 2
	Instrument ID: GCMST									

Client Sample ID: MW-08

Lab Sample ID: 570-42805-2

Date Collected: 11/03/20 12:39

Matrix: Water

Date Received: 11/03/20 18:05

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	20 mL	20 mL	108936	11/12/20 09:25	UX77	ECL 2
	Instrument ID: GCMST									
Total/NA	Prep	3510C			100.5 mL	10 mL	107171	11/05/20 06:59	PQS1	ECL 1
Total/NA	Analysis	8270C SIM ID		1			107275	11/05/20 12:56	AJ2Q	ECL 1
	Instrument ID: GCMSDDD									

Client Sample ID: MW-30B

Lab Sample ID: 570-42805-3

Date Collected: 11/03/20 15:05

Matrix: Water

Date Received: 11/03/20 18:05

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	20 mL	20 mL	108936	11/12/20 08:57	UX77	ECL 2
	Instrument ID: GCMST									
Total/NA	Prep	3510C			100.6 mL	10 mL	107171	11/05/20 06:59	PQS1	ECL 1
Total/NA	Analysis	8270C SIM ID		1			107275	11/05/20 13:11	AJ2Q	ECL 1
	Instrument ID: GCMSDDD									

Laboratory References:

ECL 1 = Eurofins Calscience LLC Lincoln, 7440 Lincoln Way, Garden Grove, CA 92841, TEL (714)895-5494

ECL 2 = Eurofins Calscience LLC Lampson, 7445 Lampson Ave, Garden Grove, CA 92841, TEL (714)895-5494

Accreditation/Certification Summary

Client: Hargis + Associates, Inc.
Project/Site: Raytheon / 532.30

Job ID: 570-42805-1

Laboratory: Eurofins Calscience LLC

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
California	Los Angeles County Sanitation Districts	10109	09-30-21
California	SCAQMD LAP	17LA0919	11-30-20
California	State	2944	09-30-21
Nevada	State	CA00111	07-31-21
Oregon	NELAP	CA300001	01-29-21
USDA	US Federal Programs	P330-20-00034	02-10-23
Washington	State	C916-18	10-11-21

Method Summary

Client: Hargis + Associates, Inc.
Project/Site: Raytheon / 532.30

Job ID: 570-42805-1

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	ECL 2
8270C SIM ID	Semivolatile Organic Compounds (GC/MS SIM / Isotope Dilution)	SW846	ECL 1
3510C	Liquid-Liquid Extraction (Separatory Funnel)	SW846	ECL 1
5030C	Purge and Trap	SW846	ECL 2

Protocol References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

ECL 1 = Eurofins Calscience LLC Lincoln, 7440 Lincoln Way, Garden Grove, CA 92841, TEL (714)895-5494

ECL 2 = Eurofins Calscience LLC Lampson, 7445 Lampson Ave, Garden Grove, CA 92841, TEL (714)895-5494

Sample Summary

Client: Hargis + Associates, Inc.
Project/Site: Raytheon / 532.30

Job ID: 570-42805-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
570-42805-1	TB-110320B	Water	11/03/20 09:00	11/03/20 18:05	
570-42805-2	MW-08	Water	11/03/20 12:39	11/03/20 18:05	
570-42805-3	MW-30B	Water	11/03/20 15:05	11/03/20 18:05	

42805

HARGIS + ASSOCIATES, INC.
HYDROGEOLOGY • ENGINEERING

Date: 11/03/2020
Page 1 of 1

PROJECT: Raytheon Main

TASK NO.: 532.30

Project Manager Steve Netto
QA Manager Andrew Donnelly
Phone 858.455.6500
Fax 858.455.6533

Sampled By: A. DONNELLY, A. CANZON

SAMPLE COLLECTION

LAB ID	SAMPLE ID	Date	Time	MATRIX: Groundwater	MATRIX: Lab prepared water	PRESERVATION: Hydrochloric Acid (HCl)	PRESERVATION: NaOH/AlCl3	PRESERVATION: NaOH/Zn	PRESERVATION: Ice	CONTAINERS: 40-ml VOA	CONTAINERS: 1 L Amber	CONTAINERS: 250-ml poly	CONTAINERS: 250-ml Amber	ANALYSIS REQUESTED: VOCs by EPA 8260B	ANALYSIS REQUESTED: 1,4 Dioxane 8270 SIM	ANALYSIS REQUESTED: 1,4-Dioxane 8270 MOD	ANALYSIS REQUESTED: CO2 by SM4500	ANALYSIS REQUESTED: Dissolved Sulfide by SM4500 S2-d	ANALYSIS REQUESTED: Total Sulfide by SM-4500 S2-d	Expected Concetration Range (ppb) for VOA's: 0 - 10	10 - 100	100 - 1,000	>1,000	SPECIAL HANDLING: 24 hr TAT	48 hr TAT	Standard TAT	Level IV Data Validation Requested	MS/MSD Requested
1	TB-110320B	11/3/20	0900		X	X			X	2				X						X						X		
2	MW-08	↓	1239	X		X			X	3				X							X					X		
	↓		↓	X					X		1				X											X		
3	MW-30B		1505	X		X			X	3				X								X				X		
	↓		↓	X					X		1				X											X		
Total number of containers per analysis:										8	2																	

Laboratory

~~ATL~~
~~Attn: Tina Nguyen~~
~~3257 Walnut Ave~~
~~Signal Hill, CA 90755~~
~~562-989-4045~~

EUROFINS CALSCIENCE
ATTN: Virendra Patel
7440 Lincoln Way
Garden Grove, CA

REMARKS

Report J Flags

Total No. of Containers: 10

Relinquished By: / Company:	Date / Time	Received By: / Company	Date / Time
H+A	11/03/2020 / 1620	[illegible]	11/3/20 1620
Relinquished By: / Company:	Date / Time	Received By: / Company	Date / Time
[illegible]	11/3/20	[illegible]	11/3/20 1805

- ☐ No. of containers correct
- ☐ Received in good condition
- ☐ Custody seals secure
- ☐ Conforms to COC document

Send Results to:
Steve Netto
9171 Towne Centre Drive
Suite 375
San Diego, CA 92122
Ph: 858.455.5400
snetto@hargis.com

Instructions

1. Fill out form completely and sign only after verified for completeness
2. Complete in ballpoint pen. Draw one line through error, initial and date correction
3. Indicate the number of sample containers in analytical request space; indicate choice with ✓or ×
4. Note applicable preservatives, special instructions, and deviations from typical environmental samples.
5. Consult project QA documents for specific instructions.

_____ Temperature on receipt

3.6/2.8 SCC

570-42805 Chain of Custody

Login Sample Receipt Checklist

Client: Hargis + Associates, Inc.

Job Number: 570-42805-1

Login Number: 42805

List Source: Eurofins Calscience

List Number: 1

Creator: Patel, Jayesh

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

November 11, 2020

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

ELAP No.: 1838
CSDLAC No.: 10196
ORELAP No.: CA300003

Re: ATL Work Order Number : 2002461
Client Reference : Raytheon Main, 532.30

Enclosed are the results for sample(s) received on November 04, 2020 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,

Edgar P. Caballero
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 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.		Project Number :	Raytheon Main, 532.30
9171 Towne Centre Drive, Suite 375		Report To :	Steve Netto
San Diego , CA 92122		Reported :	11/11/2020

SUMMARY OF SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
TB-11042020	2002461-01	Water	11/04/20 8:30	11/04/20 16:30
MW-28	2002461-02	Groundwater	11/04/20 8:41	11/04/20 16:30
MW-40	2002461-03	Groundwater	11/04/20 10:12	11/04/20 16:30
MW-41	2002461-04	Groundwater	11/04/20 12:18	11/04/20 16:30
MW-39	2002461-05	Groundwater	11/04/20 13:46	11/04/20 16:30
MW-43	2002461-06	Groundwater	11/04/20 9:21	11/04/20 16:30
MW-42	2002461-07	Groundwater	11/04/20 11:15	11/04/20 16:30
MW-36	2002461-08	Groundwater	11/04/20 14:43	11/04/20 16:30

CASE NARRATIVE

Results were J-flagged. "J" is used to flag those results that are between the PQL (Practical Quantitation Limit) and the calculated MDL (Method Detection Limit). Results that are "J" flagged are estimated values since it becomes difficult to accurately quantitate the analyte near the MDL.

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 : 11/11/2020

Client Sample ID: TB-11042020

Lab ID: 2002461-01

Volatile Organic Compounds by EPA 8260B **Analyst: KL**

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	0.11	1	B0K0083	11/05/2020	11/05/20 17:31	
1,1,1-Trichloroethane	ND	0.50	0.21	1	B0K0083	11/05/2020	11/05/20 17:31	
1,1,2,2-Tetrachloroethane	ND	0.50	0.36	1	B0K0083	11/05/2020	11/05/20 17:31	
1,1,2-Trichloroethane	ND	0.50	0.25	1	B0K0083	11/05/2020	11/05/20 17:31	
1,1-Dichloroethane	ND	0.50	0.09	1	B0K0083	11/05/2020	11/05/20 17:31	
1,1-Dichloroethene	ND	0.50	0.13	1	B0K0083	11/05/2020	11/05/20 17:31	
1,1-Dichloropropene	ND	0.50	0.13	1	B0K0083	11/05/2020	11/05/20 17:31	
1,2,3-Trichloropropane	ND	0.50	0.39	1	B0K0083	11/05/2020	11/05/20 17:31	
1,2,3-Trichlorobenzene	ND	0.50	0.18	1	B0K0083	11/05/2020	11/05/20 17:31	
1,2,4-Trichlorobenzene	ND	0.50	0.16	1	B0K0083	11/05/2020	11/05/20 17:31	
1,2,4-Trimethylbenzene	ND	0.50	0.14	1	B0K0083	11/05/2020	11/05/20 17:31	
1,2-Dibromo-3-chloropropane	ND	0.50	0.41	1	B0K0083	11/05/2020	11/05/20 17:31	
1,2-Dibromoethane	ND	0.50	0.24	1	B0K0083	11/05/2020	11/05/20 17:31	
1,2-Dichlorobenzene	ND	0.50	0.20	1	B0K0083	11/05/2020	11/05/20 17:31	
1,2-Dichloroethane	ND	0.50	0.20	1	B0K0083	11/05/2020	11/05/20 17:31	
1,2-Dichloropropane	ND	0.50	0.15	1	B0K0083	11/05/2020	11/05/20 17:31	
1,3,5-Trimethylbenzene	ND	0.50	0.13	1	B0K0083	11/05/2020	11/05/20 17:31	
1,3-Dichlorobenzene	ND	0.50	0.16	1	B0K0083	11/05/2020	11/05/20 17:31	
1,3-Dichloropropane	ND	0.50	0.21	1	B0K0083	11/05/2020	11/05/20 17:31	
1,4-Dichlorobenzene	ND	0.50	0.17	1	B0K0083	11/05/2020	11/05/20 17:31	
2,2-Dichloropropane	ND	0.50	0.38	1	B0K0083	11/05/2020	11/05/20 17:31	
2-Chlorotoluene	ND	0.50	0.11	1	B0K0083	11/05/2020	11/05/20 17:31	
4-Chlorotoluene	ND	0.50	0.12	1	B0K0083	11/05/2020	11/05/20 17:31	
4-Isopropyltoluene	ND	0.50	0.11	1	B0K0083	11/05/2020	11/05/20 17:31	
Benzene	ND	0.50	0.13	1	B0K0083	11/05/2020	11/05/20 17:31	
Bromobenzene	ND	0.50	0.21	1	B0K0083	11/05/2020	11/05/20 17:31	
Bromodichloromethane	ND	0.50	0.14	1	B0K0083	11/05/2020	11/05/20 17:31	
Bromoform	ND	0.50	0.20	1	B0K0083	11/05/2020	11/05/20 17:31	
Bromomethane	ND	0.50	0.40	1	B0K0083	11/05/2020	11/05/20 17:31	
Carbon tetrachloride	ND	0.50	0.09	1	B0K0083	11/05/2020	11/05/20 17:31	
Chlorobenzene	ND	0.50	0.13	1	B0K0083	11/05/2020	11/05/20 17:31	
Chloroethane	ND	0.50	0.15	1	B0K0083	11/05/2020	11/05/20 17:31	
Chloroform	ND	0.50	0.11	1	B0K0083	11/05/2020	11/05/20 17:31	
Chloromethane	ND	0.50	0.12	1	B0K0083	11/05/2020	11/05/20 17:31	
cis-1,2-Dichloroethene	ND	0.50	0.14	1	B0K0083	11/05/2020	11/05/20 17:31	
cis-1,3-Dichloropropene	ND	0.50	0.13	1	B0K0083	11/05/2020	11/05/20 17:31	
Dibromochloromethane	ND	0.50	0.16	1	B0K0083	11/05/2020	11/05/20 17:31	

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 : 11/11/2020

Client Sample ID: TB-11042020

Lab ID: 2002461-01

Volatile Organic Compounds by EPA 8260B **Analyst: KL**

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Dibromomethane	ND	0.50	0.19	1	B0K0083	11/05/2020	11/05/20 17:31	
Dichlorodifluoromethane	ND	0.50	0.18	1	B0K0083	11/05/2020	11/05/20 17:31	
Ethylbenzene	ND	0.50	0.13	1	B0K0083	11/05/2020	11/05/20 17:31	
Hexachlorobutadiene	ND	0.50	0.15	1	B0K0083	11/05/2020	11/05/20 17:31	
Isopropylbenzene	ND	0.50	0.10	1	B0K0083	11/05/2020	11/05/20 17:31	
m,p-Xylene	ND	1.0	0.19	1	B0K0083	11/05/2020	11/05/20 17:31	
Methylene chloride	ND	1.0	0.71	1	B0K0083	11/05/2020	11/05/20 17:31	
n-Butylbenzene	ND	0.50	0.11	1	B0K0083	11/05/2020	11/05/20 17:31	
n-Propylbenzene	ND	0.50	0.10	1	B0K0083	11/05/2020	11/05/20 17:31	
Naphthalene	ND	0.50	0.41	1	B0K0083	11/05/2020	11/05/20 17:31	
o-Xylene	ND	0.50	0.13	1	B0K0083	11/05/2020	11/05/20 17:31	
sec-Butylbenzene	ND	0.50	0.09	1	B0K0083	11/05/2020	11/05/20 17:31	
Styrene	ND	0.50	0.13	1	B0K0083	11/05/2020	11/05/20 17:31	
tert-Butylbenzene	ND	0.50	0.09	1	B0K0083	11/05/2020	11/05/20 17:31	
Tetrachloroethene	ND	0.50	0.10	1	B0K0083	11/05/2020	11/05/20 17:31	
Toluene	ND	0.50	0.12	1	B0K0083	11/05/2020	11/05/20 17:31	
trans-1,2-Dichloroethene	ND	0.50	0.09	1	B0K0083	11/05/2020	11/05/20 17:31	
Trichloroethene	ND	0.50	0.10	1	B0K0083	11/05/2020	11/05/20 17:31	
Trichlorofluoromethane	ND	0.50	0.23	1	B0K0083	11/05/2020	11/05/20 17:31	
Vinyl chloride	ND	0.50	0.13	1	B0K0083	11/05/2020	11/05/20 17:31	
Surrogate: 1,2-Dichloroethane-d4	*95.7 %*	*64 - 155*			B0K0083	11/05/2020	*11/05/20 17:31*	
Surrogate: 4-Bromofluorobenzene	*79.6 %*	*73 - 124*			B0K0083	11/05/2020	*11/05/20 17:31*	
Surrogate: Dibromofluoromethane	*108 %*	*78 - 129*			B0K0083	11/05/2020	*11/05/20 17:31*	
Surrogate: Toluene-d8	*93.4 %*	*84 - 117*			B0K0083	11/05/2020	*11/05/20 17:31*	

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 : 11/11/2020

Client Sample ID: MW-28

Lab ID: 2002461-02

Volatile Organic Compounds by EPA 8260B **Analyst: KL**

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	0.11	1	B0K0083	11/05/2020	11/05/20 15:29	
1,1,1-Trichloroethane	ND	0.50	0.21	1	B0K0083	11/05/2020	11/05/20 15:29	
1,1,2,2-Tetrachloroethane	ND	0.50	0.36	1	B0K0083	11/05/2020	11/05/20 15:29	
1,1,2-Trichloroethane	ND	0.50	0.25	1	B0K0083	11/05/2020	11/05/20 15:29	
1,1-Dichloroethane	ND	0.50	0.09	1	B0K0083	11/05/2020	11/05/20 15:29	
1,1-Dichloroethene	**0.83**	0.50	0.13	1	B0K0083	11/05/2020	11/05/20 15:29	
1,1-Dichloropropene	ND	0.50	0.13	1	B0K0083	11/05/2020	11/05/20 15:29	
1,2,3-Trichloropropane	ND	0.50	0.39	1	B0K0083	11/05/2020	11/05/20 15:29	
1,2,3-Trichlorobenzene	ND	0.50	0.18	1	B0K0083	11/05/2020	11/05/20 15:29	
1,2,4-Trichlorobenzene	ND	0.50	0.16	1	B0K0083	11/05/2020	11/05/20 15:29	
1,2,4-Trimethylbenzene	ND	0.50	0.14	1	B0K0083	11/05/2020	11/05/20 15:29	
1,2-Dibromo-3-chloropropane	ND	0.50	0.41	1	B0K0083	11/05/2020	11/05/20 15:29	
1,2-Dibromoethane	ND	0.50	0.24	1	B0K0083	11/05/2020	11/05/20 15:29	
1,2-Dichlorobenzene	ND	0.50	0.20	1	B0K0083	11/05/2020	11/05/20 15:29	
1,2-Dichloroethane	ND	0.50	0.20	1	B0K0083	11/05/2020	11/05/20 15:29	
1,2-Dichloropropane	ND	0.50	0.15	1	B0K0083	11/05/2020	11/05/20 15:29	
1,3,5-Trimethylbenzene	ND	0.50	0.13	1	B0K0083	11/05/2020	11/05/20 15:29	
1,3-Dichlorobenzene	ND	0.50	0.16	1	B0K0083	11/05/2020	11/05/20 15:29	
1,3-Dichloropropane	ND	0.50	0.21	1	B0K0083	11/05/2020	11/05/20 15:29	
1,4-Dichlorobenzene	ND	0.50	0.17	1	B0K0083	11/05/2020	11/05/20 15:29	
2,2-Dichloropropane	ND	0.50	0.38	1	B0K0083	11/05/2020	11/05/20 15:29	
2-Chlorotoluene	ND	0.50	0.11	1	B0K0083	11/05/2020	11/05/20 15:29	
4-Chlorotoluene	ND	0.50	0.12	1	B0K0083	11/05/2020	11/05/20 15:29	
4-Isopropyltoluene	ND	0.50	0.11	1	B0K0083	11/05/2020	11/05/20 15:29	
Benzene	ND	0.50	0.13	1	B0K0083	11/05/2020	11/05/20 15:29	
Bromobenzene	ND	0.50	0.21	1	B0K0083	11/05/2020	11/05/20 15:29	
Bromodichloromethane	ND	0.50	0.14	1	B0K0083	11/05/2020	11/05/20 15:29	
Bromoform	ND	0.50	0.20	1	B0K0083	11/05/2020	11/05/20 15:29	
Bromomethane	ND	0.50	0.40	1	B0K0083	11/05/2020	11/05/20 15:29	
Carbon tetrachloride	ND	0.50	0.09	1	B0K0083	11/05/2020	11/05/20 15:29	
Chlorobenzene	ND	0.50	0.13	1	B0K0083	11/05/2020	11/05/20 15:29	
Chloroethane	ND	0.50	0.15	1	B0K0083	11/05/2020	11/05/20 15:29	
Chloroform	ND	0.50	0.11	1	B0K0083	11/05/2020	11/05/20 15:29	
Chloromethane	ND	0.50	0.12	1	B0K0083	11/05/2020	11/05/20 15:29	
cis-1,2-Dichloroethene	ND	0.50	0.14	1	B0K0083	11/05/2020	11/05/20 15:29	
cis-1,3-Dichloropropene	ND	0.50	0.13	1	B0K0083	11/05/2020	11/05/20 15:29	
Dibromochloromethane	ND	0.50	0.16	1	B0K0083	11/05/2020	11/05/20 15:29	

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 :	11/11/2020

Client Sample ID: MW-28

Lab ID: 2002461-02

Volatile Organic Compounds by EPA 8260B **Analyst: KL**

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Dibromomethane	ND	0.50	0.19	1	B0K0083	11/05/2020	11/05/20 15:29	
Dichlorodifluoromethane	ND	0.50	0.18	1	B0K0083	11/05/2020	11/05/20 15:29	
Ethylbenzene	ND	0.50	0.13	1	B0K0083	11/05/2020	11/05/20 15:29	
Hexachlorobutadiene	ND	0.50	0.15	1	B0K0083	11/05/2020	11/05/20 15:29	
Isopropylbenzene	ND	0.50	0.10	1	B0K0083	11/05/2020	11/05/20 15:29	
m,p-Xylene	ND	1.0	0.19	1	B0K0083	11/05/2020	11/05/20 15:29	
Methylene chloride	ND	1.0	0.71	1	B0K0083	11/05/2020	11/05/20 15:29	
n-Butylbenzene	ND	0.50	0.11	1	B0K0083	11/05/2020	11/05/20 15:29	
n-Propylbenzene	ND	0.50	0.10	1	B0K0083	11/05/2020	11/05/20 15:29	
Naphthalene	ND	0.50	0.41	1	B0K0083	11/05/2020	11/05/20 15:29	
o-Xylene	ND	0.50	0.13	1	B0K0083	11/05/2020	11/05/20 15:29	
sec-Butylbenzene	ND	0.50	0.09	1	B0K0083	11/05/2020	11/05/20 15:29	
Styrene	ND	0.50	0.13	1	B0K0083	11/05/2020	11/05/20 15:29	
tert-Butylbenzene	ND	0.50	0.09	1	B0K0083	11/05/2020	11/05/20 15:29	
Tetrachloroethene	ND	0.50	0.10	1	B0K0083	11/05/2020	11/05/20 15:29	
Toluene	ND	0.50	0.12	1	B0K0083	11/05/2020	11/05/20 15:29	
trans-1,2-Dichloroethene	ND	0.50	0.09	1	B0K0083	11/05/2020	11/05/20 15:29	
Trichloroethene	ND	0.50	0.10	1	B0K0083	11/05/2020	11/05/20 15:29	
Trichlorofluoromethane	ND	0.50	0.23	1	B0K0083	11/05/2020	11/05/20 15:29	
Vinyl chloride	ND	0.50	0.13	1	B0K0083	11/05/2020	11/05/20 15:29	
Surrogate: 1,2-Dichloroethane-d4	*90.1 %*	*64 - 155*			B0K0083	11/05/2020	*11/05/20 15:29*	
Surrogate: 4-Bromofluorobenzene	*79.8 %*	*73 - 124*			B0K0083	11/05/2020	*11/05/20 15:29*	
Surrogate: Dibromofluoromethane	*98.6 %*	*78 - 129*			B0K0083	11/05/2020	*11/05/20 15:29*	
Surrogate: Toluene-d8	*94.1 %*	*84 - 117*			B0K0083	11/05/2020	*11/05/20 15:29*	

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 :	11/11/2020

Client Sample ID: MW-28

Lab ID: 2002461-02

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

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,4-Dioxane	ND	0.20	0.05	1	B0K0092	11/05/2020	11/06/20 19:04	
Surrogate: 1,2-Dichlorobenzene-d4	*56.4 %*		*13 - 99*		B0K0092	11/05/2020	*11/06/20 19:04*	
Surrogate: 2-Fluorobiphenyl	*62.7 %*		*8 - 111*		B0K0092	11/05/2020	*11/06/20 19:04*	
Surrogate: 4-Terphenyl-d14	*70.4 %*		*12 - 113*		B0K0092	11/05/2020	*11/06/20 19:04*	
Surrogate: Nitrobenzene-d5	*49.6 %*		*15 - 121*		B0K0092	11/05/2020	*11/06/20 19:04*	

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 :	11/11/2020

Client Sample ID: MW-40

Lab ID: 2002461-03

Volatile Organic Compounds by EPA 8260B **Analyst: KL**

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	0.11	1	B0K0083	11/05/2020	11/05/20 17:51	
1,1,1-Trichloroethane	ND	0.50	0.21	1	B0K0083	11/05/2020	11/05/20 17:51	
1,1,2,2-Tetrachloroethane	ND	0.50	0.36	1	B0K0083	11/05/2020	11/05/20 17:51	
1,1,2-Trichloroethane	ND	0.50	0.25	1	B0K0083	11/05/2020	11/05/20 17:51	
1,1-Dichloroethane	ND	0.50	0.09	1	B0K0083	11/05/2020	11/05/20 17:51	
1,1-Dichloroethene	ND	0.50	0.13	1	B0K0083	11/05/2020	11/05/20 17:51	
1,1-Dichloropropene	ND	0.50	0.13	1	B0K0083	11/05/2020	11/05/20 17:51	
1,2,3-Trichloropropane	ND	0.50	0.39	1	B0K0083	11/05/2020	11/05/20 17:51	
1,2,3-Trichlorobenzene	ND	0.50	0.18	1	B0K0083	11/05/2020	11/05/20 17:51	
1,2,4-Trichlorobenzene	ND	0.50	0.16	1	B0K0083	11/05/2020	11/05/20 17:51	
1,2,4-Trimethylbenzene	ND	0.50	0.14	1	B0K0083	11/05/2020	11/05/20 17:51	
1,2-Dibromo-3-chloropropane	ND	0.50	0.41	1	B0K0083	11/05/2020	11/05/20 17:51	
1,2-Dibromoethane	ND	0.50	0.24	1	B0K0083	11/05/2020	11/05/20 17:51	
1,2-Dichlorobenzene	ND	0.50	0.20	1	B0K0083	11/05/2020	11/05/20 17:51	
1,2-Dichloroethane	ND	0.50	0.20	1	B0K0083	11/05/2020	11/05/20 17:51	
1,2-Dichloropropane	ND	0.50	0.15	1	B0K0083	11/05/2020	11/05/20 17:51	
1,3,5-Trimethylbenzene	ND	0.50	0.13	1	B0K0083	11/05/2020	11/05/20 17:51	
1,3-Dichlorobenzene	ND	0.50	0.16	1	B0K0083	11/05/2020	11/05/20 17:51	
1,3-Dichloropropane	ND	0.50	0.21	1	B0K0083	11/05/2020	11/05/20 17:51	
1,4-Dichlorobenzene	ND	0.50	0.17	1	B0K0083	11/05/2020	11/05/20 17:51	
2,2-Dichloropropane	ND	0.50	0.38	1	B0K0083	11/05/2020	11/05/20 17:51	
2-Chlorotoluene	ND	0.50	0.11	1	B0K0083	11/05/2020	11/05/20 17:51	
4-Chlorotoluene	ND	0.50	0.12	1	B0K0083	11/05/2020	11/05/20 17:51	
4-Isopropyltoluene	ND	0.50	0.11	1	B0K0083	11/05/2020	11/05/20 17:51	
Benzene	ND	0.50	0.13	1	B0K0083	11/05/2020	11/05/20 17:51	
Bromobenzene	ND	0.50	0.21	1	B0K0083	11/05/2020	11/05/20 17:51	
Bromodichloromethane	ND	0.50	0.14	1	B0K0083	11/05/2020	11/05/20 17:51	
Bromoform	ND	0.50	0.20	1	B0K0083	11/05/2020	11/05/20 17:51	
Bromomethane	ND	0.50	0.40	1	B0K0083	11/05/2020	11/05/20 17:51	
Carbon tetrachloride	ND	0.50	0.09	1	B0K0083	11/05/2020	11/05/20 17:51	
Chlorobenzene	ND	0.50	0.13	1	B0K0083	11/05/2020	11/05/20 17:51	
Chloroethane	ND	0.50	0.15	1	B0K0083	11/05/2020	11/05/20 17:51	
Chloroform	ND	0.50	0.11	1	B0K0083	11/05/2020	11/05/20 17:51	
Chloromethane	ND	0.50	0.12	1	B0K0083	11/05/2020	11/05/20 17:51	
cis-1,2-Dichloroethene	ND	0.50	0.14	1	B0K0083	11/05/2020	11/05/20 17:51	
cis-1,3-Dichloropropene	ND	0.50	0.13	1	B0K0083	11/05/2020	11/05/20 17:51	
Dibromochloromethane	ND	0.50	0.16	1	B0K0083	11/05/2020	11/05/20 17:51	

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 :	11/11/2020

Client Sample ID: MW-40

Lab ID: 2002461-03

Volatile Organic Compounds by EPA 8260B **Analyst: KL**

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Dibromomethane	ND	0.50	0.19	1	B0K0083	11/05/2020	11/05/20 17:51	
Dichlorodifluoromethane	ND	0.50	0.18	1	B0K0083	11/05/2020	11/05/20 17:51	
Ethylbenzene	ND	0.50	0.13	1	B0K0083	11/05/2020	11/05/20 17:51	
Hexachlorobutadiene	ND	0.50	0.15	1	B0K0083	11/05/2020	11/05/20 17:51	
Isopropylbenzene	ND	0.50	0.10	1	B0K0083	11/05/2020	11/05/20 17:51	
m,p-Xylene	ND	1.0	0.19	1	B0K0083	11/05/2020	11/05/20 17:51	
Methylene chloride	ND	1.0	0.71	1	B0K0083	11/05/2020	11/05/20 17:51	
n-Butylbenzene	ND	0.50	0.11	1	B0K0083	11/05/2020	11/05/20 17:51	
n-Propylbenzene	ND	0.50	0.10	1	B0K0083	11/05/2020	11/05/20 17:51	
Naphthalene	ND	0.50	0.41	1	B0K0083	11/05/2020	11/05/20 17:51	
o-Xylene	ND	0.50	0.13	1	B0K0083	11/05/2020	11/05/20 17:51	
sec-Butylbenzene	ND	0.50	0.09	1	B0K0083	11/05/2020	11/05/20 17:51	
Styrene	ND	0.50	0.13	1	B0K0083	11/05/2020	11/05/20 17:51	
tert-Butylbenzene	ND	0.50	0.09	1	B0K0083	11/05/2020	11/05/20 17:51	
Tetrachloroethene	ND	0.50	0.10	1	B0K0083	11/05/2020	11/05/20 17:51	
Toluene	ND	0.50	0.12	1	B0K0083	11/05/2020	11/05/20 17:51	
trans-1,2-Dichloroethene	ND	0.50	0.09	1	B0K0083	11/05/2020	11/05/20 17:51	
Trichloroethene	ND	0.50	0.10	1	B0K0083	11/05/2020	11/05/20 17:51	
Trichlorofluoromethane	ND	0.50	0.23	1	B0K0083	11/05/2020	11/05/20 17:51	
Vinyl chloride	ND	0.50	0.13	1	B0K0083	11/05/2020	11/05/20 17:51	
Surrogate: 1,2-Dichloroethane-d4	*93.5 %*	*64 - 155*			B0K0083	11/05/2020	*11/05/20 17:51*	
Surrogate: 4-Bromofluorobenzene	*78.5 %*	*73 - 124*			B0K0083	11/05/2020	*11/05/20 17:51*	
Surrogate: Dibromofluoromethane	*101 %*	*78 - 129*			B0K0083	11/05/2020	*11/05/20 17:51*	
Surrogate: Toluene-d8	*94.7 %*	*84 - 117*			B0K0083	11/05/2020	*11/05/20 17:51*	

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 :	11/11/2020

Client Sample ID: MW-40

Lab ID: 2002461-03

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

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,4-Dioxane	ND	0.20	0.05	1	B0K0092	11/05/2020	11/06/20 19:30	
Surrogate: 1,2-Dichlorobenzene-d4	*70.0 %*		*13 - 99*		B0K0092	11/05/2020	*11/06/20 19:30*	
Surrogate: 2-Fluorobiphenyl	*75.2 %*		*8 - 111*		B0K0092	11/05/2020	*11/06/20 19:30*	
Surrogate: 4-Terphenyl-d14	*76.7 %*		*12 - 113*		B0K0092	11/05/2020	*11/06/20 19:30*	
Surrogate: Nitrobenzene-d5	*60.5 %*		*15 - 121*		B0K0092	11/05/2020	*11/06/20 19:30*	

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 : 11/11/2020

Client Sample ID: MW-41

Lab ID: 2002461-04

Volatile Organic Compounds by EPA 8260B **Analyst: KL**

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	0.11	1	B0K0083	11/05/2020	11/05/20 18:52	
1,1,1-Trichloroethane	ND	0.50	0.21	1	B0K0083	11/05/2020	11/05/20 18:52	
1,1,2,2-Tetrachloroethane	ND	0.50	0.36	1	B0K0083	11/05/2020	11/05/20 18:52	
1,1,2-Trichloroethane	ND	0.50	0.25	1	B0K0083	11/05/2020	11/05/20 18:52	
1,1-Dichloroethane	ND	0.50	0.09	1	B0K0083	11/05/2020	11/05/20 18:52	
1,1-Dichloroethene	**0.99**	0.50	0.13	1	B0K0083	11/05/2020	11/05/20 18:52	
1,1-Dichloropropene	ND	0.50	0.13	1	B0K0083	11/05/2020	11/05/20 18:52	
1,2,3-Trichloropropane	ND	0.50	0.39	1	B0K0083	11/05/2020	11/05/20 18:52	
1,2,3-Trichlorobenzene	ND	0.50	0.18	1	B0K0083	11/05/2020	11/05/20 18:52	
1,2,4-Trichlorobenzene	ND	0.50	0.16	1	B0K0083	11/05/2020	11/05/20 18:52	
1,2,4-Trimethylbenzene	ND	0.50	0.14	1	B0K0083	11/05/2020	11/05/20 18:52	
1,2-Dibromo-3-chloropropane	ND	0.50	0.41	1	B0K0083	11/05/2020	11/05/20 18:52	
1,2-Dibromoethane	ND	0.50	0.24	1	B0K0083	11/05/2020	11/05/20 18:52	
1,2-Dichlorobenzene	ND	0.50	0.20	1	B0K0083	11/05/2020	11/05/20 18:52	
1,2-Dichloroethane	ND	0.50	0.20	1	B0K0083	11/05/2020	11/05/20 18:52	
1,2-Dichloropropane	ND	0.50	0.15	1	B0K0083	11/05/2020	11/05/20 18:52	
1,3,5-Trimethylbenzene	ND	0.50	0.13	1	B0K0083	11/05/2020	11/05/20 18:52	
1,3-Dichlorobenzene	ND	0.50	0.16	1	B0K0083	11/05/2020	11/05/20 18:52	
1,3-Dichloropropane	ND	0.50	0.21	1	B0K0083	11/05/2020	11/05/20 18:52	
1,4-Dichlorobenzene	ND	0.50	0.17	1	B0K0083	11/05/2020	11/05/20 18:52	
2,2-Dichloropropane	ND	0.50	0.38	1	B0K0083	11/05/2020	11/05/20 18:52	
2-Chlorotoluene	ND	0.50	0.11	1	B0K0083	11/05/2020	11/05/20 18:52	
4-Chlorotoluene	ND	0.50	0.12	1	B0K0083	11/05/2020	11/05/20 18:52	
4-Isopropyltoluene	ND	0.50	0.11	1	B0K0083	11/05/2020	11/05/20 18:52	
Benzene	ND	0.50	0.13	1	B0K0083	11/05/2020	11/05/20 18:52	
Bromobenzene	ND	0.50	0.21	1	B0K0083	11/05/2020	11/05/20 18:52	
Bromodichloromethane	ND	0.50	0.14	1	B0K0083	11/05/2020	11/05/20 18:52	
Bromoform	ND	0.50	0.20	1	B0K0083	11/05/2020	11/05/20 18:52	
Bromomethane	ND	0.50	0.40	1	B0K0083	11/05/2020	11/05/20 18:52	
Carbon tetrachloride	ND	0.50	0.09	1	B0K0083	11/05/2020	11/05/20 18:52	
Chlorobenzene	ND	0.50	0.13	1	B0K0083	11/05/2020	11/05/20 18:52	
Chloroethane	ND	0.50	0.15	1	B0K0083	11/05/2020	11/05/20 18:52	
Chloroform	**0.49**	0.50	0.11	1	B0K0083	11/05/2020	11/05/20 18:52	J
Chloromethane	ND	0.50	0.12	1	B0K0083	11/05/2020	11/05/20 18:52	
cis-1,2-Dichloroethene	ND	0.50	0.14	1	B0K0083	11/05/2020	11/05/20 18:52	
cis-1,3-Dichloropropene	ND	0.50	0.13	1	B0K0083	11/05/2020	11/05/20 18:52	
Dibromochloromethane	ND	0.50	0.16	1	B0K0083	11/05/2020	11/05/20 18:52	

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 :	11/11/2020

Client Sample ID: MW-41

Lab ID: 2002461-04

Volatile Organic Compounds by EPA 8260B **Analyst: KL**

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Dibromomethane	ND	0.50	0.19	1	B0K0083	11/05/2020	11/05/20 18:52	
Dichlorodifluoromethane	ND	0.50	0.18	1	B0K0083	11/05/2020	11/05/20 18:52	
Ethylbenzene	ND	0.50	0.13	1	B0K0083	11/05/2020	11/05/20 18:52	
Hexachlorobutadiene	ND	0.50	0.15	1	B0K0083	11/05/2020	11/05/20 18:52	
Isopropylbenzene	ND	0.50	0.10	1	B0K0083	11/05/2020	11/05/20 18:52	
m,p-Xylene	ND	1.0	0.19	1	B0K0083	11/05/2020	11/05/20 18:52	
Methylene chloride	ND	1.0	0.71	1	B0K0083	11/05/2020	11/05/20 18:52	
n-Butylbenzene	ND	0.50	0.11	1	B0K0083	11/05/2020	11/05/20 18:52	
n-Propylbenzene	ND	0.50	0.10	1	B0K0083	11/05/2020	11/05/20 18:52	
Naphthalene	ND	0.50	0.41	1	B0K0083	11/05/2020	11/05/20 18:52	
o-Xylene	ND	0.50	0.13	1	B0K0083	11/05/2020	11/05/20 18:52	
sec-Butylbenzene	ND	0.50	0.09	1	B0K0083	11/05/2020	11/05/20 18:52	
Styrene	ND	0.50	0.13	1	B0K0083	11/05/2020	11/05/20 18:52	
tert-Butylbenzene	ND	0.50	0.09	1	B0K0083	11/05/2020	11/05/20 18:52	
Tetrachloroethene	ND	0.50	0.10	1	B0K0083	11/05/2020	11/05/20 18:52	
Toluene	ND	0.50	0.12	1	B0K0083	11/05/2020	11/05/20 18:52	
trans-1,2-Dichloroethene	ND	0.50	0.09	1	B0K0083	11/05/2020	11/05/20 18:52	
Trichloroethene	ND	0.50	0.10	1	B0K0083	11/05/2020	11/05/20 18:52	
Trichlorofluoromethane	ND	0.50	0.23	1	B0K0083	11/05/2020	11/05/20 18:52	
Vinyl chloride	ND	0.50	0.13	1	B0K0083	11/05/2020	11/05/20 18:52	
Surrogate: 1,2-Dichloroethane-d4	*90.8 %*	*64 - 155*			B0K0083	11/05/2020	*11/05/20 18:52*	
Surrogate: 4-Bromofluorobenzene	*80.0 %*	*73 - 124*			B0K0083	11/05/2020	*11/05/20 18:52*	
Surrogate: Dibromofluoromethane	*102 %*	*78 - 129*			B0K0083	11/05/2020	*11/05/20 18:52*	
Surrogate: Toluene-d8	*96.4 %*	*84 - 117*			B0K0083	11/05/2020	*11/05/20 18:52*	

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 :	11/11/2020

Client Sample ID: MW-41

Lab ID: 2002461-04

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

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,4-Dioxane	ND	0.20	0.05	1	B0K0092	11/05/2020	11/06/20 19:56	
Surrogate: 1,2-Dichlorobenzene-d4	*57.3 %*		*13 - 99*		B0K0092	11/05/2020	*11/06/20 19:56*	
Surrogate: 2-Fluorobiphenyl	*63.3 %*		*8 - 111*		B0K0092	11/05/2020	*11/06/20 19:56*	
Surrogate: 4-Terphenyl-d14	*69.4 %*		*12 - 113*		B0K0092	11/05/2020	*11/06/20 19:56*	
Surrogate: Nitrobenzene-d5	*53.7 %*		*15 - 121*		B0K0092	11/05/2020	*11/06/20 19:56*	

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 : 11/11/2020

Client Sample ID: MW-39

Lab ID: 2002461-05

Volatile Organic Compounds by EPA 8260B **Analyst: KL**

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	0.11	1	B0K0083	11/05/2020	11/05/20 18:11	
1,1,1-Trichloroethane	ND	0.50	0.21	1	B0K0083	11/05/2020	11/05/20 18:11	
1,1,2,2-Tetrachloroethane	ND	0.50	0.36	1	B0K0083	11/05/2020	11/05/20 18:11	
1,1,2-Trichloroethane	ND	0.50	0.25	1	B0K0083	11/05/2020	11/05/20 18:11	
1,1-Dichloroethane	ND	0.50	0.09	1	B0K0083	11/05/2020	11/05/20 18:11	
1,1-Dichloroethene	ND	0.50	0.13	1	B0K0083	11/05/2020	11/05/20 18:11	
1,1-Dichloropropene	ND	0.50	0.13	1	B0K0083	11/05/2020	11/05/20 18:11	
1,2,3-Trichloropropane	ND	0.50	0.39	1	B0K0083	11/05/2020	11/05/20 18:11	
1,2,3-Trichlorobenzene	ND	0.50	0.18	1	B0K0083	11/05/2020	11/05/20 18:11	
1,2,4-Trichlorobenzene	ND	0.50	0.16	1	B0K0083	11/05/2020	11/05/20 18:11	
1,2,4-Trimethylbenzene	ND	0.50	0.14	1	B0K0083	11/05/2020	11/05/20 18:11	
1,2-Dibromo-3-chloropropane	ND	0.50	0.41	1	B0K0083	11/05/2020	11/05/20 18:11	
1,2-Dibromoethane	ND	0.50	0.24	1	B0K0083	11/05/2020	11/05/20 18:11	
1,2-Dichlorobenzene	ND	0.50	0.20	1	B0K0083	11/05/2020	11/05/20 18:11	
1,2-Dichloroethane	ND	0.50	0.20	1	B0K0083	11/05/2020	11/05/20 18:11	
1,2-Dichloropropane	ND	0.50	0.15	1	B0K0083	11/05/2020	11/05/20 18:11	
1,3,5-Trimethylbenzene	ND	0.50	0.13	1	B0K0083	11/05/2020	11/05/20 18:11	
1,3-Dichlorobenzene	ND	0.50	0.16	1	B0K0083	11/05/2020	11/05/20 18:11	
1,3-Dichloropropane	ND	0.50	0.21	1	B0K0083	11/05/2020	11/05/20 18:11	
1,4-Dichlorobenzene	ND	0.50	0.17	1	B0K0083	11/05/2020	11/05/20 18:11	
2,2-Dichloropropane	ND	0.50	0.38	1	B0K0083	11/05/2020	11/05/20 18:11	
2-Chlorotoluene	ND	0.50	0.11	1	B0K0083	11/05/2020	11/05/20 18:11	
4-Chlorotoluene	ND	0.50	0.12	1	B0K0083	11/05/2020	11/05/20 18:11	
4-Isopropyltoluene	ND	0.50	0.11	1	B0K0083	11/05/2020	11/05/20 18:11	
Benzene	ND	0.50	0.13	1	B0K0083	11/05/2020	11/05/20 18:11	
Bromobenzene	ND	0.50	0.21	1	B0K0083	11/05/2020	11/05/20 18:11	
Bromodichloromethane	ND	0.50	0.14	1	B0K0083	11/05/2020	11/05/20 18:11	
Bromoform	ND	0.50	0.20	1	B0K0083	11/05/2020	11/05/20 18:11	
Bromomethane	ND	0.50	0.40	1	B0K0083	11/05/2020	11/05/20 18:11	
Carbon tetrachloride	ND	0.50	0.09	1	B0K0083	11/05/2020	11/05/20 18:11	
Chlorobenzene	ND	0.50	0.13	1	B0K0083	11/05/2020	11/05/20 18:11	
Chloroethane	ND	0.50	0.15	1	B0K0083	11/05/2020	11/05/20 18:11	
Chloroform	ND	0.50	0.11	1	B0K0083	11/05/2020	11/05/20 18:11	
Chloromethane	ND	0.50	0.12	1	B0K0083	11/05/2020	11/05/20 18:11	
cis-1,2-Dichloroethene	ND	0.50	0.14	1	B0K0083	11/05/2020	11/05/20 18:11	
cis-1,3-Dichloropropene	ND	0.50	0.13	1	B0K0083	11/05/2020	11/05/20 18:11	
Dibromochloromethane	ND	0.50	0.16	1	B0K0083	11/05/2020	11/05/20 18:11	

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 :	11/11/2020

Client Sample ID: MW-39

Lab ID: 2002461-05

Volatile Organic Compounds by EPA 8260B **Analyst: KL**

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Dibromomethane	ND	0.50	0.19	1	B0K0083	11/05/2020	11/05/20 18:11	
Dichlorodifluoromethane	ND	0.50	0.18	1	B0K0083	11/05/2020	11/05/20 18:11	
Ethylbenzene	ND	0.50	0.13	1	B0K0083	11/05/2020	11/05/20 18:11	
Hexachlorobutadiene	ND	0.50	0.15	1	B0K0083	11/05/2020	11/05/20 18:11	
Isopropylbenzene	ND	0.50	0.10	1	B0K0083	11/05/2020	11/05/20 18:11	
m,p-Xylene	ND	1.0	0.19	1	B0K0083	11/05/2020	11/05/20 18:11	
Methylene chloride	ND	1.0	0.71	1	B0K0083	11/05/2020	11/05/20 18:11	
n-Butylbenzene	ND	0.50	0.11	1	B0K0083	11/05/2020	11/05/20 18:11	
n-Propylbenzene	ND	0.50	0.10	1	B0K0083	11/05/2020	11/05/20 18:11	
Naphthalene	ND	0.50	0.41	1	B0K0083	11/05/2020	11/05/20 18:11	
o-Xylene	ND	0.50	0.13	1	B0K0083	11/05/2020	11/05/20 18:11	
sec-Butylbenzene	ND	0.50	0.09	1	B0K0083	11/05/2020	11/05/20 18:11	
Styrene	ND	0.50	0.13	1	B0K0083	11/05/2020	11/05/20 18:11	
tert-Butylbenzene	ND	0.50	0.09	1	B0K0083	11/05/2020	11/05/20 18:11	
Tetrachloroethene	ND	0.50	0.10	1	B0K0083	11/05/2020	11/05/20 18:11	
Toluene	ND	0.50	0.12	1	B0K0083	11/05/2020	11/05/20 18:11	
trans-1,2-Dichloroethene	ND	0.50	0.09	1	B0K0083	11/05/2020	11/05/20 18:11	
Trichloroethene	ND	0.50	0.10	1	B0K0083	11/05/2020	11/05/20 18:11	
Trichlorofluoromethane	ND	0.50	0.23	1	B0K0083	11/05/2020	11/05/20 18:11	
Vinyl chloride	ND	0.50	0.13	1	B0K0083	11/05/2020	11/05/20 18:11	
Surrogate: 1,2-Dichloroethane-d4	*108 %*	*64 - 155*			B0K0083	11/05/2020	*11/05/20 18:11*	
Surrogate: 4-Bromofluorobenzene	*81.1 %*	*73 - 124*			B0K0083	11/05/2020	*11/05/20 18:11*	
Surrogate: Dibromofluoromethane	*110 %*	*78 - 129*			B0K0083	11/05/2020	*11/05/20 18:11*	
Surrogate: Toluene-d8	*95.8 %*	*84 - 117*			B0K0083	11/05/2020	*11/05/20 18:11*	

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 :	11/11/2020

Client Sample ID: MW-39

Lab ID: 2002461-05

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

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,4-Dioxane	ND	0.20	0.05	1	B0K0092	11/05/2020	11/06/20 20:22	
Surrogate: 1,2-Dichlorobenzene-d4	*60.6 %*		*13 - 99*		B0K0092	11/05/2020	*11/06/20 20:22*	
Surrogate: 2-Fluorobiphenyl	*67.3 %*		*8 - 111*		B0K0092	11/05/2020	*11/06/20 20:22*	
Surrogate: 4-Terphenyl-d14	*75.7 %*		*12 - 113*		B0K0092	11/05/2020	*11/06/20 20:22*	
Surrogate: Nitrobenzene-d5	*52.6 %*		*15 - 121*		B0K0092	11/05/2020	*11/06/20 20:22*	

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 : 11/11/2020

Client Sample ID: MW-43

Lab ID: 2002461-06

Volatile Organic Compounds by EPA 8260B **Analyst: KL**

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	0.11	1	B0K0083	11/05/2020	11/05/20 18:32	
1,1,1-Trichloroethane	ND	0.50	0.21	1	B0K0083	11/05/2020	11/05/20 18:32	
1,1,2,2-Tetrachloroethane	ND	0.50	0.36	1	B0K0083	11/05/2020	11/05/20 18:32	
1,1,2-Trichloroethane	ND	0.50	0.25	1	B0K0083	11/05/2020	11/05/20 18:32	
1,1-Dichloroethane	ND	0.50	0.09	1	B0K0083	11/05/2020	11/05/20 18:32	
1,1-Dichloroethene	ND	0.50	0.13	1	B0K0083	11/05/2020	11/05/20 18:32	
1,1-Dichloropropene	ND	0.50	0.13	1	B0K0083	11/05/2020	11/05/20 18:32	
1,2,3-Trichloropropane	ND	0.50	0.39	1	B0K0083	11/05/2020	11/05/20 18:32	
1,2,3-Trichlorobenzene	ND	0.50	0.18	1	B0K0083	11/05/2020	11/05/20 18:32	
1,2,4-Trichlorobenzene	ND	0.50	0.16	1	B0K0083	11/05/2020	11/05/20 18:32	
1,2,4-Trimethylbenzene	ND	0.50	0.14	1	B0K0083	11/05/2020	11/05/20 18:32	
1,2-Dibromo-3-chloropropane	ND	0.50	0.41	1	B0K0083	11/05/2020	11/05/20 18:32	
1,2-Dibromoethane	ND	0.50	0.24	1	B0K0083	11/05/2020	11/05/20 18:32	
1,2-Dichlorobenzene	ND	0.50	0.20	1	B0K0083	11/05/2020	11/05/20 18:32	
1,2-Dichloroethane	ND	0.50	0.20	1	B0K0083	11/05/2020	11/05/20 18:32	
1,2-Dichloropropane	ND	0.50	0.15	1	B0K0083	11/05/2020	11/05/20 18:32	
1,3,5-Trimethylbenzene	ND	0.50	0.13	1	B0K0083	11/05/2020	11/05/20 18:32	
1,3-Dichlorobenzene	ND	0.50	0.16	1	B0K0083	11/05/2020	11/05/20 18:32	
1,3-Dichloropropane	ND	0.50	0.21	1	B0K0083	11/05/2020	11/05/20 18:32	
1,4-Dichlorobenzene	ND	0.50	0.17	1	B0K0083	11/05/2020	11/05/20 18:32	
2,2-Dichloropropane	ND	0.50	0.38	1	B0K0083	11/05/2020	11/05/20 18:32	
2-Chlorotoluene	ND	0.50	0.11	1	B0K0083	11/05/2020	11/05/20 18:32	
4-Chlorotoluene	ND	0.50	0.12	1	B0K0083	11/05/2020	11/05/20 18:32	
4-Isopropyltoluene	ND	0.50	0.11	1	B0K0083	11/05/2020	11/05/20 18:32	
Benzene	ND	0.50	0.13	1	B0K0083	11/05/2020	11/05/20 18:32	
Bromobenzene	ND	0.50	0.21	1	B0K0083	11/05/2020	11/05/20 18:32	
Bromodichloromethane	ND	0.50	0.14	1	B0K0083	11/05/2020	11/05/20 18:32	
Bromoform	ND	0.50	0.20	1	B0K0083	11/05/2020	11/05/20 18:32	
Bromomethane	ND	0.50	0.40	1	B0K0083	11/05/2020	11/05/20 18:32	
Carbon tetrachloride	ND	0.50	0.09	1	B0K0083	11/05/2020	11/05/20 18:32	
Chlorobenzene	ND	0.50	0.13	1	B0K0083	11/05/2020	11/05/20 18:32	
Chloroethane	ND	0.50	0.15	1	B0K0083	11/05/2020	11/05/20 18:32	
Chloroform	ND	0.50	0.11	1	B0K0083	11/05/2020	11/05/20 18:32	
Chloromethane	ND	0.50	0.12	1	B0K0083	11/05/2020	11/05/20 18:32	
cis-1,2-Dichloroethene	ND	0.50	0.14	1	B0K0083	11/05/2020	11/05/20 18:32	
cis-1,3-Dichloropropene	ND	0.50	0.13	1	B0K0083	11/05/2020	11/05/20 18:32	
Dibromochloromethane	ND	0.50	0.16	1	B0K0083	11/05/2020	11/05/20 18:32	

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 :	11/11/2020

Client Sample ID: MW-43

Lab ID: 2002461-06

Volatile Organic Compounds by EPA 8260B **Analyst: KL**

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Dibromomethane	ND	0.50	0.19	1	B0K0083	11/05/2020	11/05/20 18:32	
Dichlorodifluoromethane	ND	0.50	0.18	1	B0K0083	11/05/2020	11/05/20 18:32	
Ethylbenzene	ND	0.50	0.13	1	B0K0083	11/05/2020	11/05/20 18:32	
Hexachlorobutadiene	ND	0.50	0.15	1	B0K0083	11/05/2020	11/05/20 18:32	
Isopropylbenzene	ND	0.50	0.10	1	B0K0083	11/05/2020	11/05/20 18:32	
m,p-Xylene	ND	1.0	0.19	1	B0K0083	11/05/2020	11/05/20 18:32	
Methylene chloride	ND	1.0	0.71	1	B0K0083	11/05/2020	11/05/20 18:32	
n-Butylbenzene	ND	0.50	0.11	1	B0K0083	11/05/2020	11/05/20 18:32	
n-Propylbenzene	ND	0.50	0.10	1	B0K0083	11/05/2020	11/05/20 18:32	
Naphthalene	ND	0.50	0.41	1	B0K0083	11/05/2020	11/05/20 18:32	
o-Xylene	ND	0.50	0.13	1	B0K0083	11/05/2020	11/05/20 18:32	
sec-Butylbenzene	ND	0.50	0.09	1	B0K0083	11/05/2020	11/05/20 18:32	
Styrene	ND	0.50	0.13	1	B0K0083	11/05/2020	11/05/20 18:32	
tert-Butylbenzene	ND	0.50	0.09	1	B0K0083	11/05/2020	11/05/20 18:32	
Tetrachloroethene	ND	0.50	0.10	1	B0K0083	11/05/2020	11/05/20 18:32	
Toluene	ND	0.50	0.12	1	B0K0083	11/05/2020	11/05/20 18:32	
trans-1,2-Dichloroethene	ND	0.50	0.09	1	B0K0083	11/05/2020	11/05/20 18:32	
Trichloroethene	ND	0.50	0.10	1	B0K0083	11/05/2020	11/05/20 18:32	
Trichlorofluoromethane	ND	0.50	0.23	1	B0K0083	11/05/2020	11/05/20 18:32	
Vinyl chloride	ND	0.50	0.13	1	B0K0083	11/05/2020	11/05/20 18:32	
Surrogate: 1,2-Dichloroethane-d4	*89.3 %*	*64 - 155*			B0K0083	11/05/2020	*11/05/20 18:32*	
Surrogate: 4-Bromofluorobenzene	*78.3 %*	*73 - 124*			B0K0083	11/05/2020	*11/05/20 18:32*	
Surrogate: Dibromofluoromethane	*102 %*	*78 - 129*			B0K0083	11/05/2020	*11/05/20 18:32*	
Surrogate: Toluene-d8	*94.6 %*	*84 - 117*			B0K0083	11/05/2020	*11/05/20 18:32*	

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 :	11/11/2020

Client Sample ID: MW-43

Lab ID: 2002461-06

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

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,4-Dioxane	ND	0.20	0.05	1	B0K0092	11/05/2020	11/06/20 20:48	
Surrogate: 1,2-Dichlorobenzene-d4	*58.9 %*		*13 - 99*		B0K0092	11/05/2020	*11/06/20 20:48*	
Surrogate: 2-Fluorobiphenyl	*60.1 %*		*8 - 111*		B0K0092	11/05/2020	*11/06/20 20:48*	
Surrogate: 4-Terphenyl-d14	*72.4 %*		*12 - 113*		B0K0092	11/05/2020	*11/06/20 20:48*	
Surrogate: Nitrobenzene-d5	*62.7 %*		*15 - 121*		B0K0092	11/05/2020	*11/06/20 20:48*	

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 : 11/11/2020

Client Sample ID: MW-42

Lab ID: 2002461-07

Volatile Organic Compounds by EPA 8260B **Analyst: KL**

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	0.11	1	B0K0083	11/05/2020	11/05/20 19:12	
1,1,1-Trichloroethane	ND	0.50	0.21	1	B0K0083	11/05/2020	11/05/20 19:12	
1,1,2,2-Tetrachloroethane	ND	0.50	0.36	1	B0K0083	11/05/2020	11/05/20 19:12	
1,1,2-Trichloroethane	ND	0.50	0.25	1	B0K0083	11/05/2020	11/05/20 19:12	
1,1-Dichloroethane	**0.42**	0.50	0.09	1	B0K0083	11/05/2020	11/05/20 19:12	J
1,1-Dichloroethene	**32**	0.50	0.13	1	B0K0083	11/05/2020	11/05/20 19:12	
1,1-Dichloropropene	ND	0.50	0.13	1	B0K0083	11/05/2020	11/05/20 19:12	
1,2,3-Trichloropropane	ND	0.50	0.39	1	B0K0083	11/05/2020	11/05/20 19:12	
1,2,3-Trichlorobenzene	ND	0.50	0.18	1	B0K0083	11/05/2020	11/05/20 19:12	
1,2,4-Trichlorobenzene	ND	0.50	0.16	1	B0K0083	11/05/2020	11/05/20 19:12	
1,2,4-Trimethylbenzene	ND	0.50	0.14	1	B0K0083	11/05/2020	11/05/20 19:12	
1,2-Dibromo-3-chloropropane	ND	0.50	0.41	1	B0K0083	11/05/2020	11/05/20 19:12	
1,2-Dibromoethane	ND	0.50	0.24	1	B0K0083	11/05/2020	11/05/20 19:12	
1,2-Dichlorobenzene	ND	0.50	0.20	1	B0K0083	11/05/2020	11/05/20 19:12	
1,2-Dichloroethane	ND	0.50	0.20	1	B0K0083	11/05/2020	11/05/20 19:12	
1,2-Dichloropropane	ND	0.50	0.15	1	B0K0083	11/05/2020	11/05/20 19:12	
1,3,5-Trimethylbenzene	ND	0.50	0.13	1	B0K0083	11/05/2020	11/05/20 19:12	
1,3-Dichlorobenzene	ND	0.50	0.16	1	B0K0083	11/05/2020	11/05/20 19:12	
1,3-Dichloropropane	ND	0.50	0.21	1	B0K0083	11/05/2020	11/05/20 19:12	
1,4-Dichlorobenzene	ND	0.50	0.17	1	B0K0083	11/05/2020	11/05/20 19:12	
2,2-Dichloropropane	ND	0.50	0.38	1	B0K0083	11/05/2020	11/05/20 19:12	
2-Chlorotoluene	ND	0.50	0.11	1	B0K0083	11/05/2020	11/05/20 19:12	
4-Chlorotoluene	ND	0.50	0.12	1	B0K0083	11/05/2020	11/05/20 19:12	
4-Isopropyltoluene	ND	0.50	0.11	1	B0K0083	11/05/2020	11/05/20 19:12	
Benzene	ND	0.50	0.13	1	B0K0083	11/05/2020	11/05/20 19:12	
Bromobenzene	ND	0.50	0.21	1	B0K0083	11/05/2020	11/05/20 19:12	
Bromodichloromethane	ND	0.50	0.14	1	B0K0083	11/05/2020	11/05/20 19:12	
Bromoform	ND	0.50	0.20	1	B0K0083	11/05/2020	11/05/20 19:12	
Bromomethane	ND	0.50	0.40	1	B0K0083	11/05/2020	11/05/20 19:12	
Carbon tetrachloride	ND	0.50	0.09	1	B0K0083	11/05/2020	11/05/20 19:12	
Chlorobenzene	ND	0.50	0.13	1	B0K0083	11/05/2020	11/05/20 19:12	
Chloroethane	ND	0.50	0.15	1	B0K0083	11/05/2020	11/05/20 19:12	
Chloroform	ND	0.50	0.11	1	B0K0083	11/05/2020	11/05/20 19:12	
Chloromethane	ND	0.50	0.12	1	B0K0083	11/05/2020	11/05/20 19:12	
cis-1,2-Dichloroethene	ND	0.50	0.14	1	B0K0083	11/05/2020	11/05/20 19:12	
cis-1,3-Dichloropropene	ND	0.50	0.13	1	B0K0083	11/05/2020	11/05/20 19:12	
Dibromochloromethane	ND	0.50	0.16	1	B0K0083	11/05/2020	11/05/20 19:12	

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 :	11/11/2020

Client Sample ID: MW-42

Lab ID: 2002461-07

Volatile Organic Compounds by EPA 8260B **Analyst: KL**

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Dibromomethane	ND	0.50	0.19	1	B0K0083	11/05/2020	11/05/20 19:12	
Dichlorodifluoromethane	ND	0.50	0.18	1	B0K0083	11/05/2020	11/05/20 19:12	
Ethylbenzene	ND	0.50	0.13	1	B0K0083	11/05/2020	11/05/20 19:12	
Hexachlorobutadiene	ND	0.50	0.15	1	B0K0083	11/05/2020	11/05/20 19:12	
Isopropylbenzene	ND	0.50	0.10	1	B0K0083	11/05/2020	11/05/20 19:12	
m,p-Xylene	ND	1.0	0.19	1	B0K0083	11/05/2020	11/05/20 19:12	
Methylene chloride	ND	1.0	0.71	1	B0K0083	11/05/2020	11/05/20 19:12	
n-Butylbenzene	ND	0.50	0.11	1	B0K0083	11/05/2020	11/05/20 19:12	
n-Propylbenzene	ND	0.50	0.10	1	B0K0083	11/05/2020	11/05/20 19:12	
Naphthalene	ND	0.50	0.41	1	B0K0083	11/05/2020	11/05/20 19:12	
o-Xylene	ND	0.50	0.13	1	B0K0083	11/05/2020	11/05/20 19:12	
sec-Butylbenzene	ND	0.50	0.09	1	B0K0083	11/05/2020	11/05/20 19:12	
Styrene	ND	0.50	0.13	1	B0K0083	11/05/2020	11/05/20 19:12	
tert-Butylbenzene	ND	0.50	0.09	1	B0K0083	11/05/2020	11/05/20 19:12	
Tetrachloroethene	ND	0.50	0.10	1	B0K0083	11/05/2020	11/05/20 19:12	
Toluene	ND	0.50	0.12	1	B0K0083	11/05/2020	11/05/20 19:12	
trans-1,2-Dichloroethene	ND	0.50	0.09	1	B0K0083	11/05/2020	11/05/20 19:12	
Trichloroethene	ND	0.50	0.10	1	B0K0083	11/05/2020	11/05/20 19:12	
Trichlorofluoromethane	ND	0.50	0.23	1	B0K0083	11/05/2020	11/05/20 19:12	
Vinyl chloride	ND	0.50	0.13	1	B0K0083	11/05/2020	11/05/20 19:12	
Surrogate: 1,2-Dichloroethane-d4	*91.4 %*	*64 - 155*			B0K0083	11/05/2020	*11/05/20 19:12*	
Surrogate: 4-Bromofluorobenzene	*80.1 %*	*73 - 124*			B0K0083	11/05/2020	*11/05/20 19:12*	
Surrogate: Dibromofluoromethane	*102 %*	*78 - 129*			B0K0083	11/05/2020	*11/05/20 19:12*	
Surrogate: Toluene-d8	*94.1 %*	*84 - 117*			B0K0083	11/05/2020	*11/05/20 19:12*	

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 :	11/11/2020

Client Sample ID: MW-42

Lab ID: 2002461-07

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

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,4-Dioxane	**0.83**	0.20	0.05	1	B0K0092	11/05/2020	11/06/20 21:13	
Surrogate: 1,2-Dichlorobenzene-d4	*57.8 %*		*13 - 99*		B0K0092	11/05/2020	*11/06/20 21:13*	
Surrogate: 2-Fluorobiphenyl	*61.5 %*		*8 - 111*		B0K0092	11/05/2020	*11/06/20 21:13*	
Surrogate: 4-Terphenyl-d14	*71.5 %*		*12 - 113*		B0K0092	11/05/2020	*11/06/20 21:13*	
Surrogate: Nitrobenzene-d5	*48.8 %*		*15 - 121*		B0K0092	11/05/2020	*11/06/20 21:13*	

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 : 11/11/2020

Client Sample ID: MW-36

Lab ID: 2002461-08

Volatile Organic Compounds by EPA 8260B **Analyst: KL**

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	0.11	1	B0K0083	11/05/2020	11/05/20 19:32	
1,1,1-Trichloroethane	ND	0.50	0.21	1	B0K0083	11/05/2020	11/05/20 19:32	
1,1,2,2-Tetrachloroethane	ND	0.50	0.36	1	B0K0083	11/05/2020	11/05/20 19:32	
1,1,2-Trichloroethane	ND	0.50	0.25	1	B0K0083	11/05/2020	11/05/20 19:32	
1,1-Dichloroethane	**0.62**	0.50	0.09	1	B0K0083	11/05/2020	11/05/20 19:32	
1,1-Dichloroethene	**72**	0.50	0.13	1	B0K0083	11/05/2020	11/05/20 19:32	
1,1-Dichloropropene	ND	0.50	0.13	1	B0K0083	11/05/2020	11/05/20 19:32	
1,2,3-Trichloropropane	ND	0.50	0.39	1	B0K0083	11/05/2020	11/05/20 19:32	
1,2,3-Trichlorobenzene	ND	0.50	0.18	1	B0K0083	11/05/2020	11/05/20 19:32	
1,2,4-Trichlorobenzene	ND	0.50	0.16	1	B0K0083	11/05/2020	11/05/20 19:32	
1,2,4-Trimethylbenzene	ND	0.50	0.14	1	B0K0083	11/05/2020	11/05/20 19:32	
1,2-Dibromo-3-chloropropane	ND	0.50	0.41	1	B0K0083	11/05/2020	11/05/20 19:32	
1,2-Dibromoethane	ND	0.50	0.24	1	B0K0083	11/05/2020	11/05/20 19:32	
1,2-Dichlorobenzene	ND	0.50	0.20	1	B0K0083	11/05/2020	11/05/20 19:32	
1,2-Dichloroethane	ND	0.50	0.20	1	B0K0083	11/05/2020	11/05/20 19:32	
1,2-Dichloropropane	ND	0.50	0.15	1	B0K0083	11/05/2020	11/05/20 19:32	
1,3,5-Trimethylbenzene	ND	0.50	0.13	1	B0K0083	11/05/2020	11/05/20 19:32	
1,3-Dichlorobenzene	ND	0.50	0.16	1	B0K0083	11/05/2020	11/05/20 19:32	
1,3-Dichloropropane	ND	0.50	0.21	1	B0K0083	11/05/2020	11/05/20 19:32	
1,4-Dichlorobenzene	ND	0.50	0.17	1	B0K0083	11/05/2020	11/05/20 19:32	
2,2-Dichloropropane	ND	0.50	0.38	1	B0K0083	11/05/2020	11/05/20 19:32	
2-Chlorotoluene	ND	0.50	0.11	1	B0K0083	11/05/2020	11/05/20 19:32	
4-Chlorotoluene	ND	0.50	0.12	1	B0K0083	11/05/2020	11/05/20 19:32	
4-Isopropyltoluene	ND	0.50	0.11	1	B0K0083	11/05/2020	11/05/20 19:32	
Benzene	ND	0.50	0.13	1	B0K0083	11/05/2020	11/05/20 19:32	
Bromobenzene	ND	0.50	0.21	1	B0K0083	11/05/2020	11/05/20 19:32	
Bromodichloromethane	ND	0.50	0.14	1	B0K0083	11/05/2020	11/05/20 19:32	
Bromoform	ND	0.50	0.20	1	B0K0083	11/05/2020	11/05/20 19:32	
Bromomethane	ND	0.50	0.40	1	B0K0083	11/05/2020	11/05/20 19:32	
Carbon tetrachloride	ND	0.50	0.09	1	B0K0083	11/05/2020	11/05/20 19:32	
Chlorobenzene	ND	0.50	0.13	1	B0K0083	11/05/2020	11/05/20 19:32	
Chloroethane	ND	0.50	0.15	1	B0K0083	11/05/2020	11/05/20 19:32	
Chloroform	ND	0.50	0.11	1	B0K0083	11/05/2020	11/05/20 19:32	
Chloromethane	ND	0.50	0.12	1	B0K0083	11/05/2020	11/05/20 19:32	
cis-1,2-Dichloroethene	ND	0.50	0.14	1	B0K0083	11/05/2020	11/05/20 19:32	
cis-1,3-Dichloropropene	ND	0.50	0.13	1	B0K0083	11/05/2020	11/05/20 19:32	
Dibromochloromethane	ND	0.50	0.16	1	B0K0083	11/05/2020	11/05/20 19:32	

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 : 11/11/2020

Client Sample ID: MW-36

Lab ID: 2002461-08

Volatile Organic Compounds by EPA 8260B **Analyst: KL**

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Dibromomethane	ND	0.50	0.19	1	B0K0083	11/05/2020	11/05/20 19:32	
Dichlorodifluoromethane	ND	0.50	0.18	1	B0K0083	11/05/2020	11/05/20 19:32	
Ethylbenzene	ND	0.50	0.13	1	B0K0083	11/05/2020	11/05/20 19:32	
Hexachlorobutadiene	ND	0.50	0.15	1	B0K0083	11/05/2020	11/05/20 19:32	
Isopropylbenzene	ND	0.50	0.10	1	B0K0083	11/05/2020	11/05/20 19:32	
m,p-Xylene	ND	1.0	0.19	1	B0K0083	11/05/2020	11/05/20 19:32	
Methylene chloride	ND	1.0	0.71	1	B0K0083	11/05/2020	11/05/20 19:32	
n-Butylbenzene	ND	0.50	0.11	1	B0K0083	11/05/2020	11/05/20 19:32	
n-Propylbenzene	ND	0.50	0.10	1	B0K0083	11/05/2020	11/05/20 19:32	
Naphthalene	ND	0.50	0.41	1	B0K0083	11/05/2020	11/05/20 19:32	
o-Xylene	ND	0.50	0.13	1	B0K0083	11/05/2020	11/05/20 19:32	
sec-Butylbenzene	ND	0.50	0.09	1	B0K0083	11/05/2020	11/05/20 19:32	
Styrene	ND	0.50	0.13	1	B0K0083	11/05/2020	11/05/20 19:32	
tert-Butylbenzene	ND	0.50	0.09	1	B0K0083	11/05/2020	11/05/20 19:32	
Tetrachloroethene	ND	0.50	0.10	1	B0K0083	11/05/2020	11/05/20 19:32	
Toluene	ND	0.50	0.12	1	B0K0083	11/05/2020	11/05/20 19:32	
trans-1,2-Dichloroethene	ND	0.50	0.09	1	B0K0083	11/05/2020	11/05/20 19:32	
Trichloroethene	ND	0.50	0.10	1	B0K0083	11/05/2020	11/05/20 19:32	
Trichlorofluoromethane	ND	0.50	0.23	1	B0K0083	11/05/2020	11/05/20 19:32	
Vinyl chloride	ND	0.50	0.13	1	B0K0083	11/05/2020	11/05/20 19:32	
Surrogate: 1,2-Dichloroethane-d4	*88.6 %*	*64 - 155*			B0K0083	11/05/2020	*11/05/20 19:32*	
Surrogate: 4-Bromofluorobenzene	*79.3 %*	*73 - 124*			B0K0083	11/05/2020	*11/05/20 19:32*	
Surrogate: Dibromofluoromethane	*99.4 %*	*78 - 129*			B0K0083	11/05/2020	*11/05/20 19:32*	
Surrogate: Toluene-d8	*94.6 %*	*84 - 117*			B0K0083	11/05/2020	*11/05/20 19:32*	

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 :	11/11/2020

Client Sample ID: MW-36

Lab ID: 2002461-08

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

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,4-Dioxane	**6.4**	0.20	0.05	1	B0K0092	11/05/2020	11/06/20 21:40	
Surrogate: 1,2-Dichlorobenzene-d4	*59.6 %*		*13 - 99*		B0K0092	11/05/2020	*11/06/20 21:40*	
Surrogate: 2-Fluorobiphenyl	*68.2 %*		*8 - 111*		B0K0092	11/05/2020	*11/06/20 21:40*	
Surrogate: 4-Terphenyl-d14	*62.2 %*		*12 - 113*		B0K0092	11/05/2020	*11/06/20 21:40*	
Surrogate: Nitrobenzene-d5	*52.3 %*		*15 - 121*		B0K0092	11/05/2020	*11/06/20 21:40*	

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 : 11/11/2020

QUALITY CONTROL SECTION

Volatile Organic Compounds by EPA 8260B - Quality Control

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B0K0083 - MSVOA_LL_W										
Blank (B0K0083-BLK1)					Prepared: 11/5/2020 Analyzed: 11/5/2020					
1,1,1,2-Tetrachloroethane	ND	0.50	0.11							
1,1,1-Trichloroethane	ND	0.50	0.21							
1,1,2,2-Tetrachloroethane	ND	0.50	0.36							
1,1,2-Trichloroethane	ND	0.50	0.25							
1,1-Dichloroethane	ND	0.50	0.09							
1,1-Dichloroethene	ND	0.50	0.13							
1,1-Dichloropropene	ND	0.50	0.13							
1,2,3-Trichloropropane	ND	0.50	0.39							
1,2,3-Trichlorobenzene	ND	0.50	0.18							
1,2,4-Trichlorobenzene	ND	0.50	0.16							
1,2,4-Trimethylbenzene	ND	0.50	0.14							
1,2-Dibromo-3-chloropropane	ND	0.50	0.41							
1,2-Dibromoethane	ND	0.50	0.24							
1,2-Dichlorobenzene	ND	0.50	0.20							
1,2-Dichloroethane	ND	0.50	0.20							
1,2-Dichloropropane	ND	0.50	0.15							
1,3,5-Trimethylbenzene	ND	0.50	0.13							
1,3-Dichlorobenzene	ND	0.50	0.16							
1,3-Dichloropropane	ND	0.50	0.21							
1,4-Dichlorobenzene	ND	0.50	0.17							
2,2-Dichloropropane	ND	0.50	0.38							
2-Chlorotoluene	ND	0.50	0.11							
4-Chlorotoluene	ND	0.50	0.12							
4-Isopropyltoluene	ND	0.50	0.11							
Benzene	ND	0.50	0.13							
Bromobenzene	ND	0.50	0.21							
Bromodichloromethane	ND	0.50	0.14							
Bromoform	ND	0.50	0.20							
Bromomethane	ND	0.50	0.40							
Carbon tetrachloride	ND	0.50	0.09							
Chlorobenzene	ND	0.50	0.13							
Chloroethane	ND	0.50	0.15							
Chloroform	ND	0.50	0.11							
Chloromethane	ND	0.50	0.12							
cis-1,2-Dichloroethene	ND	0.50	0.14							
cis-1,3-Dichloropropene	ND	0.50	0.13							
Dibromochloromethane	ND	0.50	0.16							
Dibromomethane	ND	0.50	0.19							
Dichlorodifluoromethane	ND	0.50	0.18							

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 : 11/11/2020

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

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B0K0083 - MSVOA_LL_W (continued)										
Blank (B0K0083-BLK1) - Continued					Prepared: 11/5/2020 Analyzed: 11/5/2020					
Ethylbenzene	ND	0.50	0.13							
Hexachlorobutadiene	ND	0.50	0.15							
Isopropylbenzene	ND	0.50	0.10							
m,p-Xylene	ND	1.0	0.19							
Methylene chloride	ND	1.0	0.71							
n-Butylbenzene	ND	0.50	0.11							
n-Propylbenzene	ND	0.50	0.10							
Naphthalene	ND	0.50	0.41							
o-Xylene	ND	0.50	0.13							
sec-Butylbenzene	ND	0.50	0.09							
Styrene	ND	0.50	0.13							
tert-Butylbenzene	ND	0.50	0.09							
Tetrachloroethene	ND	0.50	0.10							
Toluene	ND	0.50	0.12							
trans-1,2-Dichloroethene	ND	0.50	0.09							
Trichloroethene	ND	0.50	0.10							
Trichlorofluoromethane	ND	0.50	0.23							
Vinyl chloride	ND	0.50	0.13							
Surrogate: 1,2-Dichloroethane-d4	*23.24*			*25.0000*		*93.0*	*64 - 155*			
Surrogate: 4-Bromofluorobenzene	*20.02*			*25.0000*		*80.1*	*73 - 124*			
Surrogate: Dibromofluoromethan	*25.74*			*25.0000*		*103*	*78 - 129*			
Surrogate: Toluene-d8	*23.61*			*25.0000*		*94.4*	*84 - 117*			
LCS (B0K0083-BS1)					Prepared: 11/5/2020 Analyzed: 11/5/2020					
1,1,1,2-Tetrachloroethane	19.4000	0.50	0.11	20.0000		97.0	79 - 116			
1,1,1-Trichloroethane	18.7000	0.50	0.21	20.0000		93.5	73 - 130			
1,1,2,2-Tetrachloroethane	19.4000	0.50	0.36	20.0000		97.0	71 - 122			
1,1,2-Trichloroethane	19.0500	0.50	0.25	20.0000		95.2	70 - 124			
1,1-Dichloroethane	18.0100	0.50	0.09	20.0000		90.0	69 - 128			
1,1-Dichloroethene	18.8500	0.50	0.13	20.0000		94.2	65 - 137			
1,1-Dichloropropene	18.5500	0.50	0.13	20.0000		92.8	74 - 129			
1,2,3-Trichloropropane	18.8100	0.50	0.39	20.0000		94.0	74 - 123			
1,2,3-Trichlorobenzene	19.1900	0.50	0.18	20.0000		96.0	59 - 130			
1,2,4-Trichlorobenzene	18.5900	0.50	0.16	20.0000		93.0	65 - 125			
1,2,4-Trimethylbenzene	18.0800	0.50	0.14	20.0000		90.4	88 - 124			
1,2-Dibromo-3-chloropropane	18.1400	0.50	0.41	20.0000		90.7	61 - 127			
1,2-Dibromoethane	19.3500	0.50	0.24	20.0000		96.8	72 - 125			
1,2-Dichlorobenzene	19.0700	0.50	0.20	20.0000		95.4	84 - 113			
1,2-Dichloroethane	17.6400	0.50	0.20	20.0000		88.2	68 - 130			
1,2-Dichloropropane	18.0900	0.50	0.15	20.0000		90.4	77 - 121			
1,3,5-Trimethylbenzene	18.8800	0.50	0.13	20.0000		94.4	83 - 124			

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

Project Number : Raytheon Main, 532.30
Report To : Steve Netto
Reported : 11/11/2020

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

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B0K0083 - MSVOA_LL_W (continued)										
LCS (B0K0083-BS1) - Continued					Prepared: 11/5/2020 Analyzed: 11/5/2020					
1,3-Dichlorobenzene	18.4500	0.50	0.16	20.0000		92.2	83 - 112			
1,3-Dichloropropane	18.2400	0.50	0.21	20.0000		91.2	77 - 119			
1,4-Dichlorobenzene	18.8900	0.50	0.17	20.0000		94.4	79 - 115			
2,2-Dichloropropane	19.3200	0.50	0.38	20.0000		96.6	67 - 149			
2-Chlorotoluene	17.5800	0.50	0.11	20.0000		87.9	81 - 119			
4-Chlorotoluene	18.1300	0.50	0.12	20.0000		90.6	86 - 117			
4-Isopropyltoluene	19.4800	0.50	0.11	20.0000		97.4	82 - 131			
Benzene	19.4000	0.50	0.13	20.0000		97.0	75 - 124			
Bromobenzene	18.6200	0.50	0.21	20.0000		93.1	82 - 108			
Bromodichloromethane	19.0800	0.50	0.14	20.0000		95.4	80 - 120			
Bromoform	20.6100	0.50	0.20	20.0000		103	70 - 123			
Bromomethane	17.9300	0.50	0.40	20.0000		89.6	44 - 151			
Carbon tetrachloride	20.2100	0.50	0.09	20.0000		101	62 - 140			
Chlorobenzene	18.4200	0.50	0.13	20.0000		92.1	80 - 112			
Chloroethane	19.4300	0.50	0.15	20.0000		97.2	42 - 167			
Chloroform	15.7000	0.50	0.11	20.0000		78.5	77 - 122			
Chloromethane	17.8500	0.50	0.12	20.0000		89.2	33 - 153			
cis-1,2-Dichloroethene	19.4600	0.50	0.14	20.0000		97.3	75 - 121			
cis-1,3-Dichloropropene	17.7000	0.50	0.13	20.0000		88.5	73 - 127			
Dibromochloromethane	17.6700	0.50	0.16	20.0000		88.4	77 - 122			
Dibromomethane	18.6800	0.50	0.19	20.0000		93.4	75 - 121			
Dichlorodifluoromethane	17.2900	0.50	0.18	20.0000		86.4	0 - 171			
Ethylbenzene	17.9600	0.50	0.13	20.0000		89.8	82 - 119			
Hexachlorobutadiene	18.5800	0.50	0.15	20.0000		92.9	71 - 131			
Isopropylbenzene	17.7900	0.50	0.10	20.0000		89.0	75 - 126			
m,p-Xylene	36.8400	1.0	0.19	40.0000		92.1	86 - 119			
Methylene chloride	17.6200	1.0	0.71	20.0000		88.1	76 - 125			
n-Butylbenzene	18.8700	0.50	0.11	20.0000		94.4	81 - 125			
n-Propylbenzene	18.1100	0.50	0.10	20.0000		90.6	78 - 130			
Naphthalene	16.7500	0.50	0.41	20.0000		83.8	47 - 128			
o-Xylene	17.8000	0.50	0.13	20.0000		89.0	85 - 119			
sec-Butylbenzene	18.6300	0.50	0.09	20.0000		93.2	78 - 130			
Styrene	16.7800	0.50	0.13	20.0000		83.9	62 - 148			
tert-Butylbenzene	18.3200	0.50	0.09	20.0000		91.6	77 - 125			
Tetrachloroethene	19.5200	0.50	0.10	20.0000		97.6	73 - 120			
Toluene	19.0800	0.50	0.12	20.0000		95.4	79 - 119			
trans-1,2-Dichloroethene	18.4700	0.50	0.09	20.0000		92.4	70 - 129			
Trichloroethene	19.2000	0.50	0.10	20.0000		96.0	73 - 117			
Trichlorofluoromethane	19.8700	0.50	0.23	20.0000		99.4	59 - 135			
Vinyl chloride	17.8100	0.50	0.13	20.0000		89.0	58 - 132			
Surrogate: 1,2-Dichloroethane-d4	*21.71*			*25.0000*		*86.8*	*64 - 155*			

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 : 11/11/2020

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

Analyte	Result (ug/L)	PQL (ug/L)		Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B0K0083 - MSVOA_LL_W (continued)										
LCS (B0K0083-BS1) - Continued					Prepared: 11/5/2020 Analyzed: 11/5/2020					
Surrogate: 4-Bromofluorobenzene	*22.73*			*25.0000*		*90.9*	*73 - 124*			
Surrogate: Dibromofluoromethan	*24.82*			*25.0000*		*99.3*	*78 - 129*			
Surrogate: Toluene-d8	*24.42*			*25.0000*		*97.7*	*84 - 117*			
LCS Dup (B0K0083-BSD1)					Prepared: 11/5/2020 Analyzed: 11/5/2020					
1,1,1,2-Tetrachloroethane	18.8600	0.50	0.11	20.0000		94.3	79 - 116	2.82	20	
1,1,1-Trichloroethane	17.7700	0.50	0.21	20.0000		88.8	73 - 130	5.10	20	
1,1,2,2-Tetrachloroethane	19.3900	0.50	0.36	20.0000		97.0	71 - 122	0.0516	20	
1,1,2-Trichloroethane	18.3800	0.50	0.25	20.0000		91.9	70 - 124	3.58	20	
1,1-Dichloroethane	16.7000	0.50	0.09	20.0000		83.5	69 - 128	7.55	20	
1,1-Dichloroethene	17.7500	0.50	0.13	20.0000		88.8	65 - 137	6.01	20	
1,1-Dichloropropene	17.5000	0.50	0.13	20.0000		87.5	74 - 129	5.83	20	
1,2,3-Trichloropropane	18.8000	0.50	0.39	20.0000		94.0	74 - 123	0.0532	20	
1,2,3-Trichlorobenzene	19.0800	0.50	0.18	20.0000		95.4	59 - 130	0.575	20	
1,2,4-Trichlorobenzene	18.5200	0.50	0.16	20.0000		92.6	65 - 125	0.377	20	
1,2,4-Trimethylbenzene	17.2200	0.50	0.14	20.0000		86.1	88 - 124	4.87	20	L3
1,2-Dibromo-3-chloropropane	19.3300	0.50	0.41	20.0000		96.6	61 - 127	6.35	20	
1,2-Dibromoethane	19.0600	0.50	0.24	20.0000		95.3	72 - 125	1.51	20	
1,2-Dichlorobenzene	19.6600	0.50	0.20	20.0000		98.3	84 - 113	3.05	20	
1,2-Dichloroethane	17.8100	0.50	0.20	20.0000		89.0	68 - 130	0.959	20	
1,2-Dichloropropane	17.4500	0.50	0.15	20.0000		87.2	77 - 121	3.60	20	
1,3,5-Trimethylbenzene	18.8300	0.50	0.13	20.0000		94.2	83 - 124	0.265	20	
1,3-Dichlorobenzene	18.8200	0.50	0.16	20.0000		94.1	83 - 112	1.99	20	
1,3-Dichloropropane	18.7900	0.50	0.21	20.0000		94.0	77 - 119	2.97	20	
1,4-Dichlorobenzene	18.9600	0.50	0.17	20.0000		94.8	79 - 115	0.370	20	
2,2-Dichloropropane	17.9700	0.50	0.38	20.0000		89.8	67 - 149	7.24	20	
2-Chlorotoluene	17.2200	0.50	0.11	20.0000		86.1	81 - 119	2.07	20	
4-Chlorotoluene	17.8100	0.50	0.12	20.0000		89.0	86 - 117	1.78	20	
4-Isopropyltoluene	19.2100	0.50	0.11	20.0000		96.0	82 - 131	1.40	20	
Benzene	18.5200	0.50	0.13	20.0000		92.6	75 - 124	4.64	20	
Bromobenzene	19.0700	0.50	0.21	20.0000		95.4	82 - 108	2.39	20	
Bromodichloromethane	18.5500	0.50	0.14	20.0000		92.8	80 - 120	2.82	20	
Bromoform	20.1000	0.50	0.20	20.0000		100	70 - 123	2.51	20	
Bromomethane	17.2100	0.50	0.40	20.0000		86.0	44 - 151	4.10	20	
Carbon tetrachloride	19.3400	0.50	0.09	20.0000		96.7	62 - 140	4.40	20	
Chlorobenzene	17.8400	0.50	0.13	20.0000		89.2	80 - 112	3.20	20	
Chloroethane	17.8100	0.50	0.15	20.0000		89.0	42 - 167	8.70	20	
Chloroform	15.0000	0.50	0.11	20.0000		75.0	77 - 122	4.56	20	L3
Chloromethane	16.7300	0.50	0.12	20.0000		83.6	33 - 153	6.48	20	
cis-1,2-Dichloroethene	18.3500	0.50	0.14	20.0000		91.8	75 - 121	5.87	20	
cis-1,3-Dichloropropene	17.0400	0.50	0.13	20.0000		85.2	73 - 127	3.80	20	
Dibromochloromethane	17.7000	0.50	0.16	20.0000		88.5	77 - 122	0.170	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 : 11/11/2020

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

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B0K0083 - MSVOA_LL_W (continued)										
LCS Dup (B0K0083-BSD1) - Continued					Prepared: 11/5/2020 Analyzed: 11/5/2020					
Dibromomethane	20.5100	0.50	0.19	20.0000		103	75 - 121	9.34	20	
Dichlorodifluoromethane	16.4900	0.50	0.18	20.0000		82.4	0 - 171	4.74	20	
Ethylbenzene	16.8900	0.50	0.13	20.0000		84.4	82 - 119	6.14	20	
Hexachlorobutadiene	18.3500	0.50	0.15	20.0000		91.8	71 - 131	1.25	20	
Isopropylbenzene	17.5200	0.50	0.10	20.0000		87.6	75 - 126	1.53	20	
m,p-Xylene	34.8400	1.0	0.19	40.0000		87.1	86 - 119	5.58	20	
Methylene chloride	17.4800	1.0	0.71	20.0000		87.4	76 - 125	0.798	20	
n-Butylbenzene	18.6000	0.50	0.11	20.0000		93.0	81 - 125	1.44	20	
n-Propylbenzene	17.5000	0.50	0.10	20.0000		87.5	78 - 130	3.43	20	
Naphthalene	16.6700	0.50	0.41	20.0000		83.4	47 - 128	0.479	20	
o-Xylene	17.1900	0.50	0.13	20.0000		86.0	85 - 119	3.49	20	
sec-Butylbenzene	18.5000	0.50	0.09	20.0000		92.5	78 - 130	0.700	20	
Styrene	16.4500	0.50	0.13	20.0000		82.2	62 - 148	1.99	20	
tert-Butylbenzene	18.3000	0.50	0.09	20.0000		91.5	77 - 125	0.109	20	
Tetrachloroethene	18.0000	0.50	0.10	20.0000		90.0	73 - 120	8.10	20	
Toluene	17.5800	0.50	0.12	20.0000		87.9	79 - 119	8.18	20	
trans-1,2-Dichloroethene	17.1300	0.50	0.09	20.0000		85.6	70 - 129	7.53	20	
Trichloroethene	17.7600	0.50	0.10	20.0000		88.8	73 - 117	7.79	20	
Trichlorofluoromethane	18.7800	0.50	0.23	20.0000		93.9	59 - 135	5.64	20	
Vinyl chloride	16.4000	0.50	0.13	20.0000		82.0	58 - 132	8.24	20	
Surrogate: 1,2-Dichloroethane-d4	*21.21*			*25.0000*		*84.8*	*64 - 155*			
Surrogate: 4-Bromofluorobenzene	*22.98*			*25.0000*		*91.9*	*73 - 124*			
Surrogate: Dibromofluoromethan	*24.82*			*25.0000*		*99.3*	*78 - 129*			
Surrogate: Toluene-d8	*24.49*			*25.0000*		*98.0*	*84 - 117*			
Matrix Spike (B0K0083-MS1)				**Source: 2002461-02**	Prepared: 11/5/2020 Analyzed: 11/5/2020					
1,1,1,2-Tetrachloroethane	21.1200	0.50	0.11	20.0000	ND	106	81 - 133			
1,1,1-Trichloroethane	20.6200	0.50	0.21	20.0000	ND	103	93 - 149			
1,1,2,2-Tetrachloroethane	19.8200	0.50	0.36	20.0000	ND	99.1	69 - 151			
1,1,2-Trichloroethane	19.7400	0.50	0.25	20.0000	ND	98.7	78 - 130			
1,1-Dichloroethane	19.1700	0.50	0.09	20.0000	ND	95.8	68 - 135			
1,1-Dichloroethene	20.8200	0.50	0.13	20.0000	0.830000	100	77 - 134			
1,1-Dichloropropene	20.2500	0.50	0.13	20.0000	ND	101	91 - 138			
1,2,3-Trichloropropane	20.3200	0.50	0.39	20.0000	ND	102	77 - 136			
1,2,3-Trichlorobenzene	21.0900	0.50	0.18	20.0000	ND	105	72 - 129			
1,2,4-Trichlorobenzene	21.1600	0.50	0.16	20.0000	ND	106	64 - 135			
1,2,4-Trimethylbenzene	19.7600	0.50	0.14	20.0000	ND	98.8	10 - 179			
1,2-Dibromo-3-chloropropane	18.7100	0.50	0.41	20.0000	ND	93.6	62 - 153			
1,2-Dibromoethane	19.9200	0.50	0.24	20.0000	ND	99.6	80 - 132			
1,2-Dichlorobenzene	20.7600	0.50	0.20	20.0000	ND	104	81 - 131			
1,2-Dichloroethane	18.2700	0.50	0.20	20.0000	ND	91.4	68 - 146			

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

Project Number : Raytheon Main, 532.30
Report To : Steve Netto
Reported : 11/11/2020

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

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B0K0083 - MSVOA_LL_W (continued)										
Matrix Spike (B0K0083-MS1) - Continued			**Source: 2002461-02**			Prepared: 11/5/2020 Analyzed: 11/5/2020				
1,2-Dichloropropane	18.8600	0.50	0.15	20.0000	ND	94.3	74 - 136			
1,3,5-Trimethylbenzene	21.2600	0.50	0.13	20.0000	ND	106	66 - 149			
1,3-Dichlorobenzene	21.3100	0.50	0.16	20.0000	ND	107	79 - 128			
1,3-Dichloropropane	19.3900	0.50	0.21	20.0000	ND	97.0	80 - 129			
1,4-Dichlorobenzene	20.5700	0.50	0.17	20.0000	ND	103	84 - 121			
2,2-Dichloropropane	20.9800	0.50	0.38	20.0000	ND	105	63 - 179			
2-Chlorotoluene	19.6200	0.50	0.11	20.0000	ND	98.1	76 - 142			
4-Chlorotoluene	19.7400	0.50	0.12	20.0000	ND	98.7	72 - 152			
4-Isopropyltoluene	22.4000	0.50	0.11	20.0000	ND	112	84 - 141			
Benzene	20.8500	0.50	0.13	20.0000	ND	104	79 - 131			
Bromobenzene	20.2500	0.50	0.21	20.0000	ND	101	82 - 121			
Bromodichloromethane	19.7800	0.50	0.14	20.0000	ND	98.9	86 - 138			
Bromoform	21.4400	0.50	0.20	20.0000	ND	107	80 - 136			
Bromomethane	19.3400	0.50	0.40	20.0000	ND	96.7	35 - 194			
Carbon tetrachloride	22.6100	0.50	0.09	20.0000	ND	113	73 - 176			
Chlorobenzene	19.6100	0.50	0.13	20.0000	ND	98.0	81 - 124			
Chloroethane	20.4300	0.50	0.15	20.0000	ND	102	0 - 257			
Chloroform	16.3400	0.50	0.11	20.0000	ND	81.7	76 - 139			
Chloromethane	18.3400	0.50	0.12	20.0000	ND	91.7	27 - 144			
cis-1,2-Dichloroethene	20.4600	0.50	0.14	20.0000	ND	102	69 - 139			
cis-1,3-Dichloropropene	18.9900	0.50	0.13	20.0000	ND	95.0	67 - 149			
Dibromochloromethane	18.2500	0.50	0.16	20.0000	ND	91.2	91 - 131			
Dibromomethane	20.6100	0.50	0.19	20.0000	ND	103	70 - 134			
Dichlorodifluoromethane	20.2300	0.50	0.18	20.0000	ND	101	0 - 161			
Ethylbenzene	19.6800	0.50	0.13	20.0000	ND	98.4	89 - 134			
Hexachlorobutadiene	21.2200	0.50	0.15	20.0000	ND	106	73 - 137			
Isopropylbenzene	19.9800	0.50	0.10	20.0000	ND	99.9	72 - 152			
m,p-Xylene	40.0400	1.0	0.19	40.0000	ND	100	82 - 141			
Methylene chloride	18.1900	1.0	0.71	20.0000	ND	91.0	74 - 133			
n-Butylbenzene	21.9300	0.50	0.11	20.0000	ND	110	65 - 164			
n-Propylbenzene	20.2900	0.50	0.10	20.0000	ND	101	73 - 161			
Naphthalene	18.1800	0.50	0.41	20.0000	ND	90.9	59 - 105			
o-Xylene	19.5600	0.50	0.13	20.0000	ND	97.8	90 - 134			
sec-Butylbenzene	21.5400	0.50	0.09	20.0000	ND	108	80 - 157			
Styrene	17.9300	0.50	0.13	20.0000	ND	89.6	0 - 222			
tert-Butylbenzene	21.1000	0.50	0.09	20.0000	ND	106	88 - 141			
Tetrachloroethene	21.4900	0.50	0.10	20.0000	ND	107	75 - 136			
Toluene	20.2100	0.50	0.12	20.0000	ND	101	82 - 132			
trans-1,2-Dichloroethene	20.1000	0.50	0.09	20.0000	ND	100	65 - 135			
Trichloroethene	20.9200	0.50	0.10	20.0000	ND	105	75 - 128			
Trichlorofluoromethane	24.7200	0.50	0.23	20.0000	ND	124	89 - 143			
Vinyl chloride	19.2300	0.50	0.13	20.0000	ND	96.2	50 - 148			

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 : 11/11/2020

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

Analyte	Result (ug/L)	PQL (ug/L)		Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B0K0083 - MSVOA_LL_W (continued)										
Matrix Spike (B0K0083-MS1) - Continued			**Source: 2002461-02**			Prepared: 11/5/2020 Analyzed: 11/5/2020				
Surrogate: 1,2-Dichloroethane-d4	*21.43*			*25.0000*		*85.7*	*64 - 155*			
Surrogate: 4-Bromofluorobenzene	*22.54*			*25.0000*		*90.2*	*73 - 124*			
Surrogate: Dibromofluoromethan	*24.68*			*25.0000*		*98.7*	*78 - 129*			
Surrogate: Toluene-d8	*24.11*			*25.0000*		*96.4*	*84 - 117*			
Matrix Spike (B0K0083-MS2)			**Source: 2002459-07**			Prepared: 11/5/2020 Analyzed: 11/5/2020				
1,1,1,2-Tetrachloroethane	22.5200	0.50	0.11	20.0000	ND	113	81 - 133			
1,1,1-Trichloroethane	21.2100	0.50	0.21	20.0000	ND	106	93 - 149			
1,1,2,2-Tetrachloroethane	21.1600	0.50	0.36	20.0000	ND	106	69 - 151			
1,1,2-Trichloroethane	28.6500	0.50	0.25	20.0000	5.29000	117	78 - 130			
1,1-Dichloroethane	31.6800	0.50	0.09	20.0000	8.19000	117	68 - 135			
1,1-Dichloroethene	988.390	0.50	0.13	20.0000	650.740	1690	77 - 134			M2
1,1-Dichloropropene	20.7300	0.50	0.13	20.0000	ND	104	91 - 138			
1,2,3-Trichloropropane	20.5300	0.50	0.39	20.0000	ND	103	77 - 136			
1,2,3-Trichlorobenzene	22.0400	0.50	0.18	20.0000	ND	110	72 - 129			
1,2,4-Trichlorobenzene	21.5500	0.50	0.16	20.0000	ND	108	64 - 135			
1,2,4-Trimethylbenzene	19.6500	0.50	0.14	20.0000	ND	98.2	10 - 179			
1,2-Dibromo-3-chloropropane	20.5500	0.50	0.41	20.0000	ND	103	62 - 153			
1,2-Dibromoethane	20.4500	0.50	0.24	20.0000	ND	102	80 - 132			
1,2-Dichlorobenzene	21.5800	0.50	0.20	20.0000	ND	108	81 - 131			
1,2-Dichloroethane	21.4100	0.50	0.20	20.0000	1.71000	98.5	68 - 146			
1,2-Dichloropropane	19.8600	0.50	0.15	20.0000	ND	99.3	74 - 136			
1,3,5-Trimethylbenzene	21.9600	0.50	0.13	20.0000	ND	110	66 - 149			
1,3-Dichlorobenzene	21.6900	0.50	0.16	20.0000	ND	108	79 - 128			
1,3-Dichloropropane	20.7100	0.50	0.21	20.0000	ND	104	80 - 129			
1,4-Dichlorobenzene	21.2700	0.50	0.17	20.0000	ND	106	84 - 121			
2,2-Dichloropropane	21.2300	0.50	0.38	20.0000	ND	106	63 - 179			
2-Chlorotoluene	20.2400	0.50	0.11	20.0000	ND	101	76 - 142			
4-Chlorotoluene	20.3300	0.50	0.12	20.0000	ND	102	72 - 152			
4-Isopropyltoluene	22.7200	0.50	0.11	20.0000	ND	114	84 - 141			
Benzene	21.3600	0.50	0.13	20.0000	ND	107	79 - 131			
Bromobenzene	21.3300	0.50	0.21	20.0000	ND	107	82 - 121			
Bromodichloromethane	20.2500	0.50	0.14	20.0000	ND	101	86 - 138			
Bromoform	23.3000	0.50	0.20	20.0000	ND	116	80 - 136			
Bromomethane	19.5000	0.50	0.40	20.0000	ND	97.5	35 - 194			
Carbon tetrachloride	23.7400	0.50	0.09	20.0000	0.260000	117	73 - 176			
Chlorobenzene	20.8200	0.50	0.13	20.0000	ND	104	81 - 124			
Chloroethane	21.1700	0.50	0.15	20.0000	ND	106	0 - 257			
Chloroform	17.4200	0.50	0.11	20.0000	0.600000	84.1	76 - 139			
Chloromethane	18.9300	0.50	0.12	20.0000	ND	94.6	27 - 144			
cis-1,2-Dichloroethene	22.6300	0.50	0.14	20.0000	1.01000	108	69 - 139			

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 : 11/11/2020

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

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B0K0083 - MSVOA_LL_W (continued)										
Matrix Spike (B0K0083-MS2) - Continued			**Source: 2002459-07**			Prepared: 11/5/2020 Analyzed: 11/5/2020				
cis-1,3-Dichloropropene	19.6900	0.50	0.13	20.0000	ND	98.4	67 - 149			
Dibromochloromethane	20.2500	0.50	0.16	20.0000	ND	101	91 - 131			
Dibromomethane	21.0000	0.50	0.19	20.0000	ND	105	70 - 134			
Dichlorodifluoromethane	20.5200	0.50	0.18	20.0000	ND	103	0 - 161			
Ethylbenzene	20.1300	0.50	0.13	20.0000	ND	101	89 - 134			
Hexachlorobutadiene	21.2200	0.50	0.15	20.0000	ND	106	73 - 137			
Isopropylbenzene	20.6300	0.50	0.10	20.0000	ND	103	72 - 152			
m,p-Xylene	41.6600	1.0	0.19	40.0000	ND	104	82 - 141			
Methylene chloride	18.5800	1.0	0.71	20.0000	ND	92.9	74 - 133			
n-Butylbenzene	21.8300	0.50	0.11	20.0000	ND	109	65 - 164			
n-Propylbenzene	20.8900	0.50	0.10	20.0000	ND	104	73 - 161			
Naphthalene	19.4700	0.50	0.41	20.0000	ND	97.4	59 - 105			
o-Xylene	20.4500	0.50	0.13	20.0000	ND	102	90 - 134			
sec-Butylbenzene	21.8000	0.50	0.09	20.0000	ND	109	80 - 157			
Styrene	18.1400	0.50	0.13	20.0000	ND	90.7	0 - 222			
tert-Butylbenzene	21.1800	0.50	0.09	20.0000	ND	106	88 - 141			
Tetrachloroethene	24.7700	0.50	0.10	20.0000	1.82000	115	75 - 136			
Toluene	20.3400	0.50	0.12	20.0000	ND	102	82 - 132			
trans-1,2-Dichloroethene	21.1100	0.50	0.09	20.0000	ND	106	65 - 135			
Trichloroethene	41.0400	0.50	0.10	20.0000	13.5600	137	75 - 128			M2
Trichlorofluoromethane	23.0300	0.50	0.23	20.0000	0.270000	114	89 - 143			
Vinyl chloride	20.3300	0.50	0.13	20.0000	ND	102	50 - 148			
Surrogate: 1,2-Dichloroethane-d4	*22.18*			*25.0000*		*88.7*	*64 - 155*			
Surrogate: 4-Bromofluorobenzene	*23.04*			*25.0000*		*92.2*	*73 - 124*			
Surrogate: Dibromofluoromethan	*24.87*			*25.0000*		*99.5*	*78 - 129*			
Surrogate: Toluene-d8	*23.96*			*25.0000*		*95.8*	*84 - 117*			
Matrix Spike Dup (B0K0083-MSD2)			**Source: 2002459-07**			Prepared: 11/5/2020 Analyzed: 11/5/2020				
1,1,1,2-Tetrachloroethane	22.4800	0.50	0.11	20.0000	ND	112	81 - 133	0.178	20	
1,1,1-Trichloroethane	21.8100	0.50	0.21	20.0000	ND	109	93 - 149	2.79	20	
1,1,2,2-Tetrachloroethane	20.9800	0.50	0.36	20.0000	ND	105	69 - 151	0.854	20	
1,1,2-Trichloroethane	28.8600	0.50	0.25	20.0000	5.29000	118	78 - 130	0.730	20	
1,1-Dichloroethane	31.1300	0.50	0.09	20.0000	8.19000	115	68 - 135	1.75	20	
1,1-Dichloroethene	927.080	0.50	0.13	20.0000	650.740	1380	77 - 134	6.40	20	M2
1,1-Dichloropropene	21.3300	0.50	0.13	20.0000	ND	107	91 - 138	2.85	20	
1,2,3-Trichloropropane	21.4100	0.50	0.39	20.0000	ND	107	77 - 136	4.20	20	
1,2,3-Trichlorobenzene	22.1900	0.50	0.18	20.0000	ND	111	72 - 129	0.678	20	
1,2,4-Trichlorobenzene	22.3300	0.50	0.16	20.0000	ND	112	64 - 135	3.56	20	
1,2,4-Trimethylbenzene	20.2500	0.50	0.14	20.0000	ND	101	10 - 179	3.01	20	
1,2-Dibromo-3-chloropropane	22.1000	0.50	0.41	20.0000	ND	110	62 - 153	7.27	20	
1,2-Dibromoethane	21.6000	0.50	0.24	20.0000	ND	108	80 - 132	5.47	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 : 11/11/2020

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

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B0K0083 - MSVOA_LL_W (continued)										
Matrix Spike Dup (B0K0083-MSD2) - Continued			**Source: 2002459-07**		Prepared: 11/5/2020 Analyzed: 11/5/2020					
1,2-Dichlorobenzene	21.6300	0.50	0.20	20.0000	ND	108	81 - 131	0.231	20	
1,2-Dichloroethane	21.9200	0.50	0.20	20.0000	1.71000	101	68 - 146	2.35	20	
1,2-Dichloropropane	20.4900	0.50	0.15	20.0000	ND	102	74 - 136	3.12	20	
1,3,5-Trimethylbenzene	21.8600	0.50	0.13	20.0000	ND	109	66 - 149	0.456	20	
1,3-Dichlorobenzene	21.7800	0.50	0.16	20.0000	ND	109	79 - 128	0.414	20	
1,3-Dichloropropane	21.0800	0.50	0.21	20.0000	ND	105	80 - 129	1.77	20	
1,4-Dichlorobenzene	21.5000	0.50	0.17	20.0000	ND	108	84 - 121	1.08	20	
2,2-Dichloropropane	21.3400	0.50	0.38	20.0000	ND	107	63 - 179	0.517	20	
2-Chlorotoluene	20.4900	0.50	0.11	20.0000	ND	102	76 - 142	1.23	20	
4-Chlorotoluene	20.6800	0.50	0.12	20.0000	ND	103	72 - 152	1.71	20	
4-Isopropyltoluene	23.0100	0.50	0.11	20.0000	ND	115	84 - 141	1.27	20	
Benzene	21.8500	0.50	0.13	20.0000	ND	109	79 - 131	2.27	20	
Bromobenzene	21.3700	0.50	0.21	20.0000	ND	107	82 - 121	0.187	20	
Bromodichloromethane	20.8500	0.50	0.14	20.0000	ND	104	86 - 138	2.92	20	
Bromoform	23.6400	0.50	0.20	20.0000	ND	118	80 - 136	1.45	20	
Bromomethane	20.2200	0.50	0.40	20.0000	ND	101	35 - 194	3.63	20	
Carbon tetrachloride	23.9800	0.50	0.09	20.0000	0.260000	119	73 - 176	1.01	20	
Chlorobenzene	21.1800	0.50	0.13	20.0000	ND	106	81 - 124	1.71	20	
Chloroethane	20.4200	0.50	0.15	20.0000	ND	102	0 - 257	3.61	20	
Chloroform	18.0000	0.50	0.11	20.0000	0.600000	87.0	76 - 139	3.27	20	
Chloromethane	19.0900	0.50	0.12	20.0000	ND	95.4	27 - 144	0.842	20	
cis-1,2-Dichloroethene	22.8600	0.50	0.14	20.0000	1.01000	109	69 - 139	1.01	20	
cis-1,3-Dichloropropene	19.9200	0.50	0.13	20.0000	ND	99.6	67 - 149	1.16	20	
Dibromochloromethane	19.9100	0.50	0.16	20.0000	ND	99.6	91 - 131	1.69	20	
Dibromomethane	21.5000	0.50	0.19	20.0000	ND	108	70 - 134	2.35	20	
Dichlorodifluoromethane	20.7700	0.50	0.18	20.0000	ND	104	0 - 161	1.21	20	
Ethylbenzene	20.7100	0.50	0.13	20.0000	ND	104	89 - 134	2.84	20	
Hexachlorobutadiene	22.0300	0.50	0.15	20.0000	ND	110	73 - 137	3.75	20	
Isopropylbenzene	20.5500	0.50	0.10	20.0000	ND	103	72 - 152	0.389	20	
m,p-Xylene	42.2400	1.0	0.19	40.0000	ND	106	82 - 141	1.38	20	
Methylene chloride	18.8200	1.0	0.71	20.0000	ND	94.1	74 - 133	1.28	20	
n-Butylbenzene	22.5400	0.50	0.11	20.0000	ND	113	65 - 164	3.20	20	
n-Propylbenzene	20.6900	0.50	0.10	20.0000	ND	103	73 - 161	0.962	20	
Naphthalene	20.3200	0.50	0.41	20.0000	ND	102	59 - 105	4.27	20	
o-Xylene	20.9000	0.50	0.13	20.0000	ND	104	90 - 134	2.18	20	
sec-Butylbenzene	21.8900	0.50	0.09	20.0000	ND	109	80 - 157	0.412	20	
Styrene	18.7400	0.50	0.13	20.0000	ND	93.7	0 - 222	3.25	20	
tert-Butylbenzene	21.4400	0.50	0.09	20.0000	ND	107	88 - 141	1.22	20	
Tetrachloroethene	24.3700	0.50	0.10	20.0000	1.82000	113	75 - 136	1.63	20	
Toluene	21.0900	0.50	0.12	20.0000	ND	105	82 - 132	3.62	20	
trans-1,2-Dichloroethene	21.0900	0.50	0.09	20.0000	ND	105	65 - 135	0.0948	20	
Trichloroethene	43.1200	0.50	0.10	20.0000	13.5600	148	75 - 128	4.94	20	M2

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 : 11/11/2020

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

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B0K0083 - MSVOA_LL_W (continued)										
Matrix Spike Dup (B0K0083-MSD2) - Continued			**Source: 2002459-07**		Prepared: 11/5/2020 Analyzed: 11/5/2020					
Trichlorofluoromethane	23.8700	0.50	0.23	20.0000	0.270000	118	89 - 143	3.58	20	
Vinyl chloride	20.1400	0.50	0.13	20.0000	ND	101	50 - 148	0.939	20	
Surrogate: 1,2-Dichloroethane-d4	*21.67*			*25.0000*		*86.7*	*64 - 155*			
Surrogate: 4-Bromofluorobenzene	*22.66*			*25.0000*		*90.6*	*73 - 124*			
Surrogate: Dibromofluoromethan	*24.30*			*25.0000*		*97.2*	*78 - 129*			
Surrogate: Toluene-d8	*24.06*			*25.0000*		*96.2*	*84 - 117*			

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 : 11/11/2020

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

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B0K0092 - MSSEMI_W										
Blank (B0K0092-BLK1)					Prepared: 11/5/2020 Analyzed: 11/6/2020					
1,4-Dioxane	ND	0.20	0.05							
Surrogate: 1,2-Dichlorobenzene-d	*0.5451*			*1.00000*		*54.5*	*13 - 99*			
Surrogate: 2-Fluorobiphenyl	*0.5868*			*1.00000*		*58.7*	*8 - 111*			
Surrogate: 4-Terphenyl-d14	*0.6782*			*1.00000*		*67.8*	*12 - 113*			
Surrogate: Nitrobenzene-d5	*0.5139*			*1.00000*		*51.4*	*15 - 121*			
LCS (B0K0092-BS1)					Prepared: 11/5/2020 Analyzed: 11/6/2020					
1,4-Dioxane	0.966780	0.20	0.05	1.00000		96.7	75 - 155			
Surrogate: 1,2-Dichlorobenzene-d	*0.5493*			*1.00000*		*54.9*	*13 - 99*			
Surrogate: 2-Fluorobiphenyl	*0.6052*			*1.00000*		*60.5*	*8 - 111*			
Surrogate: 4-Terphenyl-d14	*0.6236*			*1.00000*		*62.4*	*12 - 113*			
Surrogate: Nitrobenzene-d5	*0.5714*			*1.00000*		*57.1*	*15 - 121*			
LCS Dup (B0K0092-BSD1)					Prepared: 11/5/2020 Analyzed: 11/6/2020					
1,4-Dioxane	0.947420	0.20	0.05	1.00000		94.7	75 - 155	2.02	20	
Surrogate: 1,2-Dichlorobenzene-d	*0.5478*			*1.00000*		*54.8*	*13 - 99*			
Surrogate: 2-Fluorobiphenyl	*0.5906*			*1.00000*		*59.1*	*8 - 111*			
Surrogate: 4-Terphenyl-d14	*0.6235*			*1.00000*		*62.3*	*12 - 113*			
Surrogate: Nitrobenzene-d5	*0.5746*			*1.00000*		*57.5*	*15 - 121*			

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 :	11/11/2020

Notes and Definitions

M2	Matrix spike recovery outside of acceptance limit due to possible matrix interference. The analytical batch was validated by the laboratory control sample.
L3	Laboratory control sample outside in-house established limits but within method criteria.
J	Analyte detected below the Practical Quantitation Limit but above or equal to the Method Detection Limit. Result is an estimated concentration.
ND	Analyte is not detected at or above the Practical Quantitation Limit (PQL). When client requests quantitation against MDL, analyte is not detected at or above the Method Detection Limit (MDL)
PQL	Practical Quantitation Limit
MDL	Method Detection Limit
NR	Not Reported
RPD	Relative Percent Difference
CA2	CA-ELAP (CDPH)
OR1	OR-NELAP (OSPHL)

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.
(3) Results are wet unless otherwise specified.

HARGIS + ASSOCIATES, INC.
HYDROGEOLOGY • ENGINEERING

200 2461

Date: 11/04/2020
Page 1 of 2

PROJECT: Raytheon Main

TASK NO.: 532.30

Project Manager: Steve Netto
QA Manager: Andrew Donnelly
Phone: 858.455.6500
Fax: 858.455.6533

Sampled By: A. DONNELLY, A. JANG

LAB ID	SAMPLE ID	SAMPLE COLLECTION Date	Time	MATRIX: Groundwater	Lab prepared water	PRESERVATION: Hydrochloric Acid (HCl)	NaOH/AlCl3	NaOH/Zn	Ice	CONTAINERS: 40-ml VOA		1 L Amber		250-ml poly	250-ml Amber	ANALYSIS REQUESTED: VOCs by EPA 8260B	1,4 Dioxane 8270 SIM	1,4-Dioxane 8270 MOD		CO2 by SM4500	Dissolved Sulfide by SM4500 S2-d	Total Sulfide by SM-4500 S2-d		Expected Concetration Range (ppb) for VOA's: 0 - 10	10- 100	100 - 1,000	>1,000		SPECIAL HANDLING: 24 hr TAT	48 hr TAT	Standard TAT	Level IV Data Validation Requested	MS/MSD Requested	REMARKS
2002461-01	TB-11042020	11/4/20	0830		X	X			X	2						X								X							X			Report J Flags
-02	MW-28		0841	X		X			X	9						X								X							X		X	
	↓		↓	X					X			3					X													X		X	
-3	MW-40		1012	X		X			X	3						X								X							X			
	↓		↓	X					X			1					X													X			
-4	MW-41		1218	X		X			X	3						X								X							X			
	↓		↓	X					X			1					X													X			
-5	MW-39		1346	X		X			X	3						X								X							X			
	↓	↓	↓	X					X			1					X													X			

Total number of containers per analysis:

Total No. of Containers:

Relinquished By: / Company	Date / Time	Received By: / Company	Date / Time
[signature] / HHA 11/4/20	/ 1630	Max Rothracker	11/4/20 16:30
Max Rothracker 11/4/20	17:10	[signature]	11/4/20 17:10

- ☑ No. of containers correct
- ☑ Received in good condition
- ☑ Custody seals secure
- ☑ Conforms to COC document

2.4C Temperature on receipt

Laboratory
ATL
Attn: Tina Nguyen
3257 Walnut Ave
Signal Hill, CA 90755
562-989-4045

Send Results to:
Steve Netto
9171 Towne Centre Drive
Suite 375
San Diego, CA 92122
Ph: 858.455.5400
snetto@hargis.com

Instructions

Fill out form completely and sign only after verified for completeness
Complete in ballpoint pen. Draw one line through error, initial and date correction
Indicate the number of sample containers in analytical request space; indicate choice with ✓or ×
Note applicable preservatives, special instructions, and deviations from typical environmental samples.
Consult project QA documents for specific instructions.

HARGIS + ASSOCIATES, INC.
HYDROGEOLOGY • ENGINEERING

2002461

Date: 11/04/2020
Page 2 of 2

PROJECT: Raytheon Main

TASK NO.: 532.30

Project Manager Steve Netto
QA Manager Andrew Donnelly
Phone 858.455.6500
Fax 858.455.6533

Sampled By: A. Janzon, D. Sealee

SAMPLE COLLECTION

LAB ID	SAMPLE ID	Date	Time	MATRIX: Groundwater	MATRIX: Lab prepared water	PRESERVATION: Hydrochloric Acid (HCl)	PRESERVATION: NaOH/AlCl3	PRESERVATION: NaOH/Zn	PRESERVATION: Ice	CONTAINERS: 40-ml VOA	CONTAINERS: 1 L Amber	CONTAINERS: 250-ml poly	CONTAINERS: 250-ml Amber	ANALYSIS REQUESTED: VOCs by EPA 8260B	ANALYSIS REQUESTED: 1,4 Dioxane 8270 SIM	ANALYSIS REQUESTED: 1,4-Dioxane 8270 MOD	ANALYSIS REQUESTED: CO2 by SM4500	ANALYSIS REQUESTED: Dissolved Sulfide by SM4500 S2-d	ANALYSIS REQUESTED: Total Sulfide by SM-4500 S2-d	Expected Concetration Range (ppb) for VOA's: 0 - 10	10- 100	100 - 1,000	>1,000	SPECIAL HANDLING: 24 hr TAT	48 hr TAT	Standard TAT	Level IV Data Validation Requested	MS/MSD Requested	REMARKS
2002461-1	MW-43	11/04/2020	0921	X		X			X	3				X							X					X			Report J Flags
-9	↓	↓	↓	X					X		1				X											X			
-7	MW-42		1115	X		X			X	3				X							X					X			
	↓		↓	X					X		1				X											X			
-8	MW-36		1443	X		X			X	3				X							X					X			
	↓	↓	↓	X					X		1				X											X			

Total number of containers per analysis:

Total No. of Containers:

Relinquished By: / Company	Date / Time	Received By: / Company	Date / Time
[signature] / H+A 11/4	20/1630	Max Rothrock	11/4/20 16:30
Relinquished By: / Company	Date / Time	Received By: / Company	Date / Time
Max Rothrock 11/4/20	17:10	[signature]	11/4/20 17:10

- [x] No. of containers correct
- [x] Received in good condition
- [x] Custody seals secure
- [x] Conforms to COC document

2.4C Temperature on receipt

Laboratory
ATL
Attn: Tina Nguyen
3257 Walnut Ave
Signal Hill, CA 90755
562-989-4045

Send Results to:
Steve Netto
9171 Towne Centre Drive
Suite 375
San Diego, CA 92122
Ph: 858.455.5400
snetto@hargis.com

Instructions

Fill out form completely and sign only after verified for completeness
Complete in ballpoint pen. Draw one line through error, initial and date correction
Indicate the number of sample containers in analytical request space; indicate choice with ✓or ×
Note applicable preservatives, special instructions, and deviations from typical environmental samples.
Consult project QA documents for specific instructions.

GROUNDWATER EXTRACTION AND TREATMENT SYSTEM
ANALYTICAL RESULTS

ADVANCED TECHNOLOGY LABORATORIES

September 08, 2020

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

ELAP No.: 1838
CSDLAC No.: 10196
ORELAP No.: CA300003

Re: ATL Work Order Number : 2002061

Client Reference : Raytheon Main GETS OCSD Quarterly Sample, 532.15

Enclosed are the results for sample(s) received on September 03, 2020 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,

Dr. Reza Karimi
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 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.		Project Number :	Raytheon Main GETS OCSD Quarterly S:
9171 Towne Centre Drive, Suite 375		Report To :	Steve Netto
San Diego , CA 92122		Reported :	09/08/2020

SUMMARY OF SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
TB-090320	2002061-01	Lab prepared water	9/03/20 8:00	9/03/20 10:30
CEFF	2002061-02	Groundwater	9/03/20 8:10	9/03/20 10:30

CASE NARRATIVE

Samples for Volatile Organic Compouds by EPA 624 was subcontracted to AETL with CA-ELAP Cert. 1541.

Certificate of Analysis

Hargis & Associates, Inc.		Project Number :	Raytheon Main GETS OCSD Quarterly S:
9171 Towne Centre Drive, Suite 375		Report To :	Steve Netto
San Diego , CA 92122		Reported :	09/08/2020

Client Sample ID: CEFF

Lab ID: 2002061-02

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

Analyte		Result (ug/L)	PQL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,4-Dioxane		ND	2.0	1	B0I0079	09/04/2020	09/04/20 12:20	
Surrogate: 1,2-Dichlorobenzene-d4	*77.2 %*		*17 - 119*		B0I0079	09/04/2020	*09/04/20 12:20*	
Surrogate: 2-Fluorobiphenyl	*87.3 %*		*10 - 133*		B0I0079	09/04/2020	*09/04/20 12:20*	
Surrogate: 4-Terphenyl-d14	*83.3 %*		*5 - 139*		B0I0079	09/04/2020	*09/04/20 12:20*	
Surrogate: Nitrobenzene-d5	*98.6 %*		*13 - 150*		B0I0079	09/04/2020	*09/04/20 12:20*	

Certificate of Analysis

Hargis & Associates, Inc.	Project Number : Raytheon Main GETS OCSD Quarterly S:
9171 Towne Centre Drive, Suite 375	Report To : Steve Netto
San Diego , CA 92122	Reported : 09/08/2020

QUALITY CONTROL SECTION

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

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B0I0079 - MSSEMI_W										
Blank (B0I0079-BLK1)					Prepared: 9/4/2020 Analyzed: 9/4/2020					
1,4-Dioxane	ND	2.0	0.84							
Surrogate: 1,2-Dichlorobenzene-d	*65.92*			*100.000*		*65.9*	*17 - 119*			
Surrogate: 2-Fluorobiphenyl	*75.03*			*100.000*		*75.0*	*10 - 133*			
Surrogate: 4-Terphenyl-d14	*78.99*			*100.000*		*79.0*	*5 - 139*			
Surrogate: Nitrobenzene-d5	*83.28*			*100.000*		*83.3*	*13 - 150*			
LCS (B0I0079-BS1)					Prepared: 9/4/2020 Analyzed: 9/4/2020					
1,4-Dioxane	96.8500	2.0	0.84	100.000		96.8	75 - 155			
Surrogate: 1,2-Dichlorobenzene-d	*51.01*			*100.000*		*51.0*	*17 - 119*			
Surrogate: 2-Fluorobiphenyl	*61.42*			*100.000*		*61.4*	*10 - 133*			
Surrogate: 4-Terphenyl-d14	*66.35*			*100.000*		*66.4*	*5 - 139*			
Surrogate: Nitrobenzene-d5	*69.65*			*100.000*		*69.6*	*13 - 150*			
LCS Dup (B0I0079-BSD1)					Prepared: 9/4/2020 Analyzed: 9/4/2020					
1,4-Dioxane	90.7600	2.0	0.84	100.000		90.8	75 - 155	6.49	20	
Surrogate: 1,2-Dichlorobenzene-d	*73.95*			*100.000*		*74.0*	*17 - 119*			
Surrogate: 2-Fluorobiphenyl	*86.66*			*100.000*		*86.7*	*10 - 133*			
Surrogate: 4-Terphenyl-d14	*89.65*			*100.000*		*89.6*	*5 - 139*			
Surrogate: Nitrobenzene-d5	*96.44*			*100.000*		*96.4*	*13 - 150*			

Certificate of Analysis

Hargis & Associates, Inc.		Project Number :	Raytheon Main GETS OCSD Quarterly S:
9171 Towne Centre Drive, Suite 375		Report To :	Steve Netto
San Diego , CA 92122		Reported :	09/08/2020

Notes and Definitions

ND	Analyte is not detected at or above the Practical Quantitation Limit (PQL). When client requests quantitation against MDL, analyte is not detected at or above the Method Detection Limit (MDL)
PQL	Practical Quantitation Limit
MDL	Method Detection Limit
NR	Not Reported
RPD	Relative Percent Difference
CA2	CA-ELAP (CDPH)
OR1	OR-NELAP (OSPHL)

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.
(3) Results are wet unless otherwise specified.

HARGIS+ASSOCIATES, INC.
HYDROGEOLOGY ▪ ENGINEERING

Date: 9/3/2020
Page 1 of 1

PROJECT: Raytheon Main GETS OCSD Quarterly Sample

TASK NO.: 532.15

Project Manager Steve Netto
QA Manager Ross Horton
Phone 858.455.6500
Fax 858.455.6533

Sampled By: Ruben Sanchez

LAB ID	SAMPLE ID	SAMPLE COLLECTION Date	Time	MATRIX: Groundwater	Lab prepared water	PRESERVATION: Hydrochloric Acid (HCl)				Ice	CONTAINERS: 40-ml VOA	125 mL Poly	250 mL Poly	250 mL Glass	1 L Poly	1L Amber	ANALYSIS REQUESTED: VOCs by EPA 624	1,4-Dioxane by EPA 8270C MOD	Expected Concentration Range (ppb) for VOAs: 0 - 10	10 - 100	100 - 1,000	>1,000	SPECIAL HANDLING: 24 hr TAT	48 Hour TAT	5 Day TAT	Level IV Data Validation Requested	MS/MSD Requested	REMARKS
2002061-01	TB-090320	9/3/2020	8:00		X	X				X	2						X		X					X				
↓ 02	CEFF	9/3/2020	8:10	X		X				X	3					1	X	X	X					X					Note 48 hr TAT
																													Evaluate samples down to
																													the MDL, reporting "J" flags
																													when necessary

AMERICAN ENVIRONMENTAL TESTING LABORATORY
2834 North Naomi Street Burbank, CA 91504 • ELAP# 1541 & 2402 • LACSD# 10181
TEL (888) 288-AETL • (818) 845-8200 • www.aetlab.com
A KYZER LABS COMPANY

September 08, 2020

AETL Job No: BBI0031
Received Date: 09/03/2020
Project Number: 2002061

Advanced Technology Laboratories
3275 Walnut Avenue
Signal Hill, CA 90755-5225
Telephone: (562) 989-4045

Attention: Tina Nguyen

Project Name: General
Site:

Enclosed please find the results of analyses for samples which were analyzed as specified on the attached chain of custody. If you have any questions concerning this report, please do not hesitate to call.

Checked By: Harriet Torosyan
Harriet Torosyan
Project Manager

Approved By:
Corey Jones
Project Manager

Table of Contents

Client Project Name: General B002061)
Work Order Number: BBI0031

1 Cover Letter 1
2 Sample Condition on Receipt 3
3 Chain of Custody 4
4 Cooler Receipt Form 5
5 Case Narrative 6
6 Samples Received 7
7 Positive Hits Summary 8
8 Analytical Results 9
9 Quality Control Results 13
10 Certified Analyses 16
11 Certifications 17
12 Qualifiers and Definitions 18

AMERICAN ENVIRONMENTAL TESTING LABORATORY
2834 North Naomi Street Burbank, CA 91504 • ELAP# 1541 & 2402 • LACSD# 10181
TEL (888) 288-AETL • (818) 845-8200 • www.aetlab.com
A KYZER LABS COMPANY

Advanced Technology Laboratories	AETL Job Number:	BBI0031	
3275 Walnut Avenue	Project Number:	2002061	
Signal Hill, CA 90755-5225	Project Manager:	Tina Nguyen	
	Project Name:	General	Reported: 09/08/2020 16:00

Sample Condition on Receipt

Cooler ID: Default Cooler **Temperature: 2.1 °C**

Are the COCs Correct	Y		
Labels Legible	Y	Containers In Good Condition	Y
COC/Labels Agree	Y	Samples Preserved Properly	Y
Sufficient Sample Volume	Y	Sufficient Holding Time for all Tests	Y
Sample Labels intact	Y	Received on Ice	Y

The contents of this report apply to the sample(s) analyzed in accordance with the chain of custody document.
No duplication of this report is allowed, except in its entirety without written approval of the laboratory.

ADVANCED TECHNOLOGY LABORATORIES

SUBCONTRACT ORDER

Work Order: 2002061

BBI00 31

SENDING LABORATORY:

Advanced Technology Laboratories
3275 Walnut Avenue
Signal Hill, CA 90755
Phone: 562.989.4045
Fax: 562.989.6348
Project Manager: Tina Nguyen
(Tina.Nguyen@atlglobal.com)

Sampler: Ruben Sanchez

RECEIVING LABORATORY:

AETL
2834 North Naomi Street
Burbank, CA 91504
Phone :(818) 845-8200
Fax: (818) 845-8840
PO#: SC14849-48 HR RUSH TAT

IMPORTANT : Please include Work Order # and PO # in your invoice.

Analysis	Due	Expires	Sampled	Comments
ATL Lab#: 2002061-01 / TB-090320		**Lab prepared water**	**09/03/20 08:00**	**Report down to the MDL**
624_SUB	**09/08/20 15:00**	09/17/20 08:00		BBI00 31.01
[Volatile Organic Compounds]				
2-Voa Vial - HCl				
ATL Lab#: 2002061-02 / CEFF		**Groundwater**	**09/03/20 08:10**	BBI00 31.02
624_SUB	**09/08/20 15:00**	09/17/20 08:10		
[Volatile Organic Compounds]				
3-Voa Vial - HCl				

Approved by: 9/3/2020
ATL Project Manager — Date

9/3/20
Released By ATL Sample Control — Date
Received By Courier — Date 9/3/20

9/3/20 1203
Released By Courier — Date
Received By Subcontract Laboratory — Date 9/3/20 1203

Released By — Date
Received By — Date

C:\PROGRAM FILES (X86)\PROMIUM\ELEMENT\PRINT\SCO_ATL(A.3).RPT

AMERICAN ENVIRONMENTAL TESTING LABORATORY
2834 N. NAOMI ST. BURBANK, CALIFORNIA 91504 ELAP# 1541 & 2402 LACSD# 10181
TEL (888) 288-AETL (818) 845-8200 FAX (818) 845-8840 www.aetlab.com
A KYZER LABS COMPANY

COOLER RECEIPT FORM

Client Name: ATL
Project Name:
AETL Job Number: BBI0031
Date Received: 9/3/2020 Received by: Sargis Pirch
Carrier: ☐ AETL Courier ☑ Client ☐ GSL ☐ FedEx ☐ UPS
☐ Others:

Samples were received in: ☒ Cooler (1) ☐ Other (Specify):
Inside temperature of shipping container No 1: 2.1 °C, No 2: , No 3:
Type of sample containers: ☑ VOA, ☐ Glass bottles, ☐ Wide mouth jars, ☐ HDPE bottles, ☐ Metal sleeves, ☐ Others (Specify):
How are samples preserved: ☐ None, ☑ Ice , ☐ Blue Ice, ☐ Dry Ice
☐ None, ☐ HNO_3, ☐ NaOH, ☐ ZnOAc, ☑ HCl, ☐ $Na_2S_2O_3$, ☐ MeOH
☐ Other (Specify):

	Yes	No, explain below	Name, if client was notified.
1. Are the COCs Correct?	✓		
2. Are the Sample labels legible?	✓		
3. Do samples match the COC?	✓		
4. Are the required analyses clear?	✓		
5. Is there enough samples for required analysis?	✓		
6. Are samples sealed with evidence tape?	N/A		
7. Are sample containers in good condition?	✓		
8. Are samples preserved?	✓		
9. Are samples preserved properly for the intended analysis?	✓		
10. Are the VOAs free of headspace?	✓		
11. Are the jars free of headspace?	N/A		

PLEASE NOTE ALL SAMPLES WILL BE DISPOSED OF 30 DAYS AFTER RECEIVING DATE. IF AETL IS INFORMED OTHERWISE, THERE WILL BE A STORAGE CHARGE PER SAMPLE PER MONTH FOR ANY SAMPLE HELD BEYOND 30 DAYS.

Explain all "No" answers for above questions:

AMERICAN ENVIRONMENTAL TESTING LABORATORY
2834 North Naomi Street Burbank, CA 91504 • ELAP# 1541 & 2402 • LACSD# 10181
TEL (888) 288-AETL • (818) 845-8200 • www.aetlab.com
A KYZER LABS COMPANY

Advanced Technology Laboratories	AETL Job Number:	BBI0031	
3275 Walnut Avenue	Project Number:	2002061	
Signal Hill, CA 90755-5225	Project Manager:	Tina Nguyen	
	Project Name:	General	Reported: 09/08/2020 16:00

Case Narrative

The following "Sample Received" Section summarizes the samples received and associated analyses requested as specified on the enclosed chain of custody.

No analytical non-conformances were encountered.

The contents of this report apply to the sample(s) analyzed in accordance with the chain of custody document.
No duplication of this report is allowed, except in its entirety without written approval of the laboratory.

AMERICAN ENVIRONMENTAL TESTING LABORATORY
2834 North Naomi Street Burbank, CA 91504 • ELAP# 1541 & 2402 • LACSD# 10181
TEL (888) 288-AETL • (818) 845-8200 • www.aetlab.com
A KYZER LABS COMPANY

Advanced Technology Laboratories	AETL Job Number:	BBI0031	
3275 Walnut Avenue	Project Number:	2002061	
Signal Hill, CA 90755-5225	Project Manager:	Tina Nguyen	
	Project Name:	General	Reported: 09/08/2020 16:00

Samples Received

AETL received the following samples on 09/03/2020 with the following specifications

Project Name:
Site:

Client ID		Sample Date
TB-090320		09/3/2020 8:00
Lab ID	**Matrix**	**Quantity of Containers**
BBI0031-01	Aqueous	2

Analysis	Units	TAT
EPA 624	ug/L	2

Client ID		Sample Date
CEFF		09/2/2020 8:10
Lab ID	**Matrix**	**Quantity of Containers**
BBI0031-02	Aqueous	3

Analysis	Units	TAT
EPA 624	ug/L	2

Total Number of Samples received: 2

The contents of this report apply to the sample(s) analyzed in accordance with the chain of custody document.
No duplication of this report is allowed, except in its entirety without written approval of the laboratory.

AMERICAN ENVIRONMENTAL TESTING LABORATORY
2834 North Naomi Street Burbank, CA 91504 • ELAP# 1541 & 2402 • LACSD# 10181
TEL (888) 288-AETL • (818) 845-8200 • www.aetlab.com
A KYZER LABS COMPANY

Advanced Technology Laboratories	AETL Job Number:	BBI0031	
3275 Walnut Avenue	Project Number:	2002061	
Signal Hill, CA 90755-5225	Project Manager:	Tina Nguyen	
	Project Name:	General	Reported: 09/08/2020 16:00

Positive Hits Summary

Lab ID **Client ID** **Received**

Method	Analyte	Result	Qualifier	Unit	Analyzed

No positive results reported!

The contents of this report apply to the sample(s) analyzed in accordance with the chain of custody document.
No duplication of this report is allowed, except in its entirety without written approval of the laboratory.

AMERICAN ENVIRONMENTAL TESTING LABORATORY
2834 North Naomi Street Burbank, CA 91504 • ELAP# 1541 & 2402 • LACSD# 10181
TEL (888) 288-AETL • (818) 845-8200 • www.aetlab.com
A KYZER LABS COMPANY

Advanced Technology Laboratories	AETL Job Number:	BBI0031	
3275 Walnut Avenue	Project Number:	2002061	
Signal Hill, CA 90755-5225	Project Manager:	Tina Nguyen	
	Project Name:	General	Reported: 09/08/2020 16:00

Analytical Results

Client ID: TB-090320

Lab ID: BBI0031-01 (Aqueous) **Sampled: 09/03/20 8:00**

Volatile Organic Compounds

Method: EPA 624

Analyte	Result	Qualifier	Dilution	MDL	RL	Units	Prepared Date/Time	Analyzed Date/Time	Batch	Analyst Initials	Prep. Method
1,1,1-Trichloroethane	ND		1	0.500	1.00	ug/L	09/03/20 15:23	09/04/20 12:07	B0I0082	PI	5030B
1,1,2,2-Tetrachloroethane	ND		1	0.500	1.00	ug/L	09/03/20 15:23	09/04/20 12:07	B0I0082	PI	5030B
1,1,2-Trichloroethane	ND		1	0.500	1.00	ug/L	09/03/20 15:23	09/04/20 12:07	B0I0082	PI	5030B
1,1-Dichloroethane	ND		1	0.500	1.00	ug/L	09/03/20 15:23	09/04/20 12:07	B0I0082	PI	5030B
1,1-Dichloroethene	ND		1	0.500	1.00	ug/L	09/03/20 15:23	09/04/20 12:07	B0I0082	PI	5030B
1,2-Dichlorobenzene	ND		1	0.500	1.00	ug/L	09/03/20 15:23	09/04/20 12:07	B0I0082	PI	5030B
1,2-Dichloroethane (EDC)	ND		1	0.500	1.00	ug/L	09/03/20 15:23	09/04/20 12:07	B0I0082	PI	5030B
1,2-Dichloropropane	ND		1	0.500	1.00	ug/L	09/03/20 15:23	09/04/20 12:07	B0I0082	PI	5030B
1,3-Dichlorobenzene	ND		1	0.500	1.00	ug/L	09/03/20 15:23	09/04/20 12:07	B0I0082	PI	5030B
1,4-Dichlorobenzene	ND		1	0.500	1.00	ug/L	09/03/20 15:23	09/04/20 12:07	B0I0082	PI	5030B
2-Butanone (MEK)	ND		1	0.500	1.00	ug/L	09/03/20 15:23	09/04/20 12:07	B0I0082	PI	5030B
2-Chloroethyl vinyl ether	ND		1	0.500	1.00	ug/L	09/03/20 15:23	09/04/20 12:07	B0I0082	PI	5030B
2-Hexanone	ND		1	0.500	1.00	ug/L	09/03/20 15:23	09/04/20 12:07	B0I0082	PI	5030B
4-Methyl-2-pentanone (MIBK)	ND		1	0.500	1.00	ug/L	09/03/20 15:23	09/04/20 12:07	B0I0082	PI	5030B
Acetone	ND		1	5.00	10.0	ug/L	09/03/20 15:23	09/04/20 12:07	B0I0082	PI	5030B
Acrolein (2-Propenal)	ND		1	0.500	1.00	ug/L	09/03/20 15:23	09/04/20 12:07	B0I0082	PI	5030B
Acrylonitrile (2-Propenenitrile)	ND		1	0.500	1.00	ug/L	09/03/20 15:23	09/04/20 12:07	B0I0082	PI	5030B
Benzene	ND		1	0.500	1.00	ug/L	09/03/20 15:23	09/04/20 12:07	B0I0082	PI	5030B
Bromodichloromethane	ND		1	0.500	1.00	ug/L	09/03/20 15:23	09/04/20 12:07	B0I0082	PI	5030B
Bromoform (Tribromomethane)	ND		1	0.500	1.00	ug/L	09/03/20 15:23	09/04/20 12:07	B0I0082	PI	5030B
Bromomethane (Methyl bromide)	ND		1	0.500	1.00	ug/L	09/03/20 15:23	09/04/20 12:07	B0I0082	PI	5030B
Carbon Disulfide	ND		1	0.500	1.00	ug/L	09/03/20 15:23	09/04/20 12:07	B0I0082	PI	5030B
Carbon tetrachloride	ND		1	0.500	1.00	ug/L	09/03/20 15:23	09/04/20 12:07	B0I0082	PI	5030B
Chlorobenzene	ND		1	0.500	1.00	ug/L	09/03/20 15:23	09/04/20 12:07	B0I0082	PI	5030B
Chloroethane	ND		1	0.500	1.00	ug/L	09/03/20 15:23	09/04/20 12:07	B0I0082	PI	5030B
Chloroform (Trichloromethane)	ND		1	0.500	1.00	ug/L	09/03/20 15:23	09/04/20 12:07	B0I0082	PI	5030B
Chloromethane (Methyl chloride)	ND		1	0.500	1.00	ug/L	09/03/20 15:23	09/04/20 12:07	B0I0082	PI	5030B
cis-1,2-Dichloroethene	ND		1	0.500	1.00	ug/L	09/03/20 15:23	09/04/20 12:07	B0I0082	PI	5030B
cis-1,3-Dichloropropene	ND		1	0.500	1.00	ug/L	09/03/20 15:23	09/04/20 12:07	B0I0082	PI	5030B
Dibromochloromethane	ND		1	0.500	1.00	ug/L	09/03/20 15:23	09/04/20 12:07	B0I0082	PI	5030B
Dichlorodifluoromethane	ND		1	0.500	1.00	ug/L	09/03/20 15:23	09/04/20 12:07	B0I0082	PI	5030B
Ethylbenzene	ND		1	0.500	1.00	ug/L	09/03/20 15:23	09/04/20 12:07	B0I0082	PI	5030B
m,p-Xylenes	ND		1	0.500	1.00	ug/L	09/03/20 15:23	09/04/20 12:07	B0I0082	PI	5030B
Methylene chloride (DCM)	ND		1	0.500	1.00	ug/L	09/03/20 15:23	09/04/20 12:07	B0I0082	PI	5030B

The contents of this report apply to the sample(s) analyzed in accordance with the chain of custody document.
No duplication of this report is allowed, except in its entirety without written approval of the laboratory.

AMERICAN ENVIRONMENTAL TESTING LABORATORY
2834 North Naomi Street Burbank, CA 91504 • ELAP# 1541 & 2402 • LACSD# 10181
TEL (888) 288-AETL • (818) 845-8200 • www.aetlab.com
A KYZER LABS COMPANY

Advanced Technology Laboratories
3275 Walnut Avenue
Signal Hill, CA 90755-5225

AETL Job Number: BBI0031
Project Number: 2002061
Project Manager: Tina Nguyen
Project Name: General
Reported: 09/08/2020 16:00

Analytical Results

Client ID: TB-090320
Lab ID: BBI0031-01 (Aqueous) **Sampled: 09/03/20 8:00**

Analyte	Result	Qualifier	Dilution	MDL	RL	Units	Prepared Date/Time	Analyzed Date/Time	Batch	Analyst Initials	Prep. Method
Volatile Organic Compounds (Continued)											
Methyl-tert-butyl ether (MTBE)	ND		1	0.500	1.00	ug/L	09/03/20 15:23	09/04/20 12:07	B0I0082	PI	5030B
Naphthalene	ND		1	0.500	1.00	ug/L	09/03/20 15:23	09/04/20 12:07	B0I0082	PI	5030B
o-Xylene	ND		1	0.500	1.00	ug/L	09/03/20 15:23	09/04/20 12:07	B0I0082	PI	5030B
Styrene	ND		1	0.500	1.00	ug/L	09/03/20 15:23	09/04/20 12:07	B0I0082	PI	5030B
Tetrachloroethene	ND		1	0.500	1.00	ug/L	09/03/20 15:23	09/04/20 12:07	B0I0082	PI	5030B
Toluene (Methyl benzene)	ND		1	0.500	1.00	ug/L	09/03/20 15:23	09/04/20 12:07	B0I0082	PI	5030B
trans-1,2-Dichloroethene	ND		1	0.500	1.00	ug/L	09/03/20 15:23	09/04/20 12:07	B0I0082	PI	5030B
trans-1,3-Dichloropropene	ND		1	0.500	1.00	ug/L	09/03/20 15:23	09/04/20 12:07	B0I0082	PI	5030B
Trichloroethene	ND		1	0.500	1.00	ug/L	09/03/20 15:23	09/04/20 12:07	B0I0082	PI	5030B
Trichlorofluoromethane	ND		1	0.500	1.00	ug/L	09/03/20 15:23	09/04/20 12:07	B0I0082	PI	5030B
Vinyl Acetate	ND		1	0.500	1.00	ug/L	09/03/20 15:23	09/04/20 12:07	B0I0082	PI	5030B
Vinyl chloride (Chloroethene)	ND		1	0.500	1.00	ug/L	09/03/20 15:23	09/04/20 12:07	B0I0082	PI	5030B
Xylenes (Total)	ND		1	0.500	1.00	ug/L	09/03/20 15:23	09/04/20 12:07	B0I0082	PI	5030B
	Recovery				Acceptance Criteria						
Surrogate: 1,2-Dichloroethane-d4	*94.7%*				*75-125*		09/03/20 15:23	*09/04/20 12:07*	B0I0082	*PI*	5030B
Surrogate: Bromofluorobenzene	*88.2%*				*75-125*		09/03/20 15:23	*09/04/20 12:07*	B0I0082	*PI*	5030B
Surrogate: Toluene-d8	*82.9%*				*75-125*		09/03/20 15:23	*09/04/20 12:07*	B0I0082	*PI*	5030B

The contents of this report apply to the sample(s) analyzed in accordance with the chain of custody document.
No duplication of this report is allowed, except in its entirety without written approval of the laboratory.

AMERICAN ENVIRONMENTAL TESTING LABORATORY
2834 North Naomi Street Burbank, CA 91504 • ELAP# 1541 & 2402 • LACSD# 10181
TEL (888) 288-AETL • (818) 845-8200 • www.aetlab.com
A KYZER LABS COMPANY

Advanced Technology Laboratories	AETL Job Number:	BBI0031	
3275 Walnut Avenue	Project Number:	2002061	
Signal Hill, CA 90755-5225	Project Manager:	Tina Nguyen	
	Project Name:	General	Reported: 09/08/2020 16:00

Analytical Results

Client ID: CEFF
Lab ID: BBI0031-02 (Aqueous) **Sampled:** 09/02/20 8:10

Volatile Organic Compounds

Method: EPA 624

Analyte	Result	Qualifier	Dilution	MDL	RL	Units	Prepared Date/Time	Analyzed Date/Time	Batch	Analyst Initials	Prep. Method
1,1,1-Trichloroethane	ND		1	0.500	1.00	ug/L	09/03/20 15:23	09/04/20 13:10	B0I0082	PI	5030B
1,1,2,2-Tetrachloroethane	ND		1	0.500	1.00	ug/L	09/03/20 15:23	09/04/20 13:10	B0I0082	PI	5030B
1,1,2-Trichloroethane	ND		1	0.500	1.00	ug/L	09/03/20 15:23	09/04/20 13:10	B0I0082	PI	5030B
1,1-Dichloroethane	ND		1	0.500	1.00	ug/L	09/03/20 15:23	09/04/20 13:10	B0I0082	PI	5030B
1,1-Dichloroethene	ND		1	0.500	1.00	ug/L	09/03/20 15:23	09/04/20 13:10	B0I0082	PI	5030B
1,2-Dichlorobenzene	ND		1	0.500	1.00	ug/L	09/03/20 15:23	09/04/20 13:10	B0I0082	PI	5030B
1,2-Dichloroethane (EDC)	ND		1	0.500	1.00	ug/L	09/03/20 15:23	09/04/20 13:10	B0I0082	PI	5030B
1,2-Dichloropropane	ND		1	0.500	1.00	ug/L	09/03/20 15:23	09/04/20 13:10	B0I0082	PI	5030B
1,3-Dichlorobenzene	ND		1	0.500	1.00	ug/L	09/03/20 15:23	09/04/20 13:10	B0I0082	PI	5030B
1,4-Dichlorobenzene	ND		1	0.500	1.00	ug/L	09/03/20 15:23	09/04/20 13:10	B0I0082	PI	5030B
2-Butanone (MEK)	ND		1	0.500	1.00	ug/L	09/03/20 15:23	09/04/20 13:10	B0I0082	PI	5030B
2-Chloroethyl vinyl ether	ND		1	0.500	1.00	ug/L	09/03/20 15:23	09/04/20 13:10	B0I0082	PI	5030B
2-Hexanone	ND		1	0.500	1.00	ug/L	09/03/20 15:23	09/04/20 13:10	B0I0082	PI	5030B
4-Methyl-2-pentanone (MIBK)	ND		1	0.500	1.00	ug/L	09/03/20 15:23	09/04/20 13:10	B0I0082	PI	5030B
Acetone	ND		1	5.00	10.0	ug/L	09/03/20 15:23	09/04/20 13:10	B0I0082	PI	5030B
Acrolein (2-Propenal)	ND		1	0.500	1.00	ug/L	09/03/20 15:23	09/04/20 13:10	B0I0082	PI	5030B
Acrylonitrile (2-Propenenitrile)	ND		1	0.500	1.00	ug/L	09/03/20 15:23	09/04/20 13:10	B0I0082	PI	5030B
Benzene	ND		1	0.500	1.00	ug/L	09/03/20 15:23	09/04/20 13:10	B0I0082	PI	5030B
Bromodichloromethane	ND		1	0.500	1.00	ug/L	09/03/20 15:23	09/04/20 13:10	B0I0082	PI	5030B
Bromoform (Tribromomethane)	ND		1	0.500	1.00	ug/L	09/03/20 15:23	09/04/20 13:10	B0I0082	PI	5030B
Bromomethane (Methyl bromide)	ND		1	0.500	1.00	ug/L	09/03/20 15:23	09/04/20 13:10	B0I0082	PI	5030B
Carbon Disulfide	ND		1	0.500	1.00	ug/L	09/03/20 15:23	09/04/20 13:10	B0I0082	PI	5030B
Carbon tetrachloride	ND		1	0.500	1.00	ug/L	09/03/20 15:23	09/04/20 13:10	B0I0082	PI	5030B
Chlorobenzene	ND		1	0.500	1.00	ug/L	09/03/20 15:23	09/04/20 13:10	B0I0082	PI	5030B
Chloroethane	ND		1	0.500	1.00	ug/L	09/03/20 15:23	09/04/20 13:10	B0I0082	PI	5030B
Chloroform (Trichloromethane)	ND		1	0.500	1.00	ug/L	09/03/20 15:23	09/04/20 13:10	B0I0082	PI	5030B
Chloromethane (Methyl chloride)	ND		1	0.500	1.00	ug/L	09/03/20 15:23	09/04/20 13:10	B0I0082	PI	5030B
cis-1,2-Dichloroethene	ND		1	0.500	1.00	ug/L	09/03/20 15:23	09/04/20 13:10	B0I0082	PI	5030B
cis-1,3-Dichloropropene	ND		1	0.500	1.00	ug/L	09/03/20 15:23	09/04/20 13:10	B0I0082	PI	5030B
Dibromochloromethane	ND		1	0.500	1.00	ug/L	09/03/20 15:23	09/04/20 13:10	B0I0082	PI	5030B
Dichlorodifluoromethane	ND		1	0.500	1.00	ug/L	09/03/20 15:23	09/04/20 13:10	B0I0082	PI	5030B
Ethylbenzene	ND		1	0.500	1.00	ug/L	09/03/20 15:23	09/04/20 13:10	B0I0082	PI	5030B
m,p-Xylenes	ND		1	0.500	1.00	ug/L	09/03/20 15:23	09/04/20 13:10	B0I0082	PI	5030B
Methylene chloride (DCM)	ND		1	0.500	1.00	ug/L	09/03/20 15:23	09/04/20 13:10	B0I0082	PI	5030B

The contents of this report apply to the sample(s) analyzed in accordance with the chain of custody document.
No duplication of this report is allowed, except in its entirety without written approval of the laboratory.

AMERICAN ENVIRONMENTAL TESTING LABORATORY
2834 North Naomi Street Burbank, CA 91504 • ELAP# 1541 & 2402 • LACSD# 10181
TEL (888) 288-AETL • (818) 845-8200 • www.aetlab.com
A KYZER LABS COMPANY

Advanced Technology Laboratories	AETL Job Number:	BBI0031	
3275 Walnut Avenue	Project Number:	2002061	
Signal Hill, CA 90755-5225	Project Manager:	Tina Nguyen	
	Project Name:	General	Reported: 09/08/2020 16:00

Analytical Results

Client ID: CEFF

Lab ID: BBI0031-02 (Aqueous) **Sampled: 09/02/20 8:10**

Analyte	Result	Qualifier	Dilution	MDL	RL	Units	Prepared Date/Time	Analyzed Date/Time	Batch	Analyst Initials	Prep. Method
Volatile Organic Compounds (Continued)											
Methyl-tert-butyl ether (MTBE)	ND		1	0.500	1.00	ug/L	09/03/20 15:23	09/04/20 13:10	B0I0082	PI	5030B
Naphthalene	ND		1	0.500	1.00	ug/L	09/03/20 15:23	09/04/20 13:10	B0I0082	PI	5030B
o-Xylene	ND		1	0.500	1.00	ug/L	09/03/20 15:23	09/04/20 13:10	B0I0082	PI	5030B
Styrene	ND		1	0.500	1.00	ug/L	09/03/20 15:23	09/04/20 13:10	B0I0082	PI	5030B
Tetrachloroethene	ND		1	0.500	1.00	ug/L	09/03/20 15:23	09/04/20 13:10	B0I0082	PI	5030B
Toluene (Methyl benzene)	ND		1	0.500	1.00	ug/L	09/03/20 15:23	09/04/20 13:10	B0I0082	PI	5030B
trans-1,2-Dichloroethene	ND		1	0.500	1.00	ug/L	09/03/20 15:23	09/04/20 13:10	B0I0082	PI	5030B
trans-1,3-Dichloropropene	ND		1	0.500	1.00	ug/L	09/03/20 15:23	09/04/20 13:10	B0I0082	PI	5030B
Trichloroethene	ND		1	0.500	1.00	ug/L	09/03/20 15:23	09/04/20 13:10	B0I0082	PI	5030B
Trichlorofluoromethane	ND		1	0.500	1.00	ug/L	09/03/20 15:23	09/04/20 13:10	B0I0082	PI	5030B
Vinyl Acetate	ND		1	0.500	1.00	ug/L	09/03/20 15:23	09/04/20 13:10	B0I0082	PI	5030B
Vinyl chloride (Chloroethene)	ND		1	0.500	1.00	ug/L	09/03/20 15:23	09/04/20 13:10	B0I0082	PI	5030B
Xylenes (Total)	ND		1	0.500	1.00	ug/L	09/03/20 15:23	09/04/20 13:10	B0I0082	PI	5030B
	Recovery				Acceptance Criteria						
Surrogate: 1,2-Dichloroethane-d4	*99.7%*				*75-125*		09/03/20 15:23	*09/04/20 13:10*	B0I0082	*PI*	5030B
Surrogate: Bromofluorobenzene	*88.9%*				*75-125*		09/03/20 15:23	*09/04/20 13:10*	B0I0082	*PI*	5030B
Surrogate: Toluene-d8	*86.3%*				*75-125*		09/03/20 15:23	*09/04/20 13:10*	B0I0082	*PI*	5030B

The contents of this report apply to the sample(s) analyzed in accordance with the chain of custody document.
No duplication of this report is allowed, except in its entirety without written approval of the laboratory.

AMERICAN ENVIRONMENTAL TESTING LABORATORY
2834 North Naomi Street Burbank, CA 91504 • ELAP# 1541 & 2402 • LACSD# 10181
TEL (888) 288-AETL • (818) 845-8200 • www.aetlab.com
A KYZER LABS COMPANY

Advanced Technology Laboratories	AETL Job Number:	BBI0031	
3275 Walnut Avenue	Project Number:	2002061	
Signal Hill, CA 90755-5225	Project Manager:	Tina Nguyen	
	Project Name:	General	Reported: 09/08/2020 16:00

Quality Control Results

Volatile Organic Compounds (EPA 624)

Analyte	Result	MDL	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
Batch: B0I0082 - 5030B					**Prepared: 09/03/2020 15:23**						
Method Blank (B0I0082-BLK1)					**Analyzed: 09/04/2020 10:32**						
1,1,1-Trichloroethane	ND	0.500	1.00	ug/L							
1,1,2,2-Tetrachloroethane	ND	0.500	1.00	ug/L							
1,1,2-Trichloroethane	ND	0.500	1.00	ug/L							
1,1-Dichloroethane	ND	0.500	1.00	ug/L							
1,1-Dichloroethene	ND	0.500	1.00	ug/L							
1,2-Dichlorobenzene	ND	0.500	1.00	ug/L							
1,2-Dichloroethane (EDC)	ND	0.500	1.00	ug/L							
1,2-Dichloropropane	ND	0.500	1.00	ug/L							
1,3-Dichlorobenzene	ND	0.500	1.00	ug/L							
1,4-Dichlorobenzene	ND	0.500	1.00	ug/L							
2-Butanone (MEK)	ND	0.500	1.00	ug/L							
2-Chloroethyl vinyl ether	ND	0.500	1.00	ug/L							
2-Hexanone	ND	0.500	1.00	ug/L							
4-Methyl-2-pentanone (MIBK)	ND	0.500	1.00	ug/L							
Acetone	ND	5.00	10.0	ug/L							
Acrolein (2-Propenal)	ND	0.500	1.00	ug/L							
Acrylonitrile (2-Propenenitrile)	ND	0.500	1.00	ug/L							
Benzene	ND	0.500	1.00	ug/L							
Bromodichloromethane	ND	0.500	1.00	ug/L							
Bromoform (Tribromomethane)	ND	0.500	1.00	ug/L							
Bromomethane (Methyl bromide)	ND	0.500	1.00	ug/L							
Carbon Disulfide	ND	0.500	1.00	ug/L							
Carbon tetrachloride	ND	0.500	1.00	ug/L							
Chlorobenzene	ND	0.500	1.00	ug/L							
Chloroethane	ND	0.500	1.00	ug/L							
Chloroform (Trichloromethane)	ND	0.500	1.00	ug/L							
Chloromethane (Methyl chloride)	ND	0.500	1.00	ug/L							
cis-1,2-Dichloroethene	ND	0.500	1.00	ug/L							
cis-1,3-Dichloropropene	ND	0.500	1.00	ug/L							
Dibromochloromethane	ND	0.500	1.00	ug/L							
Dichlorodifluoromethane	ND	0.500	1.00	ug/L							
Ethylbenzene	ND	0.500	1.00	ug/L							
m,p-Xylenes	ND	0.500	1.00	ug/L							
Methylene chloride (DCM)	ND	0.500	1.00	ug/L							
Methyl-tert-butyl ether (MTBE)	ND	0.500	1.00	ug/L							
Naphthalene	ND	0.500	1.00	ug/L							
o-Xylene	ND	0.500	1.00	ug/L							
Styrene	ND	0.500	1.00	ug/L							
Tetrachloroethene	ND	0.500	1.00	ug/L							
Toluene (Methyl benzene)	ND	0.500	1.00	ug/L							
trans-1,2-Dichloroethene	ND	0.500	1.00	ug/L							
trans-1,3-Dichloropropene	ND	0.500	1.00	ug/L							
Trichloroethene	ND	0.500	1.00	ug/L							

The contents of this report apply to the sample(s) analyzed in accordance with the chain of custody document.
No duplication of this report is allowed, except in its entirety without written approval of the laboratory.

AMERICAN ENVIRONMENTAL TESTING LABORATORY
2834 North Naomi Street Burbank, CA 91504 • ELAP# 1541 & 2402 • LACSD# 10181
TEL (888) 288-AETL • (818) 845-8200 • www.aetlab.com
A KYZER LABS COMPANY

Advanced Technology Laboratories	AETL Job Number:	BBI0031	
3275 Walnut Avenue	Project Number:	2002061	
Signal Hill, CA 90755-5225	Project Manager:	Tina Nguyen	
	Project Name:	General	Reported: 09/08/2020 16:00

Quality Control Results

Volatile Organic Compounds (EPA 624)

Analyte	Result	MDL	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
Batch: B0I0082 - 5030B (Continued)					**Prepared: 09/03/2020 15:23**						
Method Blank (B0I0082-BLK1)					**Analyzed: 09/04/2020 10:32**						
Trichlorofluoromethane	ND	0.500	1.00	ug/L							
Vinyl Acetate	ND	0.500	1.00	ug/L							
Vinyl chloride (Chloroethene)	ND	0.500	1.00	ug/L							
Xylenes (Total)	ND	0.500	1.00	ug/L							
Surrogate: 1,2-Dichloroethane-d4	*45.6*			*ug/L*	*50.0*		*91.1*	*75-125*			
Surrogate: Bromofluorobenzene	*45.1*			*ug/L*	*50.0*		*90.1*	*75-125*			
Surrogate: Toluene-d8	*39.3*			*ug/L*	*50.0*		*78.6*	*75-125*			

The contents of this report apply to the sample(s) analyzed in accordance with the chain of custody document.
No duplication of this report is allowed, except in its entirety without written approval of the laboratory.

AMERICAN ENVIRONMENTAL TESTING LABORATORY
2834 North Naomi Street Burbank, CA 91504 • ELAP# 1541 & 2402 • LACSD# 10181
TEL (888) 288-AETL • (818) 845-8200 • www.aetlab.com
A KYZER LABS COMPANY

Advanced Technology Laboratories	AETL Job Number:	BBI0031	
3275 Walnut Avenue	Project Number:	2002061	
Signal Hill, CA 90755-5225	Project Manager:	Tina Nguyen	
	Project Name:	General	Reported: 09/08/2020 16:00

Quality Control Results

Volatile Organic Compounds (EPA 624)

Analyte	Result	MDL	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
Batch: B0I0082 - 5030B (Continued)					**Prepared: 09/03/2020 15:23**						
LCS (B0I0082-BS1)					**Analyzed: 09/04/2020 08:59**						
1,1-Dichloroethene	40.2			ug/L	50.0		80.5	75-125			
Benzene	39.3			ug/L	50.0		78.5	75-125			
Chlorobenzene	44.8			ug/L	50.0		89.5	75-125			
m,p-Xylenes	88.1			ug/L	100		88.1	75-125			
Methyl-tert-butyl ether (MTBE)	39.3			ug/L	50.0		78.6	75-125			
o-Xylene	44.3			ug/L	50.0		88.7	75-125			
Toluene (Methyl benzene)	44.5			ug/L	50.0		88.9	75-125			
Trichloroethene	51.2			ug/L	50.0		102	75-125			
Surrogate: 1,2-Dichloroethane-d4	*44.7*			*ug/L*	*50.0*		*89.4*	*75-125*			
Surrogate: Bromofluorobenzene	*44.0*			*ug/L*	*50.0*		*88.1*	*75-125*			
Surrogate: Toluene-d8	*43.3*			*ug/L*	*50.0*		*86.5*	*75-125*			
LCSD (B0I0082-BSD1)					**Analyzed: 09/04/2020 09:30**						
1,1-Dichloroethene	39.1			ug/L	50.0		78.1	75-125	2.98	20	
Benzene	42.4			ug/L	50.0		84.8	75-125	7.67	20	
Chlorobenzene	43.3			ug/L	50.0		86.7	75-125	3.22	20	
m,p-Xylenes	84.9			ug/L	100		84.9	75-125	3.73	20	
Methyl-tert-butyl ether (MTBE)	38.2			ug/L	50.0		76.4	75-125	2.89	20	
o-Xylene	42.1			ug/L	50.0		84.3	75-125	5.09	20	
Toluene (Methyl benzene)	41.9			ug/L	50.0		83.8	75-125	5.93	20	
Trichloroethene	48.2			ug/L	50.0		96.5	75-125	5.89	20	
Surrogate: 1,2-Dichloroethane-d4	*43.4*			*ug/L*	*50.0*		*86.9*	*75-125*			
Surrogate: Bromofluorobenzene	*44.1*			*ug/L*	*50.0*		*88.1*	*75-125*			
Surrogate: Toluene-d8	*41.0*			*ug/L*	*50.0*		*82.0*	*75-125*			

The contents of this report apply to the sample(s) analyzed in accordance with the chain of custody document.
No duplication of this report is allowed, except in its entirety without written approval of the laboratory.

AMERICAN ENVIRONMENTAL TESTING LABORATORY
2834 North Naomi Street Burbank, CA 91504 • ELAP# 1541 & 2402 • LACSD# 10181
TEL (888) 288-AETL • (818) 845-8200 • www.aetlab.com
A KYZER LABS COMPANY

Advanced Technology Laboratories	AETL Job Number:	BBI0031	
3275 Walnut Avenue	Project Number:	2002061	
Signal Hill, CA 90755-5225	Project Manager:	Tina Nguyen	
	Project Name:	General	Reported: 09/08/2020 16:00

Certified Analyses included in this Report

Analyte	CAS #	Certifications
EPA 624 in Aqueous		
1,1,1-Trichloroethane	71-55-6	ELAP
1,1,2,2-Tetrachloroethane	79-34-5	ELAP
1,1,2-Trichloroethane	79-00-5	ELAP
1,1-Dichloroethane	75-34-3	ELAP
1,1-Dichloroethene	75-35-4	ELAP
1,2-Dichlorobenzene	95-50-1	ELAP
1,2-Dichloroethane (EDC)	107-06-2	ELAP
1,2-Dichloropropane	78-87-5	ELAP
1,3-Dichlorobenzene	541-73-1	ELAP
1,4-Dichlorobenzene	106-46-7	ELAP
2-Butanone (MEK)	78-93-3	ELAP
2-Chloroethyl vinyl ether	110-75-8	ELAP
2-Hexanone	591-78-6	ELAP
4-Methyl-2-pentanone (MIBK)	108-10-1	ELAP
Acetone	67-64-1	ELAP
Acrolein (2-Propenal)	107-02-8	ELAP
Acrylonitrile (2-Propenenitrile)	107-13-1	ELAP
Benzene	71-43-2	ELAP
Bromodichloromethane	75-27-4	ELAP
Bromoform (Tribromomethane)	75-25-2	ELAP
Bromomethane (Methyl bromide)	74-83-9	ELAP
Carbon Disulfide	75-15-0	ELAP
Carbon tetrachloride	56-23-5	ELAP
Chlorobenzene	108-90-7	ELAP
Chloroethane	75-00-3	ELAP
Chloroform (Trichloromethane)	67-66-3	ELAP
Chloromethane (Methyl chloride)	74-87-3	ELAP
cis-1,2-Dichloroethene	156-59-2	ELAP
cis-1,3-Dichloropropene	10061-01-5	ELAP
Dibromochloromethane	124-48-1	ELAP
Dichlorodifluoromethane	75-71-8	ELAP
Ethylbenzene	100-41-4	ELAP
m,p-Xylenes	179601-23-1	ELAP
Methylene chloride (DCM)	75-09-2	ELAP
Methyl-tert-butyl ether (MTBE)	1634-04-4	ELAP
o-Xylene	95-47-6	ELAP
Styrene	100-42-5	ELAP
Tetrachloroethene	127-18-4	ELAP
Toluene (Methyl benzene)	108-88-3	ELAP
trans-1,2-Dichloroethene	156-60-5	ELAP
trans-1,3-Dichloropropene	10061-02-6	ELAP

The contents of this report apply to the sample(s) analyzed in accordance with the chain of custody document.
No duplication of this report is allowed, except in its entirety without written approval of the laboratory.

AMERICAN ENVIRONMENTAL TESTING LABORATORY
2834 North Naomi Street Burbank, CA 91504 • ELAP# 1541 & 2402 • LACSD# 10181
TEL (888) 288-AETL • (818) 845-8200 • www.aetlab.com
A KYZER LABS COMPANY

Advanced Technology Laboratories	AETL Job Number:	BBI0031	
3275 Walnut Avenue	Project Number:	2002061	
Signal Hill, CA 90755-5225	Project Manager:	Tina Nguyen	
	Project Name:	General	Reported: 09/08/2020 16:00

Certified Analyses included in this Report
(Continued)

Analyte	CAS #	Certifications
EPA 624 in Aqueous (Continued)		
Trichloroethene	79-01-6	ELAP
Trichlorofluoromethane	75-69-4	ELAP
Vinyl Acetate	108-05-4	ELAP
Vinyl chloride (Chloroethene)	75-01-4	ELAP
Xylenes (Total)	1330-20-7	ELAP

List of Certifications

Code	Description	Number	Expires
ELAP	ELAP Cert ID	1541	06/30/2021

The contents of this report apply to the sample(s) analyzed in accordance with the chain of custody document.
No duplication of this report is allowed, except in its entirety without written approval of the laboratory.

AMERICAN ENVIRONMENTAL TESTING LABORATORY
2834 North Naomi Street Burbank, CA 91504 • ELAP# 1541 & 2402 • LACSD# 10181
TEL (888) 288-AETL • (818) 845-8200 • www.aetlab.com
A KYZER LABS COMPANY

Advanced Technology Laboratories	AETL Job Number:	BBI0031	
3275 Walnut Avenue	Project Number:	2002061	
Signal Hill, CA 90755-5225	Project Manager:	Tina Nguyen	
	Project Name:	General	Reported: 09/08/2020 16:00

Qualifiers and Definitions

Item	Definitions
% wt	Percent Weight
%REC	Percent Recovery
°C	Degrees Celsius
AETL	American Environmental Testing Laboratory, LLC
C	Carbon
CARB	California Air Resources Board
COC	Chain of Custody
DRO	Diesel Range Organics
Dup	Duplicate
ELAP	Environmental Laboratory Accreditation Program
EPA	Environmental Protection Agency
GRO	Gasoline Range Organics
HC	Hydrocarbon
LACSD	Los Angeles County Sanitation Districts
LCS	Laboratory Control Sample - A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes.
LCSD	Laboratory Control Sample Duplicate - A replicate of Laboratory Control Sample.
LOQ	Limit of Quantitation
MDL	Method Detection Limit - The minimum measured concentration of a substance that can be reported with 99% confidence. MDL is statistically derived number which is specific for each instrument, each method and each compound.
mg/kg	Miligrams per Kilogram
mg/L	Miligrams per Liter
MRO	Motor oil Range Organics
MS	Matrix Spike - A sample prepared, taken through all sample preparation and analytical steps of the procedure and analyzed as an independent test results.
MSD	Matrix Spike Duplicate - A replicate of Matrix Spike Sample.
N	No
ND	Analyte is not detected below Method Detection Limit.
ng/m3	Nanograms per cubic meter
NIOSH	National Institute for Occupational Safety and Health
nL/L	Nanoliters per Liter
NTU	Nephelometric Turbidity Units
Ohm-cm	Ohms per centimeter
OSHA	Occupational Safety and Health Administration
PCB	Polychlorinated Biphenyl
RL	Reporting Limit - The lowest concentration at which an analyte can be detected in a sample and its concentration can be reported with a specified degree of confidence, accuracy and precision. For usage at AETL, RL is equivalant to LOQ.
RPD	Relative Percent Difference

The contents of this report apply to the sample(s) analyzed in accordance with the chain of custody document.
No duplication of this report is allowed, except in its entirety without written approval of the laboratory.

AMERICAN ENVIRONMENTAL TESTING LABORATORY
2834 North Naomi Street Burbank, CA 91504 • ELAP# 1541 & 2402 • LACSD# 10181
TEL (888) 288-AETL • (818) 845-8200 • www.aetlab.com
A KYZER LABS COMPANY

Advanced Technology Laboratories	AETL Job Number:	BBI0031	
3275 Walnut Avenue	Project Number:	2002061	
Signal Hill, CA 90755-5225	Project Manager:	Tina Nguyen	
	Project Name:	General	Reported: 09/08/2020 16:00

SIM	Selective Ion Monitoring
SPLP	Synthetic Precipitation Leaching Procedure
STLC	Soluble Threshold Limit Concentration
TCLP	Toxicity Characteristic Leaching Procedure
TPH	Total Petroleum Hydrocarbons
TTLC	Total Threshold Limit Concentrations
ug/kg	Micrograms per Kilogram
ug/L	Micrograms per Liter
ug/m3	Micrograms per cubic meter
WET	Waste Extraction Test
Y	Yes
ZHE	Zero Headspace Extraction

The contents of this report apply to the sample(s) analyzed in accordance with the chain of custody document.
No duplication of this report is allowed, except in its entirety without written approval of the laboratory.

ADVANCED TECHNOLOGY LABORATORIES

September 14, 2020

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

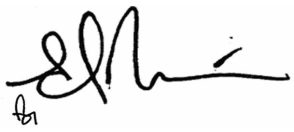
ELAP No.: 1838
CSDLAC No.: 10196
ORELAP No.: CA300003

Re: ATL Work Order Number : 2002067
Client Reference : Raytheon Main GETS Quarterly, 532.15

Enclosed are the results for sample(s) received on September 03, 2020 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,



Dr. Reza Karimi
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 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.		Project Number :	Raytheon Main GETS Quarterly, 532.15
9171 Towne Centre Drive, Suite 375		Report To :	Steve Netto
San Diego , CA 92122		Reported :	09/14/2020

SUMMARY OF SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
CEFF	2002067-01	Groundwater	9/03/20 8:10	9/03/20 15:00
POX	2002067-02	Groundwater	9/03/20 8:35	9/03/20 15:00
INF	2002067-03	Groundwater	9/03/20 9:00	9/03/20 15:00
EW-02	2002067-04	Groundwater	9/03/20 9:45	9/03/20 15:00
MW-29	2002067-05	Groundwater	9/03/20 10:10	9/03/20 15:00

Certificate of Analysis

Hargis & Associates, Inc.		Project Number :	Raytheon Main GETS Quarterly, 532.15
9171 Towne Centre Drive, Suite 375		Report To :	Steve Netto
San Diego , CA 92122		Reported :	09/14/2020

Client Sample ID: CEFF

Lab ID: 2002067-01

Total Dissolved Solids (Residue, Filterable) by SM 2540C **Analyst: AH**

Analyte	Result (mg/L)	PQL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Residue, Dissolved	**690**	10	1	B0I0094	09/04/2020	09/08/20 12:07	

Certificate of Analysis

Hargis & Associates, Inc.	Project Number : Raytheon Main GETS Quarterly, 532.15
9171 Towne Centre Drive, Suite 375	Report To : Steve Netto
San Diego , CA 92122	Reported : 09/14/2020

Client Sample ID: POX

Lab ID: 2002067-02

Anions Scan by Ion Chromatography EPA 300.0

Analyst: AH

Analyte	Result (mg/L)	PQL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Chloride	**94**	5.0	10	B0I0092	09/04/2020	09/04/20 15:32	
Nitrate, as N	**4.1**	0.10	1	B0I0092	09/04/2020	09/04/20 14:13	
Nitrite, as N	ND	0.10	1	B0I0092	09/04/2020	09/04/20 14:13	
ortho-Phosphate, as P	ND	0.05	1	B0I0092	09/04/2020	09/04/20 14:13	
Sulfate	**110**	10	10	B0I0092	09/04/2020	09/04/20 15:32	

UV Absorption by EPA 415.3

Analyst: AH

Analyte	Result (1/cm)	PQL (1/cm)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
UV Absorption	ND	0.01	1	B0I0093	09/04/2020	09/04/20 18:57	

Total Dissolved Solids (Residue, Filterable) by SM 2540C

Analyst: AH

Analyte	Result (mg/L)	PQL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Residue, Dissolved	**710**	10	1	B0I0094	09/04/2020	09/08/20 12:09	

Chemical Oxygen Demand by EPA 410.4

Analyst: AH

Analyte	Result (mg/L)	PQL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Chemical Oxygen Demand	ND	5.0	1	B0I0112	09/08/2020	09/11/20 14:56	

Certificate of Analysis

Hargis & Associates, Inc.	Project Number : Raytheon Main GETS Quarterly, 532.15
9171 Towne Centre Drive, Suite 375	Report To : Steve Netto
San Diego , CA 92122	Reported : 09/14/2020

Client Sample ID: INF

Lab ID: 2002067-03

Anions Scan by Ion Chromatography EPA 300.0

Analyst: AH

Analyte	Result (mg/L)	PQL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Chloride	**95**	5.0	10	B0I0092	09/04/2020	09/04/20 15:43	
Nitrate, as N	**4.1**	0.10	1	B0I0092	09/04/2020	09/04/20 14:25	
Nitrite, as N	ND	0.10	1	B0I0092	09/04/2020	09/04/20 14:25	
ortho-Phosphate, as P	ND	0.05	1	B0I0092	09/04/2020	09/04/20 14:25	
Sulfate	**120**	10	10	B0I0092	09/04/2020	09/04/20 15:43	

UV Absorption by EPA 415.3

Analyst: AH

Analyte	Result (1/cm)	PQL (1/cm)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
UV Absorption	ND	0.01	1	B0I0093	09/04/2020	09/04/20 18:57	

Alkalinity, Speciated by SM 2320B

Analyst: AH

Analyte	Result (mg/L)	PQL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Alkalinity, Bicarbonate (as CaCO3)	**220**	5.0	1	B0I0196	09/10/2020	09/10/20 20:26	
Alkalinity, Carbonate (as CaCO3)	ND	5.0	1	B0I0196	09/10/2020	09/10/20 20:26	
Alkalinity, Hydroxide (as CaCO3)	ND	5.0	1	B0I0196	09/10/2020	09/10/20 20:26	
Alkalinity, Total (as CaCO3)	**220**	5.0	1	B0I0196	09/10/2020	09/10/20 20:26	

Total Dissolved Solids (Residue, Filterable) by SM 2540C

Analyst: AH

Analyte	Result (mg/L)	PQL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Residue, Dissolved	**700**	10	1	B0I0094	09/04/2020	09/08/20 12:11	

Total Organic Carbon by SM 5310B

Analyst: AH

Analyte	Result (mg/L)	PQL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Organic Carbon, Total	ND	3.0	1	B0I0183	09/09/2020	09/09/20 17:38	

Chemical Oxygen Demand by EPA 410.4

Analyst: AH

Analyte	Result (mg/L)	PQL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes

Certificate of Analysis

Hargis & Associates, Inc.		Project Number :	Raytheon Main GETS Quarterly, 532.15
9171 Towne Centre Drive, Suite 375		Report To :	Steve Netto
San Diego , CA 92122		Reported :	09/14/2020

Client Sample ID: INF

Lab ID: 2002067-03

Chemical Oxygen Demand by EPA 410.4

Analyst: AH

Analyte	Result (mg/L)	PQL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Chemical Oxygen Demand	ND	5.0	1	B0I0112	09/08/2020	09/11/20 14:56	

Total Metals by ICP-AES EPA 6010B

Analyst: TA

Analyte	Result (mg/L)	PQL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Selenium	ND	0.010	1	B0I0117	09/08/2020	09/09/20 12:46	

Dissolved Metals by ICP-AES EPA 6010B

Analyst: TA

Analyte	Result (mg/L)	PQL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Calcium	**93**	0.50	1	B0I0114	09/08/2020	09/09/20 12:04	
Iron	ND	0.50	1	B0I0114	09/08/2020	09/09/20 12:04	
Magnesium	**28**	0.10	1	B0I0114	09/08/2020	09/09/20 12:04	
Manganese	ND	0.50	1	B0I0114	09/08/2020	09/09/20 12:04	
Selenium	ND	0.010	1	B0I0114	09/08/2020	09/09/20 12:04	
Sodium	**79**	1.0	1	B0I0114	09/08/2020	09/09/20 12:04	

Certificate of Analysis

Hargis & Associates, Inc.	Project Number : Raytheon Main GETS Quarterly, 532.15
9171 Towne Centre Drive, Suite 375	Report To : Steve Netto
San Diego , CA 92122	Reported : 09/14/2020

Client Sample ID: EW-02

Lab ID: 2002067-04

Anions Scan by Ion Chromatography EPA 300.0

Analyst: AH

Analyte	Result (mg/L)	PQL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Chloride	**83**	5.0	10	B0I0092	09/04/2020	09/04/20 15:54	
Nitrate, as N	**3.6**	0.10	1	B0I0092	09/04/2020	09/04/20 14:36	
Nitrite, as N	ND	0.10	1	B0I0092	09/04/2020	09/04/20 14:36	
ortho-Phosphate, as P	ND	0.05	1	B0I0092	09/04/2020	09/04/20 14:36	
Sulfate	**120**	10	10	B0I0092	09/04/2020	09/04/20 15:54	

UV Absorption by EPA 415.3

Analyst: AH

Analyte	Result (1/cm)	PQL (1/cm)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
UV Absorption	ND	0.01	1	B0I0093	09/04/2020	09/04/20 18:57	

Alkalinity, Speciated by SM 2320B

Analyst: AH

Analyte	Result (mg/L)	PQL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Alkalinity, Bicarbonate (as CaCO3)	**220**	5.0	1	B0I0196	09/10/2020	09/10/20 20:26	
Alkalinity, Carbonate (as CaCO3)	ND	5.0	1	B0I0196	09/10/2020	09/10/20 20:26	
Alkalinity, Hydroxide (as CaCO3)	ND	5.0	1	B0I0196	09/10/2020	09/10/20 20:26	
Alkalinity, Total (as CaCO3)	**220**	5.0	1	B0I0196	09/10/2020	09/10/20 20:26	

Total Dissolved Solids (Residue, Filterable) by SM 2540C

Analyst: AH

Analyte	Result (mg/L)	PQL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Residue, Dissolved	**660**	10	1	B0I0094	09/04/2020	09/08/20 12:13	

Total Organic Carbon by SM 5310B

Analyst: AH

Analyte	Result (mg/L)	PQL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Organic Carbon, Total	ND	3.0	1	B0I0183	09/09/2020	09/09/20 18:02	

Chemical Oxygen Demand by EPA 410.4

Analyst: AH

Analyte	Result (mg/L)	PQL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes

Certificate of Analysis

Hargis & Associates, Inc.		Project Number :	Raytheon Main GETS Quarterly, 532.15
9171 Towne Centre Drive, Suite 375		Report To :	Steve Netto
San Diego , CA 92122		Reported :	09/14/2020

Client Sample ID: EW-02

Lab ID: 2002067-04

Chemical Oxygen Demand by EPA 410.4

Analyst: AH

Analyte	Result (mg/L)	PQL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Chemical Oxygen Demand	ND	5.0	1	B0I0112	09/08/2020	09/11/20 14:56	

Total Metals by ICP-AES EPA 6010B

Analyst: TA

Analyte	Result (mg/L)	PQL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Selenium	ND	0.010	1	B0I0117	09/08/2020	09/09/20 12:51	

Dissolved Metals by ICP-AES EPA 6010B

Analyst: TA

Analyte	Result (mg/L)	PQL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Calcium	**89**	0.50	1	B0I0114	09/08/2020	09/09/20 12:05	
Iron	ND	0.50	1	B0I0114	09/08/2020	09/09/20 12:05	
Magnesium	**27**	0.10	1	B0I0114	09/08/2020	09/09/20 12:05	
Manganese	ND	0.50	1	B0I0114	09/08/2020	09/09/20 12:05	
Selenium	ND	0.010	1	B0I0114	09/08/2020	09/09/20 12:05	
Sodium	**74**	1.0	1	B0I0114	09/08/2020	09/09/20 12:05	

Certificate of Analysis

Hargis & Associates, Inc.	Project Number : Raytheon Main GETS Quarterly, 532.15
9171 Towne Centre Drive, Suite 375	Report To : Steve Netto
San Diego , CA 92122	Reported : 09/14/2020

Client Sample ID: MW-29

Lab ID: 2002067-05

Anions Scan by Ion Chromatography EPA 300.0

Analyst: AH

Analyte	Result (mg/L)	PQL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Chloride	**150**	5.0	10	B0I0092	09/04/2020	09/04/20 16:06	
Nitrate, as N	**6.6**	0.10	1	B0I0092	09/04/2020	09/04/20 14:48	
Nitrite, as N	ND	0.10	1	B0I0092	09/04/2020	09/04/20 14:48	
ortho-Phosphate, as P	ND	0.05	1	B0I0092	09/04/2020	09/04/20 14:48	
Sulfate	**110**	10	10	B0I0092	09/04/2020	09/04/20 16:06	

UV Absorption by EPA 415.3

Analyst: AH

Analyte	Result (1/cm)	PQL (1/cm)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
UV Absorption	ND	0.01	1	B0I0093	09/04/2020	09/04/20 18:57	

Alkalinity, Speciated by SM 2320B

Analyst: AH

Analyte	Result (mg/L)	PQL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Alkalinity, Bicarbonate (as CaCO3)	**260**	5.0	1	B0I0196	09/10/2020	09/10/20 20:26	
Alkalinity, Carbonate (as CaCO3)	ND	5.0	1	B0I0196	09/10/2020	09/10/20 20:26	
Alkalinity, Hydroxide (as CaCO3)	ND	5.0	1	B0I0196	09/10/2020	09/10/20 20:26	
Alkalinity, Total (as CaCO3)	**260**	5.0	1	B0I0196	09/10/2020	09/10/20 20:26	

Total Dissolved Solids (Residue, Filterable) by SM 2540C

Analyst: AH

Analyte	Result (mg/L)	PQL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Residue, Dissolved	**850**	10	1	B0I0094	09/04/2020	09/08/20 12:15	

Total Organic Carbon by SM 5310B

Analyst: AH

Analyte	Result (mg/L)	PQL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Organic Carbon, Total	ND	3.0	1	B0I0183	09/09/2020	09/09/20 18:30	

Chemical Oxygen Demand by EPA 410.4

Analyst: AH

Analyte	Result (mg/L)	PQL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes

Certificate of Analysis

Hargis & Associates, Inc.		Project Number :	Raytheon Main GETS Quarterly, 532.15
9171 Towne Centre Drive, Suite 375		Report To :	Steve Netto
San Diego , CA 92122		Reported :	09/14/2020

Client Sample ID: MW-29

Lab ID: 2002067-05

Chemical Oxygen Demand by EPA 410.4

Analyst: AH

Analyte	Result (mg/L)	PQL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Chemical Oxygen Demand	ND	5.0	1	B0I0112	09/08/2020	09/08/20 15:42	

Total Metals by ICP-AES EPA 6010B

Analyst: TA

Analyte	Result (mg/L)	PQL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Selenium	ND	0.010	1	B0I0117	09/08/2020	09/09/20 12:52	

Dissolved Metals by ICP-AES EPA 6010B

Analyst: TA

Analyte	Result (mg/L)	PQL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Calcium	**110**	0.50	1	B0I0114	09/08/2020	09/09/20 12:06	
Iron	ND	0.50	1	B0I0114	09/08/2020	09/09/20 12:06	
Magnesium	**33**	0.10	1	B0I0114	09/08/2020	09/09/20 12:06	
Manganese	ND	0.50	1	B0I0114	09/08/2020	09/09/20 12:06	
Selenium	ND	0.010	1	B0I0114	09/08/2020	09/09/20 12:06	
Sodium	**100**	1.0	1	B0I0114	09/08/2020	09/09/20 12:06	

Certificate of Analysis

Hargis & Associates, Inc.	Project Number : Raytheon Main GETS Quarterly, 532.15
9171 Towne Centre Drive, Suite 375	Report To : Steve Netto
San Diego , CA 92122	Reported : 09/14/2020

QUALITY CONTROL SECTION

Alkalinity, Speciated by SM 2320B - Quality Control

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B0I0196 - No_Prep_WC1_W										
Blank (B0I0196-BLK1)					Prepared: 9/10/2020 Analyzed: 9/10/2020					
Alkalinity, Bicarbonate (as CaCO3)	ND	5.0	3.4							
Alkalinity, Carbonate (as CaCO3)	ND	5.0	3.4							
Alkalinity, Hydroxide (as CaCO3)	ND	5.0	3.4							
Alkalinity, Total (as CaCO3)	ND	5.0	3.4							
LCS (B0I0196-BS1)					Prepared: 9/10/2020 Analyzed: 9/10/2020					
Alkalinity, Total (as CaCO3)	102.440	5.0	3.4	99.9580		102	80 - 120			
Matrix Spike (B0I0196-MS1)			**Source: 2002069-05**		Prepared: 9/10/2020 Analyzed: 9/10/2020					
Alkalinity, Total (as CaCO3)	323.140	5.0	3.4	99.9580	223.700	99.5	80 - 120			
Matrix Spike Dup (B0I0196-MSD1)			**Source: 2002069-05**		Prepared: 9/10/2020 Analyzed: 9/10/2020					
Alkalinity, Total (as CaCO3)	322.930	5.0	3.4	99.9580	223.700	99.3	80 - 120	0.0650	20	

Certificate of Analysis

Hargis & Associates, Inc.		Project Number :	Raytheon Main GETS Quarterly, 532.15
9171 Towne Centre Drive, Suite 375		Report To :	Steve Netto
San Diego , CA 92122		Reported :	09/14/2020

Total Dissolved Solids (Residue, Filterable) by SM 2540C - Quality Control

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B0I0094 - No_Prep_WC1_W										
Blank (B0I0094-BLK1)					Prepared: 9/4/2020 Analyzed: 9/8/2020					
Residue, Dissolved	ND	10	10							
LCS (B0I0094-BS1)					Prepared: 9/4/2020 Analyzed: 9/8/2020					
Residue, Dissolved	1009.00	10	10	1000.00		101	80 - 120			
Duplicate (B0I0094-DUP1)			**Source: 2002056-12**		Prepared: 9/4/2020 Analyzed: 9/8/2020					
Residue, Dissolved	ND	10	10		ND			NR	10	

Certificate of Analysis

Hargis & Associates, Inc.	Project Number : Raytheon Main GETS Quarterly, 532.15
9171 Towne Centre Drive, Suite 375	Report To : Steve Netto
San Diego , CA 92122	Reported : 09/14/2020

Anions Scan by Ion Chromatography EPA 300.0 - Quality Control

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B0I0092 - No_Prep_IC1_W										
Blank (B0I0092-BLK1)					Prepared: 9/4/2020 Analyzed: 9/4/2020					
Chloride	ND	0.50	0.15							
Nitrate, as N	ND	0.10	0.05							
Nitrite, as N	ND	0.10	0.02							
ortho-Phosphate, as P	ND	0.05	0.05							
Sulfate	ND	1.0	0.25							
LCS (B0I0092-BS1)					Prepared: 9/4/2020 Analyzed: 9/4/2020					
Chloride	1.09950	0.50	0.15	1.00000		110	90 - 110			
Nitrate, as N	0.910100	0.10	0.05	1.00000		91.0	90 - 110			
Nitrite, as N	1.06200	0.10	0.02	1.00000		106	90 - 110			
ortho-Phosphate, as P	0.969400	0.05	0.05	1.00000		96.9	90 - 110			
Sulfate	2.01420	1.0	0.25	2.00000		101	90 - 110			
Duplicate (B0I0092-DUP1)			**Source: 2002067-05**		Prepared: 9/4/2020 Analyzed: 9/4/2020					
Chloride	154.123	5.0	1.5		151.905			1.45	20	
Nitrate, as N	6.14300	1.0	0.47		6.56490			6.64	20	
Nitrite, as N	ND	1.0	0.15		ND				20	
ortho-Phosphate, as P	ND	0.50	0.48		ND				20	
Sulfate	110.116	10	2.5		107.768			2.16	20	
Matrix Spike (B0I0092-MS1)			**Source: 2002067-05**		Prepared: 9/4/2020 Analyzed: 9/4/2020					
Chloride	153.291	5.0	1.5	2.50000	151.905	55.4	80 - 120			M3
Nitrate, as N	8.02400	1.0	0.47	2.50000	6.56490	58.4	80 - 120			M2
Nitrite, as N	4.57300	1.0	0.15	2.50000	ND	183	80 - 120			M2
ortho-Phosphate, as P	1.61300	0.50	0.48	2.50000	ND	64.5	80 - 120			M2
Sulfate	116.624	10	2.5	5.00000	107.768	177	80 - 120			M3
Matrix Spike Dup (B0I0092-MSD1)			**Source: 2002067-05**		Prepared: 9/4/2020 Analyzed: 9/4/2020					
Chloride	153.664	5.0	1.5	2.50000	151.905	70.4	80 - 120	0.243	20	M3
Nitrate, as N	8.14600	1.0	0.47	2.50000	6.56490	63.2	80 - 120	1.51	20	M2
Nitrite, as N	4.76400	1.0	0.15	2.50000	ND	191	80 - 120	4.09	20	M2
ortho-Phosphate, as P	1.82800	0.50	0.48	2.50000	ND	73.1	80 - 120	12.5	20	M2
Sulfate	117.451	10	2.5	5.00000	107.768	194	80 - 120	0.707	20	M3

Certificate of Analysis

Hargis & Associates, Inc.	Project Number : Raytheon Main GETS Quarterly, 532.15
9171 Towne Centre Drive, Suite 375	Report To : Steve Netto
San Diego , CA 92122	Reported : 09/14/2020

UV Absorption by EPA 415.3 - Quality Control

Analyte	Result (1/cm)	PQL (1/cm)	MDL (1/cm)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B0I0093 - No_Prep_II_W										
Duplicate (B0I0093-DUP1)			**Source: 2002067-02**		Prepared: 9/4/2020 Analyzed: 9/4/2020					
UV Absorption	ND	0.01	0.01		ND			NR	20	

Certificate of Analysis

Hargis & Associates, Inc.	Project Number : Raytheon Main GETS Quarterly, 532.15
9171 Towne Centre Drive, Suite 375	Report To : Steve Netto
San Diego , CA 92122	Reported : 09/14/2020

Total Organic Carbon by SM 5310B - Quality Control

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B0I0183 - No_Prep_II_W										
Blank (B0I0183-BLK1)					Prepared: 9/9/2020 Analyzed: 9/9/2020					
Organic Carbon, Total	ND	3.0	1.3							
LCS (B0I0183-BS1)					Prepared: 9/9/2020 Analyzed: 9/9/2020					
Organic Carbon, Total	25.4300	3.0	1.3	25.0000		102	80 - 120			
Duplicate (B0I0183-DUP1)			**Source: 2002069-04**		Prepared: 9/9/2020 Analyzed: 9/9/2020					
Organic Carbon, Total	ND	3.0	1.3		ND			NR	20	
Matrix Spike (B0I0183-MS1)			**Source: 2002069-04**		Prepared: 9/9/2020 Analyzed: 9/9/2020					
Organic Carbon, Total	21.2000	3.0	1.3	25.0000	ND	84.8	80 - 120			
Matrix Spike Dup (B0I0183-MSD1)			**Source: 2002069-04**		Prepared: 9/9/2020 Analyzed: 9/9/2020					
Organic Carbon, Total	24.4100	3.0	1.3	25.0000	ND	97.6	80 - 120	14.1	20	

Certificate of Analysis

Hargis & Associates, Inc.	Project Number : Raytheon Main GETS Quarterly, 532.15
9171 Towne Centre Drive, Suite 375	Report To : Steve Netto
San Diego , CA 92122	Reported : 09/14/2020

Chemical Oxygen Demand by EPA 410.4 - Quality Control

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B0I0112 - Prep_WC1_W										
Blank (B0I0112-BLK1)					Prepared: 9/8/2020 Analyzed: 9/8/2020					
Chemical Oxygen Demand	ND	5.0	4.2							
LCS (B0I0112-BS1)					Prepared: 9/8/2020 Analyzed: 9/8/2020					
Chemical Oxygen Demand	506.910	5.0	4.2	501.500		101	80 - 120			
Matrix Spike (B0I0112-MS1)			**Source: 2002067-05**		Prepared: 9/8/2020 Analyzed: 9/8/2020					
Chemical Oxygen Demand	583.481	5.0	4.2	501.500	ND	116	80 - 120			
Matrix Spike Dup (B0I0112-MSD1)			**Source: 2002067-05**		Prepared: 9/8/2020 Analyzed: 9/8/2020					
Chemical Oxygen Demand	583.770	5.0	4.2	501.500	ND	116	80 - 120	0.0495	20	

Certificate of Analysis

Hargis & Associates, Inc.	Project Number : Raytheon Main GETS Quarterly, 532.15
9171 Towne Centre Drive, Suite 375	Report To : Steve Netto
San Diego , CA 92122	Reported : 09/14/2020

Total Metals by ICP-AES EPA 6010B - Quality Control

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B0I0117 - EPA 3010A_W										
Blank (B0I0117-BLK1)					Prepared: 9/8/2020 Analyzed: 9/9/2020					
Selenium	ND	0.010	0.0093							
LCS (B0I0117-BS1)					Prepared: 9/8/2020 Analyzed: 9/9/2020					
Selenium	0.463297	0.010	0.0093	0.500000		92.7	80 - 120			
Matrix Spike (B0I0117-MS1)			**Source: 2002067-03**		Prepared: 9/8/2020 Analyzed: 9/9/2020					
Selenium	0.518126	0.010	0.0093	0.500000	ND	104	57 - 146			
Matrix Spike Dup (B0I0117-MSD1)			**Source: 2002067-03**		Prepared: 9/8/2020 Analyzed: 9/9/2020					
Selenium	0.519656	0.010	0.0093	0.500000	ND	104	57 - 146	0.295	20	

Certificate of Analysis

Hargis & Associates, Inc.	Project Number : Raytheon Main GETS Quarterly, 532.15
9171 Towne Centre Drive, Suite 375	Report To : Steve Netto
San Diego , CA 92122	Reported : 09/14/2020

Dissolved Metals by ICP-AES EPA 6010B - Quality Control

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B0I0114 - EPA 3010A_W										
Blank (B0I0114-BLK1)					Prepared: 9/8/2020 Analyzed: 9/9/2020					
Calcium	ND	0.50	0.12							
Iron	ND	0.50	0.011							
Magnesium	ND	0.10	0.021							
Manganese	ND	0.50	0.0046							
Selenium	ND	0.010	0.0093							
Sodium	ND	1.0	0.12							
LCS (B0I0114-BS1)					Prepared: 9/8/2020 Analyzed: 9/9/2020					
Calcium	4.53538	0.50	0.12	5.00000		90.7	80 - 120			
Iron	4.69625	0.50	0.011	5.00000		93.9	80 - 120			
Magnesium	4.58566	0.10	0.021	5.00000		91.7	80 - 120			
Manganese	0.479348	0.50	0.0046	0.500000		95.9	80 - 120			
Selenium	0.454608	0.010	0.0093	0.500000		90.9	80 - 120			
Sodium	9.42096	1.0	0.12	10.0000		94.2	80 - 120			
Duplicate (B0I0114-DUP1)			**Source: 2002046-63**		Prepared: 9/8/2020 Analyzed: 9/9/2020					
Calcium	ND	0.50	0.12		ND			NR	20	
Iron	ND	0.50	0.011		ND			NR	20	
Magnesium	ND	0.10	0.021		ND			NR	20	
Manganese	ND	0.50	0.0046		ND			NR	20	
Selenium	ND	0.010	0.0093		ND			NR	20	
Sodium	1.30387	1.0	0.12		1.34079			2.79	20	
Matrix Spike (B0I0114-MS1)			**Source: 2002046-63**		Prepared: 9/8/2020 Analyzed: 9/9/2020					
Calcium	4.43054	0.50	0.12	5.00000	ND	88.6	0 - 218			
Iron	4.54763	0.50	0.011	5.00000	ND	91.0	46 - 158			
Magnesium	4.46940	0.10	0.021	5.00000	ND	89.4	22 - 181			
Manganese	0.479651	0.50	0.0046	0.500000	ND	95.9	51 - 152			
Selenium	0.443393	0.010	0.0093	0.500000	ND	88.7	57 - 146			
Sodium	9.15576	1.0	0.12	10.0000	1.34079	78.1	0 - 194			
Matrix Spike Dup (B0I0114-MSD1)			**Source: 2002046-63**		Prepared: 9/8/2020 Analyzed: 9/9/2020					
Calcium	4.50901	0.50	0.12	5.00000	ND	90.2	0 - 218	1.76	20	
Iron	4.66015	0.50	0.011	5.00000	ND	93.2	46 - 158	2.44	20	
Magnesium	4.54669	0.10	0.021	5.00000	ND	90.9	22 - 181	1.71	20	
Manganese	0.479546	0.50	0.0046	0.500000	ND	95.9	51 - 152	0.0220	20	
Selenium	0.459330	0.010	0.0093	0.500000	ND	91.9	57 - 146	3.53	20	
Sodium	9.22247	1.0	0.12	10.0000	1.34079	78.8	0 - 194	0.726	20	

Certificate of Analysis

Hargis & Associates, Inc.		Project Number :	Raytheon Main GETS Quarterly, 532.15
9171 Towne Centre Drive, Suite 375		Report To :	Steve Netto
San Diego , CA 92122		Reported :	09/14/2020

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.
ND	Analyte is not detected at or above the Practical Quantitation Limit (PQL). When client requests quantitation against MDL, analyte is not detected at or above the Method Detection Limit (MDL)
PQL	Practical Quantitation Limit
MDL	Method Detection Limit
NR	Not Reported
RPD	Relative Percent Difference
CA2	CA-ELAP (CDPH)
OR1	OR-NELAP (OSPHL)

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.
(3) Results are wet unless otherwise specified.

3.0
1.6

HARGIS+ASSOCIATES, INC.
HYDROGEOLOGY • ENGINEERING

Date: 9/3/2020
Page 1 of 1

PROJECT: Raytheon Main GETS Quarterly Sample

TASK NO.: 532.15

Project Manager Steve Netto
QA Manager Ross Horton
Phone 858.455.6500
Fax 858.455.6533

Sampled By: Ruben Sanchez

LAB ID	SAMPLE ID	SAMPLE COLLECTION Date	Time	MATRIX: Groundwater	Lab prepared water	PRESERVATION: Hydrochloric Acid (HCl)	Nitric Acid (HNO_3)		Sulfuric Acid (H_2SO_4)	Ice	CONTAINERS: 40-ml VOA	125 mL Poly	125 mL amber	250 mL Poly	500 mL Poly	250 mL Glass	ANALYSIS REQUESTED: Alkalinity by SM2320B	Anions by EPA 300	COD by EPA 410.4	Dissolved Metals by EPA 6010B	Total Dissolved Solids by SM2540C	Total Organic Carbon by SM5310B	Total Se by EPA 6010B	UV Absorption EPA 415.3 @254 nm		Expected Concentration Range (ppb) for VOAs: 0 - 10	10 - 100	100 - 1,000	>1,000		SPECIAL HANDLING: 24 hr TAT	48 Hour TAT	5 Day TAT	Level IV Data Validation Requested	MS/MSD Requested	REMARKS
2002067-01	CEFF	9/3/2020	8:10	X						X		1									X												X		
02	POX	9/3/2020	8:35	X					X	X		2	1			1		X	X		X			X									X		Lab to filter dissolved
03	INF	9/3/2020	9:00	X			X		X	X	3	2	1	1	2	1	X	X	X	X	X	X	X	X									X		metals, and anions
04	EW-02	9/3/2020	9:45	X			X		X	X	3	2	1	1	2	1	X	X	X	X	X	X	X	X									X		
05	MW-29	9/3/2020	10:10	X			X		X	X	3	2	1	1	2	1	X	X	X	X	X	X	X	X									X		

Total number of containers per analysis: 9 9 4 3 6 4

Total No. of Containers: 35

Relinquished By: / Company:	Date / Time	Received By: / Company	Date / Time
H+A	9-3-20 1230	H+A	9-3-2020 1230
H+A	9-3-2020 15:00	ATL	9 3 20 20 1500

- No. of containers correct
- Received in good condition
- Custody seals secure
- Conforms to COC document

3.0
1.6 Temperature on receipt

Laboratory
Advanced Technology Laboratories
Attn: Tina Nguyen
3275 Walnut Ave
Signal Hill, CA 90755
(562) 989-4045

Send Results to:
Steve Netto & Ross Horton
9171 Towne Centre Drive
Suite 375
San Diego, CA 92122
Ph: 858.455.6500
snetto@hargis.com
rhorton@hargis.com

Instructions
Fill out form completely and sign only after verified for completeness
Complete in ballpoint pen. Draw one line through error, initial and date correction
Indicate the number of sample containers in analytical request space; indicate choice with ✓or ×
Note applicable preservatives, special instructions, and deviations from typical environmental samples.
Consult project QA documents for specific instructions.

ADVANCED TECHNOLOGY LABORATORIES

September 23, 2020

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

ELAP No.: 1838
CSDLAC No.: 10196
ORELAP No.: CA300003

Re: ATL Work Order Number : 2002069
Client Reference : Raytheon Main GETS Monthly Sample, 532.15

Enclosed are the results for sample(s) received on September 03, 2020 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,

Dr. Reza Karimi
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 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.	Project Number :	Raytheon Main GETS Monthly Sample, 5
9171 Towne Centre Drive, Suite 375	Report To :	Steve Netto
San Diego , CA 92122	Reported :	09/23/2020

SUMMARY OF SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
TB-090320	2002069-01	Water	9/03/20 8:00	9/03/20 15:00
CEFF	2002069-02	Water	9/03/20 8:10	9/03/20 15:00
CBT	2002069-03	Water	9/03/20 8:25	9/03/20 15:00
POX	2002069-04	Water	9/03/20 8:35	9/03/20 15:00
PF	2002069-05	Water	9/03/20 8:50	9/03/20 15:00
INF	2002069-06	Water	9/03/20 9:00	9/03/20 15:00
EW-02	2002069-07	Water	9/03/20 9:45	9/03/20 15:00
MW-29	2002069-08	Water	9/03/20 10:10	9/03/20 15:00
CEFF	2002069-09	Water	9/11/20 11:15	9/03/20 15:00

CASE NARRATIVE

Samples for Bromate by IC-MS/MS was subcontracted to Element Materials Technology with CA-ELAP Cert. 2652.

Additional volume was provided for 1,4-Dioxane by EPA 8270 SIM for sample CEFF (ATL-2002069-9) on September 11, 2020.

Certificate of Analysis

Hargis & Associates, Inc.	Project Number : Raytheon Main GETS Monthly Sample, 5
9171 Towne Centre Drive, Suite 375	Report To : Steve Netto
San Diego , CA 92122	Reported : 09/23/2020

Client Sample ID: TB-090320

Lab ID: 2002069-01

Volatile Organic Compounds by EPA 8260B **Analyst: VW**

Analyte	Result (ug/L)	PQL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	0.50	1	B0I0136	09/09/2020	09/09/20 12:18	
1,1,1-Trichloroethane	ND	0.50	1	B0I0136	09/09/2020	09/09/20 12:18	
1,1,2,2-Tetrachloroethane	ND	0.50	1	B0I0136	09/09/2020	09/09/20 12:18	
1,1,2-Trichloroethane	ND	0.50	1	B0I0136	09/09/2020	09/09/20 12:18	
1,1-Dichloroethane	ND	0.50	1	B0I0136	09/09/2020	09/09/20 12:18	
1,1-Dichloroethene	ND	0.50	1	B0I0136	09/09/2020	09/09/20 12:18	
1,1-Dichloropropene	ND	0.50	1	B0I0136	09/09/2020	09/09/20 12:18	
1,2,3-Trichloropropane	ND	0.50	1	B0I0136	09/09/2020	09/09/20 12:18	
1,2,3-Trichlorobenzene	ND	0.50	1	B0I0136	09/09/2020	09/09/20 12:18	
1,2,4-Trichlorobenzene	ND	0.50	1	B0I0136	09/09/2020	09/09/20 12:18	
1,2,4-Trimethylbenzene	ND	0.50	1	B0I0136	09/09/2020	09/09/20 12:18	
1,2-Dibromo-3-chloropropane	ND	0.50	1	B0I0136	09/09/2020	09/09/20 12:18	
1,2-Dibromoethane	ND	0.50	1	B0I0136	09/09/2020	09/09/20 12:18	
1,2-Dichlorobenzene	ND	0.50	1	B0I0136	09/09/2020	09/09/20 12:18	
1,2-Dichloroethane	ND	0.50	1	B0I0136	09/09/2020	09/09/20 12:18	
1,2-Dichloropropane	ND	0.50	1	B0I0136	09/09/2020	09/09/20 12:18	
1,3,5-Trimethylbenzene	ND	0.50	1	B0I0136	09/09/2020	09/09/20 12:18	
1,3-Dichlorobenzene	ND	0.50	1	B0I0136	09/09/2020	09/09/20 12:18	
1,3-Dichloropropane	ND	0.50	1	B0I0136	09/09/2020	09/09/20 12:18	
1,4-Dichlorobenzene	ND	0.50	1	B0I0136	09/09/2020	09/09/20 12:18	
2,2-Dichloropropane	ND	0.50	1	B0I0136	09/09/2020	09/09/20 12:18	
2-Chlorotoluene	ND	0.50	1	B0I0136	09/09/2020	09/09/20 12:18	
4-Chlorotoluene	ND	0.50	1	B0I0136	09/09/2020	09/09/20 12:18	
4-Isopropyltoluene	ND	0.50	1	B0I0136	09/09/2020	09/09/20 12:18	
Benzene	ND	0.50	1	B0I0136	09/09/2020	09/09/20 12:18	
Bromobenzene	ND	0.50	1	B0I0136	09/09/2020	09/09/20 12:18	
Bromodichloromethane	ND	0.50	1	B0I0136	09/09/2020	09/09/20 12:18	
Bromoform	ND	0.50	1	B0I0136	09/09/2020	09/09/20 12:18	
Bromomethane	ND	0.50	1	B0I0136	09/09/2020	09/09/20 12:18	
Carbon tetrachloride	ND	0.50	1	B0I0136	09/09/2020	09/09/20 12:18	
Chlorobenzene	ND	0.50	1	B0I0136	09/09/2020	09/09/20 12:18	
Chloroethane	ND	0.50	1	B0I0136	09/09/2020	09/09/20 12:18	
Chloroform	ND	0.50	1	B0I0136	09/09/2020	09/09/20 12:18	
Chloromethane	ND	0.50	1	B0I0136	09/09/2020	09/09/20 12:18	
cis-1,2-Dichloroethene	ND	0.50	1	B0I0136	09/09/2020	09/09/20 12:18	
cis-1,3-Dichloropropene	ND	0.50	1	B0I0136	09/09/2020	09/09/20 12:18	
Dibromochloromethane	ND	0.50	1	B0I0136	09/09/2020	09/09/20 12:18	

Certificate of Analysis

Hargis & Associates, Inc.		Project Number :	Raytheon Main GETS Monthly Sample, 5
9171 Towne Centre Drive, Suite 375		Report To :	Steve Netto
San Diego , CA 92122		Reported :	09/23/2020

Client Sample ID: TB-090320

Lab ID: 2002069-01

Volatile Organic Compounds by EPA 8260B **Analyst: VW**

Analyte	Result (ug/L)	PQL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Dibromomethane	ND	0.50	1	B0I0136	09/09/2020	09/09/20 12:18	
Dichlorodifluoromethane	ND	0.50	1	B0I0136	09/09/2020	09/09/20 12:18	
Ethylbenzene	ND	0.50	1	B0I0136	09/09/2020	09/09/20 12:18	
Hexachlorobutadiene	ND	0.50	1	B0I0136	09/09/2020	09/09/20 12:18	
Isopropylbenzene	ND	0.50	1	B0I0136	09/09/2020	09/09/20 12:18	
m,p-Xylene	ND	1.0	1	B0I0136	09/09/2020	09/09/20 12:18	
Methylene chloride	ND	1.0	1	B0I0136	09/09/2020	09/09/20 12:18	
n-Butylbenzene	ND	0.50	1	B0I0136	09/09/2020	09/09/20 12:18	
n-Propylbenzene	ND	0.50	1	B0I0136	09/09/2020	09/09/20 12:18	
Naphthalene	ND	0.50	1	B0I0136	09/09/2020	09/09/20 12:18	
o-Xylene	ND	0.50	1	B0I0136	09/09/2020	09/09/20 12:18	
sec-Butylbenzene	ND	0.50	1	B0I0136	09/09/2020	09/09/20 12:18	
Styrene	ND	0.50	1	B0I0136	09/09/2020	09/09/20 12:18	
tert-Butylbenzene	ND	0.50	1	B0I0136	09/09/2020	09/09/20 12:18	
Tetrachloroethene	ND	0.50	1	B0I0136	09/09/2020	09/09/20 12:18	
Toluene	ND	0.50	1	B0I0136	09/09/2020	09/09/20 12:18	
trans-1,2-Dichloroethene	ND	0.50	1	B0I0136	09/09/2020	09/09/20 12:18	
Trichloroethene	ND	0.50	1	B0I0136	09/09/2020	09/09/20 12:18	
Trichlorofluoromethane	ND	0.50	1	B0I0136	09/09/2020	09/09/20 12:18	
Vinyl chloride	ND	0.50	1	B0I0136	09/09/2020	09/09/20 12:18	
Surrogate: 1,2-Dichloroethane-d4	*99.1 %*	*64 - 155*		B0I0136	09/09/2020	*09/09/20 12:18*	
Surrogate: 4-Bromofluorobenzene	*91.6 %*	*73 - 124*		B0I0136	09/09/2020	*09/09/20 12:18*	
Surrogate: Dibromofluoromethane	*95.9 %*	*78 - 129*		B0I0136	09/09/2020	*09/09/20 12:18*	
Surrogate: Toluene-d8	*95.1 %*	*84 - 117*		B0I0136	09/09/2020	*09/09/20 12:18*	

Certificate of Analysis

Hargis & Associates, Inc.	Project Number : Raytheon Main GETS Monthly Sample, 5
9171 Towne Centre Drive, Suite 375	Report To : Steve Netto
San Diego , CA 92122	Reported : 09/23/2020

Client Sample ID: CEFF

Lab ID: 2002069-02

Volatile Organic Compounds by EPA 8260B **Analyst: VW**

Analyte	Result (ug/L)	PQL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	0.50	1	B0I0136	09/09/2020	09/09/20 12:40	
1,1,1-Trichloroethane	ND	0.50	1	B0I0136	09/09/2020	09/09/20 12:40	
1,1,2,2-Tetrachloroethane	ND	0.50	1	B0I0136	09/09/2020	09/09/20 12:40	
1,1,2-Trichloroethane	ND	0.50	1	B0I0136	09/09/2020	09/09/20 12:40	
1,1-Dichloroethane	ND	0.50	1	B0I0136	09/09/2020	09/09/20 12:40	
1,1-Dichloroethene	ND	0.50	1	B0I0136	09/09/2020	09/09/20 12:40	
1,1-Dichloropropene	ND	0.50	1	B0I0136	09/09/2020	09/09/20 12:40	
1,2,3-Trichloropropane	ND	0.50	1	B0I0136	09/09/2020	09/09/20 12:40	
1,2,3-Trichlorobenzene	ND	0.50	1	B0I0136	09/09/2020	09/09/20 12:40	
1,2,4-Trichlorobenzene	ND	0.50	1	B0I0136	09/09/2020	09/09/20 12:40	
1,2,4-Trimethylbenzene	ND	0.50	1	B0I0136	09/09/2020	09/09/20 12:40	
1,2-Dibromo-3-chloropropane	ND	0.50	1	B0I0136	09/09/2020	09/09/20 12:40	
1,2-Dibromoethane	ND	0.50	1	B0I0136	09/09/2020	09/09/20 12:40	
1,2-Dichlorobenzene	ND	0.50	1	B0I0136	09/09/2020	09/09/20 12:40	
1,2-Dichloroethane	ND	0.50	1	B0I0136	09/09/2020	09/09/20 12:40	
1,2-Dichloropropane	ND	0.50	1	B0I0136	09/09/2020	09/09/20 12:40	
1,3,5-Trimethylbenzene	ND	0.50	1	B0I0136	09/09/2020	09/09/20 12:40	
1,3-Dichlorobenzene	ND	0.50	1	B0I0136	09/09/2020	09/09/20 12:40	
1,3-Dichloropropane	ND	0.50	1	B0I0136	09/09/2020	09/09/20 12:40	
1,4-Dichlorobenzene	ND	0.50	1	B0I0136	09/09/2020	09/09/20 12:40	
2,2-Dichloropropane	ND	0.50	1	B0I0136	09/09/2020	09/09/20 12:40	
2-Chlorotoluene	ND	0.50	1	B0I0136	09/09/2020	09/09/20 12:40	
4-Chlorotoluene	ND	0.50	1	B0I0136	09/09/2020	09/09/20 12:40	
4-Isopropyltoluene	ND	0.50	1	B0I0136	09/09/2020	09/09/20 12:40	
Benzene	ND	0.50	1	B0I0136	09/09/2020	09/09/20 12:40	
Bromobenzene	ND	0.50	1	B0I0136	09/09/2020	09/09/20 12:40	
Bromodichloromethane	ND	0.50	1	B0I0136	09/09/2020	09/09/20 12:40	
Bromoform	ND	0.50	1	B0I0136	09/09/2020	09/09/20 12:40	
Bromomethane	ND	0.50	1	B0I0136	09/09/2020	09/09/20 12:40	
Carbon tetrachloride	ND	0.50	1	B0I0136	09/09/2020	09/09/20 12:40	
Chlorobenzene	ND	0.50	1	B0I0136	09/09/2020	09/09/20 12:40	
Chloroethane	ND	0.50	1	B0I0136	09/09/2020	09/09/20 12:40	
Chloroform	ND	0.50	1	B0I0136	09/09/2020	09/09/20 12:40	
Chloromethane	ND	0.50	1	B0I0136	09/09/2020	09/09/20 12:40	
cis-1,2-Dichloroethene	ND	0.50	1	B0I0136	09/09/2020	09/09/20 12:40	
cis-1,3-Dichloropropene	ND	0.50	1	B0I0136	09/09/2020	09/09/20 12:40	
Dibromochloromethane	ND	0.50	1	B0I0136	09/09/2020	09/09/20 12:40	

Certificate of Analysis

Hargis & Associates, Inc.	Project Number : Raytheon Main GETS Monthly Sample, 5
9171 Towne Centre Drive, Suite 375	Report To : Steve Netto
San Diego , CA 92122	Reported : 09/23/2020

Client Sample ID: CEFF

Lab ID: 2002069-02

Volatile Organic Compounds by EPA 8260B **Analyst: VW**

Analyte	Result (ug/L)	PQL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Dibromomethane	ND	0.50	1	B0I0136	09/09/2020	09/09/20 12:40	
Dichlorodifluoromethane	ND	0.50	1	B0I0136	09/09/2020	09/09/20 12:40	
Ethylbenzene	ND	0.50	1	B0I0136	09/09/2020	09/09/20 12:40	
Hexachlorobutadiene	ND	0.50	1	B0I0136	09/09/2020	09/09/20 12:40	
Isopropylbenzene	ND	0.50	1	B0I0136	09/09/2020	09/09/20 12:40	
m,p-Xylene	ND	1.0	1	B0I0136	09/09/2020	09/09/20 12:40	
Methylene chloride	ND	1.0	1	B0I0136	09/09/2020	09/09/20 12:40	
n-Butylbenzene	ND	0.50	1	B0I0136	09/09/2020	09/09/20 12:40	
n-Propylbenzene	ND	0.50	1	B0I0136	09/09/2020	09/09/20 12:40	
Naphthalene	ND	0.50	1	B0I0136	09/09/2020	09/09/20 12:40	
o-Xylene	ND	0.50	1	B0I0136	09/09/2020	09/09/20 12:40	
sec-Butylbenzene	ND	0.50	1	B0I0136	09/09/2020	09/09/20 12:40	
Styrene	ND	0.50	1	B0I0136	09/09/2020	09/09/20 12:40	
tert-Butylbenzene	ND	0.50	1	B0I0136	09/09/2020	09/09/20 12:40	
Tetrachloroethene	ND	0.50	1	B0I0136	09/09/2020	09/09/20 12:40	
Toluene	ND	0.50	1	B0I0136	09/09/2020	09/09/20 12:40	
trans-1,2-Dichloroethene	ND	0.50	1	B0I0136	09/09/2020	09/09/20 12:40	
Trichloroethene	ND	0.50	1	B0I0136	09/09/2020	09/09/20 12:40	
Trichlorofluoromethane	ND	0.50	1	B0I0136	09/09/2020	09/09/20 12:40	
Vinyl chloride	ND	0.50	1	B0I0136	09/09/2020	09/09/20 12:40	
Surrogate: 1,2-Dichloroethane-d4	*106 %*	*64 - 155*		B0I0136	09/09/2020	*09/09/20 12:40*	
Surrogate: 4-Bromofluorobenzene	*90.9 %*	*73 - 124*		B0I0136	09/09/2020	*09/09/20 12:40*	
Surrogate: Dibromofluoromethane	*97.1 %*	*78 - 129*		B0I0136	09/09/2020	*09/09/20 12:40*	
Surrogate: Toluene-d8	*98.0 %*	*84 - 117*		B0I0136	09/09/2020	*09/09/20 12:40*	

Certificate of Analysis

Hargis & Associates, Inc.	Project Number : Raytheon Main GETS Monthly Sample, 5
9171 Towne Centre Drive, Suite 375	Report To : Steve Netto
San Diego , CA 92122	Reported : 09/23/2020

Client Sample ID: CBT

Lab ID: 2002069-03

Volatile Organic Compounds by EPA 8260B **Analyst: VW**

Analyte	Result (ug/L)	PQL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	0.50	1	B0I0136	09/09/2020	09/09/20 13:01	
1,1,1-Trichloroethane	ND	0.50	1	B0I0136	09/09/2020	09/09/20 13:01	
1,1,2,2-Tetrachloroethane	ND	0.50	1	B0I0136	09/09/2020	09/09/20 13:01	
1,1,2-Trichloroethane	ND	0.50	1	B0I0136	09/09/2020	09/09/20 13:01	
1,1-Dichloroethane	ND	0.50	1	B0I0136	09/09/2020	09/09/20 13:01	
1,1-Dichloroethene	ND	0.50	1	B0I0136	09/09/2020	09/09/20 13:01	
1,1-Dichloropropene	ND	0.50	1	B0I0136	09/09/2020	09/09/20 13:01	
1,2,3-Trichloropropane	ND	0.50	1	B0I0136	09/09/2020	09/09/20 13:01	
1,2,3-Trichlorobenzene	ND	0.50	1	B0I0136	09/09/2020	09/09/20 13:01	
1,2,4-Trichlorobenzene	ND	0.50	1	B0I0136	09/09/2020	09/09/20 13:01	
1,2,4-Trimethylbenzene	ND	0.50	1	B0I0136	09/09/2020	09/09/20 13:01	
1,2-Dibromo-3-chloropropane	ND	0.50	1	B0I0136	09/09/2020	09/09/20 13:01	
1,2-Dibromoethane	ND	0.50	1	B0I0136	09/09/2020	09/09/20 13:01	
1,2-Dichlorobenzene	ND	0.50	1	B0I0136	09/09/2020	09/09/20 13:01	
1,2-Dichloroethane	ND	0.50	1	B0I0136	09/09/2020	09/09/20 13:01	
1,2-Dichloropropane	ND	0.50	1	B0I0136	09/09/2020	09/09/20 13:01	
1,3,5-Trimethylbenzene	ND	0.50	1	B0I0136	09/09/2020	09/09/20 13:01	
1,3-Dichlorobenzene	ND	0.50	1	B0I0136	09/09/2020	09/09/20 13:01	
1,3-Dichloropropane	ND	0.50	1	B0I0136	09/09/2020	09/09/20 13:01	
1,4-Dichlorobenzene	ND	0.50	1	B0I0136	09/09/2020	09/09/20 13:01	
2,2-Dichloropropane	ND	0.50	1	B0I0136	09/09/2020	09/09/20 13:01	
2-Chlorotoluene	ND	0.50	1	B0I0136	09/09/2020	09/09/20 13:01	
4-Chlorotoluene	ND	0.50	1	B0I0136	09/09/2020	09/09/20 13:01	
4-Isopropyltoluene	ND	0.50	1	B0I0136	09/09/2020	09/09/20 13:01	
Benzene	ND	0.50	1	B0I0136	09/09/2020	09/09/20 13:01	
Bromobenzene	ND	0.50	1	B0I0136	09/09/2020	09/09/20 13:01	
Bromodichloromethane	ND	0.50	1	B0I0136	09/09/2020	09/09/20 13:01	
Bromoform	ND	0.50	1	B0I0136	09/09/2020	09/09/20 13:01	
Bromomethane	ND	0.50	1	B0I0136	09/09/2020	09/09/20 13:01	
Carbon tetrachloride	ND	0.50	1	B0I0136	09/09/2020	09/09/20 13:01	
Chlorobenzene	ND	0.50	1	B0I0136	09/09/2020	09/09/20 13:01	
Chloroethane	ND	0.50	1	B0I0136	09/09/2020	09/09/20 13:01	
Chloroform	ND	0.50	1	B0I0136	09/09/2020	09/09/20 13:01	
Chloromethane	ND	0.50	1	B0I0136	09/09/2020	09/09/20 13:01	
cis-1,2-Dichloroethene	ND	0.50	1	B0I0136	09/09/2020	09/09/20 13:01	
cis-1,3-Dichloropropene	ND	0.50	1	B0I0136	09/09/2020	09/09/20 13:01	
Dibromochloromethane	ND	0.50	1	B0I0136	09/09/2020	09/09/20 13:01	

Certificate of Analysis

Hargis & Associates, Inc.	Project Number : Raytheon Main GETS Monthly Sample, 5
9171 Towne Centre Drive, Suite 375	Report To : Steve Netto
San Diego , CA 92122	Reported : 09/23/2020

Client Sample ID: CBT

Lab ID: 2002069-03

Volatile Organic Compounds by EPA 8260B **Analyst: VW**

Analyte	Result (ug/L)	PQL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Dibromomethane	ND	0.50	1	B0I0136	09/09/2020	09/09/20 13:01	
Dichlorodifluoromethane	ND	0.50	1	B0I0136	09/09/2020	09/09/20 13:01	
Ethylbenzene	ND	0.50	1	B0I0136	09/09/2020	09/09/20 13:01	
Hexachlorobutadiene	ND	0.50	1	B0I0136	09/09/2020	09/09/20 13:01	
Isopropylbenzene	ND	0.50	1	B0I0136	09/09/2020	09/09/20 13:01	
m,p-Xylene	ND	1.0	1	B0I0136	09/09/2020	09/09/20 13:01	
Methylene chloride	ND	1.0	1	B0I0136	09/09/2020	09/09/20 13:01	
n-Butylbenzene	ND	0.50	1	B0I0136	09/09/2020	09/09/20 13:01	
n-Propylbenzene	ND	0.50	1	B0I0136	09/09/2020	09/09/20 13:01	
Naphthalene	ND	0.50	1	B0I0136	09/09/2020	09/09/20 13:01	
o-Xylene	ND	0.50	1	B0I0136	09/09/2020	09/09/20 13:01	
sec-Butylbenzene	ND	0.50	1	B0I0136	09/09/2020	09/09/20 13:01	
Styrene	ND	0.50	1	B0I0136	09/09/2020	09/09/20 13:01	
tert-Butylbenzene	ND	0.50	1	B0I0136	09/09/2020	09/09/20 13:01	
Tetrachloroethene	ND	0.50	1	B0I0136	09/09/2020	09/09/20 13:01	
Toluene	ND	0.50	1	B0I0136	09/09/2020	09/09/20 13:01	
trans-1,2-Dichloroethene	ND	0.50	1	B0I0136	09/09/2020	09/09/20 13:01	
Trichloroethene	ND	0.50	1	B0I0136	09/09/2020	09/09/20 13:01	
Trichlorofluoromethane	ND	0.50	1	B0I0136	09/09/2020	09/09/20 13:01	
Vinyl chloride	ND	0.50	1	B0I0136	09/09/2020	09/09/20 13:01	
Surrogate: 1,2-Dichloroethane-d4	*107 %*	*64 - 155*		B0I0136	09/09/2020	*09/09/20 13:01*	
Surrogate: 4-Bromofluorobenzene	*95.1 %*	*73 - 124*		B0I0136	09/09/2020	*09/09/20 13:01*	
Surrogate: Dibromofluoromethane	*98.7 %*	*78 - 129*		B0I0136	09/09/2020	*09/09/20 13:01*	
Surrogate: Toluene-d8	*97.6 %*	*84 - 117*		B0I0136	09/09/2020	*09/09/20 13:01*	

Certificate of Analysis

Hargis & Associates, Inc.	Project Number : Raytheon Main GETS Monthly Sample, 5
9171 Towne Centre Drive, Suite 375	Report To : Steve Netto
San Diego , CA 92122	Reported : 09/23/2020

Client Sample ID: CBT

Lab ID: 2002069-03

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

Analyte		Result (ug/L)	PQL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,4-Dioxane		ND	0.20	1	B0I0171	09/09/2020	09/09/20 16:44	
Surrogate: 1,2-Dichlorobenzene-d4	*69.2 %*		*13 - 99*		B0I0171	09/09/2020	*09/09/20 16:44*	
Surrogate: 2-Fluorobiphenyl	*70.4 %*		*8 - 111*		B0I0171	09/09/2020	*09/09/20 16:44*	
Surrogate: 4-Terphenyl-d14	*78.5 %*		*12 - 113*		B0I0171	09/09/2020	*09/09/20 16:44*	
Surrogate: Nitrobenzene-d5	*88.1 %*		*15 - 121*		B0I0171	09/09/2020	*09/09/20 16:44*	

Certificate of Analysis

Hargis & Associates, Inc.	Project Number : Raytheon Main GETS Monthly Sample, 5
9171 Towne Centre Drive, Suite 375	Report To : Steve Netto
San Diego , CA 92122	Reported : 09/23/2020

Client Sample ID: POX

Lab ID: 2002069-04

Alkalinity, Speciated by SM 2320B

Analyst: AH

Analyte	Result (mg/L)	PQL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Alkalinity, Bicarbonate (as CaCO3)	**220**	5.0	1	B0I0196	09/10/2020	09/10/20 20:26	
Alkalinity, Carbonate (as CaCO3)	ND	5.0	1	B0I0196	09/10/2020	09/10/20 20:26	
Alkalinity, Hydroxide (as CaCO3)	ND	5.0	1	B0I0196	09/10/2020	09/10/20 20:26	
Alkalinity, Total (as CaCO3)	**220**	5.0	1	B0I0196	09/10/2020	09/10/20 20:26	

Total Organic Carbon by SM 5310B

Analyst: AH

Analyte	Result (mg/L)	PQL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Organic Carbon, Total	ND	3.0	1	B0I0183	09/09/2020	09/09/20 18:55	

Volatile Organic Compounds by EPA 8260B

Analyst: VW

Analyte	Result (ug/L)	PQL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	0.50	1	B0I0136	09/09/2020	09/09/20 13:22	
1,1,1-Trichloroethane	ND	0.50	1	B0I0136	09/09/2020	09/09/20 13:22	
1,1,2,2-Tetrachloroethane	ND	0.50	1	B0I0136	09/09/2020	09/09/20 13:22	
1,1,2-Trichloroethane	ND	0.50	1	B0I0136	09/09/2020	09/09/20 13:22	
1,1-Dichloroethane	ND	0.50	1	B0I0136	09/09/2020	09/09/20 13:22	
1,1-Dichloroethene	ND	0.50	1	B0I0136	09/09/2020	09/09/20 13:22	
1,1-Dichloropropene	ND	0.50	1	B0I0136	09/09/2020	09/09/20 13:22	
1,2,3-Trichloropropane	ND	0.50	1	B0I0136	09/09/2020	09/09/20 13:22	
1,2,3-Trichlorobenzene	ND	0.50	1	B0I0136	09/09/2020	09/09/20 13:22	
1,2,4-Trichlorobenzene	ND	0.50	1	B0I0136	09/09/2020	09/09/20 13:22	
1,2,4-Trimethylbenzene	ND	0.50	1	B0I0136	09/09/2020	09/09/20 13:22	
1,2-Dibromo-3-chloropropane	ND	0.50	1	B0I0136	09/09/2020	09/09/20 13:22	
1,2-Dibromoethane	ND	0.50	1	B0I0136	09/09/2020	09/09/20 13:22	
1,2-Dichlorobenzene	ND	0.50	1	B0I0136	09/09/2020	09/09/20 13:22	
1,2-Dichloroethane	ND	0.50	1	B0I0136	09/09/2020	09/09/20 13:22	
1,2-Dichloropropane	ND	0.50	1	B0I0136	09/09/2020	09/09/20 13:22	
1,3,5-Trimethylbenzene	ND	0.50	1	B0I0136	09/09/2020	09/09/20 13:22	
1,3-Dichlorobenzene	ND	0.50	1	B0I0136	09/09/2020	09/09/20 13:22	
1,3-Dichloropropane	ND	0.50	1	B0I0136	09/09/2020	09/09/20 13:22	
1,4-Dichlorobenzene	ND	0.50	1	B0I0136	09/09/2020	09/09/20 13:22	
2,2-Dichloropropane	ND	0.50	1	B0I0136	09/09/2020	09/09/20 13:22	
2-Chlorotoluene	ND	0.50	1	B0I0136	09/09/2020	09/09/20 13:22	

Certificate of Analysis

Hargis & Associates, Inc.	Project Number : Raytheon Main GETS Monthly Sample, 5
9171 Towne Centre Drive, Suite 375	Report To : Steve Netto
San Diego , CA 92122	Reported : 09/23/2020

Client Sample ID: POX

Lab ID: 2002069-04

Volatile Organic Compounds by EPA 8260B **Analyst: VW**

Analyte	Result (ug/L)	PQL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
4-Chlorotoluene	ND	0.50	1	B0I0136	09/09/2020	09/09/20 13:22	
4-Isopropyltoluene	ND	0.50	1	B0I0136	09/09/2020	09/09/20 13:22	
Benzene	ND	0.50	1	B0I0136	09/09/2020	09/09/20 13:22	
Bromobenzene	ND	0.50	1	B0I0136	09/09/2020	09/09/20 13:22	
Bromodichloromethane	ND	0.50	1	B0I0136	09/09/2020	09/09/20 13:22	
Bromoform	ND	0.50	1	B0I0136	09/09/2020	09/09/20 13:22	
Bromomethane	ND	0.50	1	B0I0136	09/09/2020	09/09/20 13:22	
Carbon tetrachloride	ND	0.50	1	B0I0136	09/09/2020	09/09/20 13:22	
Chlorobenzene	ND	0.50	1	B0I0136	09/09/2020	09/09/20 13:22	
Chloroethane	ND	0.50	1	B0I0136	09/09/2020	09/09/20 13:22	
Chloroform	ND	0.50	1	B0I0136	09/09/2020	09/09/20 13:22	
Chloromethane	ND	0.50	1	B0I0136	09/09/2020	09/09/20 13:22	
cis-1,2-Dichloroethene	ND	0.50	1	B0I0136	09/09/2020	09/09/20 13:22	
cis-1,3-Dichloropropene	ND	0.50	1	B0I0136	09/09/2020	09/09/20 13:22	
Dibromochloromethane	ND	0.50	1	B0I0136	09/09/2020	09/09/20 13:22	
Dibromomethane	ND	0.50	1	B0I0136	09/09/2020	09/09/20 13:22	
Dichlorodifluoromethane	ND	0.50	1	B0I0136	09/09/2020	09/09/20 13:22	
Ethylbenzene	ND	0.50	1	B0I0136	09/09/2020	09/09/20 13:22	
Hexachlorobutadiene	ND	0.50	1	B0I0136	09/09/2020	09/09/20 13:22	
Isopropylbenzene	ND	0.50	1	B0I0136	09/09/2020	09/09/20 13:22	
m,p-Xylene	ND	1.0	1	B0I0136	09/09/2020	09/09/20 13:22	
Methylene chloride	ND	1.0	1	B0I0136	09/09/2020	09/09/20 13:22	
n-Butylbenzene	ND	0.50	1	B0I0136	09/09/2020	09/09/20 13:22	
n-Propylbenzene	ND	0.50	1	B0I0136	09/09/2020	09/09/20 13:22	
Naphthalene	ND	0.50	1	B0I0136	09/09/2020	09/09/20 13:22	
o-Xylene	ND	0.50	1	B0I0136	09/09/2020	09/09/20 13:22	
sec-Butylbenzene	ND	0.50	1	B0I0136	09/09/2020	09/09/20 13:22	
Styrene	ND	0.50	1	B0I0136	09/09/2020	09/09/20 13:22	
tert-Butylbenzene	ND	0.50	1	B0I0136	09/09/2020	09/09/20 13:22	
Tetrachloroethene	ND	0.50	1	B0I0136	09/09/2020	09/09/20 13:22	
Toluene	ND	0.50	1	B0I0136	09/09/2020	09/09/20 13:22	
trans-1,2-Dichloroethene	ND	0.50	1	B0I0136	09/09/2020	09/09/20 13:22	
Trichloroethene	ND	0.50	1	B0I0136	09/09/2020	09/09/20 13:22	
Trichlorofluoromethane	ND	0.50	1	B0I0136	09/09/2020	09/09/20 13:22	
Vinyl chloride	ND	0.50	1	B0I0136	09/09/2020	09/09/20 13:22	
Surrogate: 1,2-Dichloroethane-d4	*104 %*	*64 - 155*		B0I0136	09/09/2020	*09/09/20 13:22*	
Surrogate: 4-Bromofluorobenzene	*94.3 %*	*73 - 124*		B0I0136	09/09/2020	*09/09/20 13:22*	

Certificate of Analysis

Hargis & Associates, Inc.	Project Number : Raytheon Main GETS Monthly Sample, 5
9171 Towne Centre Drive, Suite 375	Report To : Steve Netto
San Diego , CA 92122	Reported : 09/23/2020

Client Sample ID: POX

Lab ID: 2002069-04

Volatile Organic Compounds by EPA 8260B — **Analyst: VW**

Analyte		Result (ug/L)	PQL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Surrogate: Dibromofluoromethane	*102 %*		*78 - 129*		B0I0136	09/09/2020	*09/09/20 13:22*	
Surrogate: Toluene-d8	*98.0 %*		*84 - 117*		B0I0136	09/09/2020	*09/09/20 13:22*	

1,4-Dioxane by EPA 8270/SIM: Isotope Dilution Technique — **Analyst: SP**

Analyte		Result (ug/L)	PQL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,4-Dioxane		ND	0.20	1	B0I0171	09/09/2020	09/09/20 17:11	
Surrogate: 1,2-Dichlorobenzene-d4	*65.8 %*		*13 - 99*		B0I0171	09/09/2020	*09/09/20 17:11*	
Surrogate: 2-Fluorobiphenyl	*66.5 %*		*8 - 111*		B0I0171	09/09/2020	*09/09/20 17:11*	
Surrogate: 4-Terphenyl-d14	*69.9 %*		*12 - 113*		B0I0171	09/09/2020	*09/09/20 17:11*	
Surrogate: Nitrobenzene-d5	*85.4 %*		*15 - 121*		B0I0171	09/09/2020	*09/09/20 17:11*	

Certificate of Analysis

Hargis & Associates, Inc.		Project Number :	Raytheon Main GETS Monthly Sample, 5
9171 Towne Centre Drive, Suite 375		Report To :	Steve Netto
San Diego , CA 92122		Reported :	09/23/2020

Client Sample ID: PF

Lab ID: 2002069-05

UV Absorption by EPA 415.3

Analyst: AH

Analyte	Result (1/cm)	PQL (1/cm)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
UV Absorption	ND	0.01	1	B0I0093	09/04/2020	09/04/20 18:57	

Alkalinity, Speciated by SM 2320B

Analyst: AH

Analyte	Result (mg/L)	PQL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Alkalinity, Bicarbonate (as CaCO3)	**220**	5.0	1	B0I0196	09/10/2020	09/10/20 20:26	
Alkalinity, Carbonate (as CaCO3)	ND	5.0	1	B0I0196	09/10/2020	09/10/20 20:26	
Alkalinity, Hydroxide (as CaCO3)	ND	5.0	1	B0I0196	09/10/2020	09/10/20 20:26	
Alkalinity, Total (as CaCO3)	**220**	5.0	1	B0I0196	09/10/2020	09/10/20 20:26	

Total Suspended Solids (Residue, Non-Filtrable) by SM 2540D

Analyst: AH

Analyte	Result (mg/L)	PQL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Residue, Suspended	ND	1.0	1	B0I0148	09/09/2020	09/10/20 15:00	

Total Organic Carbon by SM 5310B

Analyst: AH

Analyte	Result (mg/L)	PQL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Organic Carbon, Total	ND	3.0	1	B0I0183	09/09/2020	09/09/20 20:53	

Certificate of Analysis

Hargis & Associates, Inc.	Project Number : Raytheon Main GETS Monthly Sample, 5
9171 Towne Centre Drive, Suite 375	Report To : Steve Netto
San Diego , CA 92122	Reported : 09/23/2020

Client Sample ID: INF

Lab ID: 2002069-06

Bromide by Ion Chromatography EPA 300 — **Analyst: AH**

Analyte	Result (mg/L)	PQL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Bromide	**0.59**	0.05	1	B0I0161	09/09/2020	09/09/20 16:10	

Volatile Organic Compounds by EPA 8260B — **Analyst: VW**

Analyte	Result (ug/L)	PQL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	0.50	1	B0I0136	09/09/2020	09/09/20 14:04	
1,1,1-Trichloroethane	ND	0.50	1	B0I0136	09/09/2020	09/09/20 14:04	
1,1,2,2-Tetrachloroethane	ND	0.50	1	B0I0136	09/09/2020	09/09/20 14:04	
1,1,2-Trichloroethane	ND	0.50	1	B0I0136	09/09/2020	09/09/20 14:04	
1,1-Dichloroethane	ND	0.50	1	B0I0136	09/09/2020	09/09/20 14:04	
1,1-Dichloroethene	**39**	0.50	1	B0I0136	09/09/2020	09/09/20 14:04	
1,1-Dichloropropene	ND	0.50	1	B0I0136	09/09/2020	09/09/20 14:04	
1,2,3-Trichloropropane	ND	0.50	1	B0I0136	09/09/2020	09/09/20 14:04	
1,2,3-Trichlorobenzene	ND	0.50	1	B0I0136	09/09/2020	09/09/20 14:04	
1,2,4-Trichlorobenzene	ND	0.50	1	B0I0136	09/09/2020	09/09/20 14:04	
1,2,4-Trimethylbenzene	ND	0.50	1	B0I0136	09/09/2020	09/09/20 14:04	
1,2-Dibromo-3-chloropropane	ND	0.50	1	B0I0136	09/09/2020	09/09/20 14:04	
1,2-Dibromoethane	ND	0.50	1	B0I0136	09/09/2020	09/09/20 14:04	
1,2-Dichlorobenzene	ND	0.50	1	B0I0136	09/09/2020	09/09/20 14:04	
1,2-Dichloroethane	ND	0.50	1	B0I0136	09/09/2020	09/09/20 14:04	
1,2-Dichloropropane	ND	0.50	1	B0I0136	09/09/2020	09/09/20 14:04	
1,3,5-Trimethylbenzene	ND	0.50	1	B0I0136	09/09/2020	09/09/20 14:04	
1,3-Dichlorobenzene	ND	0.50	1	B0I0136	09/09/2020	09/09/20 14:04	
1,3-Dichloropropane	ND	0.50	1	B0I0136	09/09/2020	09/09/20 14:04	
1,4-Dichlorobenzene	ND	0.50	1	B0I0136	09/09/2020	09/09/20 14:04	
2,2-Dichloropropane	ND	0.50	1	B0I0136	09/09/2020	09/09/20 14:04	
2-Chlorotoluene	ND	0.50	1	B0I0136	09/09/2020	09/09/20 14:04	
4-Chlorotoluene	ND	0.50	1	B0I0136	09/09/2020	09/09/20 14:04	
4-Isopropyltoluene	ND	0.50	1	B0I0136	09/09/2020	09/09/20 14:04	
Benzene	ND	0.50	1	B0I0136	09/09/2020	09/09/20 14:04	
Bromobenzene	ND	0.50	1	B0I0136	09/09/2020	09/09/20 14:04	
Bromodichloromethane	ND	0.50	1	B0I0136	09/09/2020	09/09/20 14:04	
Bromoform	ND	0.50	1	B0I0136	09/09/2020	09/09/20 14:04	
Bromomethane	ND	0.50	1	B0I0136	09/09/2020	09/09/20 14:04	
Carbon tetrachloride	ND	0.50	1	B0I0136	09/09/2020	09/09/20 14:04	
Chlorobenzene	ND	0.50	1	B0I0136	09/09/2020	09/09/20 14:04	

Certificate of Analysis

Hargis & Associates, Inc.	Project Number : Raytheon Main GETS Monthly Sample, 5
9171 Towne Centre Drive, Suite 375	Report To : Steve Netto
San Diego , CA 92122	Reported : 09/23/2020

Client Sample ID: INF

Lab ID: 2002069-06

Volatile Organic Compounds by EPA 8260B **Analyst: VW**

Analyte	Result (ug/L)	PQL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Chloroethane	ND	0.50	1	B0I0136	09/09/2020	09/09/20 14:04	
Chloroform	ND	0.50	1	B0I0136	09/09/2020	09/09/20 14:04	
Chloromethane	ND	0.50	1	B0I0136	09/09/2020	09/09/20 14:04	
cis-1,2-Dichloroethene	ND	0.50	1	B0I0136	09/09/2020	09/09/20 14:04	
cis-1,3-Dichloropropene	ND	0.50	1	B0I0136	09/09/2020	09/09/20 14:04	
Dibromochloromethane	ND	0.50	1	B0I0136	09/09/2020	09/09/20 14:04	
Dibromomethane	ND	0.50	1	B0I0136	09/09/2020	09/09/20 14:04	
Dichlorodifluoromethane	ND	0.50	1	B0I0136	09/09/2020	09/09/20 14:04	
Ethylbenzene	ND	0.50	1	B0I0136	09/09/2020	09/09/20 14:04	
Hexachlorobutadiene	ND	0.50	1	B0I0136	09/09/2020	09/09/20 14:04	
Isopropylbenzene	ND	0.50	1	B0I0136	09/09/2020	09/09/20 14:04	
m,p-Xylene	ND	1.0	1	B0I0136	09/09/2020	09/09/20 14:04	
Methylene chloride	ND	1.0	1	B0I0136	09/09/2020	09/09/20 14:04	
n-Butylbenzene	ND	0.50	1	B0I0136	09/09/2020	09/09/20 14:04	
n-Propylbenzene	ND	0.50	1	B0I0136	09/09/2020	09/09/20 14:04	
Naphthalene	ND	0.50	1	B0I0136	09/09/2020	09/09/20 14:04	
o-Xylene	ND	0.50	1	B0I0136	09/09/2020	09/09/20 14:04	
sec-Butylbenzene	ND	0.50	1	B0I0136	09/09/2020	09/09/20 14:04	
Styrene	ND	0.50	1	B0I0136	09/09/2020	09/09/20 14:04	
tert-Butylbenzene	ND	0.50	1	B0I0136	09/09/2020	09/09/20 14:04	
Tetrachloroethene	ND	0.50	1	B0I0136	09/09/2020	09/09/20 14:04	
Toluene	ND	0.50	1	B0I0136	09/09/2020	09/09/20 14:04	
trans-1,2-Dichloroethene	ND	0.50	1	B0I0136	09/09/2020	09/09/20 14:04	
Trichloroethene	ND	0.50	1	B0I0136	09/09/2020	09/09/20 14:04	
Trichlorofluoromethane	ND	0.50	1	B0I0136	09/09/2020	09/09/20 14:04	
Vinyl chloride	ND	0.50	1	B0I0136	09/09/2020	09/09/20 14:04	
Surrogate: 1,2-Dichloroethane-d4	*109 %*	*64 - 155*		B0I0136	09/09/2020	*09/09/20 14:04*	
Surrogate: 4-Bromofluorobenzene	*92.6 %*	*73 - 124*		B0I0136	09/09/2020	*09/09/20 14:04*	
Surrogate: Dibromofluoromethane	*100 %*	*78 - 129*		B0I0136	09/09/2020	*09/09/20 14:04*	
Surrogate: Toluene-d8	*96.0 %*	*84 - 117*		B0I0136	09/09/2020	*09/09/20 14:04*	

Certificate of Analysis

Hargis & Associates, Inc.	Project Number : Raytheon Main GETS Monthly Sample, 5
9171 Towne Centre Drive, Suite 375	Report To : Steve Netto
San Diego , CA 92122	Reported : 09/23/2020

Client Sample ID: INF

Lab ID: 2002069-06

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

Analyte		Result (ug/L)	PQL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,4-Dioxane		**20**	2.0	1	B0I0159	09/09/2020	09/09/20 18:48	
Surrogate: 1,2-Dichlorobenzene-d4	*51.3 %*		*17 - 119*		B0I0159	09/09/2020	*09/09/20 18:48*	
Surrogate: 2-Fluorobiphenyl	*57.3 %*		*10 - 133*		B0I0159	09/09/2020	*09/09/20 18:48*	
Surrogate: 4-Terphenyl-d14	*63.9 %*		*5 - 139*		B0I0159	09/09/2020	*09/09/20 18:48*	
Surrogate: Nitrobenzene-d5	*51.0 %*		*13 - 150*		B0I0159	09/09/2020	*09/09/20 18:48*	

Certificate of Analysis

Hargis & Associates, Inc.	Project Number : Raytheon Main GETS Monthly Sample, 5
9171 Towne Centre Drive, Suite 375	Report To : Steve Netto
San Diego , CA 92122	Reported : 09/23/2020

Client Sample ID: EW-02

Lab ID: 2002069-07

Bromide by Ion Chromatography EPA 300 — **Analyst: AH**

Analyte	Result (mg/L)	PQL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Bromide	**0.52**	0.05	1	B0I0161	09/09/2020	09/09/20 16:21	

Volatile Organic Compounds by EPA 8260B — **Analyst: VW**

Analyte	Result (ug/L)	PQL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	0.50	1	B0I0136	09/09/2020	09/09/20 13:43	
1,1,1-Trichloroethane	ND	0.50	1	B0I0136	09/09/2020	09/09/20 13:43	
1,1,2,2-Tetrachloroethane	ND	0.50	1	B0I0136	09/09/2020	09/09/20 13:43	
1,1,2-Trichloroethane	ND	0.50	1	B0I0136	09/09/2020	09/09/20 13:43	
1,1-Dichloroethane	ND	0.50	1	B0I0136	09/09/2020	09/09/20 13:43	
1,1-Dichloroethene	**15**	0.50	1	B0I0136	09/09/2020	09/09/20 13:43	
1,1-Dichloropropene	ND	0.50	1	B0I0136	09/09/2020	09/09/20 13:43	
1,2,3-Trichloropropane	ND	0.50	1	B0I0136	09/09/2020	09/09/20 13:43	
1,2,3-Trichlorobenzene	ND	0.50	1	B0I0136	09/09/2020	09/09/20 13:43	
1,2,4-Trichlorobenzene	ND	0.50	1	B0I0136	09/09/2020	09/09/20 13:43	
1,2,4-Trimethylbenzene	ND	0.50	1	B0I0136	09/09/2020	09/09/20 13:43	
1,2-Dibromo-3-chloropropane	ND	0.50	1	B0I0136	09/09/2020	09/09/20 13:43	
1,2-Dibromoethane	ND	0.50	1	B0I0136	09/09/2020	09/09/20 13:43	
1,2-Dichlorobenzene	ND	0.50	1	B0I0136	09/09/2020	09/09/20 13:43	
1,2-Dichloroethane	ND	0.50	1	B0I0136	09/09/2020	09/09/20 13:43	
1,2-Dichloropropane	ND	0.50	1	B0I0136	09/09/2020	09/09/20 13:43	
1,3,5-Trimethylbenzene	ND	0.50	1	B0I0136	09/09/2020	09/09/20 13:43	
1,3-Dichlorobenzene	ND	0.50	1	B0I0136	09/09/2020	09/09/20 13:43	
1,3-Dichloropropane	ND	0.50	1	B0I0136	09/09/2020	09/09/20 13:43	
1,4-Dichlorobenzene	ND	0.50	1	B0I0136	09/09/2020	09/09/20 13:43	
2,2-Dichloropropane	ND	0.50	1	B0I0136	09/09/2020	09/09/20 13:43	
2-Chlorotoluene	ND	0.50	1	B0I0136	09/09/2020	09/09/20 13:43	
4-Chlorotoluene	ND	0.50	1	B0I0136	09/09/2020	09/09/20 13:43	
4-Isopropyltoluene	ND	0.50	1	B0I0136	09/09/2020	09/09/20 13:43	
Benzene	ND	0.50	1	B0I0136	09/09/2020	09/09/20 13:43	
Bromobenzene	ND	0.50	1	B0I0136	09/09/2020	09/09/20 13:43	
Bromodichloromethane	ND	0.50	1	B0I0136	09/09/2020	09/09/20 13:43	
Bromoform	ND	0.50	1	B0I0136	09/09/2020	09/09/20 13:43	
Bromomethane	ND	0.50	1	B0I0136	09/09/2020	09/09/20 13:43	
Carbon tetrachloride	ND	0.50	1	B0I0136	09/09/2020	09/09/20 13:43	
Chlorobenzene	ND	0.50	1	B0I0136	09/09/2020	09/09/20 13:43	

Certificate of Analysis

Hargis & Associates, Inc.	Project Number : Raytheon Main GETS Monthly Sample, 5
9171 Towne Centre Drive, Suite 375	Report To : Steve Netto
San Diego , CA 92122	Reported : 09/23/2020

Client Sample ID: EW-02

Lab ID: 2002069-07

Volatile Organic Compounds by EPA 8260B **Analyst: VW**

Analyte	Result (ug/L)	PQL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Chloroethane	ND	0.50	1	B0I0136	09/09/2020	09/09/20 13:43	
Chloroform	ND	0.50	1	B0I0136	09/09/2020	09/09/20 13:43	
Chloromethane	ND	0.50	1	B0I0136	09/09/2020	09/09/20 13:43	
cis-1,2-Dichloroethene	ND	0.50	1	B0I0136	09/09/2020	09/09/20 13:43	
cis-1,3-Dichloropropene	ND	0.50	1	B0I0136	09/09/2020	09/09/20 13:43	
Dibromochloromethane	ND	0.50	1	B0I0136	09/09/2020	09/09/20 13:43	
Dibromomethane	ND	0.50	1	B0I0136	09/09/2020	09/09/20 13:43	
Dichlorodifluoromethane	ND	0.50	1	B0I0136	09/09/2020	09/09/20 13:43	
Ethylbenzene	ND	0.50	1	B0I0136	09/09/2020	09/09/20 13:43	
Hexachlorobutadiene	ND	0.50	1	B0I0136	09/09/2020	09/09/20 13:43	
Isopropylbenzene	ND	0.50	1	B0I0136	09/09/2020	09/09/20 13:43	
m,p-Xylene	ND	1.0	1	B0I0136	09/09/2020	09/09/20 13:43	
Methylene chloride	ND	1.0	1	B0I0136	09/09/2020	09/09/20 13:43	
n-Butylbenzene	ND	0.50	1	B0I0136	09/09/2020	09/09/20 13:43	
n-Propylbenzene	ND	0.50	1	B0I0136	09/09/2020	09/09/20 13:43	
Naphthalene	ND	0.50	1	B0I0136	09/09/2020	09/09/20 13:43	
o-Xylene	ND	0.50	1	B0I0136	09/09/2020	09/09/20 13:43	
sec-Butylbenzene	ND	0.50	1	B0I0136	09/09/2020	09/09/20 13:43	
Styrene	ND	0.50	1	B0I0136	09/09/2020	09/09/20 13:43	
tert-Butylbenzene	ND	0.50	1	B0I0136	09/09/2020	09/09/20 13:43	
Tetrachloroethene	ND	0.50	1	B0I0136	09/09/2020	09/09/20 13:43	
Toluene	ND	0.50	1	B0I0136	09/09/2020	09/09/20 13:43	
trans-1,2-Dichloroethene	ND	0.50	1	B0I0136	09/09/2020	09/09/20 13:43	
Trichloroethene	ND	0.50	1	B0I0136	09/09/2020	09/09/20 13:43	
Trichlorofluoromethane	ND	0.50	1	B0I0136	09/09/2020	09/09/20 13:43	
Vinyl chloride	ND	0.50	1	B0I0136	09/09/2020	09/09/20 13:43	
Surrogate: 1,2-Dichloroethane-d4	*103 %*	*64 - 155*		B0I0136	09/09/2020	*09/09/20 13:43*	
Surrogate: 4-Bromofluorobenzene	*88.8 %*	*73 - 124*		B0I0136	09/09/2020	*09/09/20 13:43*	
Surrogate: Dibromofluoromethane	*93.8 %*	*78 - 129*		B0I0136	09/09/2020	*09/09/20 13:43*	
Surrogate: Toluene-d8	*96.6 %*	*84 - 117*		B0I0136	09/09/2020	*09/09/20 13:43*	

Certificate of Analysis

Hargis & Associates, Inc.	Project Number : Raytheon Main GETS Monthly Sample, 5
9171 Towne Centre Drive, Suite 375	Report To : Steve Netto
San Diego , CA 92122	Reported : 09/23/2020

Client Sample ID: EW-02

Lab ID: 2002069-07

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

Analyte		Result (ug/L)	PQL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,4-Dioxane		**8.7**	2.0	1	B0I0159	09/09/2020	09/09/20 19:14	
Surrogate: 1,2-Dichlorobenzene-d4	*63.5 %*		*17 - 119*		B0I0159	09/09/2020	*09/09/20 19:14*	
Surrogate: 2-Fluorobiphenyl	*69.1 %*		*10 - 133*		B0I0159	09/09/2020	*09/09/20 19:14*	
Surrogate: 4-Terphenyl-d14	*70.1 %*		*5 - 139*		B0I0159	09/09/2020	*09/09/20 19:14*	
Surrogate: Nitrobenzene-d5	*62.1 %*		*13 - 150*		B0I0159	09/09/2020	*09/09/20 19:14*	

Certificate of Analysis

Hargis & Associates, Inc.	Project Number : Raytheon Main GETS Monthly Sample, 5
9171 Towne Centre Drive, Suite 375	Report To : Steve Netto
San Diego , CA 92122	Reported : 09/23/2020

Client Sample ID: MW-29

Lab ID: 2002069-08

Bromide by Ion Chromatography EPA 300 — **Analyst: AH**

Analyte	Result (mg/L)	PQL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Bromide	**0.95**	0.05	1	B0I0161	09/09/2020	09/09/20 16:32	

Volatile Organic Compounds by EPA 8260B — **Analyst: VW**

Analyte	Result (ug/L)	PQL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	0.50	1	B0I0136	09/09/2020	09/09/20 15:08	
1,1,1-Trichloroethane	ND	0.50	1	B0I0136	09/09/2020	09/09/20 15:08	
1,1,2,2-Tetrachloroethane	ND	0.50	1	B0I0136	09/09/2020	09/09/20 15:08	
1,1,2-Trichloroethane	ND	0.50	1	B0I0136	09/09/2020	09/09/20 15:08	
1,1-Dichloroethane	**1.3**	0.50	1	B0I0136	09/09/2020	09/09/20 15:08	
1,1-Dichloroethene	**97**	5.0	10	B0I0136	09/09/2020	09/09/20 14:47	
1,1-Dichloropropene	ND	0.50	1	B0I0136	09/09/2020	09/09/20 15:08	
1,2,3-Trichloropropane	ND	0.50	1	B0I0136	09/09/2020	09/09/20 15:08	
1,2,3-Trichlorobenzene	ND	0.50	1	B0I0136	09/09/2020	09/09/20 15:08	
1,2,4-Trichlorobenzene	ND	0.50	1	B0I0136	09/09/2020	09/09/20 15:08	
1,2,4-Trimethylbenzene	ND	0.50	1	B0I0136	09/09/2020	09/09/20 15:08	
1,2-Dibromo-3-chloropropane	ND	0.50	1	B0I0136	09/09/2020	09/09/20 15:08	
1,2-Dibromoethane	ND	0.50	1	B0I0136	09/09/2020	09/09/20 15:08	
1,2-Dichlorobenzene	ND	0.50	1	B0I0136	09/09/2020	09/09/20 15:08	
1,2-Dichloroethane	ND	0.50	1	B0I0136	09/09/2020	09/09/20 15:08	
1,2-Dichloropropane	ND	0.50	1	B0I0136	09/09/2020	09/09/20 15:08	
1,3,5-Trimethylbenzene	ND	0.50	1	B0I0136	09/09/2020	09/09/20 15:08	
1,3-Dichlorobenzene	ND	0.50	1	B0I0136	09/09/2020	09/09/20 15:08	
1,3-Dichloropropane	ND	0.50	1	B0I0136	09/09/2020	09/09/20 15:08	
1,4-Dichlorobenzene	ND	0.50	1	B0I0136	09/09/2020	09/09/20 15:08	
2,2-Dichloropropane	ND	0.50	1	B0I0136	09/09/2020	09/09/20 15:08	
2-Chlorotoluene	ND	0.50	1	B0I0136	09/09/2020	09/09/20 15:08	
4-Chlorotoluene	ND	0.50	1	B0I0136	09/09/2020	09/09/20 15:08	
4-Isopropyltoluene	ND	0.50	1	B0I0136	09/09/2020	09/09/20 15:08	
Benzene	ND	0.50	1	B0I0136	09/09/2020	09/09/20 15:08	
Bromobenzene	ND	0.50	1	B0I0136	09/09/2020	09/09/20 15:08	
Bromodichloromethane	ND	0.50	1	B0I0136	09/09/2020	09/09/20 15:08	
Bromoform	ND	0.50	1	B0I0136	09/09/2020	09/09/20 15:08	
Bromomethane	ND	0.50	1	B0I0136	09/09/2020	09/09/20 15:08	
Carbon tetrachloride	ND	0.50	1	B0I0136	09/09/2020	09/09/20 15:08	
Chlorobenzene	ND	0.50	1	B0I0136	09/09/2020	09/09/20 15:08	

Certificate of Analysis

Hargis & Associates, Inc.	Project Number : Raytheon Main GETS Monthly Sample, 5
9171 Towne Centre Drive, Suite 375	Report To : Steve Netto
San Diego , CA 92122	Reported : 09/23/2020

Client Sample ID: MW-29

Lab ID: 2002069-08

Volatile Organic Compounds by EPA 8260B **Analyst: VW**

Analyte	Result (ug/L)	PQL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Chloroethane	ND	0.50	1	B0I0136	09/09/2020	09/09/20 15:08	
Chloroform	ND	0.50	1	B0I0136	09/09/2020	09/09/20 15:08	
Chloromethane	ND	0.50	1	B0I0136	09/09/2020	09/09/20 15:08	
cis-1,2-Dichloroethene	ND	0.50	1	B0I0136	09/09/2020	09/09/20 15:08	
cis-1,3-Dichloropropene	ND	0.50	1	B0I0136	09/09/2020	09/09/20 15:08	
Dibromochloromethane	ND	0.50	1	B0I0136	09/09/2020	09/09/20 15:08	
Dibromomethane	ND	0.50	1	B0I0136	09/09/2020	09/09/20 15:08	
Dichlorodifluoromethane	ND	0.50	1	B0I0136	09/09/2020	09/09/20 15:08	
Ethylbenzene	ND	0.50	1	B0I0136	09/09/2020	09/09/20 15:08	
Hexachlorobutadiene	ND	0.50	1	B0I0136	09/09/2020	09/09/20 15:08	
Isopropylbenzene	ND	0.50	1	B0I0136	09/09/2020	09/09/20 15:08	
m,p-Xylene	ND	1.0	1	B0I0136	09/09/2020	09/09/20 15:08	
Methylene chloride	ND	1.0	1	B0I0136	09/09/2020	09/09/20 15:08	
n-Butylbenzene	ND	0.50	1	B0I0136	09/09/2020	09/09/20 15:08	
n-Propylbenzene	ND	0.50	1	B0I0136	09/09/2020	09/09/20 15:08	
Naphthalene	ND	0.50	1	B0I0136	09/09/2020	09/09/20 15:08	
o-Xylene	ND	0.50	1	B0I0136	09/09/2020	09/09/20 15:08	
sec-Butylbenzene	ND	0.50	1	B0I0136	09/09/2020	09/09/20 15:08	
Styrene	ND	0.50	1	B0I0136	09/09/2020	09/09/20 15:08	
tert-Butylbenzene	ND	0.50	1	B0I0136	09/09/2020	09/09/20 15:08	
Tetrachloroethene	**0.76**	0.50	1	B0I0136	09/09/2020	09/09/20 15:08	
Toluene	ND	0.50	1	B0I0136	09/09/2020	09/09/20 15:08	
trans-1,2-Dichloroethene	ND	0.50	1	B0I0136	09/09/2020	09/09/20 15:08	
Trichloroethene	**1.5**	0.50	1	B0I0136	09/09/2020	09/09/20 15:08	
Trichlorofluoromethane	ND	0.50	1	B0I0136	09/09/2020	09/09/20 15:08	
Vinyl chloride	ND	0.50	1	B0I0136	09/09/2020	09/09/20 15:08	
Surrogate: 1,2-Dichloroethane-d4	*105 %*	*64 - 155*		B0I0136	09/09/2020	*09/09/20 15:08*	
Surrogate: 1,2-Dichloroethane-d4	*120 %*	*64 - 155*		B0I0136	09/09/2020	*09/09/20 14:47*	
Surrogate: 4-Bromofluorobenzene	*90.8 %*	*73 - 124*		B0I0136	09/09/2020	*09/09/20 15:08*	
Surrogate: 4-Bromofluorobenzene	*96.8 %*	*73 - 124*		B0I0136	09/09/2020	*09/09/20 14:47*	
Surrogate: Dibromofluoromethane	*98.9 %*	*78 - 129*		B0I0136	09/09/2020	*09/09/20 15:08*	
Surrogate: Dibromofluoromethane	*107 %*	*78 - 129*		B0I0136	09/09/2020	*09/09/20 14:47*	
Surrogate: Toluene-d8	*98.4 %*	*84 - 117*		B0I0136	09/09/2020	*09/09/20 14:47*	
Surrogate: Toluene-d8	*98.5 %*	*84 - 117*		B0I0136	09/09/2020	*09/09/20 15:08*	

Certificate of Analysis

Hargis & Associates, Inc.	Project Number : Raytheon Main GETS Monthly Sample, 5
9171 Towne Centre Drive, Suite 375	Report To : Steve Netto
San Diego , CA 92122	Reported : 09/23/2020

Client Sample ID: MW-29

Lab ID: 2002069-08

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

Analyte		Result (ug/L)	PQL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,4-Dioxane		**81**	2.0	1	B0I0159	09/09/2020	09/09/20 19:40	
Surrogate: 1,2-Dichlorobenzene-d4	*57.2 %*		*17 - 119*		B0I0159	09/09/2020	*09/09/20 19:40*	
Surrogate: 2-Fluorobiphenyl	*62.7 %*		*10 - 133*		B0I0159	09/09/2020	*09/09/20 19:40*	
Surrogate: 4-Terphenyl-d14	*71.1 %*		*5 - 139*		B0I0159	09/09/2020	*09/09/20 19:40*	
Surrogate: Nitrobenzene-d5	*57.6 %*		*13 - 150*		B0I0159	09/09/2020	*09/09/20 19:40*	

Certificate of Analysis

Hargis & Associates, Inc.	Project Number : Raytheon Main GETS Monthly Sample, 5
9171 Towne Centre Drive, Suite 375	Report To : Steve Netto
San Diego , CA 92122	Reported : 09/23/2020

Client Sample ID: CEFF

Lab ID: 2002069-09

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

Analyte		Result (ug/L)	PQL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,4-Dioxane		ND	0.20	1	B0I0281	09/15/2020	09/16/20 19:55	
Surrogate: 1,2-Dichlorobenzene-d4	*89.7 %*		*13 - 99*		B0I0281	09/15/2020	*09/16/20 19:55*	
Surrogate: 2-Fluorobiphenyl	*88.5 %*		*8 - 111*		B0I0281	09/15/2020	*09/16/20 19:55*	
Surrogate: 4-Terphenyl-d14	*78.8 %*		*12 - 113*		B0I0281	09/15/2020	*09/16/20 19:55*	
Surrogate: Nitrobenzene-d5	*69.2 %*		*15 - 121*		B0I0281	09/15/2020	*09/16/20 19:55*	

Certificate of Analysis

Hargis & Associates, Inc.	Project Number : Raytheon Main GETS Monthly Sample, 5
9171 Towne Centre Drive, Suite 375	Report To : Steve Netto
San Diego , CA 92122	Reported : 09/23/2020

QUALITY CONTROL SECTION

Alkalinity, Speciated by SM 2320B - Quality Control

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B0I0196 - No_Prep_WC1_W										
Blank (B0I0196-BLK1)					Prepared: 9/10/2020 Analyzed: 9/10/2020					
Alkalinity, Bicarbonate (as CaCO3)	ND	5.0	3.4							
Alkalinity, Carbonate (as CaCO3)	ND	5.0	3.4							
Alkalinity, Hydroxide (as CaCO3)	ND	5.0	3.4							
Alkalinity, Total (as CaCO3)	ND	5.0	3.4							
LCS (B0I0196-BS1)					Prepared: 9/10/2020 Analyzed: 9/10/2020					
Alkalinity, Total (as CaCO3)	102.440	5.0	3.4	99.9580		102	80 - 120			
Matrix Spike (B0I0196-MS1)			**Source: 2002069-05**		Prepared: 9/10/2020 Analyzed: 9/10/2020					
Alkalinity, Total (as CaCO3)	323.140	5.0	3.4	99.9580	223.700	99.5	80 - 120			
Matrix Spike Dup (B0I0196-MSD1)			**Source: 2002069-05**		Prepared: 9/10/2020 Analyzed: 9/10/2020					
Alkalinity, Total (as CaCO3)	322.930	5.0	3.4	99.9580	223.700	99.3	80 - 120	0.0650	20	

Certificate of Analysis

Hargis & Associates, Inc.	Project Number : Raytheon Main GETS Monthly Sample, 5
9171 Towne Centre Drive, Suite 375	Report To : Steve Netto
San Diego , CA 92122	Reported : 09/23/2020

Total Suspended Solids (Residue, Non-Filtrable) by SM 2540D - Quality Control

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B0I0148 - No_Prep_WC1_W										
Blank (B0I0148-BLK1)					Prepared: 9/9/2020 Analyzed: 9/10/2020					
Residue, Suspended	ND	1.0	1.0							
LCS (B0I0148-BS1)					Prepared: 9/9/2020 Analyzed: 9/10/2020					
Residue, Suspended	96.0000	10	10	100.000		96.0	80 - 120			
Duplicate (B0I0148-DUP1)			**Source: 2002078-02**		Prepared: 9/9/2020 Analyzed: 9/10/2020					
Residue, Suspended	106.250	12	12		107.500			1.17	10	

Certificate of Analysis

Hargis & Associates, Inc.	Project Number : Raytheon Main GETS Monthly Sample, 5
9171 Towne Centre Drive, Suite 375	Report To : Steve Netto
San Diego , CA 92122	Reported : 09/23/2020

Bromide by Ion Chromatography EPA 300 - Quality Control

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B0I0161 - No_Prep_IC1_W										
Blank (B0I0161-BLK1)					Prepared: 9/9/2020 Analyzed: 9/9/2020					
Bromide	ND	0.05	0.02							
LCS (B0I0161-BS1)					Prepared: 9/9/2020 Analyzed: 9/9/2020					
Bromide	1.01590	0.05	0.02	1.00000		102	90 - 110			
Duplicate (B0I0161-DUP1)			**Source: 2002069-06**		Prepared: 9/9/2020 Analyzed: 9/9/2020					
Bromide	0.628400	0.05	0.02		0.591700			6.02	20	
Matrix Spike (B0I0161-MS1)			**Source: 2002069-06**		Prepared: 9/9/2020 Analyzed: 9/9/2020					
Bromide	3.27810	0.05	0.02	2.50000	0.591700	107	80 - 120			
Matrix Spike Dup (B0I0161-MSD1)			**Source: 2002069-06**		Prepared: 9/9/2020 Analyzed: 9/9/2020					
Bromide	3.18760	0.05	0.02	2.50000	0.591700	104	80 - 120	2.80	20	

Certificate of Analysis

Hargis & Associates, Inc.	Project Number : Raytheon Main GETS Monthly Sample, 5
9171 Towne Centre Drive, Suite 375	Report To : Steve Netto
San Diego , CA 92122	Reported : 09/23/2020

UV Absorption by EPA 415.3 - Quality Control

Analyte	Result (1/cm)	PQL (1/cm)	MDL (1/cm)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B0I0093 - No_Prep_II_W										
Duplicate (B0I0093-DUP1)			**Source: 2002067-02**		Prepared: 9/4/2020 Analyzed: 9/4/2020					
UV Absorption	ND	0.01	0.01		ND			NR	20	

Certificate of Analysis

Hargis & Associates, Inc.	Project Number : Raytheon Main GETS Monthly Sample, 5
9171 Towne Centre Drive, Suite 375	Report To : Steve Netto
San Diego , CA 92122	Reported : 09/23/2020

Total Organic Carbon by SM 5310B - Quality Control

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B0I0183 - No_Prep_II_W										
Blank (B0I0183-BLK1)					Prepared: 9/9/2020 Analyzed: 9/9/2020					
Organic Carbon, Total	ND	3.0	1.3							
LCS (B0I0183-BS1)					Prepared: 9/9/2020 Analyzed: 9/9/2020					
Organic Carbon, Total	25.4300	3.0	1.3	25.0000		102	80 - 120			
Duplicate (B0I0183-DUP1)			**Source: 2002069-04**		Prepared: 9/9/2020 Analyzed: 9/9/2020					
Organic Carbon, Total	ND	3.0	1.3		ND			NR	20	
Matrix Spike (B0I0183-MS1)			**Source: 2002069-04**		Prepared: 9/9/2020 Analyzed: 9/9/2020					
Organic Carbon, Total	21.2000	3.0	1.3	25.0000	ND	84.8	80 - 120			
Matrix Spike Dup (B0I0183-MSD1)			**Source: 2002069-04**		Prepared: 9/9/2020 Analyzed: 9/9/2020					
Organic Carbon, Total	24.4100	3.0	1.3	25.0000	ND	97.6	80 - 120	14.1	20	

Certificate of Analysis

Hargis & Associates, Inc.	Project Number : Raytheon Main GETS Monthly Sample, 5
9171 Towne Centre Drive, Suite 375	Report To : Steve Netto
San Diego , CA 92122	Reported : 09/23/2020

Volatile Organic Compounds by EPA 8260B - Quality Control

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B0I0136 - MSVOA_LL_W										
Blank (B0I0136-BLK1)							Prepared: 9/9/2020 Analyzed: 9/9/2020			
1,1,1,2-Tetrachloroethane	ND	0.50	0.11							
1,1,1-Trichloroethane	ND	0.50	0.21							
1,1,2,2-Tetrachloroethane	ND	0.50	0.36							
1,1,2-Trichloroethane	ND	0.50	0.25							
1,1-Dichloroethane	ND	0.50	0.09							
1,1-Dichloroethene	ND	0.50	0.13							
1,1-Dichloropropene	ND	0.50	0.13							
1,2,3-Trichloropropane	ND	0.50	0.39							
1,2,3-Trichlorobenzene	ND	0.50	0.18							
1,2,4-Trichlorobenzene	ND	0.50	0.16							
1,2,4-Trimethylbenzene	ND	0.50	0.14							
1,2-Dibromo-3-chloropropane	ND	0.50	0.41							
1,2-Dibromoethane	ND	0.50	0.24							
1,2-Dichlorobenzene	ND	0.50	0.20							
1,2-Dichloroethane	ND	0.50	0.20							
1,2-Dichloropropane	ND	0.50	0.15							
1,3,5-Trimethylbenzene	ND	0.50	0.13							
1,3-Dichlorobenzene	ND	0.50	0.16							
1,3-Dichloropropane	ND	0.50	0.21							
1,4-Dichlorobenzene	ND	0.50	0.17							
2,2-Dichloropropane	ND	0.50	0.38							
2-Chlorotoluene	ND	0.50	0.11							
4-Chlorotoluene	ND	0.50	0.12							
4-Isopropyltoluene	ND	0.50	0.11							
Benzene	ND	0.50	0.13							
Bromobenzene	ND	0.50	0.21							
Bromodichloromethane	ND	0.50	0.14							
Bromoform	ND	0.50	0.20							
Bromomethane	ND	0.50	0.40							
Carbon tetrachloride	ND	0.50	0.09							
Chlorobenzene	ND	0.50	0.13							
Chloroethane	ND	0.50	0.15							
Chloroform	ND	0.50	0.11							
Chloromethane	ND	0.50	0.12							
cis-1,2-Dichloroethene	ND	0.50	0.14							
cis-1,3-Dichloropropene	ND	0.50	0.13							
Dibromochloromethane	ND	0.50	0.16							
Dibromomethane	ND	0.50	0.19							
Dichlorodifluoromethane	ND	0.50	0.18							
Ethylbenzene	ND	0.50	0.13							
Hexachlorobutadiene	ND	0.50	0.15							

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

Project Number : Raytheon Main GETS Monthly Sample, 5
Report To : Steve Netto
Reported : 09/23/2020

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

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B0I0136 - MSVOA_LL_W (continued)										
Blank (B0I0136-BLK1) - Continued					Prepared: 9/9/2020 Analyzed: 9/9/2020					
Isopropylbenzene	ND	0.50	0.10							
m,p-Xylene	ND	1.0	0.19							
Methylene chloride	ND	1.0	0.71							
n-Butylbenzene	ND	0.50	0.11							
n-Propylbenzene	ND	0.50	0.10							
Naphthalene	ND	0.50	0.41							
o-Xylene	ND	0.50	0.13							
sec-Butylbenzene	ND	0.50	0.09							
Styrene	ND	0.50	0.13							
tert-Butylbenzene	ND	0.50	0.09							
Tetrachloroethene	ND	0.50	0.10							
Toluene	ND	0.50	0.12							
trans-1,2-Dichloroethene	ND	0.50	0.09							
Trichloroethene	ND	0.50	0.10							
Trichlorofluoromethane	ND	0.50	0.23							
Vinyl chloride	ND	0.50	0.13							
Surrogate: 1,2-Dichloroethane-d4	*24.57*			*25.0000*		*98.3*	*64 - 155*			
Surrogate: 4-Bromofluorobenzene	*22.78*			*25.0000*		*91.1*	*73 - 124*			
Surrogate: Dibromofluoromethan	*25.25*			*25.0000*		*101*	*78 - 129*			
Surrogate: Toluene-d8	*24.02*			*25.0000*		*96.1*	*84 - 117*			
LCS (B0I0136-BS1)					Prepared: 9/9/2020 Analyzed: 9/9/2020					
1,1,1,2-Tetrachloroethane	18.8600	0.50	0.11	20.0000		94.3	79 - 116			
1,1,1-Trichloroethane	21.6900	0.50	0.21	20.0000		108	73 - 130			
1,1,2,2-Tetrachloroethane	21.0700	0.50	0.36	20.0000		105	71 - 122			
1,1,2-Trichloroethane	18.2300	0.50	0.25	20.0000		91.2	70 - 124			
1,1-Dichloroethane	18.9100	0.50	0.09	20.0000		94.6	69 - 128			
1,1-Dichloroethene	18.2900	0.50	0.13	20.0000		91.4	65 - 137			
1,1-Dichloropropene	17.6300	0.50	0.13	20.0000		88.2	74 - 129			
1,2,3-Trichloropropane	20.1400	0.50	0.39	20.0000		101	74 - 123			
1,2,3-Trichlorobenzene	22.6100	0.50	0.18	20.0000		113	59 - 130			
1,2,4-Trichlorobenzene	21.8800	0.50	0.16	20.0000		109	65 - 125			
1,2,4-Trimethylbenzene	20.2500	0.50	0.14	20.0000		101	88 - 124			
1,2-Dibromo-3-chloropropane	20.1400	0.50	0.41	20.0000		101	61 - 127			
1,2-Dibromoethane	16.4900	0.50	0.24	20.0000		82.4	72 - 125			
1,2-Dichlorobenzene	19.7700	0.50	0.20	20.0000		98.8	84 - 113			
1,2-Dichloroethane	18.2000	0.50	0.20	20.0000		91.0	68 - 130			
1,2-Dichloropropane	17.8000	0.50	0.15	20.0000		89.0	77 - 121			
1,3,5-Trimethylbenzene	21.9800	0.50	0.13	20.0000		110	83 - 124			
1,3-Dichlorobenzene	19.6800	0.50	0.16	20.0000		98.4	83 - 112			
1,3-Dichloropropane	20.1700	0.50	0.21	20.0000		101	77 - 119			

Certificate of Analysis

Hargis & Associates, Inc.	Project Number : Raytheon Main GETS Monthly Sample, 5
9171 Towne Centre Drive, Suite 375	Report To : Steve Netto
San Diego , CA 92122	Reported : 09/23/2020

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

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B0I0136 - MSVOA_LL_W (continued)										
LCS (B0I0136-BS1) - Continued					Prepared: 9/9/2020 Analyzed: 9/9/2020					
1,4-Dichlorobenzene	20.1800	0.50	0.17	20.0000		101	79 - 115			
2,2-Dichloropropane	21.5300	0.50	0.38	20.0000		108	67 - 149			
2-Chlorotoluene	20.0700	0.50	0.11	20.0000		100	81 - 119			
4-Chlorotoluene	21.2700	0.50	0.12	20.0000		106	86 - 117			
4-Isopropyltoluene	21.8400	0.50	0.11	20.0000		109	82 - 131			
Benzene	17.4700	0.50	0.13	20.0000		87.4	75 - 124			
Bromobenzene	20.2400	0.50	0.21	20.0000		101	82 - 108			
Bromodichloromethane	19.5800	0.50	0.14	20.0000		97.9	80 - 120			
Bromoform	17.8300	0.50	0.20	20.0000		89.2	70 - 123			
Bromomethane	23.5100	0.50	0.40	20.0000		118	44 - 151			
Carbon tetrachloride	18.9500	0.50	0.09	20.0000		94.8	62 - 140			
Chlorobenzene	18.4800	0.50	0.13	20.0000		92.4	80 - 112			
Chloroethane	21.0200	0.50	0.15	20.0000		105	42 - 167			
Chloroform	20.6200	0.50	0.11	20.0000		103	77 - 122			
Chloromethane	22.9700	0.50	0.12	20.0000		115	33 - 153			
cis-1,2-Dichloroethene	18.7100	0.50	0.14	20.0000		93.6	75 - 121			
cis-1,3-Dichloropropene	17.6400	0.50	0.13	20.0000		88.2	73 - 127			
Dibromochloromethane	19.7700	0.50	0.16	20.0000		98.8	77 - 122			
Dibromomethane	16.8800	0.50	0.19	20.0000		84.4	75 - 121			
Dichlorodifluoromethane	21.0400	0.50	0.18	20.0000		105	0 - 171			
Ethylbenzene	19.6100	0.50	0.13	20.0000		98.0	82 - 119			
Hexachlorobutadiene	22.3500	0.50	0.15	20.0000		112	71 - 131			
Isopropylbenzene	20.8600	0.50	0.10	20.0000		104	75 - 126			
m,p-Xylene	41.0700	1.0	0.19	40.0000		103	86 - 119			
Methylene chloride	19.2700	1.0	0.71	20.0000		96.4	76 - 125			
n-Butylbenzene	20.6000	0.50	0.11	20.0000		103	81 - 125			
n-Propylbenzene	21.2400	0.50	0.10	20.0000		106	78 - 130			
Naphthalene	19.0900	0.50	0.41	20.0000		95.4	47 - 128			
o-Xylene	20.9200	0.50	0.13	20.0000		105	85 - 119			
sec-Butylbenzene	21.2300	0.50	0.09	20.0000		106	78 - 130			
Styrene	18.3700	0.50	0.13	20.0000		91.8	62 - 148			
tert-Butylbenzene	20.2100	0.50	0.09	20.0000		101	77 - 125			
Tetrachloroethene	19.8800	0.50	0.10	20.0000		99.4	73 - 120			
Toluene	18.0100	0.50	0.12	20.0000		90.0	79 - 119			
trans-1,2-Dichloroethene	19.3400	0.50	0.09	20.0000		96.7	70 - 129			
Trichloroethene	16.9200	0.50	0.10	20.0000		84.6	73 - 117			
Trichlorofluoromethane	20.2600	0.50	0.23	20.0000		101	59 - 135			
Vinyl chloride	19.6600	0.50	0.13	20.0000		98.3	58 - 132			
Surrogate: 1,2-Dichloroethane-d4	*27.05*			*25.0000*		*108*	*64 - 155*			
Surrogate: 4-Bromofluorobenzene	*26.77*			*25.0000*		*107*	*73 - 124*			
Surrogate: Dibromofluoromethan	*24.43*			*25.0000*		*97.7*	*78 - 129*			

Certificate of Analysis

Hargis & Associates, Inc.	Project Number : Raytheon Main GETS Monthly Sample, 5
9171 Towne Centre Drive, Suite 375	Report To : Steve Netto
San Diego , CA 92122	Reported : 09/23/2020

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

Analyte	Result (ug/L)	PQL (ug/L)		Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B0I0136 - MSVOA_LL_W (continued)										
LCS (B0I0136-BS1) - Continued						Prepared: 9/9/2020 Analyzed: 9/9/2020				
Surrogate: Toluene-d8	*23.16*			*25.0000*		*92.6*	*84 - 117*			
LCS Dup (B0I0136-BSD1)						Prepared: 9/9/2020 Analyzed: 9/9/2020				
1,1,1,2-Tetrachloroethane	20.4800	0.50	0.11	20.0000		102	79 - 116	8.24	20	
1,1,1-Trichloroethane	22.1200	0.50	0.21	20.0000		111	73 - 130	1.96	20	
1,1,2,2-Tetrachloroethane	18.6600	0.50	0.36	20.0000		93.3	71 - 122	12.1	20	
1,1,2-Trichloroethane	21.4900	0.50	0.25	20.0000		107	70 - 124	16.4	20	
1,1-Dichloroethane	20.1800	0.50	0.09	20.0000		101	69 - 128	6.50	20	
1,1-Dichloroethene	20.8800	0.50	0.13	20.0000		104	65 - 137	13.2	20	
1,1-Dichloropropene	19.8700	0.50	0.13	20.0000		99.4	74 - 129	11.9	20	
1,2,3-Trichloropropane	17.7900	0.50	0.39	20.0000		89.0	74 - 123	12.4	20	
1,2,3-Trichlorobenzene	20.9800	0.50	0.18	20.0000		105	59 - 130	7.48	20	
1,2,4-Trichlorobenzene	19.9800	0.50	0.16	20.0000		99.9	65 - 125	9.08	20	
1,2,4-Trimethylbenzene	19.5600	0.50	0.14	20.0000		97.8	88 - 124	3.47	20	
1,2-Dibromo-3-chloropropane	20.4600	0.50	0.41	20.0000		102	61 - 127	1.58	20	
1,2-Dibromoethane	21.1300	0.50	0.24	20.0000		106	72 - 125	24.7	20	R
1,2-Dichlorobenzene	19.1700	0.50	0.20	20.0000		95.8	84 - 113	3.08	20	
1,2-Dichloroethane	21.3700	0.50	0.20	20.0000		107	68 - 130	16.0	20	
1,2-Dichloropropane	21.5900	0.50	0.15	20.0000		108	77 - 121	19.2	20	
1,3,5-Trimethylbenzene	18.9800	0.50	0.13	20.0000		94.9	83 - 124	14.6	20	
1,3-Dichlorobenzene	19.4900	0.50	0.16	20.0000		97.4	83 - 112	0.970	20	
1,3-Dichloropropane	20.8800	0.50	0.21	20.0000		104	77 - 119	3.46	20	
1,4-Dichlorobenzene	20.1200	0.50	0.17	20.0000		101	79 - 115	0.298	20	
2,2-Dichloropropane	22.4100	0.50	0.38	20.0000		112	67 - 149	4.01	20	
2-Chlorotoluene	17.7900	0.50	0.11	20.0000		89.0	81 - 119	12.0	20	
4-Chlorotoluene	18.1300	0.50	0.12	20.0000		90.6	86 - 117	15.9	20	
4-Isopropyltoluene	21.4800	0.50	0.11	20.0000		107	82 - 131	1.66	20	
Benzene	19.9900	0.50	0.13	20.0000		100	75 - 124	13.5	20	
Bromobenzene	17.9800	0.50	0.21	20.0000		89.9	82 - 108	11.8	20	
Bromodichloromethane	22.5500	0.50	0.14	20.0000		113	80 - 120	14.1	20	
Bromoform	20.6600	0.50	0.20	20.0000		103	70 - 123	14.7	20	
Bromomethane	24.0400	0.50	0.40	20.0000		120	44 - 151	2.23	20	
Carbon tetrachloride	21.3300	0.50	0.09	20.0000		107	62 - 140	11.8	20	
Chlorobenzene	18.6100	0.50	0.13	20.0000		93.0	80 - 112	0.701	20	
Chloroethane	22.5900	0.50	0.15	20.0000		113	42 - 167	7.20	20	
Chloroform	22.0600	0.50	0.11	20.0000		110	77 - 122	6.75	20	
Chloromethane	24.6000	0.50	0.12	20.0000		123	33 - 153	6.85	20	
cis-1,2-Dichloroethene	21.0500	0.50	0.14	20.0000		105	75 - 121	11.8	20	
cis-1,3-Dichloropropene	20.0700	0.50	0.13	20.0000		100	73 - 127	12.9	20	
Dibromochloromethane	20.6100	0.50	0.16	20.0000		103	77 - 122	4.16	20	
Dibromomethane	21.6600	0.50	0.19	20.0000		108	75 - 121	24.8	20	R
Dichlorodifluoromethane	22.2100	0.50	0.18	20.0000		111	0 - 171	5.41	20	

Certificate of Analysis

Hargis & Associates, Inc.	Project Number : Raytheon Main GETS Monthly Sample, 5
9171 Towne Centre Drive, Suite 375	Report To : Steve Netto
San Diego , CA 92122	Reported : 09/23/2020

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

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B0I0136 - MSVOA_LL_W (continued)										
LCS Dup (B0I0136-BSD1) - Continued					Prepared: 9/9/2020 Analyzed: 9/9/2020					
Ethylbenzene	20.1300	0.50	0.13	20.0000		101	82 - 119	2.62	20	
Hexachlorobutadiene	20.3200	0.50	0.15	20.0000		102	71 - 131	9.51	20	
Isopropylbenzene	18.6500	0.50	0.10	20.0000		93.2	75 - 126	11.2	20	
m,p-Xylene	41.5700	1.0	0.19	40.0000		104	86 - 119	1.21	20	
Methylene chloride	21.3800	1.0	0.71	20.0000		107	76 - 125	10.4	20	
n-Butylbenzene	18.6300	0.50	0.11	20.0000		93.2	81 - 125	10.0	20	
n-Propylbenzene	18.6100	0.50	0.10	20.0000		93.0	78 - 130	13.2	20	
Naphthalene	18.0500	0.50	0.41	20.0000		90.2	47 - 128	5.60	20	
o-Xylene	21.3900	0.50	0.13	20.0000		107	85 - 119	2.22	20	
sec-Butylbenzene	20.9200	0.50	0.09	20.0000		105	78 - 130	1.47	20	
Styrene	18.6800	0.50	0.13	20.0000		93.4	62 - 148	1.67	20	
tert-Butylbenzene	20.1500	0.50	0.09	20.0000		101	77 - 125	0.297	20	
Tetrachloroethene	21.7400	0.50	0.10	20.0000		109	73 - 120	8.94	20	
Toluene	21.6400	0.50	0.12	20.0000		108	79 - 119	18.3	20	
trans-1,2-Dichloroethene	20.9500	0.50	0.09	20.0000		105	70 - 129	7.99	20	
Trichloroethene	22.0900	0.50	0.10	20.0000		110	73 - 117	26.5	20	R
Trichlorofluoromethane	21.9800	0.50	0.23	20.0000		110	59 - 135	8.14	20	
Vinyl chloride	21.0300	0.50	0.13	20.0000		105	58 - 132	6.73	20	
Surrogate: 1,2-Dichloroethane-d4	*28.15*			*25.0000*		*113*	*64 - 155*			
Surrogate: 4-Bromofluorobenzene	*28.24*			*25.0000*		*113*	*73 - 124*			
Surrogate: Dibromofluoromethan	*25.54*			*25.0000*		*102*	*78 - 129*			
Surrogate: Toluene-d8	*27.85*			*25.0000*		*111*	*84 - 117*			

Certificate of Analysis

Hargis & Associates, Inc.	Project Number : Raytheon Main GETS Monthly Sample, 5
9171 Towne Centre Drive, Suite 375	Report To : Steve Netto
San Diego , CA 92122	Reported : 09/23/2020

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

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B0I0159 - MSSEMI_W										
Blank (B0I0159-BLK1)					Prepared: 9/9/2020 Analyzed: 9/9/2020					
1,4-Dioxane	ND	2.0	0.84							
Surrogate: 1,2-Dichlorobenzene-d	*66.69*			*100.000*		*66.7*	*17 - 119*			
Surrogate: 2-Fluorobiphenyl	*68.86*			*100.000*		*68.9*	*10 - 133*			
Surrogate: 4-Terphenyl-d14	*72.89*			*100.000*		*72.9*	*5 - 139*			
Surrogate: Nitrobenzene-d5	*65.31*			*100.000*		*65.3*	*13 - 150*			
LCS (B0I0159-BS1)					Prepared: 9/9/2020 Analyzed: 9/9/2020					
1,4-Dioxane	87.5300	2.0	0.84	100.000		87.5	75 - 155			
Surrogate: 1,2-Dichlorobenzene-d	*73.61*			*100.000*		*73.6*	*17 - 119*			
Surrogate: 2-Fluorobiphenyl	*82.77*			*100.000*		*82.8*	*10 - 133*			
Surrogate: 4-Terphenyl-d14	*86.82*			*100.000*		*86.8*	*5 - 139*			
Surrogate: Nitrobenzene-d5	*75.10*			*100.000*		*75.1*	*13 - 150*			
LCS Dup (B0I0159-BSD1)					Prepared: 9/9/2020 Analyzed: 9/9/2020					
1,4-Dioxane	85.7100	2.0	0.84	100.000		85.7	75 - 155	2.10	20	
Surrogate: 1,2-Dichlorobenzene-d	*72.60*			*100.000*		*72.6*	*17 - 119*			
Surrogate: 2-Fluorobiphenyl	*78.48*			*100.000*		*78.5*	*10 - 133*			
Surrogate: 4-Terphenyl-d14	*104.9*			*100.000*		*105*	*5 - 139*			
Surrogate: Nitrobenzene-d5	*75.18*			*100.000*		*75.2*	*13 - 150*			

Certificate of Analysis

Hargis & Associates, Inc.	Project Number : Raytheon Main GETS Monthly Sample, 5
9171 Towne Centre Drive, Suite 375	Report To : Steve Netto
San Diego , CA 92122	Reported : 09/23/2020

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

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B0I0122 - MSSEMI_W										
Blank (B0I0122-BLK1)					Prepared: 9/8/2020 Analyzed: 9/8/2020					
1,4-Dioxane	ND	0.20	0.05							
Surrogate: 1,2-Dichlorobenzene-d	*0.8005*			*1.00000*		*80.0*	*13 - 99*			
Surrogate: 2-Fluorobiphenyl	*0.7625*			*1.00000*		*76.2*	*8 - 111*			
Surrogate: 4-Terphenyl-d14	*0.8977*			*1.00000*		*89.8*	*12 - 113*			
Surrogate: Nitrobenzene-d5	*0.8770*			*1.00000*		*87.7*	*15 - 121*			
LCS (B0I0122-BS1)					Prepared: 9/8/2020 Analyzed: 9/8/2020					
1,4-Dioxane	1.04489	0.20	0.05	1.00000		104	75 - 155			
Surrogate: 1,2-Dichlorobenzene-d	*0.5413*			*1.00000*		*54.1*	*13 - 99*			
Surrogate: 2-Fluorobiphenyl	*0.5291*			*1.00000*		*52.9*	*8 - 111*			
Surrogate: 4-Terphenyl-d14	*0.6428*			*1.00000*		*64.3*	*12 - 113*			
Surrogate: Nitrobenzene-d5	*0.6081*			*1.00000*		*60.8*	*15 - 121*			
LCS Dup (B0I0122-BSD1)					Prepared: 9/8/2020 Analyzed: 9/8/2020					
1,4-Dioxane	1.03260	0.20	0.05	1.00000		103	75 - 155	1.18	20	
Surrogate: 1,2-Dichlorobenzene-d	*0.5422*			*1.00000*		*54.2*	*13 - 99*			
Surrogate: 2-Fluorobiphenyl	*0.5209*			*1.00000*		*52.1*	*8 - 111*			
Surrogate: 4-Terphenyl-d14	*0.6218*			*1.00000*		*62.2*	*12 - 113*			
Surrogate: Nitrobenzene-d5	*0.6206*			*1.00000*		*62.1*	*15 - 121*			

Certificate of Analysis

Hargis & Associates, Inc.	Project Number : Raytheon Main GETS Monthly Sample, 5
9171 Towne Centre Drive, Suite 375	Report To : Steve Netto
San Diego , CA 92122	Reported : 09/23/2020

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

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B0I0171 - MSSEMI_W										
Blank (B0I0171-BLK1)					Prepared: 9/9/2020 Analyzed: 9/9/2020					
1,4-Dioxane	ND	0.20	0.05							
Surrogate: 1,2-Dichlorobenzene-d	*0.7582*			*1.00000*		*75.8*	*13 - 99*			
Surrogate: 2-Fluorobiphenyl	*0.7731*			*1.00000*		*77.3*	*8 - 111*			
Surrogate: 4-Terphenyl-d14	*0.8442*			*1.00000*		*84.4*	*12 - 113*			
Surrogate: Nitrobenzene-d5	*0.8570*			*1.00000*		*85.7*	*15 - 121*			
LCS (B0I0171-BS1)					Prepared: 9/9/2020 Analyzed: 9/9/2020					
1,4-Dioxane	1.24984	0.20	0.05	1.00000		125	75 - 155			
Surrogate: 1,2-Dichlorobenzene-d	*0.4592*			*1.00000*		*45.9*	*13 - 99*			
Surrogate: 2-Fluorobiphenyl	*0.5492*			*1.00000*		*54.9*	*8 - 111*			
Surrogate: 4-Terphenyl-d14	*0.6754*			*1.00000*		*67.5*	*12 - 113*			
Surrogate: Nitrobenzene-d5	*0.5475*			*1.00000*		*54.7*	*15 - 121*			
LCS Dup (B0I0171-BSD1)					Prepared: 9/9/2020 Analyzed: 9/9/2020					
1,4-Dioxane	1.25610	0.20	0.05	1.00000		126	75 - 155	0.500	20	
Surrogate: 1,2-Dichlorobenzene-d	*0.4668*			*1.00000*		*46.7*	*13 - 99*			
Surrogate: 2-Fluorobiphenyl	*0.5490*			*1.00000*		*54.9*	*8 - 111*			
Surrogate: 4-Terphenyl-d14	*0.6594*			*1.00000*		*65.9*	*12 - 113*			
Surrogate: Nitrobenzene-d5	*0.5488*			*1.00000*		*54.9*	*15 - 121*			

Certificate of Analysis

Hargis & Associates, Inc.	Project Number : Raytheon Main GETS Monthly Sample, 5
9171 Towne Centre Drive, Suite 375	Report To : Steve Netto
San Diego , CA 92122	Reported : 09/23/2020

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

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B0I0281 - MSSEMI_W										
Blank (B0I0281-BLK1)					Prepared: 9/15/2020 Analyzed: 9/16/2020					
1,4-Dioxane	ND	0.20	0.05							
Surrogate: 1,2-Dichlorobenzene-d	*0.8931*			*1.00000*		*89.3*	*13 - 99*			
Surrogate: 2-Fluorobiphenyl	*0.9297*			*1.00000*		*93.0*	*8 - 111*			
Surrogate: 4-Terphenyl-d14	*0.9998*			*1.00000*		*100*	*12 - 113*			
Surrogate: Nitrobenzene-d5	*0.8438*			*1.00000*		*84.4*	*15 - 121*			
LCS (B0I0281-BS1)					Prepared: 9/15/2020 Analyzed: 9/16/2020					
1,4-Dioxane	1.09551	0.20	0.05	1.00000		110	75 - 155			
Surrogate: 1,2-Dichlorobenzene-d	*0.5161*			*1.00000*		*51.6*	*13 - 99*			
Surrogate: 2-Fluorobiphenyl	*0.4875*			*1.00000*		*48.7*	*8 - 111*			
Surrogate: 4-Terphenyl-d14	*0.4963*			*1.00000*		*49.6*	*12 - 113*			
Surrogate: Nitrobenzene-d5	*0.4382*			*1.00000*		*43.8*	*15 - 121*			
LCS Dup (B0I0281-BSD1)					Prepared: 9/15/2020 Analyzed: 9/16/2020					
1,4-Dioxane	1.01623	0.20	0.05	1.00000		102	75 - 155	7.51	20	
Surrogate: 1,2-Dichlorobenzene-d	*0.7336*			*1.00000*		*73.4*	*13 - 99*			
Surrogate: 2-Fluorobiphenyl	*0.6916*			*1.00000*		*69.2*	*8 - 111*			
Surrogate: 4-Terphenyl-d14	*0.7334*			*1.00000*		*73.3*	*12 - 113*			
Surrogate: Nitrobenzene-d5	*0.6148*			*1.00000*		*61.5*	*15 - 121*			

Certificate of Analysis

Hargis & Associates, Inc.		Project Number :	Raytheon Main GETS Monthly Sample, 5
9171 Towne Centre Drive, Suite 375		Report To :	Steve Netto
San Diego , CA 92122		Reported :	09/23/2020

Notes and Definitions

R	RPD value outside acceptance criteria. Calculation is based on raw values.
ND	Analyte is not detected at or above the Practical Quantitation Limit (PQL). When client requests quantitation against MDL, analyte is not detected at or above the Method Detection Limit (MDL)
PQL	Practical Quantitation Limit
MDL	Method Detection Limit
NR	Not Reported
RPD	Relative Percent Difference
CA2	CA-ELAP (CDPH)
OR1	OR-NELAP (OSPHL)

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.
(3) Results are wet unless otherwise specified.

HARGIS+ASSOCIATES, INC.
HYDROGEOLOGY • ENGINEERING

Date: 9/3/2020
Page 1 of 1

PROJECT: Raytheon Main GETS Monthly Sample

TASK NO.: 532.15

Project Manager Steve Netto
QA Manager Ross Horton
Phone 858.455.6500
Fax 858.455.6533

Sampled By: Ruben Sanchez

LAB ID	SAMPLE ID	SAMPLE COLLECTION Date	Time	MATRIX: Groundwater	MATRIX: Lab prepared water	PRESERVATION: Hydrochloric Acid (HCl)	PRESERVATION: Nitric Acid (HNO_3)	PRESERVATION:	PRESERVATION: Sulfuric Acid (H_2SO_4)	PRESERVATION: Ice	CONTAINERS: 40-ml VOA	CONTAINERS: 125 mL Poly	CONTAINERS: 250 mL Poly	CONTAINERS: 250 mL Glass	CONTAINERS: 1 L Poly	CONTAINERS: 1L Amber	ANALYSIS REQUESTED: VOCs by EPA 8260B	Bromate by EPA 317	Bromide by EPA 300	Alkalinity by SM2320B	Total Organic Carbon by SM5310B	Total Suspended Solids by SM2540D	UV Absorption EPA 415.3 @254 nm	1,4-Dioxane by EPA 8270C MOD	1,4-Dioxane by EPA 8270 SIM	Expected Concentration Range (ppb) for VOAs: 0 - 10	10 - 100	100 - 1,000	>1,000		SPECIAL HANDLING: 24 hr TAT	48 Hour TAT	5 Day TAT	Level IV Data Validation Requested	MS/MSD Requested	REMARKS
20020809-01	TB-090320	9/3/2020	8:00		X	X				X	2						X									X							X			
02	CEFF	9/3/2020	8:10	X		X				X	3					1	X								X	X							X			
03	CBT	9/3/2020	8:25	X		X				X	3					1	X								X	X							X			
04	POX	9/3/2020	8:35	X		X			X	X	5	1	1			1	X	X		X	X				X	X							X			
05	PF	9/3/2020	8:50	X					X	X	2		1	1	1					X	X	X	X										X			
06	INF	9/3/2020	9:00	X		X				X	3	2				1	X	X	X					X				X					X			
07	EW-02	9/3/2020	9:45	X		X				X	3	1				1	X		X					X			X						X			
08	MW-29	9/3/2020	10:10	X		X				X	3	1				1	X		X					X				X					X			
Total number of containers per analysis:											24	5	2	1	1	6																				Total No. of Containers: 39

Relinquished By: / Company:	Date / Time	Received By: / Company	Date / Time
H+A	9-3-20 1230	H+A	9.3.2020 1230
H+A	9-3-2020 15:00	ATL	9/3/2020 1500

- [ ] No. of containers correct
- [ ] Received in good condition
- [ ] Custody seals secure
- [ ] Conforms to COC document

3.0
1.6 Temperature on receipt

Laboratory
Advanced Technology Laboratories
Attn: Tina Nguyen
3275 Walnut Ave
Signal Hill, CA 90755
(562) 989-4045

Send Results to:
Steve Netto & Ross Horton
9171 Towne Centre Drive
Suite 375
San Diego, CA 92122
Ph: 858.455.6500
snetto@hargis.com
rhorton@hargis.com

Instructions
1. Fill out form completely and sign only after verified for completeness
2. Complete in ballpoint pen. Draw one line through error, initial and date correction
3. Indicate the number of sample containers in analytical request space; indicate choice with ✓or ×
4. Note applicable preservatives, special instructions, and deviations from typical environmental samples.
5. Consult project QA documents for specific instructions.

ADVANCED TECHNOLOGY LABORATORIES

3275 Walnut Ave., Signal Hill, CA 90755
Tel: (562) 989-4045 • Fax: (562) 989-4040

CHAIN OF CUSTODY RECORD

Page ___1 of 1

2002069

FOR LABORATORY USE ONLY					ATLCOC Ver:20200724
Method of Transport		**Sample Conditions Upon Receipt**			
☑ Client ☐ ATL		**Condition**	**Y**	**N**	**Condition** Y N
☐ FedEx ☐ OnTrac		1. CHILLED	✓	☐	5. # OF SAMPLES MATCH COC ☐ ☐
☐ GSO		2. HEADSPACE (VOA)		☐	6. PRESERVED ☐ ☐
☐ Other:		3. CONTAINER INTACT		☐	7.' Cooler Temp (°C) 19.6
		4. SEALED		☐	

Company:	Hargis + Associates Inc.	Address:			Tel:
		City:	State:	Zip:	Fax:

SEND REPORT TO:		**SEND INVOICE TO:** ☐ same as SEND REPORT TO		**EDD**		**QA/QC**	
Attn: Steve Netto	Email: SNETTO@HARGIS.COM	Attn:	Email:	☐	Excel	☐	Routine
Company:	Hargis + Associates Inc.	Company:	Email:	☐	EDF	☐	Caltrans Legal
Address:	9171 Towne Centre Drive, Suite 375	Address:		☐	Equis	☐	RWQCB Level IV
City: San Diego	State: CA Zip: 92122	City:	State: Zip:	☐		☐	

Project Name:	Raytheon Main GETS Monthly Sample	Quote #:	
Project No.:	532.15	PO #:	
Sampler:			

ITEM	Lab ID (For Lab Use Only)	Sample Description: Sample ID	Location	Date	Time	Requested Analysis: 1,4-Dioxane - 8270 SIM	Sample Matrix: Solid	Water	Wastewater	Non-aqueous	Other:	Turnaround Time (TAT)	Container: Quantity	Type: 1=Tube; 2=VOA; 3=Liter; 4=Pint; 5=Jar; 6=Bottle; 7 = Canister	Material: 1=Glass; 2=Plastic; 3=Metal	Preservative: 1=HCl; 2=HNO3; 3=H2SO4; 4 =4C; 5=Zn(Ac)2; 6=NaOH; 7=NA2S2O3	Remarks
1	~~9-08~~ 9/11/20 TN	CEFF		9/11/20	11:15	X											
2																	
3																	
4																	
5																	
6																	
7																	
8																	
9																	
10																	

(Special Instructions, Comments, Notes, etc.)

Additonal sample for CEFF

By relinquishing samples to ATL, I hereby agree that I have read and accept ATL's Terms and Conditions, as stated in www.atlglobal.com/terms-and-conditions.

Relinquished by: (Signature and Printed Name)	Date:	Time:	Received by: (Signature and Printed Name)	Date:	Time:
	9/11/2020	14:15		9/11/2020	1415
Relinquished by: (Signature and Printed Name)	Date:	Time:	Received by: (Signature and Printed Name)	Date:	Time:
Relinquished by: (Signature and Printed Name)	Date:	Time:	Received by: (Signature and Printed Name)	Date:	Time:

element

9240 Santa Fe Springs Road
Santa Fe Springs, CA
90670 USA

P: 1 562 948 2225
F: 1 562 948 5850
info.santafesprings@element.com
element.com

Laboratory Report

September 21, 2020

Advanced Technology Laboratories
PO Box 92797
Long Beach, CA 90809-2797

Attn: Tina Nguyen

Element Job No:	241835
Purchase Order:	COD - CC
Project Name:	2002069 / Groundwater
Samples Received:	2
Date Received:	09-04-2020

Analysis	Page
Bromate by SOP 5600, Rev 3	2

Michael Shelton
Technical Director

Robert Stead
Senior Chemist

This report is to be reproduced in its entirety. All documents and data will be destroyed 7 years past invoice.
All samples will be disposed of 30 days past invoice unless prior arrangements have been made.
The results given in this report apply only to the sample(s) provided and as received.

Bromate by SOP 5600, Rev 3
Ion Chromatography-Tandem Mass Spectrometry

Sample preparation: An aliquot of sample was spiked with internal standard (bromate-$^{18}O_3$), and diluted with water. The sample solutions were analyzed using IC-MS/MS.

Parts Per Billion (µg/L)

Sample ID	Result
ATL Lab#: 2002069-04 / POX	ND
ATL Lab#: 2002069-06 / INF	ND
Method Blank	ND
Detection Limit	0.5

Dates Analyzed: 09-17-2020

Quality Control Summary

Sample ID: ATL Lab#: 2002069-04 / POX

Analyte	Sample Result	Spike Conc	Spike Result	Spike % Rec	Spike Duplicate	Duplicate % Rec	RPD
Bromate	ND	10.0	10.1	101	11.0	110	9
QC Guidelines				80-120		80-120	NMT 15

This report is to be reproduced in its entirety. All documents and data will be destroyed 7 years past invoice.
All samples will be disposed of 30 days past invoice unless prior arrangements have been made.
The results given in this report apply only to the sample(s) provided and as received.

ADVANCED TECHNOLOGY LABORATORIES

SUBCONTRACT ORDER

Work Order: 2002069

SENDING LABORATORY:

Advanced Technology Laboratories
3275 Walnut Avenue
Signal Hill, CA 90755
Phone: 562.989.4045
Fax: 562.989.6348
Project Manager: Tina Nguyen
(Tina.Nguyen@atlglobal.com)

Sampler: Ruben Sanchez

RECEIVING LABORATORY:

Element Materials Technology
9240 Santa Fe Springs Road
Santa Fe Springs, CA 90670
Phone :(562) 948-2225
Fax: (562) 948-5850
PO#: SC14851-STANDARD TAT

IMPORTANT : Please include Work Order # and PO # in your invoice.

Analysis	Due	Expires	Sampled	Comments
ATL Lab#: 2002069-04 (6) / POX		**Water**	**09/03/20 08:35**	
Bromate_ICMS/MS_SUB	**09/21/20 17:00**	10/01/20 08:35		
[Bromate by IC-MS/MS]				
1-Poly Unpres - 125mL				
ATL Lab#: 2002069-06 (1) / INF		**Water**	**09/03/20 09:00**	
Bromate_ICMS/MS_SUB	**09/21/20 17:00**	10/01/20 09:00		
[Bromate by IC-MS/MS]				
1-Poly Unpres - 125mL				

09-04-2-2-cA: (1) AlSo has: D

Approved by: 9/3/2020

ATL Project Manager — Date

Released By ATL Sample Control: 9.4.2020 — Date

Received By Courier: 9/4/20 — Date

Released By Courier: 9/4/20 13:00 — Date

Received By Subcontract Laboratory: 09-04-20 — Date

Released By — Date

Received By — Date

C:\PROGRAM FILES (X86)\PROMIUM\ELEMENT\PRINT\SCO_ATL(A.3).RPT

ADVANCED TECHNOLOGY LABORATORIES

September 24, 2020

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

ELAP No.: 1838
CSDLAC No.: 10196
ORELAP No.: CA300003

Re: ATL Work Order Number : 2002158
Client Reference : Raytheon Main GETS Mid Month Sample 532.15

Enclosed are the results for sample(s) received on September 17, 2020 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,

Dr. Reza Karimi
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 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.	Project Number : Raytheon Main GETS Mid Month Sample
9171 Towne Centre Drive, Suite 375	Report To : Steve Netto
San Diego , CA 92122	Reported : 09/24/2020

SUMMARY OF SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
TB-091720	2002158-01	Water	9/17/20 8:00	9/17/20 15:25
CEFF	2002158-02	Groundwater	9/17/20 8:30	9/17/20 15:25
CBT	2002158-03	Groundwater	9/17/20 8:40	9/17/20 15:25
POX	2002158-04	Groundwater	9/17/20 8:45	9/17/20 15:25
INF	2002158-05	Groundwater	9/17/20 8:55	9/17/20 15:25
EW-02	2002158-06	Groundwater	9/17/20 9:25	9/17/20 15:25
MW-29	2002158-07	Groundwater	9/17/20 9:40	9/17/20 15:25

Certificate of Analysis

Hargis & Associates, Inc.	Project Number : Raytheon Main GETS Mid Month Sample
9171 Towne Centre Drive, Suite 375	Report To : Steve Netto
San Diego , CA 92122	Reported : 09/24/2020

Client Sample ID: TB-091720

Lab ID: 2002158-01

Volatile Organic Compounds by EPA 8260B **Analyst: KL**

Analyte	Result (ug/L)	PQL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	0.50	1	B0I0395	09/22/2020	09/22/20 17:51	
1,1,1-Trichloroethane	ND	0.50	1	B0I0395	09/22/2020	09/22/20 17:51	
1,1,2,2-Tetrachloroethane	ND	0.50	1	B0I0395	09/22/2020	09/22/20 17:51	
1,1,2-Trichloroethane	ND	0.50	1	B0I0395	09/22/2020	09/22/20 17:51	
1,1-Dichloroethane	ND	0.50	1	B0I0395	09/22/2020	09/22/20 17:51	
1,1-Dichloroethene	ND	0.50	1	B0I0395	09/22/2020	09/22/20 17:51	
1,1-Dichloropropene	ND	0.50	1	B0I0395	09/22/2020	09/22/20 17:51	
1,2,3-Trichloropropane	ND	0.50	1	B0I0395	09/22/2020	09/22/20 17:51	
1,2,3-Trichlorobenzene	ND	0.50	1	B0I0395	09/22/2020	09/22/20 17:51	
1,2,4-Trichlorobenzene	ND	0.50	1	B0I0395	09/22/2020	09/22/20 17:51	
1,2,4-Trimethylbenzene	ND	0.50	1	B0I0395	09/22/2020	09/22/20 17:51	
1,2-Dibromo-3-chloropropane	ND	0.50	1	B0I0395	09/22/2020	09/22/20 17:51	
1,2-Dibromoethane	ND	0.50	1	B0I0395	09/22/2020	09/22/20 17:51	
1,2-Dichlorobenzene	ND	0.50	1	B0I0395	09/22/2020	09/22/20 17:51	
1,2-Dichloroethane	ND	0.50	1	B0I0395	09/22/2020	09/22/20 17:51	
1,2-Dichloropropane	ND	0.50	1	B0I0395	09/22/2020	09/22/20 17:51	
1,3,5-Trimethylbenzene	ND	0.50	1	B0I0395	09/22/2020	09/22/20 17:51	
1,3-Dichlorobenzene	ND	0.50	1	B0I0395	09/22/2020	09/22/20 17:51	
1,3-Dichloropropane	ND	0.50	1	B0I0395	09/22/2020	09/22/20 17:51	
1,4-Dichlorobenzene	ND	0.50	1	B0I0395	09/22/2020	09/22/20 17:51	
2,2-Dichloropropane	ND	0.50	1	B0I0395	09/22/2020	09/22/20 17:51	
2-Chlorotoluene	ND	0.50	1	B0I0395	09/22/2020	09/22/20 17:51	
4-Chlorotoluene	ND	0.50	1	B0I0395	09/22/2020	09/22/20 17:51	
4-Isopropyltoluene	ND	0.50	1	B0I0395	09/22/2020	09/22/20 17:51	
Benzene	ND	0.50	1	B0I0395	09/22/2020	09/22/20 17:51	
Bromobenzene	ND	0.50	1	B0I0395	09/22/2020	09/22/20 17:51	
Bromodichloromethane	ND	0.50	1	B0I0395	09/22/2020	09/22/20 17:51	
Bromoform	ND	0.50	1	B0I0395	09/22/2020	09/22/20 17:51	
Bromomethane	ND	0.50	1	B0I0395	09/22/2020	09/22/20 17:51	
Carbon tetrachloride	ND	0.50	1	B0I0395	09/22/2020	09/22/20 17:51	
Chlorobenzene	ND	0.50	1	B0I0395	09/22/2020	09/22/20 17:51	
Chloroethane	ND	0.50	1	B0I0395	09/22/2020	09/22/20 17:51	
Chloroform	ND	0.50	1	B0I0395	09/22/2020	09/22/20 17:51	
Chloromethane	ND	0.50	1	B0I0395	09/22/2020	09/22/20 17:51	
cis-1,2-Dichloroethene	ND	0.50	1	B0I0395	09/22/2020	09/22/20 17:51	
cis-1,3-Dichloropropene	ND	0.50	1	B0I0395	09/22/2020	09/22/20 17:51	
Dibromochloromethane	ND	0.50	1	B0I0395	09/22/2020	09/22/20 17:51	

Certificate of Analysis

Hargis & Associates, Inc.	Project Number : Raytheon Main GETS Mid Month Sample
9171 Towne Centre Drive, Suite 375	Report To : Steve Netto
San Diego , CA 92122	Reported : 09/24/2020

Client Sample ID: TB-091720

Lab ID: 2002158-01

Volatile Organic Compounds by EPA 8260B **Analyst: KL**

Analyte	Result (ug/L)	PQL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Dibromomethane	ND	0.50	1	B0I0395	09/22/2020	09/22/20 17:51	
Dichlorodifluoromethane	ND	0.50	1	B0I0395	09/22/2020	09/22/20 17:51	
Ethylbenzene	ND	0.50	1	B0I0395	09/22/2020	09/22/20 17:51	
Hexachlorobutadiene	ND	0.50	1	B0I0395	09/22/2020	09/22/20 17:51	
Isopropylbenzene	ND	0.50	1	B0I0395	09/22/2020	09/22/20 17:51	
m,p-Xylene	ND	1.0	1	B0I0395	09/22/2020	09/22/20 17:51	
Methylene chloride	ND	1.0	1	B0I0395	09/22/2020	09/22/20 17:51	
n-Butylbenzene	ND	0.50	1	B0I0395	09/22/2020	09/22/20 17:51	
n-Propylbenzene	ND	0.50	1	B0I0395	09/22/2020	09/22/20 17:51	
Naphthalene	ND	0.50	1	B0I0395	09/22/2020	09/22/20 17:51	
o-Xylene	ND	0.50	1	B0I0395	09/22/2020	09/22/20 17:51	
sec-Butylbenzene	ND	0.50	1	B0I0395	09/22/2020	09/22/20 17:51	
Styrene	ND	0.50	1	B0I0395	09/22/2020	09/22/20 17:51	
tert-Butylbenzene	ND	0.50	1	B0I0395	09/22/2020	09/22/20 17:51	
Tetrachloroethene	ND	0.50	1	B0I0395	09/22/2020	09/22/20 17:51	
Toluene	ND	0.50	1	B0I0395	09/22/2020	09/22/20 17:51	
trans-1,2-Dichloroethene	ND	0.50	1	B0I0395	09/22/2020	09/22/20 17:51	
Trichloroethene	ND	0.50	1	B0I0395	09/22/2020	09/22/20 17:51	
Trichlorofluoromethane	ND	0.50	1	B0I0395	09/22/2020	09/22/20 17:51	
Vinyl chloride	ND	0.50	1	B0I0395	09/22/2020	09/22/20 17:51	
Surrogate: 1,2-Dichloroethane-d4	*101 %*	*64 - 155*		B0I0395	09/22/2020	*09/22/20 17:51*	
Surrogate: 4-Bromofluorobenzene	*95.9 %*	*73 - 124*		B0I0395	09/22/2020	*09/22/20 17:51*	
Surrogate: Dibromofluoromethane	*100 %*	*78 - 129*		B0I0395	09/22/2020	*09/22/20 17:51*	
Surrogate: Toluene-d8	*97.0 %*	*84 - 117*		B0I0395	09/22/2020	*09/22/20 17:51*	

Certificate of Analysis

Hargis & Associates, Inc.	Project Number : Raytheon Main GETS Mid Month Sample
9171 Towne Centre Drive, Suite 375	Report To : Steve Netto
San Diego , CA 92122	Reported : 09/24/2020

Client Sample ID: CEFF

Lab ID: 2002158-02

Volatile Organic Compounds by EPA 8260B **Analyst: KL**

Analyte	Result (ug/L)	PQL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	0.50	1	B0I0395	09/22/2020	09/22/20 18:11	
1,1,1-Trichloroethane	ND	0.50	1	B0I0395	09/22/2020	09/22/20 18:11	
1,1,2,2-Tetrachloroethane	ND	0.50	1	B0I0395	09/22/2020	09/22/20 18:11	
1,1,2-Trichloroethane	ND	0.50	1	B0I0395	09/22/2020	09/22/20 18:11	
1,1-Dichloroethane	ND	0.50	1	B0I0395	09/22/2020	09/22/20 18:11	
1,1-Dichloroethene	ND	0.50	1	B0I0395	09/22/2020	09/22/20 18:11	
1,1-Dichloropropene	ND	0.50	1	B0I0395	09/22/2020	09/22/20 18:11	
1,2,3-Trichloropropane	ND	0.50	1	B0I0395	09/22/2020	09/22/20 18:11	
1,2,3-Trichlorobenzene	ND	0.50	1	B0I0395	09/22/2020	09/22/20 18:11	
1,2,4-Trichlorobenzene	ND	0.50	1	B0I0395	09/22/2020	09/22/20 18:11	
1,2,4-Trimethylbenzene	ND	0.50	1	B0I0395	09/22/2020	09/22/20 18:11	
1,2-Dibromo-3-chloropropane	ND	0.50	1	B0I0395	09/22/2020	09/22/20 18:11	
1,2-Dibromoethane	ND	0.50	1	B0I0395	09/22/2020	09/22/20 18:11	
1,2-Dichlorobenzene	ND	0.50	1	B0I0395	09/22/2020	09/22/20 18:11	
1,2-Dichloroethane	ND	0.50	1	B0I0395	09/22/2020	09/22/20 18:11	
1,2-Dichloropropane	ND	0.50	1	B0I0395	09/22/2020	09/22/20 18:11	
1,3,5-Trimethylbenzene	ND	0.50	1	B0I0395	09/22/2020	09/22/20 18:11	
1,3-Dichlorobenzene	ND	0.50	1	B0I0395	09/22/2020	09/22/20 18:11	
1,3-Dichloropropane	ND	0.50	1	B0I0395	09/22/2020	09/22/20 18:11	
1,4-Dichlorobenzene	ND	0.50	1	B0I0395	09/22/2020	09/22/20 18:11	
2,2-Dichloropropane	ND	0.50	1	B0I0395	09/22/2020	09/22/20 18:11	
2-Chlorotoluene	ND	0.50	1	B0I0395	09/22/2020	09/22/20 18:11	
4-Chlorotoluene	ND	0.50	1	B0I0395	09/22/2020	09/22/20 18:11	
4-Isopropyltoluene	ND	0.50	1	B0I0395	09/22/2020	09/22/20 18:11	
Benzene	ND	0.50	1	B0I0395	09/22/2020	09/22/20 18:11	
Bromobenzene	ND	0.50	1	B0I0395	09/22/2020	09/22/20 18:11	
Bromodichloromethane	ND	0.50	1	B0I0395	09/22/2020	09/22/20 18:11	
Bromoform	ND	0.50	1	B0I0395	09/22/2020	09/22/20 18:11	
Bromomethane	ND	0.50	1	B0I0395	09/22/2020	09/22/20 18:11	
Carbon tetrachloride	ND	0.50	1	B0I0395	09/22/2020	09/22/20 18:11	
Chlorobenzene	ND	0.50	1	B0I0395	09/22/2020	09/22/20 18:11	
Chloroethane	ND	0.50	1	B0I0395	09/22/2020	09/22/20 18:11	
Chloroform	ND	0.50	1	B0I0395	09/22/2020	09/22/20 18:11	
Chloromethane	ND	0.50	1	B0I0395	09/22/2020	09/22/20 18:11	
cis-1,2-Dichloroethene	ND	0.50	1	B0I0395	09/22/2020	09/22/20 18:11	
cis-1,3-Dichloropropene	ND	0.50	1	B0I0395	09/22/2020	09/22/20 18:11	
Dibromochloromethane	ND	0.50	1	B0I0395	09/22/2020	09/22/20 18:11	

Certificate of Analysis

Hargis & Associates, Inc.	Project Number : Raytheon Main GETS Mid Month Sample
9171 Towne Centre Drive, Suite 375	Report To : Steve Netto
San Diego , CA 92122	Reported : 09/24/2020

Client Sample ID: CEFF

Lab ID: 2002158-02

Volatile Organic Compounds by EPA 8260B **Analyst: KL**

Analyte	Result (ug/L)	PQL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Dibromomethane	ND	0.50	1	B0I0395	09/22/2020	09/22/20 18:11	
Dichlorodifluoromethane	ND	0.50	1	B0I0395	09/22/2020	09/22/20 18:11	
Ethylbenzene	ND	0.50	1	B0I0395	09/22/2020	09/22/20 18:11	
Hexachlorobutadiene	ND	0.50	1	B0I0395	09/22/2020	09/22/20 18:11	
Isopropylbenzene	ND	0.50	1	B0I0395	09/22/2020	09/22/20 18:11	
m,p-Xylene	ND	1.0	1	B0I0395	09/22/2020	09/22/20 18:11	
Methylene chloride	ND	1.0	1	B0I0395	09/22/2020	09/22/20 18:11	
n-Butylbenzene	ND	0.50	1	B0I0395	09/22/2020	09/22/20 18:11	
n-Propylbenzene	ND	0.50	1	B0I0395	09/22/2020	09/22/20 18:11	
Naphthalene	ND	0.50	1	B0I0395	09/22/2020	09/22/20 18:11	
o-Xylene	ND	0.50	1	B0I0395	09/22/2020	09/22/20 18:11	
sec-Butylbenzene	ND	0.50	1	B0I0395	09/22/2020	09/22/20 18:11	
Styrene	ND	0.50	1	B0I0395	09/22/2020	09/22/20 18:11	
tert-Butylbenzene	ND	0.50	1	B0I0395	09/22/2020	09/22/20 18:11	
Tetrachloroethene	ND	0.50	1	B0I0395	09/22/2020	09/22/20 18:11	
Toluene	ND	0.50	1	B0I0395	09/22/2020	09/22/20 18:11	
trans-1,2-Dichloroethene	ND	0.50	1	B0I0395	09/22/2020	09/22/20 18:11	
Trichloroethene	ND	0.50	1	B0I0395	09/22/2020	09/22/20 18:11	
Trichlorofluoromethane	ND	0.50	1	B0I0395	09/22/2020	09/22/20 18:11	
Vinyl chloride	ND	0.50	1	B0I0395	09/22/2020	09/22/20 18:11	
Surrogate: 1,2-Dichloroethane-d4	*101 %*	*64 - 155*		B0I0395	09/22/2020	*09/22/20 18:11*	
Surrogate: 4-Bromofluorobenzene	*97.2 %*	*73 - 124*		B0I0395	09/22/2020	*09/22/20 18:11*	
Surrogate: Dibromofluoromethane	*98.5 %*	*78 - 129*		B0I0395	09/22/2020	*09/22/20 18:11*	
Surrogate: Toluene-d8	*98.9 %*	*84 - 117*		B0I0395	09/22/2020	*09/22/20 18:11*	

Certificate of Analysis

Hargis & Associates, Inc.	Project Number : Raytheon Main GETS Mid Month Sample
9171 Towne Centre Drive, Suite 375	Report To : Steve Netto
San Diego , CA 92122	Reported : 09/24/2020

Client Sample ID: CEFF

Lab ID: 2002158-02

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

Analyte		Result (ug/L)	PQL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,4-Dioxane		ND	0.20	1	B0I0452	09/22/2020	09/22/20 19:05	
Surrogate: 1,2-Dichlorobenzene-d4	*76.4 %*		*13 - 99*		B0I0452	09/22/2020	*09/22/20 19:05*	
Surrogate: 2-Fluorobiphenyl	*79.8 %*		*8 - 111*		B0I0452	09/22/2020	*09/22/20 19:05*	
Surrogate: 4-Terphenyl-d14	*74.1 %*		*12 - 113*		B0I0452	09/22/2020	*09/22/20 19:05*	
Surrogate: Nitrobenzene-d5	*60.2 %*		*15 - 121*		B0I0452	09/22/2020	*09/22/20 19:05*	

Certificate of Analysis

Hargis & Associates, Inc.	Project Number : Raytheon Main GETS Mid Month Sample
9171 Towne Centre Drive, Suite 375	Report To : Steve Netto
San Diego , CA 92122	Reported : 09/24/2020

Client Sample ID: CBT

Lab ID: 2002158-03

Volatile Organic Compounds by EPA 8260B **Analyst: KL**

Analyte	Result (ug/L)	PQL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	0.50	1	B0I0395	09/22/2020	09/22/20 18:31	
1,1,1-Trichloroethane	ND	0.50	1	B0I0395	09/22/2020	09/22/20 18:31	
1,1,2,2-Tetrachloroethane	ND	0.50	1	B0I0395	09/22/2020	09/22/20 18:31	
1,1,2-Trichloroethane	ND	0.50	1	B0I0395	09/22/2020	09/22/20 18:31	
1,1-Dichloroethane	ND	0.50	1	B0I0395	09/22/2020	09/22/20 18:31	
1,1-Dichloroethene	ND	0.50	1	B0I0395	09/22/2020	09/22/20 18:31	
1,1-Dichloropropene	ND	0.50	1	B0I0395	09/22/2020	09/22/20 18:31	
1,2,3-Trichloropropane	ND	0.50	1	B0I0395	09/22/2020	09/22/20 18:31	
1,2,3-Trichlorobenzene	ND	0.50	1	B0I0395	09/22/2020	09/22/20 18:31	
1,2,4-Trichlorobenzene	ND	0.50	1	B0I0395	09/22/2020	09/22/20 18:31	
1,2,4-Trimethylbenzene	ND	0.50	1	B0I0395	09/22/2020	09/22/20 18:31	
1,2-Dibromo-3-chloropropane	ND	0.50	1	B0I0395	09/22/2020	09/22/20 18:31	
1,2-Dibromoethane	ND	0.50	1	B0I0395	09/22/2020	09/22/20 18:31	
1,2-Dichlorobenzene	ND	0.50	1	B0I0395	09/22/2020	09/22/20 18:31	
1,2-Dichloroethane	ND	0.50	1	B0I0395	09/22/2020	09/22/20 18:31	
1,2-Dichloropropane	ND	0.50	1	B0I0395	09/22/2020	09/22/20 18:31	
1,3,5-Trimethylbenzene	ND	0.50	1	B0I0395	09/22/2020	09/22/20 18:31	
1,3-Dichlorobenzene	ND	0.50	1	B0I0395	09/22/2020	09/22/20 18:31	
1,3-Dichloropropane	ND	0.50	1	B0I0395	09/22/2020	09/22/20 18:31	
1,4-Dichlorobenzene	ND	0.50	1	B0I0395	09/22/2020	09/22/20 18:31	
2,2-Dichloropropane	ND	0.50	1	B0I0395	09/22/2020	09/22/20 18:31	
2-Chlorotoluene	ND	0.50	1	B0I0395	09/22/2020	09/22/20 18:31	
4-Chlorotoluene	ND	0.50	1	B0I0395	09/22/2020	09/22/20 18:31	
4-Isopropyltoluene	ND	0.50	1	B0I0395	09/22/2020	09/22/20 18:31	
Benzene	ND	0.50	1	B0I0395	09/22/2020	09/22/20 18:31	
Bromobenzene	ND	0.50	1	B0I0395	09/22/2020	09/22/20 18:31	
Bromodichloromethane	ND	0.50	1	B0I0395	09/22/2020	09/22/20 18:31	
Bromoform	ND	0.50	1	B0I0395	09/22/2020	09/22/20 18:31	
Bromomethane	ND	0.50	1	B0I0395	09/22/2020	09/22/20 18:31	
Carbon tetrachloride	ND	0.50	1	B0I0395	09/22/2020	09/22/20 18:31	
Chlorobenzene	ND	0.50	1	B0I0395	09/22/2020	09/22/20 18:31	
Chloroethane	ND	0.50	1	B0I0395	09/22/2020	09/22/20 18:31	
Chloroform	ND	0.50	1	B0I0395	09/22/2020	09/22/20 18:31	
Chloromethane	ND	0.50	1	B0I0395	09/22/2020	09/22/20 18:31	
cis-1,2-Dichloroethene	ND	0.50	1	B0I0395	09/22/2020	09/22/20 18:31	
cis-1,3-Dichloropropene	ND	0.50	1	B0I0395	09/22/2020	09/22/20 18:31	
Dibromochloromethane	ND	0.50	1	B0I0395	09/22/2020	09/22/20 18:31	

Certificate of Analysis

Hargis & Associates, Inc.	Project Number : Raytheon Main GETS Mid Month Sample
9171 Towne Centre Drive, Suite 375	Report To : Steve Netto
San Diego , CA 92122	Reported : 09/24/2020

Client Sample ID: CBT

Lab ID: 2002158-03

Volatile Organic Compounds by EPA 8260B **Analyst: KL**

Analyte	Result (ug/L)	PQL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Dibromomethane	ND	0.50	1	B0I0395	09/22/2020	09/22/20 18:31	
Dichlorodifluoromethane	ND	0.50	1	B0I0395	09/22/2020	09/22/20 18:31	
Ethylbenzene	ND	0.50	1	B0I0395	09/22/2020	09/22/20 18:31	
Hexachlorobutadiene	ND	0.50	1	B0I0395	09/22/2020	09/22/20 18:31	
Isopropylbenzene	ND	0.50	1	B0I0395	09/22/2020	09/22/20 18:31	
m,p-Xylene	ND	1.0	1	B0I0395	09/22/2020	09/22/20 18:31	
Methylene chloride	ND	1.0	1	B0I0395	09/22/2020	09/22/20 18:31	
n-Butylbenzene	ND	0.50	1	B0I0395	09/22/2020	09/22/20 18:31	
n-Propylbenzene	ND	0.50	1	B0I0395	09/22/2020	09/22/20 18:31	
Naphthalene	ND	0.50	1	B0I0395	09/22/2020	09/22/20 18:31	
o-Xylene	ND	0.50	1	B0I0395	09/22/2020	09/22/20 18:31	
sec-Butylbenzene	ND	0.50	1	B0I0395	09/22/2020	09/22/20 18:31	
Styrene	ND	0.50	1	B0I0395	09/22/2020	09/22/20 18:31	
tert-Butylbenzene	ND	0.50	1	B0I0395	09/22/2020	09/22/20 18:31	
Tetrachloroethene	ND	0.50	1	B0I0395	09/22/2020	09/22/20 18:31	
Toluene	ND	0.50	1	B0I0395	09/22/2020	09/22/20 18:31	
trans-1,2-Dichloroethene	ND	0.50	1	B0I0395	09/22/2020	09/22/20 18:31	
Trichloroethene	ND	0.50	1	B0I0395	09/22/2020	09/22/20 18:31	
Trichlorofluoromethane	**0.91**	0.50	1	B0I0395	09/22/2020	09/22/20 18:31	
Vinyl chloride	ND	0.50	1	B0I0395	09/22/2020	09/22/20 18:31	
Surrogate: 1,2-Dichloroethane-d4	*98.2 %*	*64 - 155*		B0I0395	09/22/2020	*09/22/20 18:31*	
Surrogate: 4-Bromofluorobenzene	*97.0 %*	*73 - 124*		B0I0395	09/22/2020	*09/22/20 18:31*	
Surrogate: Dibromofluoromethane	*98.6 %*	*78 - 129*		B0I0395	09/22/2020	*09/22/20 18:31*	
Surrogate: Toluene-d8	*97.1 %*	*84 - 117*		B0I0395	09/22/2020	*09/22/20 18:31*	

Certificate of Analysis

Hargis & Associates, Inc.	Project Number : Raytheon Main GETS Mid Month Sample
9171 Towne Centre Drive, Suite 375	Report To : Steve Netto
San Diego , CA 92122	Reported : 09/24/2020

Client Sample ID: CBT

Lab ID: 2002158-03

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

Analyte		Result (ug/L)	PQL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,4-Dioxane		ND	0.20	1	B0I0452	09/22/2020	09/22/20 19:32	
Surrogate: 1,2-Dichlorobenzene-d4	*79.2 %*		*13 - 99*		B0I0452	09/22/2020	*09/22/20 19:32*	
Surrogate: 2-Fluorobiphenyl	*83.1 %*		*8 - 111*		B0I0452	09/22/2020	*09/22/20 19:32*	
Surrogate: 4-Terphenyl-d14	*76.1 %*		*12 - 113*		B0I0452	09/22/2020	*09/22/20 19:32*	
Surrogate: Nitrobenzene-d5	*62.1 %*		*15 - 121*		B0I0452	09/22/2020	*09/22/20 19:32*	

Certificate of Analysis

Hargis & Associates, Inc.	Project Number : Raytheon Main GETS Mid Month Sample
9171 Towne Centre Drive, Suite 375	Report To : Steve Netto
San Diego , CA 92122	Reported : 09/24/2020

Client Sample ID: POX

Lab ID: 2002158-04

Volatile Organic Compounds by EPA 8260B **Analyst: KL**

Analyte	Result (ug/L)	PQL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	0.50	1	B0I0395	09/22/2020	09/22/20 18:51	
1,1,1-Trichloroethane	ND	0.50	1	B0I0395	09/22/2020	09/22/20 18:51	
1,1,2,2-Tetrachloroethane	ND	0.50	1	B0I0395	09/22/2020	09/22/20 18:51	
1,1,2-Trichloroethane	ND	0.50	1	B0I0395	09/22/2020	09/22/20 18:51	
1,1-Dichloroethane	ND	0.50	1	B0I0395	09/22/2020	09/22/20 18:51	
1,1-Dichloroethene	ND	0.50	1	B0I0395	09/22/2020	09/22/20 18:51	
1,1-Dichloropropene	ND	0.50	1	B0I0395	09/22/2020	09/22/20 18:51	
1,2,3-Trichloropropane	ND	0.50	1	B0I0395	09/22/2020	09/22/20 18:51	
1,2,3-Trichlorobenzene	ND	0.50	1	B0I0395	09/22/2020	09/22/20 18:51	
1,2,4-Trichlorobenzene	ND	0.50	1	B0I0395	09/22/2020	09/22/20 18:51	
1,2,4-Trimethylbenzene	ND	0.50	1	B0I0395	09/22/2020	09/22/20 18:51	
1,2-Dibromo-3-chloropropane	ND	0.50	1	B0I0395	09/22/2020	09/22/20 18:51	
1,2-Dibromoethane	ND	0.50	1	B0I0395	09/22/2020	09/22/20 18:51	
1,2-Dichlorobenzene	ND	0.50	1	B0I0395	09/22/2020	09/22/20 18:51	
1,2-Dichloroethane	ND	0.50	1	B0I0395	09/22/2020	09/22/20 18:51	
1,2-Dichloropropane	ND	0.50	1	B0I0395	09/22/2020	09/22/20 18:51	
1,3,5-Trimethylbenzene	ND	0.50	1	B0I0395	09/22/2020	09/22/20 18:51	
1,3-Dichlorobenzene	ND	0.50	1	B0I0395	09/22/2020	09/22/20 18:51	
1,3-Dichloropropane	ND	0.50	1	B0I0395	09/22/2020	09/22/20 18:51	
1,4-Dichlorobenzene	ND	0.50	1	B0I0395	09/22/2020	09/22/20 18:51	
2,2-Dichloropropane	ND	0.50	1	B0I0395	09/22/2020	09/22/20 18:51	
2-Chlorotoluene	ND	0.50	1	B0I0395	09/22/2020	09/22/20 18:51	
4-Chlorotoluene	ND	0.50	1	B0I0395	09/22/2020	09/22/20 18:51	
4-Isopropyltoluene	ND	0.50	1	B0I0395	09/22/2020	09/22/20 18:51	
Benzene	ND	0.50	1	B0I0395	09/22/2020	09/22/20 18:51	
Bromobenzene	ND	0.50	1	B0I0395	09/22/2020	09/22/20 18:51	
Bromodichloromethane	ND	0.50	1	B0I0395	09/22/2020	09/22/20 18:51	
Bromoform	ND	0.50	1	B0I0395	09/22/2020	09/22/20 18:51	
Bromomethane	ND	0.50	1	B0I0395	09/22/2020	09/22/20 18:51	
Carbon tetrachloride	ND	0.50	1	B0I0395	09/22/2020	09/22/20 18:51	
Chlorobenzene	ND	0.50	1	B0I0395	09/22/2020	09/22/20 18:51	
Chloroethane	ND	0.50	1	B0I0395	09/22/2020	09/22/20 18:51	
Chloroform	ND	0.50	1	B0I0395	09/22/2020	09/22/20 18:51	
Chloromethane	ND	0.50	1	B0I0395	09/22/2020	09/22/20 18:51	
cis-1,2-Dichloroethene	ND	0.50	1	B0I0395	09/22/2020	09/22/20 18:51	
cis-1,3-Dichloropropene	ND	0.50	1	B0I0395	09/22/2020	09/22/20 18:51	
Dibromochloromethane	ND	0.50	1	B0I0395	09/22/2020	09/22/20 18:51	

Certificate of Analysis

Hargis & Associates, Inc.	Project Number : Raytheon Main GETS Mid Month Sample
9171 Towne Centre Drive, Suite 375	Report To : Steve Netto
San Diego , CA 92122	Reported : 09/24/2020

Client Sample ID: POX

Lab ID: 2002158-04

Volatile Organic Compounds by EPA 8260B **Analyst: KL**

Analyte	Result (ug/L)	PQL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Dibromomethane	ND	0.50	1	B0I0395	09/22/2020	09/22/20 18:51	
Dichlorodifluoromethane	ND	0.50	1	B0I0395	09/22/2020	09/22/20 18:51	
Ethylbenzene	ND	0.50	1	B0I0395	09/22/2020	09/22/20 18:51	
Hexachlorobutadiene	ND	0.50	1	B0I0395	09/22/2020	09/22/20 18:51	
Isopropylbenzene	ND	0.50	1	B0I0395	09/22/2020	09/22/20 18:51	
m,p-Xylene	ND	1.0	1	B0I0395	09/22/2020	09/22/20 18:51	
Methylene chloride	ND	1.0	1	B0I0395	09/22/2020	09/22/20 18:51	
n-Butylbenzene	ND	0.50	1	B0I0395	09/22/2020	09/22/20 18:51	
n-Propylbenzene	ND	0.50	1	B0I0395	09/22/2020	09/22/20 18:51	
Naphthalene	ND	0.50	1	B0I0395	09/22/2020	09/22/20 18:51	
o-Xylene	ND	0.50	1	B0I0395	09/22/2020	09/22/20 18:51	
sec-Butylbenzene	ND	0.50	1	B0I0395	09/22/2020	09/22/20 18:51	
Styrene	ND	0.50	1	B0I0395	09/22/2020	09/22/20 18:51	
tert-Butylbenzene	ND	0.50	1	B0I0395	09/22/2020	09/22/20 18:51	
Tetrachloroethene	ND	0.50	1	B0I0395	09/22/2020	09/22/20 18:51	
Toluene	ND	0.50	1	B0I0395	09/22/2020	09/22/20 18:51	
trans-1,2-Dichloroethene	ND	0.50	1	B0I0395	09/22/2020	09/22/20 18:51	
Trichloroethene	ND	0.50	1	B0I0395	09/22/2020	09/22/20 18:51	
Trichlorofluoromethane	ND	0.50	1	B0I0395	09/22/2020	09/22/20 18:51	
Vinyl chloride	ND	0.50	1	B0I0395	09/22/2020	09/22/20 18:51	
Surrogate: 1,2-Dichloroethane-d4	*96.5 %*	*64 - 155*		B0I0395	09/22/2020	*09/22/20 18:51*	
Surrogate: 4-Bromofluorobenzene	*96.4 %*	*73 - 124*		B0I0395	09/22/2020	*09/22/20 18:51*	
Surrogate: Dibromofluoromethane	*98.9 %*	*78 - 129*		B0I0395	09/22/2020	*09/22/20 18:51*	
Surrogate: Toluene-d8	*96.0 %*	*84 - 117*		B0I0395	09/22/2020	*09/22/20 18:51*	

Certificate of Analysis

Hargis & Associates, Inc.	Project Number : Raytheon Main GETS Mid Month Sample
9171 Towne Centre Drive, Suite 375	Report To : Steve Netto
San Diego , CA 92122	Reported : 09/24/2020

Client Sample ID: POX

Lab ID: 2002158-04

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

Analyte		Result (ug/L)	PQL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,4-Dioxane		ND	0.20	1	B0I0452	09/22/2020	09/22/20 19:58	
Surrogate: 1,2-Dichlorobenzene-d4	*73.4 %*		*13 - 99*		B0I0452	09/22/2020	*09/22/20 19:58*	
Surrogate: 2-Fluorobiphenyl	*78.0 %*		*8 - 111*		B0I0452	09/22/2020	*09/22/20 19:58*	
Surrogate: 4-Terphenyl-d14	*71.7 %*		*12 - 113*		B0I0452	09/22/2020	*09/22/20 19:58*	
Surrogate: Nitrobenzene-d5	*58.3 %*		*15 - 121*		B0I0452	09/22/2020	*09/22/20 19:58*	

Certificate of Analysis

Hargis & Associates, Inc.	Project Number : Raytheon Main GETS Mid Month Sample
9171 Towne Centre Drive, Suite 375	Report To : Steve Netto
San Diego , CA 92122	Reported : 09/24/2020

Client Sample ID: INF

Lab ID: 2002158-05

Volatile Organic Compounds by EPA 8260B **Analyst: KL**

Analyte	Result (ug/L)	PQL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	0.50	1	B0I0395	09/22/2020	09/22/20 19:12	
1,1,1-Trichloroethane	ND	0.50	1	B0I0395	09/22/2020	09/22/20 19:12	
1,1,2,2-Tetrachloroethane	ND	0.50	1	B0I0395	09/22/2020	09/22/20 19:12	
1,1,2-Trichloroethane	ND	0.50	1	B0I0395	09/22/2020	09/22/20 19:12	
1,1-Dichloroethane	ND	0.50	1	B0I0395	09/22/2020	09/22/20 19:12	
1,1-Dichloroethene	**43**	0.50	1	B0I0395	09/22/2020	09/22/20 19:12	
1,1-Dichloropropene	ND	0.50	1	B0I0395	09/22/2020	09/22/20 19:12	
1,2,3-Trichloropropane	ND	0.50	1	B0I0395	09/22/2020	09/22/20 19:12	
1,2,3-Trichlorobenzene	ND	0.50	1	B0I0395	09/22/2020	09/22/20 19:12	
1,2,4-Trichlorobenzene	ND	0.50	1	B0I0395	09/22/2020	09/22/20 19:12	
1,2,4-Trimethylbenzene	ND	0.50	1	B0I0395	09/22/2020	09/22/20 19:12	
1,2-Dibromo-3-chloropropane	ND	0.50	1	B0I0395	09/22/2020	09/22/20 19:12	
1,2-Dibromoethane	ND	0.50	1	B0I0395	09/22/2020	09/22/20 19:12	
1,2-Dichlorobenzene	ND	0.50	1	B0I0395	09/22/2020	09/22/20 19:12	
1,2-Dichloroethane	ND	0.50	1	B0I0395	09/22/2020	09/22/20 19:12	
1,2-Dichloropropane	ND	0.50	1	B0I0395	09/22/2020	09/22/20 19:12	
1,3,5-Trimethylbenzene	ND	0.50	1	B0I0395	09/22/2020	09/22/20 19:12	
1,3-Dichlorobenzene	ND	0.50	1	B0I0395	09/22/2020	09/22/20 19:12	
1,3-Dichloropropane	ND	0.50	1	B0I0395	09/22/2020	09/22/20 19:12	
1,4-Dichlorobenzene	ND	0.50	1	B0I0395	09/22/2020	09/22/20 19:12	
2,2-Dichloropropane	ND	0.50	1	B0I0395	09/22/2020	09/22/20 19:12	
2-Chlorotoluene	ND	0.50	1	B0I0395	09/22/2020	09/22/20 19:12	
4-Chlorotoluene	ND	0.50	1	B0I0395	09/22/2020	09/22/20 19:12	
4-Isopropyltoluene	ND	0.50	1	B0I0395	09/22/2020	09/22/20 19:12	
Benzene	ND	0.50	1	B0I0395	09/22/2020	09/22/20 19:12	
Bromobenzene	ND	0.50	1	B0I0395	09/22/2020	09/22/20 19:12	
Bromodichloromethane	ND	0.50	1	B0I0395	09/22/2020	09/22/20 19:12	
Bromoform	ND	0.50	1	B0I0395	09/22/2020	09/22/20 19:12	
Bromomethane	ND	0.50	1	B0I0395	09/22/2020	09/22/20 19:12	
Carbon tetrachloride	ND	0.50	1	B0I0395	09/22/2020	09/22/20 19:12	
Chlorobenzene	ND	0.50	1	B0I0395	09/22/2020	09/22/20 19:12	
Chloroethane	ND	0.50	1	B0I0395	09/22/2020	09/22/20 19:12	
Chloroform	ND	0.50	1	B0I0395	09/22/2020	09/22/20 19:12	
Chloromethane	ND	0.50	1	B0I0395	09/22/2020	09/22/20 19:12	
cis-1,2-Dichloroethene	ND	0.50	1	B0I0395	09/22/2020	09/22/20 19:12	
cis-1,3-Dichloropropene	ND	0.50	1	B0I0395	09/22/2020	09/22/20 19:12	
Dibromochloromethane	ND	0.50	1	B0I0395	09/22/2020	09/22/20 19:12	

Certificate of Analysis

Hargis & Associates, Inc.	Project Number : Raytheon Main GETS Mid Month Sample
9171 Towne Centre Drive, Suite 375	Report To : Steve Netto
San Diego , CA 92122	Reported : 09/24/2020

Client Sample ID: INF

Lab ID: 2002158-05

Volatile Organic Compounds by EPA 8260B **Analyst: KL**

Analyte	Result (ug/L)	PQL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Dibromomethane	ND	0.50	1	B0I0395	09/22/2020	09/22/20 19:12	
Dichlorodifluoromethane	ND	0.50	1	B0I0395	09/22/2020	09/22/20 19:12	
Ethylbenzene	ND	0.50	1	B0I0395	09/22/2020	09/22/20 19:12	
Hexachlorobutadiene	ND	0.50	1	B0I0395	09/22/2020	09/22/20 19:12	
Isopropylbenzene	ND	0.50	1	B0I0395	09/22/2020	09/22/20 19:12	
m,p-Xylene	ND	1.0	1	B0I0395	09/22/2020	09/22/20 19:12	
Methylene chloride	ND	1.0	1	B0I0395	09/22/2020	09/22/20 19:12	
n-Butylbenzene	ND	0.50	1	B0I0395	09/22/2020	09/22/20 19:12	
n-Propylbenzene	ND	0.50	1	B0I0395	09/22/2020	09/22/20 19:12	
Naphthalene	ND	0.50	1	B0I0395	09/22/2020	09/22/20 19:12	
o-Xylene	ND	0.50	1	B0I0395	09/22/2020	09/22/20 19:12	
sec-Butylbenzene	ND	0.50	1	B0I0395	09/22/2020	09/22/20 19:12	
Styrene	ND	0.50	1	B0I0395	09/22/2020	09/22/20 19:12	
tert-Butylbenzene	ND	0.50	1	B0I0395	09/22/2020	09/22/20 19:12	
Tetrachloroethene	ND	0.50	1	B0I0395	09/22/2020	09/22/20 19:12	
Toluene	ND	0.50	1	B0I0395	09/22/2020	09/22/20 19:12	
trans-1,2-Dichloroethene	ND	0.50	1	B0I0395	09/22/2020	09/22/20 19:12	
Trichloroethene	ND	0.50	1	B0I0395	09/22/2020	09/22/20 19:12	
Trichlorofluoromethane	ND	0.50	1	B0I0395	09/22/2020	09/22/20 19:12	
Vinyl chloride	ND	0.50	1	B0I0395	09/22/2020	09/22/20 19:12	
Surrogate: 1,2-Dichloroethane-d4	*98.9 %*	*64 - 155*		B0I0395	09/22/2020	*09/22/20 19:12*	
Surrogate: 4-Bromofluorobenzene	*94.1 %*	*73 - 124*		B0I0395	09/22/2020	*09/22/20 19:12*	
Surrogate: Dibromofluoromethane	*100 %*	*78 - 129*		B0I0395	09/22/2020	*09/22/20 19:12*	
Surrogate: Toluene-d8	*96.3 %*	*84 - 117*		B0I0395	09/22/2020	*09/22/20 19:12*	

Certificate of Analysis

Hargis & Associates, Inc.	Project Number : Raytheon Main GETS Mid Month Sample
9171 Towne Centre Drive, Suite 375	Report To : Steve Netto
San Diego , CA 92122	Reported : 09/24/2020

Client Sample ID: INF

Lab ID: 2002158-05

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

Analyte		Result (ug/L)	PQL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,4-Dioxane		**23**	2.0	1	B0I0451	09/22/2020	09/22/20 20:06	
Surrogate: 1,2-Dichlorobenzene-d4	*68.7 %*		*17 - 119*		B0I0451	09/22/2020	*09/22/20 20:06*	
Surrogate: 2-Fluorobiphenyl	*73.1 %*		*10 - 133*		B0I0451	09/22/2020	*09/22/20 20:06*	
Surrogate: 4-Terphenyl-d14	*76.1 %*		*5 - 139*		B0I0451	09/22/2020	*09/22/20 20:06*	
Surrogate: Nitrobenzene-d5	*71.1 %*		*13 - 150*		B0I0451	09/22/2020	*09/22/20 20:06*	

Certificate of Analysis

Hargis & Associates, Inc.	Project Number : Raytheon Main GETS Mid Month Sample
9171 Towne Centre Drive, Suite 375	Report To : Steve Netto
San Diego , CA 92122	Reported : 09/24/2020

Client Sample ID: EW-02

Lab ID: 2002158-06

Volatile Organic Compounds by EPA 8260B **Analyst: KL**

Analyte	Result (ug/L)	PQL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	0.50	1	B0I0395	09/22/2020	09/22/20 19:32	
1,1,1-Trichloroethane	ND	0.50	1	B0I0395	09/22/2020	09/22/20 19:32	
1,1,2,2-Tetrachloroethane	ND	0.50	1	B0I0395	09/22/2020	09/22/20 19:32	
1,1,2-Trichloroethane	ND	0.50	1	B0I0395	09/22/2020	09/22/20 19:32	
1,1-Dichloroethane	ND	0.50	1	B0I0395	09/22/2020	09/22/20 19:32	
1,1-Dichloroethene	**18**	0.50	1	B0I0395	09/22/2020	09/22/20 19:32	
1,1-Dichloropropene	ND	0.50	1	B0I0395	09/22/2020	09/22/20 19:32	
1,2,3-Trichloropropane	ND	0.50	1	B0I0395	09/22/2020	09/22/20 19:32	
1,2,3-Trichlorobenzene	ND	0.50	1	B0I0395	09/22/2020	09/22/20 19:32	
1,2,4-Trichlorobenzene	ND	0.50	1	B0I0395	09/22/2020	09/22/20 19:32	
1,2,4-Trimethylbenzene	ND	0.50	1	B0I0395	09/22/2020	09/22/20 19:32	
1,2-Dibromo-3-chloropropane	ND	0.50	1	B0I0395	09/22/2020	09/22/20 19:32	
1,2-Dibromoethane	ND	0.50	1	B0I0395	09/22/2020	09/22/20 19:32	
1,2-Dichlorobenzene	ND	0.50	1	B0I0395	09/22/2020	09/22/20 19:32	
1,2-Dichloroethane	ND	0.50	1	B0I0395	09/22/2020	09/22/20 19:32	
1,2-Dichloropropane	ND	0.50	1	B0I0395	09/22/2020	09/22/20 19:32	
1,3,5-Trimethylbenzene	ND	0.50	1	B0I0395	09/22/2020	09/22/20 19:32	
1,3-Dichlorobenzene	ND	0.50	1	B0I0395	09/22/2020	09/22/20 19:32	
1,3-Dichloropropane	ND	0.50	1	B0I0395	09/22/2020	09/22/20 19:32	
1,4-Dichlorobenzene	ND	0.50	1	B0I0395	09/22/2020	09/22/20 19:32	
2,2-Dichloropropane	ND	0.50	1	B0I0395	09/22/2020	09/22/20 19:32	
2-Chlorotoluene	ND	0.50	1	B0I0395	09/22/2020	09/22/20 19:32	
4-Chlorotoluene	ND	0.50	1	B0I0395	09/22/2020	09/22/20 19:32	
4-Isopropyltoluene	ND	0.50	1	B0I0395	09/22/2020	09/22/20 19:32	
Benzene	ND	0.50	1	B0I0395	09/22/2020	09/22/20 19:32	
Bromobenzene	ND	0.50	1	B0I0395	09/22/2020	09/22/20 19:32	
Bromodichloromethane	ND	0.50	1	B0I0395	09/22/2020	09/22/20 19:32	
Bromoform	ND	0.50	1	B0I0395	09/22/2020	09/22/20 19:32	
Bromomethane	ND	0.50	1	B0I0395	09/22/2020	09/22/20 19:32	
Carbon tetrachloride	ND	0.50	1	B0I0395	09/22/2020	09/22/20 19:32	
Chlorobenzene	ND	0.50	1	B0I0395	09/22/2020	09/22/20 19:32	
Chloroethane	ND	0.50	1	B0I0395	09/22/2020	09/22/20 19:32	
Chloroform	ND	0.50	1	B0I0395	09/22/2020	09/22/20 19:32	
Chloromethane	ND	0.50	1	B0I0395	09/22/2020	09/22/20 19:32	
cis-1,2-Dichloroethene	ND	0.50	1	B0I0395	09/22/2020	09/22/20 19:32	
cis-1,3-Dichloropropene	ND	0.50	1	B0I0395	09/22/2020	09/22/20 19:32	
Dibromochloromethane	ND	0.50	1	B0I0395	09/22/2020	09/22/20 19:32	

Certificate of Analysis

Hargis & Associates, Inc.	Project Number : Raytheon Main GETS Mid Month Sample
9171 Towne Centre Drive, Suite 375	Report To : Steve Netto
San Diego , CA 92122	Reported : 09/24/2020

Client Sample ID: EW-02

Lab ID: 2002158-06

Volatile Organic Compounds by EPA 8260B **Analyst: KL**

Analyte	Result (ug/L)	PQL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Dibromomethane	ND	0.50	1	B0I0395	09/22/2020	09/22/20 19:32	
Dichlorodifluoromethane	ND	0.50	1	B0I0395	09/22/2020	09/22/20 19:32	
Ethylbenzene	ND	0.50	1	B0I0395	09/22/2020	09/22/20 19:32	
Hexachlorobutadiene	ND	0.50	1	B0I0395	09/22/2020	09/22/20 19:32	
Isopropylbenzene	ND	0.50	1	B0I0395	09/22/2020	09/22/20 19:32	
m,p-Xylene	ND	1.0	1	B0I0395	09/22/2020	09/22/20 19:32	
Methylene chloride	ND	1.0	1	B0I0395	09/22/2020	09/22/20 19:32	
n-Butylbenzene	ND	0.50	1	B0I0395	09/22/2020	09/22/20 19:32	
n-Propylbenzene	ND	0.50	1	B0I0395	09/22/2020	09/22/20 19:32	
Naphthalene	ND	0.50	1	B0I0395	09/22/2020	09/22/20 19:32	
o-Xylene	ND	0.50	1	B0I0395	09/22/2020	09/22/20 19:32	
sec-Butylbenzene	ND	0.50	1	B0I0395	09/22/2020	09/22/20 19:32	
Styrene	ND	0.50	1	B0I0395	09/22/2020	09/22/20 19:32	
tert-Butylbenzene	ND	0.50	1	B0I0395	09/22/2020	09/22/20 19:32	
Tetrachloroethene	ND	0.50	1	B0I0395	09/22/2020	09/22/20 19:32	
Toluene	ND	0.50	1	B0I0395	09/22/2020	09/22/20 19:32	
trans-1,2-Dichloroethene	ND	0.50	1	B0I0395	09/22/2020	09/22/20 19:32	
Trichloroethene	ND	0.50	1	B0I0395	09/22/2020	09/22/20 19:32	
Trichlorofluoromethane	ND	0.50	1	B0I0395	09/22/2020	09/22/20 19:32	
Vinyl chloride	ND	0.50	1	B0I0395	09/22/2020	09/22/20 19:32	
Surrogate: 1,2-Dichloroethane-d4	*101 %*	*64 - 155*		B0I0395	09/22/2020	*09/22/20 19:32*	
Surrogate: 4-Bromofluorobenzene	*95.2 %*	*73 - 124*		B0I0395	09/22/2020	*09/22/20 19:32*	
Surrogate: Dibromofluoromethane	*103 %*	*78 - 129*		B0I0395	09/22/2020	*09/22/20 19:32*	
Surrogate: Toluene-d8	*97.7 %*	*84 - 117*		B0I0395	09/22/2020	*09/22/20 19:32*	

Certificate of Analysis

Hargis & Associates, Inc.	Project Number : Raytheon Main GETS Mid Month Sample
9171 Towne Centre Drive, Suite 375	Report To : Steve Netto
San Diego , CA 92122	Reported : 09/24/2020

Client Sample ID: EW-02

Lab ID: 2002158-06

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

Analyte		Result (ug/L)	PQL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,4-Dioxane		**5.1**	2.0	1	B0I0451	09/22/2020	09/22/20 20:33	
Surrogate: 1,2-Dichlorobenzene-d4	*74.9 %*		*17 - 119*		B0I0451	09/22/2020	*09/22/20 20:33*	
Surrogate: 2-Fluorobiphenyl	*79.6 %*		*10 - 133*		B0I0451	09/22/2020	*09/22/20 20:33*	
Surrogate: 4-Terphenyl-d14	*87.6 %*		*5 - 139*		B0I0451	09/22/2020	*09/22/20 20:33*	
Surrogate: Nitrobenzene-d5	*77.2 %*		*13 - 150*		B0I0451	09/22/2020	*09/22/20 20:33*	

Certificate of Analysis

Hargis & Associates, Inc.	Project Number : Raytheon Main GETS Mid Month Sample
9171 Towne Centre Drive, Suite 375	Report To : Steve Netto
San Diego , CA 92122	Reported : 09/24/2020

Client Sample ID: MW-29

Lab ID: 2002158-07

Volatile Organic Compounds by EPA 8260B **Analyst: KL**

Analyte	Result (ug/L)	PQL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	0.50	1	B0I0395	09/22/2020	09/22/20 19:52	
1,1,1-Trichloroethane	ND	0.50	1	B0I0395	09/22/2020	09/22/20 19:52	
1,1,2,2-Tetrachloroethane	ND	0.50	1	B0I0395	09/22/2020	09/22/20 19:52	
1,1,2-Trichloroethane	ND	0.50	1	B0I0395	09/22/2020	09/22/20 19:52	
1,1-Dichloroethane	**1.5**	0.50	1	B0I0395	09/22/2020	09/22/20 19:52	
1,1-Dichloroethene	**130**	5.0	10	B0I0454	09/24/2020	09/24/20 02:49	
1,1-Dichloropropene	ND	0.50	1	B0I0395	09/22/2020	09/22/20 19:52	
1,2,3-Trichloropropane	ND	0.50	1	B0I0395	09/22/2020	09/22/20 19:52	
1,2,3-Trichlorobenzene	ND	0.50	1	B0I0395	09/22/2020	09/22/20 19:52	
1,2,4-Trichlorobenzene	ND	0.50	1	B0I0395	09/22/2020	09/22/20 19:52	
1,2,4-Trimethylbenzene	ND	0.50	1	B0I0395	09/22/2020	09/22/20 19:52	
1,2-Dibromo-3-chloropropane	ND	0.50	1	B0I0395	09/22/2020	09/22/20 19:52	
1,2-Dibromoethane	ND	0.50	1	B0I0395	09/22/2020	09/22/20 19:52	
1,2-Dichlorobenzene	ND	0.50	1	B0I0395	09/22/2020	09/22/20 19:52	
1,2-Dichloroethane	ND	0.50	1	B0I0395	09/22/2020	09/22/20 19:52	
1,2-Dichloropropane	ND	0.50	1	B0I0395	09/22/2020	09/22/20 19:52	
1,3,5-Trimethylbenzene	ND	0.50	1	B0I0395	09/22/2020	09/22/20 19:52	
1,3-Dichlorobenzene	ND	0.50	1	B0I0395	09/22/2020	09/22/20 19:52	
1,3-Dichloropropane	ND	0.50	1	B0I0395	09/22/2020	09/22/20 19:52	
1,4-Dichlorobenzene	ND	0.50	1	B0I0395	09/22/2020	09/22/20 19:52	
2,2-Dichloropropane	ND	0.50	1	B0I0395	09/22/2020	09/22/20 19:52	
2-Chlorotoluene	ND	0.50	1	B0I0395	09/22/2020	09/22/20 19:52	
4-Chlorotoluene	ND	0.50	1	B0I0395	09/22/2020	09/22/20 19:52	
4-Isopropyltoluene	ND	0.50	1	B0I0395	09/22/2020	09/22/20 19:52	
Benzene	ND	0.50	1	B0I0395	09/22/2020	09/22/20 19:52	
Bromobenzene	ND	0.50	1	B0I0395	09/22/2020	09/22/20 19:52	
Bromodichloromethane	ND	0.50	1	B0I0395	09/22/2020	09/22/20 19:52	
Bromoform	ND	0.50	1	B0I0395	09/22/2020	09/22/20 19:52	
Bromomethane	ND	0.50	1	B0I0395	09/22/2020	09/22/20 19:52	
Carbon tetrachloride	**1.8**	0.50	1	B0I0395	09/22/2020	09/22/20 19:52	
Chlorobenzene	ND	0.50	1	B0I0395	09/22/2020	09/22/20 19:52	
Chloroethane	ND	0.50	1	B0I0395	09/22/2020	09/22/20 19:52	
Chloroform	ND	0.50	1	B0I0395	09/22/2020	09/22/20 19:52	
Chloromethane	ND	0.50	1	B0I0395	09/22/2020	09/22/20 19:52	
cis-1,2-Dichloroethene	ND	0.50	1	B0I0395	09/22/2020	09/22/20 19:52	
cis-1,3-Dichloropropene	ND	0.50	1	B0I0395	09/22/2020	09/22/20 19:52	
Dibromochloromethane	ND	0.50	1	B0I0395	09/22/2020	09/22/20 19:52	

Certificate of Analysis

Hargis & Associates, Inc.	Project Number : Raytheon Main GETS Mid Month Sample
9171 Towne Centre Drive, Suite 375	Report To : Steve Netto
San Diego , CA 92122	Reported : 09/24/2020

Client Sample ID: MW-29

Lab ID: 2002158-07

Volatile Organic Compounds by EPA 8260B **Analyst: KL**

Analyte	Result (ug/L)	PQL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Dibromomethane	ND	0.50	1	B0I0395	09/22/2020	09/22/20 19:52	
Dichlorodifluoromethane	ND	0.50	1	B0I0395	09/22/2020	09/22/20 19:52	
Ethylbenzene	ND	0.50	1	B0I0395	09/22/2020	09/22/20 19:52	
Hexachlorobutadiene	ND	0.50	1	B0I0395	09/22/2020	09/22/20 19:52	
Isopropylbenzene	ND	0.50	1	B0I0395	09/22/2020	09/22/20 19:52	
m,p-Xylene	ND	1.0	1	B0I0395	09/22/2020	09/22/20 19:52	
Methylene chloride	ND	1.0	1	B0I0395	09/22/2020	09/22/20 19:52	
n-Butylbenzene	ND	0.50	1	B0I0395	09/22/2020	09/22/20 19:52	
n-Propylbenzene	ND	0.50	1	B0I0395	09/22/2020	09/22/20 19:52	
Naphthalene	ND	0.50	1	B0I0395	09/22/2020	09/22/20 19:52	
o-Xylene	ND	0.50	1	B0I0395	09/22/2020	09/22/20 19:52	
sec-Butylbenzene	ND	0.50	1	B0I0395	09/22/2020	09/22/20 19:52	
Styrene	ND	0.50	1	B0I0395	09/22/2020	09/22/20 19:52	
tert-Butylbenzene	ND	0.50	1	B0I0395	09/22/2020	09/22/20 19:52	
Tetrachloroethene	ND	0.50	1	B0I0395	09/22/2020	09/22/20 19:52	
Toluene	ND	0.50	1	B0I0395	09/22/2020	09/22/20 19:52	
trans-1,2-Dichloroethene	ND	0.50	1	B0I0395	09/22/2020	09/22/20 19:52	
Trichloroethene	**1.9**	0.50	1	B0I0395	09/22/2020	09/22/20 19:52	
Trichlorofluoromethane	**1.8**	0.50	1	B0I0395	09/22/2020	09/22/20 19:52	
Vinyl chloride	**0.55**	0.50	1	B0I0395	09/22/2020	09/22/20 19:52	
Surrogate: 1,2-Dichloroethane-d4	*98.1 %*	*64 - 155*		B0I0395	09/22/2020	*09/22/20 19:52*	
Surrogate: 1,2-Dichloroethane-d4	*103 %*	*64 - 155*		B0I0454	09/24/2020	*09/24/20 02:49*	
Surrogate: 4-Bromofluorobenzene	*95.0 %*	*73 - 124*		B0I0395	09/22/2020	*09/22/20 19:52*	
Surrogate: 4-Bromofluorobenzene	*97.4 %*	*73 - 124*		B0I0454	09/24/2020	*09/24/20 02:49*	
Surrogate: Dibromofluoromethane	*99.6 %*	*78 - 129*		B0I0395	09/22/2020	*09/22/20 19:52*	
Surrogate: Dibromofluoromethane	*103 %*	*78 - 129*		B0I0454	09/24/2020	*09/24/20 02:49*	
Surrogate: Toluene-d8	*96.9 %*	*84 - 117*		B0I0454	09/24/2020	*09/24/20 02:49*	
Surrogate: Toluene-d8	*97.0 %*	*84 - 117*		B0I0395	09/22/2020	*09/22/20 19:52*	

Certificate of Analysis

Hargis & Associates, Inc.	Project Number : Raytheon Main GETS Mid Month Sample
9171 Towne Centre Drive, Suite 375	Report To : Steve Netto
San Diego , CA 92122	Reported : 09/24/2020

Client Sample ID: MW-29

Lab ID: 2002158-07

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

Analyte		Result (ug/L)	PQL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,4-Dioxane		**94**	2.0	1	B0I0451	09/22/2020	09/22/20 20:59	
Surrogate: 1,2-Dichlorobenzene-d4	*66.3 %*		*17 - 119*		B0I0451	09/22/2020	*09/22/20 20:59*	
Surrogate: 2-Fluorobiphenyl	*70.8 %*		*10 - 133*		B0I0451	09/22/2020	*09/22/20 20:59*	
Surrogate: 4-Terphenyl-d14	*74.2 %*		*5 - 139*		B0I0451	09/22/2020	*09/22/20 20:59*	
Surrogate: Nitrobenzene-d5	*71.8 %*		*13 - 150*		B0I0451	09/22/2020	*09/22/20 20:59*	

Certificate of Analysis

Hargis & Associates, Inc.	Project Number : Raytheon Main GETS Mid Month Sample
9171 Towne Centre Drive, Suite 375	Report To : Steve Netto
San Diego , CA 92122	Reported : 09/24/2020

QUALITY CONTROL SECTION

Volatile Organic Compounds by EPA 8260B - Quality Control

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B0I0395 - MSVOA_LL_W										
Blank (B0I0395-BLK1)							Prepared: 9/22/2020 Analyzed: 9/22/2020			
1,1,1,2-Tetrachloroethane	ND	0.50	0.11							
1,1,1-Trichloroethane	ND	0.50	0.21							
1,1,2,2-Tetrachloroethane	ND	0.50	0.36							
1,1,2-Trichloroethane	ND	0.50	0.25							
1,1-Dichloroethane	ND	0.50	0.09							
1,1-Dichloroethene	ND	0.50	0.13							
1,1-Dichloropropene	ND	0.50	0.13							
1,2,3-Trichloropropane	ND	0.50	0.39							
1,2,3-Trichlorobenzene	ND	0.50	0.18							
1,2,4-Trichlorobenzene	ND	0.50	0.16							
1,2,4-Trimethylbenzene	ND	0.50	0.14							
1,2-Dibromo-3-chloropropane	ND	0.50	0.41							
1,2-Dibromoethane	ND	0.50	0.24							
1,2-Dichlorobenzene	ND	0.50	0.20							
1,2-Dichloroethane	ND	0.50	0.20							
1,2-Dichloropropane	ND	0.50	0.15							
1,3,5-Trimethylbenzene	ND	0.50	0.13							
1,3-Dichlorobenzene	ND	0.50	0.16							
1,3-Dichloropropane	ND	0.50	0.21							
1,4-Dichlorobenzene	ND	0.50	0.17							
2,2-Dichloropropane	ND	0.50	0.38							
2-Chlorotoluene	ND	0.50	0.11							
4-Chlorotoluene	ND	0.50	0.12							
4-Isopropyltoluene	ND	0.50	0.11							
Benzene	ND	0.50	0.13							
Bromobenzene	ND	0.50	0.21							
Bromodichloromethane	ND	0.50	0.14							
Bromoform	ND	0.50	0.20							
Bromomethane	ND	0.50	0.40							
Carbon tetrachloride	ND	0.50	0.09							
Chlorobenzene	ND	0.50	0.13							
Chloroethane	ND	0.50	0.15							
Chloroform	ND	0.50	0.11							
Chloromethane	ND	0.50	0.12							
cis-1,2-Dichloroethene	ND	0.50	0.14							
cis-1,3-Dichloropropene	ND	0.50	0.13							
Dibromochloromethane	ND	0.50	0.16							
Dibromomethane	ND	0.50	0.19							
Dichlorodifluoromethane	ND	0.50	0.18							

Certificate of Analysis

Hargis & Associates, Inc.	Project Number : Raytheon Main GETS Mid Month Sample
9171 Towne Centre Drive, Suite 375	Report To : Steve Netto
San Diego , CA 92122	Reported : 09/24/2020

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

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B0I0395 - MSVOA_LL_W (continued)										
Blank (B0I0395-BLK1) - Continued					Prepared: 9/22/2020 Analyzed: 9/22/2020					
Ethylbenzene	ND	0.50	0.13							
Hexachlorobutadiene	ND	0.50	0.15							
Isopropylbenzene	ND	0.50	0.10							
m,p-Xylene	ND	1.0	0.19							
Methylene chloride	ND	1.0	0.71							
n-Butylbenzene	ND	0.50	0.11							
n-Propylbenzene	ND	0.50	0.10							
Naphthalene	ND	0.50	0.41							
o-Xylene	ND	0.50	0.13							
sec-Butylbenzene	ND	0.50	0.09							
Styrene	ND	0.50	0.13							
tert-Butylbenzene	ND	0.50	0.09							
Tetrachloroethene	ND	0.50	0.10							
Toluene	ND	0.50	0.12							
trans-1,2-Dichloroethene	ND	0.50	0.09							
Trichloroethene	ND	0.50	0.10							
Trichlorofluoromethane	ND	0.50	0.23							
Vinyl chloride	ND	0.50	0.13							
Surrogate: 1,2-Dichloroethane-d4	*23.78*			*25.0000*		*95.1*	*64 - 155*			
Surrogate: 4-Bromofluorobenzene	*24.22*			*25.0000*		*96.9*	*73 - 124*			
Surrogate: Dibromofluoromethan	*25.31*			*25.0000*		*101*	*78 - 129*			
Surrogate: Toluene-d8	*23.88*			*25.0000*		*95.5*	*84 - 117*			

Certificate of Analysis

Hargis & Associates, Inc.	Project Number : Raytheon Main GETS Mid Month Sample
9171 Towne Centre Drive, Suite 375	Report To : Steve Netto
San Diego , CA 92122	Reported : 09/24/2020

Volatile Organic Compounds by EPA 8260B - Quality Control

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B0I0454 - MSVOA_LL_W										
Blank (B0I0454-BLK1)					Prepared: 9/23/2020 Analyzed: 9/23/2020					
1,1,1,2-Tetrachloroethane	ND	0.50	0.11							
1,1,1-Trichloroethane	ND	0.50	0.21							
1,1,2,2-Tetrachloroethane	ND	0.50	0.36							
1,1,2-Trichloroethane	ND	0.50	0.25							
1,1-Dichloroethane	ND	0.50	0.09							
1,1-Dichloroethene	ND	0.50	0.13							
1,1-Dichloropropene	ND	0.50	0.13							
1,2,3-Trichloropropane	ND	0.50	0.39							
1,2,3-Trichlorobenzene	ND	0.50	0.18							
1,2,4-Trichlorobenzene	ND	0.50	0.16							
1,2,4-Trimethylbenzene	ND	0.50	0.14							
1,2-Dibromo-3-chloropropane	ND	0.50	0.41							
1,2-Dibromoethane	ND	0.50	0.24							
1,2-Dichlorobenzene	ND	0.50	0.20							
1,2-Dichloroethane	ND	0.50	0.20							
1,2-Dichloropropane	ND	0.50	0.15							
1,3,5-Trimethylbenzene	ND	0.50	0.13							
1,3-Dichlorobenzene	ND	0.50	0.16							
1,3-Dichloropropane	ND	0.50	0.21							
1,4-Dichlorobenzene	ND	0.50	0.17							
2,2-Dichloropropane	ND	0.50	0.38							
2-Chlorotoluene	ND	0.50	0.11							
4-Chlorotoluene	ND	0.50	0.12							
4-Isopropyltoluene	ND	0.50	0.11							
Benzene	ND	0.50	0.13							
Bromobenzene	ND	0.50	0.21							
Bromodichloromethane	ND	0.50	0.14							
Bromoform	ND	0.50	0.20							
Bromomethane	ND	0.50	0.40							
Carbon tetrachloride	ND	0.50	0.09							
Chlorobenzene	ND	0.50	0.13							
Chloroethane	ND	0.50	0.15							
Chloroform	ND	0.50	0.11							
Chloromethane	ND	0.50	0.12							
cis-1,2-Dichloroethene	ND	0.50	0.14							
cis-1,3-Dichloropropene	ND	0.50	0.13							
Dibromochloromethane	ND	0.50	0.16							
Dibromomethane	ND	0.50	0.19							
Dichlorodifluoromethane	ND	0.50	0.18							
Ethylbenzene	ND	0.50	0.13							
Hexachlorobutadiene	ND	0.50	0.15							

Certificate of Analysis

Hargis & Associates, Inc.	Project Number : Raytheon Main GETS Mid Month Sample
9171 Towne Centre Drive, Suite 375	Report To : Steve Netto
San Diego , CA 92122	Reported : 09/24/2020

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

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B0I0454 - MSVOA_LL_W (continued)										
Blank (B0I0454-BLK1) - Continued						Prepared: 9/23/2020 Analyzed: 9/23/2020				
Isopropylbenzene	ND	0.50	0.10							
m,p-Xylene	ND	1.0	0.19							
Methylene chloride	ND	1.0	0.71							
n-Butylbenzene	ND	0.50	0.11							
n-Propylbenzene	ND	0.50	0.10							
Naphthalene	ND	0.50	0.41							
o-Xylene	ND	0.50	0.13							
sec-Butylbenzene	ND	0.50	0.09							
Styrene	ND	0.50	0.13							
tert-Butylbenzene	ND	0.50	0.09							
Tetrachloroethene	ND	0.50	0.10							
Toluene	ND	0.50	0.12							
trans-1,2-Dichloroethene	ND	0.50	0.09							
Trichloroethene	ND	0.50	0.10							
Trichlorofluoromethane	ND	0.50	0.23							
Vinyl chloride	ND	0.50	0.13							
Surrogate: 1,2-Dichloroethane-d4	*25.84*			*25.0000*		*103*	*64 - 155*			
Surrogate: 4-Bromofluorobenzene	*23.90*			*25.0000*		*95.6*	*73 - 124*			
Surrogate: Dibromofluoromethan	*25.70*			*25.0000*		*103*	*78 - 129*			
Surrogate: Toluene-d8	*24.66*			*25.0000*		*98.6*	*84 - 117*			
LCS (B0I0454-BS1)						Prepared: 9/23/2020 Analyzed: 9/23/2020				
1,1,1,2-Tetrachloroethane	19.4400	0.50	0.11	20.0000		97.2	79 - 116			
1,1,1-Trichloroethane	20.8900	0.50	0.21	20.0000		104	73 - 130			
1,1,2,2-Tetrachloroethane	18.3800	0.50	0.36	20.0000		91.9	71 - 122			
1,1,2-Trichloroethane	19.2700	0.50	0.25	20.0000		96.4	70 - 124			
1,1-Dichloroethane	20.9800	0.50	0.09	20.0000		105	69 - 128			
1,1-Dichloroethene	21.5000	0.50	0.13	20.0000		108	65 - 137			
1,1-Dichloropropene	20.8900	0.50	0.13	20.0000		104	74 - 129			
1,2,3-Trichloropropane	19.9900	0.50	0.39	20.0000		100	74 - 123			
1,2,3-Trichlorobenzene	20.6300	0.50	0.18	20.0000		103	59 - 130			
1,2,4-Trichlorobenzene	21.2300	0.50	0.16	20.0000		106	65 - 125			
1,2,4-Trimethylbenzene	21.3700	0.50	0.14	20.0000		107	88 - 124			
1,2-Dibromo-3-chloropropane	19.1200	0.50	0.41	20.0000		95.6	61 - 127			
1,2-Dibromoethane	19.6000	0.50	0.24	20.0000		98.0	72 - 125			
1,2-Dichlorobenzene	20.3700	0.50	0.20	20.0000		102	84 - 113			
1,2-Dichloroethane	20.2000	0.50	0.20	20.0000		101	68 - 130			
1,2-Dichloropropane	19.3400	0.50	0.15	20.0000		96.7	77 - 121			
1,3,5-Trimethylbenzene	21.2100	0.50	0.13	20.0000		106	83 - 124			
1,3-Dichlorobenzene	20.3300	0.50	0.16	20.0000		102	83 - 112			
1,3-Dichloropropane	19.6300	0.50	0.21	20.0000		98.2	77 - 119			

Certificate of Analysis

Hargis & Associates, Inc.	Project Number : Raytheon Main GETS Mid Month Sample
9171 Towne Centre Drive, Suite 375	Report To : Steve Netto
San Diego , CA 92122	Reported : 09/24/2020

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

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B0I0454 - MSVOA_LL_W (continued)										
LCS (B0I0454-BS1) - Continued					Prepared: 9/23/2020 Analyzed: 9/23/2020					
1,4-Dichlorobenzene	20.2800	0.50	0.17	20.0000		101	79 - 115			
2,2-Dichloropropane	21.9600	0.50	0.38	20.0000		110	67 - 149			
2-Chlorotoluene	20.1900	0.50	0.11	20.0000		101	81 - 119			
4-Chlorotoluene	20.0400	0.50	0.12	20.0000		100	86 - 117			
4-Isopropyltoluene	21.3600	0.50	0.11	20.0000		107	82 - 131			
Benzene	20.0900	0.50	0.13	20.0000		100	75 - 124			
Bromobenzene	20.2500	0.50	0.21	20.0000		101	82 - 108			
Bromodichloromethane	19.7600	0.50	0.14	20.0000		98.8	80 - 120			
Bromoform	18.6500	0.50	0.20	20.0000		93.2	70 - 123			
Bromomethane	11.3600	0.50	0.40	10.0000		114	44 - 151			
Carbon tetrachloride	20.4900	0.50	0.09	20.0000		102	62 - 140			
Chlorobenzene	19.9300	0.50	0.13	20.0000		99.6	80 - 112			
Chloroethane	10.8200	0.50	0.15	10.0000		108	42 - 167			
Chloroform	20.5300	0.50	0.11	20.0000		103	77 - 122			
Chloromethane	11.1600	0.50	0.12	10.0000		112	33 - 153			
cis-1,2-Dichloroethene	19.7700	0.50	0.14	20.0000		98.8	75 - 121			
cis-1,3-Dichloropropene	18.6700	0.50	0.13	20.0000		93.4	73 - 127			
Dibromochloromethane	19.3500	0.50	0.16	20.0000		96.8	77 - 122			
Dibromomethane	20.3700	0.50	0.19	20.0000		102	75 - 121			
Dichlorodifluoromethane	7.34000	0.50	0.18	10.0000		73.4	0 - 171			
Ethylbenzene	19.6800	0.50	0.13	20.0000		98.4	82 - 119			
Hexachlorobutadiene	21.0400	0.50	0.15	20.0000		105	71 - 131			
Isopropylbenzene	20.7800	0.50	0.10	20.0000		104	75 - 126			
m,p-Xylene	39.8900	1.0	0.19	40.0000		99.7	86 - 119			
Methylene chloride	20.0200	1.0	0.71	20.0000		100	76 - 125			
n-Butylbenzene	19.8500	0.50	0.11	20.0000		99.2	81 - 125			
n-Propylbenzene	20.9000	0.50	0.10	20.0000		104	78 - 130			
Naphthalene	18.3900	0.50	0.41	20.0000		92.0	47 - 128			
o-Xylene	19.8700	0.50	0.13	20.0000		99.4	85 - 119			
sec-Butylbenzene	21.6400	0.50	0.09	20.0000		108	78 - 130			
Styrene	17.7800	0.50	0.13	20.0000		88.9	62 - 148			
tert-Butylbenzene	20.8500	0.50	0.09	20.0000		104	77 - 125			
Tetrachloroethene	21.0800	0.50	0.10	20.0000		105	73 - 120			
Toluene	19.7900	0.50	0.12	20.0000		99.0	79 - 119			
trans-1,2-Dichloroethene	20.4900	0.50	0.09	20.0000		102	70 - 129			
Trichloroethene	21.1800	0.50	0.10	20.0000		106	73 - 117			
Trichlorofluoromethane	10.4100	0.50	0.23	10.0000		104	59 - 135			
Vinyl chloride	10.0900	0.50	0.13	10.0000		101	58 - 132			
Surrogate: 1,2-Dichloroethane-d4	*25.72*			*25.0000*		*103*	*64 - 155*			
Surrogate: 4-Bromofluorobenzene	*24.38*			*25.0000*		*97.5*	*73 - 124*			
Surrogate: Dibromofluoromethan	*25.77*			*25.0000*		*103*	*78 - 129*			

Certificate of Analysis

Hargis & Associates, Inc.	Project Number : Raytheon Main GETS Mid Month Sample
9171 Towne Centre Drive, Suite 375	Report To : Steve Netto
San Diego , CA 92122	Reported : 09/24/2020

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

Analyte	Result (ug/L)	PQL (ug/L)		Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B0I0454 - MSVOA_LL_W (continued)										
LCS (B0I0454-BS1) - Continued					Prepared: 9/23/2020 Analyzed: 9/23/2020					
Surrogate: Toluene-d8	*24.19*			*25.0000*		*96.8*	*84 - 117*			
Matrix Spike (B0I0454-MS1)			**Source: 2002177-04**		Prepared: 9/23/2020 Analyzed: 9/23/2020					
1,1,1,2-Tetrachloroethane	ND	0.50	0.11	20.0000	ND	NR	81 - 133			
1,1,1-Trichloroethane	1.12000	0.50	0.21	20.0000	ND	5.60	93 - 149			
1,1,2,2-Tetrachloroethane	ND	0.50	0.36	20.0000	ND	NR	69 - 151			
1,1,2-Trichloroethane	41.9700	0.50	0.25	20.0000	ND	210	78 - 130			
1,1-Dichloroethane	ND	0.50	0.09	20.0000	ND	NR	68 - 135			
1,1-Dichloroethene	ND	0.50	0.13	20.0000	ND	NR	77 - 134			
1,1-Dichloropropene	ND	0.50	0.13	20.0000	ND	NR	91 - 138			
1,2,3-Trichloropropane	ND	0.50	0.39	20.0000	ND	NR	77 - 136			
1,2,3-Trichlorobenzene	0.460000	0.50	0.18	20.0000	ND	2.30	72 - 129			
1,2,4-Trichlorobenzene	0.450000	0.50	0.16	20.0000	ND	2.25	64 - 135			
1,2,4-Trimethylbenzene	0.230000	0.50	0.14	20.0000	ND	1.15	10 - 179			
1,2-Dibromo-3-chloropropane	1.87000	0.50	0.41	20.0000	ND	9.35	62 - 153			
1,2-Dibromoethane	0.360000	0.50	0.24	20.0000	ND	1.80	80 - 132			
1,2-Dichlorobenzene	ND	0.50	0.20	20.0000	ND	NR	81 - 131			
1,2-Dichloroethane	ND	0.50	0.20	20.0000	ND	NR	68 - 146			
1,2-Dichloropropane	0.420000	0.50	0.15	20.0000	ND	2.10	74 - 136			
1,3,5-Trimethylbenzene	ND	0.50	0.13	20.0000	ND	NR	66 - 149			
1,3-Dichlorobenzene	0.190000	0.50	0.16	20.0000	ND	0.950	79 - 128			
1,3-Dichloropropane	ND	0.50	0.21	20.0000	ND	NR	80 - 129			
1,4-Dichlorobenzene	0.180000	0.50	0.17	20.0000	ND	0.900	84 - 121			
2,2-Dichloropropane	ND	0.50	0.38	20.0000	ND	NR	63 - 179			
2-Chlorotoluene	0.840000	0.50	0.11	20.0000	ND	4.20	76 - 142			
4-Chlorotoluene	0.190000	0.50	0.12	20.0000	ND	0.950	72 - 152			
4-Isopropyltoluene	0.490000	0.50	0.11	20.0000	ND	2.45	84 - 141			
Benzene	1.21000	0.50	0.13	20.0000	1.13000	0.400	79 - 131			
Bromobenzene	ND	0.50	0.21	20.0000	ND	NR	82 - 121			
Bromodichloromethane	1.26000	0.50	0.14	20.0000	ND	6.30	86 - 138			
Bromoform	ND	0.50	0.20	20.0000	ND	NR	80 - 136			
Bromomethane	ND	0.50	0.40	10.0000	ND	NR	35 - 194			
Carbon tetrachloride	ND	0.50	0.09	20.0000	ND	NR	73 - 176			
Chlorobenzene	ND	0.50	0.13	20.0000	ND	NR	81 - 124			
Chloroethane	ND	0.50	0.15	10.0000	ND	NR	0 - 257			
Chloroform	0.940000	0.50	0.11	20.0000	ND	4.70	76 - 139			
Chloromethane	ND	0.50	0.12	10.0000	ND	NR	27 - 144			
cis-1,2-Dichloroethene	ND	0.50	0.14	20.0000	ND	NR	69 - 139			
cis-1,3-Dichloropropene	ND	0.50	0.13	20.0000	ND	NR	67 - 149			
Dibromochloromethane	ND	0.50	0.16	20.0000	ND	NR	91 - 131			
Dibromomethane	ND	0.50	0.19	20.0000	ND	NR	70 - 134			
Dichlorodifluoromethane	ND	0.50	0.18	10.0000	ND	NR	0 - 161			

Certificate of Analysis

Hargis & Associates, Inc.	Project Number : Raytheon Main GETS Mid Month Sample
9171 Towne Centre Drive, Suite 375	Report To : Steve Netto
San Diego , CA 92122	Reported : 09/24/2020

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

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B0I0454 - MSVOA_LL_W (continued)										
Matrix Spike (B0I0454-MS1) - Continued			**Source: 2002177-04**			Prepared: 9/23/2020 Analyzed: 9/23/2020				
Ethylbenzene	0.380000	0.50	0.13	20.0000	0.300000	0.400	89 - 134			
Hexachlorobutadiene	0.480000	0.50	0.15	20.0000	ND	2.40	73 - 137			
Isopropylbenzene	1.21000	0.50	0.10	20.0000	1.15000	0.300	72 - 152			
m,p-Xylene	0.490000	1.0	0.19	40.0000	ND	1.22	82 - 141			
Methylene chloride	ND	1.0	0.71	20.0000	ND	NR	74 - 133			
n-Butylbenzene	6.06000	0.50	0.11	20.0000	ND	30.3	65 - 164			
n-Propylbenzene	0.750000	0.50	0.10	20.0000	0.570000	0.900	73 - 161			
Naphthalene	1.55000	0.50	0.41	20.0000	ND	7.75	59 - 105			
o-Xylene	ND	0.50	0.13	20.0000	ND	NR	90 - 134			
sec-Butylbenzene	6.85000	0.50	0.09	20.0000	6.43000	2.10	80 - 157			
Styrene	ND	0.50	0.13	20.0000	ND	NR	0 - 222			
tert-Butylbenzene	3.31000	0.50	0.09	20.0000	3.29000	0.100	88 - 141			
Tetrachloroethene	ND	0.50	0.10	20.0000	ND	NR	75 - 136			
Toluene	0.380000	0.50	0.12	20.0000	0.330000	0.250	82 - 132			
trans-1,2-Dichloroethene	ND	0.50	0.09	20.0000	ND	NR	65 - 135			
Trichloroethene	ND	0.50	0.10	20.0000	ND	NR	75 - 128			
Trichlorofluoromethane	ND	0.50	0.23	10.0000	ND	NR	89 - 143			
Vinyl chloride	ND	0.50	0.13	10.0000	ND	NR	50 - 148			
Surrogate: 1,2-Dichloroethane-d4	*25.82*			*25.0000*		*103*	*64 - 155*			
Surrogate: 4-Bromofluorobenzene	*23.95*			*25.0000*		*95.8*	*73 - 124*			
Surrogate: Dibromofluoromethan	*25.56*			*25.0000*		*102*	*78 - 129*			
Surrogate: Toluene-d8	*25.14*			*25.0000*		*101*	*84 - 117*			
Matrix Spike Dup (B0I0454-MSD1)			**Source: 2002177-04**			Prepared: 9/23/2020 Analyzed: 9/23/2020				
1,1,1,2-Tetrachloroethane	12.0700	0.50	0.11	20.0000	ND	60.4	81 - 133	NR	20	
1,1,1-Trichloroethane	13.3100	0.50	0.21	20.0000	ND	66.6	93 - 149	169	20	
1,1,2,2-Tetrachloroethane	10.9600	0.50	0.36	20.0000	ND	54.8	69 - 151	NR	20	
1,1,2-Trichloroethane	49.7900	0.50	0.25	20.0000	ND	249	78 - 130	17.0	20	
1,1-Dichloroethane	13.2400	0.50	0.09	20.0000	ND	66.2	68 - 135	NR	20	
1,1-Dichloroethene	13.5200	0.50	0.13	20.0000	ND	67.6	77 - 134	NR	20	
1,1-Dichloropropene	13.8500	0.50	0.13	20.0000	ND	69.2	91 - 138	NR	20	
1,2,3-Trichloropropane	12.5300	0.50	0.39	20.0000	ND	62.6	77 - 136	NR	20	
1,2,3-Trichlorobenzene	14.1500	0.50	0.18	20.0000	ND	70.8	72 - 129	187	20	
1,2,4-Trichlorobenzene	14.0100	0.50	0.16	20.0000	ND	70.0	64 - 135	188	20	
1,2,4-Trimethylbenzene	13.5300	0.50	0.14	20.0000	ND	67.6	10 - 179	193	20	
1,2-Dibromo-3-chloropropane	13.2600	0.50	0.41	20.0000	ND	66.3	62 - 153	151	20	
1,2-Dibromoethane	12.6700	0.50	0.24	20.0000	ND	63.4	80 - 132	189	20	
1,2-Dichlorobenzene	12.5600	0.50	0.20	20.0000	ND	62.8	81 - 131	NR	20	
1,2-Dichloroethane	13.1900	0.50	0.20	20.0000	ND	66.0	68 - 146	NR	20	
1,2-Dichloropropane	12.8200	0.50	0.15	20.0000	ND	64.1	74 - 136	187	20	
1,3,5-Trimethylbenzene	13.0900	0.50	0.13	20.0000	ND	65.4	66 - 149	NR	20	

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

Project Number : Raytheon Main GETS Mid Month Sample
Report To : Steve Netto
Reported : 09/24/2020

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

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B0I0454 - MSVOA_LL_W (continued)										
Matrix Spike Dup (B0I0454-MSD1) - Continued			**Source: 2002177-04**		Prepared: 9/23/2020 Analyzed: 9/23/2020					
1,3-Dichlorobenzene	12.2900	0.50	0.16	20.0000	ND	61.4	79 - 128	194	20	
1,3-Dichloropropane	12.0000	0.50	0.21	20.0000	ND	60.0	80 - 129	NR	20	
1,4-Dichlorobenzene	12.1900	0.50	0.17	20.0000	ND	61.0	84 - 121	194	20	
2,2-Dichloropropane	13.9300	0.50	0.38	20.0000	ND	69.6	63 - 179	NR	20	
2-Chlorotoluene	12.6200	0.50	0.11	20.0000	ND	63.1	76 - 142	175	20	
4-Chlorotoluene	12.0300	0.50	0.12	20.0000	ND	60.2	72 - 152	194	20	
4-Isopropyltoluene	14.1200	0.50	0.11	20.0000	ND	70.6	84 - 141	187	20	
Benzene	13.8400	0.50	0.13	20.0000	1.13000	63.6	79 - 131	168	20	
Bromobenzene	12.3100	0.50	0.21	20.0000	ND	61.6	82 - 121	NR	20	
Bromodichloromethane	14.3200	0.50	0.14	20.0000	ND	71.6	86 - 138	168	20	
Bromoform	11.7500	0.50	0.20	20.0000	ND	58.8	80 - 136	NR	20	
Bromomethane	6.45000	0.50	0.40	10.0000	ND	64.5	35 - 194	NR	20	
Carbon tetrachloride	14.1300	0.50	0.09	20.0000	ND	70.6	73 - 176	NR	20	
Chlorobenzene	12.3400	0.50	0.13	20.0000	ND	61.7	81 - 124	NR	20	
Chloroethane	6.73000	0.50	0.15	10.0000	ND	67.3	0 - 257	NR	20	
Chloroform	13.6300	0.50	0.11	20.0000	ND	68.2	76 - 139	174	20	
Chloromethane	6.62000	0.50	0.12	10.0000	ND	66.2	27 - 144	NR	20	
cis-1,2-Dichloroethene	12.7700	0.50	0.14	20.0000	ND	63.8	69 - 139	NR	20	
cis-1,3-Dichloropropene	11.8700	0.50	0.13	20.0000	ND	59.4	67 - 149	NR	20	
Dibromochloromethane	12.0100	0.50	0.16	20.0000	ND	60.0	91 - 131	NR	20	
Dibromomethane	12.2400	0.50	0.19	20.0000	ND	61.2	70 - 134	NR	20	
Dichlorodifluoromethane	4.57000	0.50	0.18	10.0000	ND	45.7	0 - 161	NR	20	
Ethylbenzene	12.7900	0.50	0.13	20.0000	0.300000	62.4	89 - 134	188	20	
Hexachlorobutadiene	14.3800	0.50	0.15	20.0000	ND	71.9	73 - 137	187	20	
Isopropylbenzene	13.7300	0.50	0.10	20.0000	1.15000	62.9	72 - 152	168	20	
m,p-Xylene	24.8500	1.0	0.19	40.0000	ND	62.1	82 - 141	192	20	
Methylene chloride	11.3800	1.0	0.71	20.0000	ND	56.9	74 - 133	NR	20	
n-Butylbenzene	17.7900	0.50	0.11	20.0000	ND	89.0	65 - 164	98.4	20	
n-Propylbenzene	13.2800	0.50	0.10	20.0000	0.570000	63.6	73 - 161	179	20	
Naphthalene	15.7700	0.50	0.41	20.0000	ND	78.8	59 - 105	164	20	
o-Xylene	12.2500	0.50	0.13	20.0000	ND	61.2	90 - 134	NR	20	
sec-Butylbenzene	19.8800	0.50	0.09	20.0000	6.43000	67.2	80 - 157	97.5	20	
Styrene	10.8900	0.50	0.13	20.0000	ND	54.4	0 - 222	NR	20	
tert-Butylbenzene	16.4600	0.50	0.09	20.0000	3.29000	65.8	88 - 141	133	20	
Tetrachloroethene	12.5500	0.50	0.10	20.0000	ND	62.8	75 - 136	NR	20	
Toluene	12.7700	0.50	0.12	20.0000	0.330000	62.2	82 - 132	188	20	
trans-1,2-Dichloroethene	13.1200	0.50	0.09	20.0000	ND	65.6	65 - 135	NR	20	
Trichloroethene	13.4100	0.50	0.10	20.0000	ND	67.0	75 - 128	NR	20	
Trichlorofluoromethane	6.80000	0.50	0.23	10.0000	ND	68.0	89 - 143	NR	20	
Vinyl chloride	6.30000	0.50	0.13	10.0000	ND	63.0	50 - 148	NR	20	
Surrogate: 1,2-Dichloroethane-d4	*25.07*			*25.0000*		*100*	*64 - 155*			

Certificate of Analysis

Hargis & Associates, Inc.	Project Number : Raytheon Main GETS Mid Month Sample
9171 Towne Centre Drive, Suite 375	Report To : Steve Netto
San Diego , CA 92122	Reported : 09/24/2020

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

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B0I0454 - MSVOA_LL_W (continued)									
Matrix Spike Dup (B0I0454-MSD1) - Continued			**Source: 2002177-04**		Prepared: 9/23/2020 Analyzed: 9/23/2020				
Surrogate: 4-Bromofluorobenzene	*24.47*		*25.0000*		*97.9*	*73 - 124*			
Surrogate: Dibromofluoromethan	*25.71*		*25.0000*		*103*	*78 - 129*			
Surrogate: Toluene-d8	*25.27*		*25.0000*		*101*	*84 - 117*			

Certificate of Analysis

Hargis & Associates, Inc.	Project Number : Raytheon Main GETS Mid Month Sample
9171 Towne Centre Drive, Suite 375	Report To : Steve Netto
San Diego , CA 92122	Reported : 09/24/2020

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

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B0I0451 - MSSEMI_W										
Blank (B0I0451-BLK1)					Prepared: 9/22/2020 Analyzed: 9/22/2020					
1,4-Dioxane	ND	2.0	0.84							
Surrogate: 1,2-Dichlorobenzene-d	*68.83*			*100.000*		*68.8*	*17 - 119*			
Surrogate: 2-Fluorobiphenyl	*68.76*			*100.000*		*68.8*	*10 - 133*			
Surrogate: 4-Terphenyl-d14	*53.71*			*100.000*		*53.7*	*5 - 139*			
Surrogate: Nitrobenzene-d5	*66.93*			*100.000*		*66.9*	*13 - 150*			
LCS (B0I0451-BS1)					Prepared: 9/22/2020 Analyzed: 9/22/2020					
1,4-Dioxane	104.970	2.0	0.84	100.000		105	75 - 155			
Surrogate: 1,2-Dichlorobenzene-d	*61.40*			*100.000*		*61.4*	*17 - 119*			
Surrogate: 2-Fluorobiphenyl	*69.80*			*100.000*		*69.8*	*10 - 133*			
Surrogate: 4-Terphenyl-d14	*78.84*			*100.000*		*78.8*	*5 - 139*			
Surrogate: Nitrobenzene-d5	*70.20*			*100.000*		*70.2*	*13 - 150*			
LCS Dup (B0I0451-BSD1)					Prepared: 9/22/2020 Analyzed: 9/22/2020					
1,4-Dioxane	101.230	2.0	0.84	100.000		101	75 - 155	3.63	20	
Surrogate: 1,2-Dichlorobenzene-d	*60.07*			*100.000*		*60.1*	*17 - 119*			
Surrogate: 2-Fluorobiphenyl	*68.99*			*100.000*		*69.0*	*10 - 133*			
Surrogate: 4-Terphenyl-d14	*78.41*			*100.000*		*78.4*	*5 - 139*			
Surrogate: Nitrobenzene-d5	*68.47*			*100.000*		*68.5*	*13 - 150*			

Certificate of Analysis

Hargis & Associates, Inc.	Project Number : Raytheon Main GETS Mid Month Sample
9171 Towne Centre Drive, Suite 375	Report To : Steve Netto
San Diego , CA 92122	Reported : 09/24/2020

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

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B0I0452 - MSSEMI_W										
Blank (B0I0452-BLK1)					Prepared: 9/22/2020 Analyzed: 9/22/2020					
1,4-Dioxane	ND	0.20	0.05							
Surrogate: 1,2-Dichlorobenzene-d	*0.8748*			*1.00000*		*87.5*	*13 - 99*			
Surrogate: 2-Fluorobiphenyl	*0.8766*			*1.00000*		*87.7*	*8 - 111*			
Surrogate: 4-Terphenyl-d14	*0.8741*			*1.00000*		*87.4*	*12 - 113*			
Surrogate: Nitrobenzene-d5	*0.7331*			*1.00000*		*73.3*	*15 - 121*			
LCS (B0I0452-BS1)					Prepared: 9/22/2020 Analyzed: 9/22/2020					
1,4-Dioxane	1.15560	0.20	0.05	1.00000		116	75 - 155			
Surrogate: 1,2-Dichlorobenzene-d	*0.6541*			*1.00000*		*65.4*	*13 - 99*			
Surrogate: 2-Fluorobiphenyl	*0.6205*			*1.00000*		*62.0*	*8 - 111*			
Surrogate: 4-Terphenyl-d14	*0.6540*			*1.00000*		*65.4*	*12 - 113*			
Surrogate: Nitrobenzene-d5	*0.5333*			*1.00000*		*53.3*	*15 - 121*			
LCS Dup (B0I0452-BSD1)					Prepared: 9/22/2020 Analyzed: 9/22/2020					
1,4-Dioxane	1.13501	0.20	0.05	1.00000		114	75 - 155	1.80	20	
Surrogate: 1,2-Dichlorobenzene-d	*0.6514*			*1.00000*		*65.1*	*13 - 99*			
Surrogate: 2-Fluorobiphenyl	*0.6279*			*1.00000*		*62.8*	*8 - 111*			
Surrogate: 4-Terphenyl-d14	*0.6704*			*1.00000*		*67.0*	*12 - 113*			
Surrogate: Nitrobenzene-d5	*0.5330*			*1.00000*		*53.3*	*15 - 121*			

Certificate of Analysis

Hargis & Associates, Inc.		Project Number :	Raytheon Main GETS Mid Month Sample
9171 Towne Centre Drive, Suite 375		Report To :	Steve Netto
San Diego , CA 92122		Reported :	09/24/2020

Notes and Definitions

ND	Analyte is not detected at or above the Practical Quantitation Limit (PQL). When client requests quantitation against MDL, analyte is not detected at or above the Method Detection Limit (MDL)
PQL	Practical Quantitation Limit
MDL	Method Detection Limit
NR	Not Reported
RPD	Relative Percent Difference
CA2	CA-ELAP (CDPH)
OR1	OR-NELAP (OSPHL)

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.
(3) Results are wet unless otherwise specified.

HARGIS+ASSOCIATES, INC.
HYDROGEOLOGY • ENGINEERING

Date: 9/17/2020
Page 1 of 1

PROJECT: Raytheon Main GETS Mid Month Sample

TASK NO.: 532.15

Project Manager: Steve Netto
QA Manager: Ross Horton
Phone: 858.455.6500
Fax: 858.455.6533

Sampled By: Ruben Sanchez

LAB ID	SAMPLE ID	SAMPLE COLLECTION Date	Time	MATRIX: Groundwater	MATRIX: Lab prepared water	PRESERVATION: Hydrochloric Acid (HCl)	PRESERVATION: Nitric Acid (HNO_3)	PRESERVATION: Sulfuric Acid (H_2SO_4)	PRESERVATION: Ice	CONTAINERS: 40-ml VOA	CONTAINERS: 125 mL Poly	CONTAINERS: 250 mL Poly	CONTAINERS: 250 mL Glass	CONTAINERS: 1 L Poly	CONTAINERS: 1L Amber	ANALYSIS REQUESTED: VOCs by EPA 8260B	Bromate by EPA 317	Bromide by EPA 300	Alkalinity by SM2320B	Total Organic Carbon by SM5310B	Total Suspended Solids by SM2540D	UV Absorption EPA 415.3 @254 nm	1,4-Dioxane by EPA 8270C MOD	1,4-Dioxane by EPA 8270C SIM	Expected Concentration Range (ppb) for VOAs: 0 - 10	10 - 100	100 - 1,000	>1,000	SPECIAL HANDLING: 24 hr TAT	48 Hour TAT	5 Day TAT	Level IV Data Validation Requested	MS/MSD Requested	REMARKS
2002168-01	TB-091720	9/17/2020	8:00		X	X			X	2						X									X								
02	CEFF	9/17/2020	8:30	X		X			X	3					1	X								X	X						X			
03	CBT	9/17/2020	8:40	X		X			X	3					1	X								X	X						X			
04	POX	9/17/2020	8:45	X		X			X	3					1	X								X	X						X			
05	INF	9/17/2020	8:55	X		X			X	3					1	X							X				X				X			
06	EW-02	9/17/2020	9:25	X		X			X	3					1	X							X			X					X			
07	MW-29	9/17/2020	9:40	X		X			X	3					1	X							X				X				X			
Total number of containers per analysis:										20					6																			Total No. of Containers: 26

Relinquished By: / Company	Date / Time	Received By: / Company	Date / Time
HHA	9-17-20 1000	HHA	9-17-20 10:00
HHA	9-17-20 1524	ATL	9172020 1525

- ✓ No. of containers correct
- ✓ Received in good condition
- ✓ Custody seals secure
- ✓ Conforms to COC document

1.6 °C Temperature on receipt

Laboratory
Adcanced Technology Laboratories
Attn: Rachelle Arada
3275 Walnut Ave
Signal Hill, CA 90755
(562) 989-4045

Send Results to:
Steve Netto & Ross Horton
9171 Towne Centre Drive
Suite 375
San Diego, CA 92122
Ph: 858.455.6500
snetto@hargis.com
rhorton@hargis.com

Instructions
1. Fill out form completely and sign only after verified for completeness
2. Complete in ballpoint pen. Draw one line through error, initial and date correction
3. Indicate the number of sample containers in analytical request space; indicate choice with ✓or ×
4. Note applicable preservatives, special instructions, and deviations from typical environmental samples.
5. Consult project QA documents for specific instructions.

ADVANCED TECHNOLOGY LABORATORIES

October 26, 2020

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

ELAP No.: 1838
CSDLAC No.: 10196
ORELAP No.: CA300003

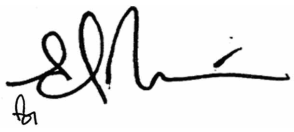
Re: ATL Work Order Number : 2002242

Client Reference : Raytheon Main GETS Monthly Sample, 532.15

Enclosed are the results for sample(s) received on October 01, 2020 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,



Dr. Reza Karimi
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 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.	Project Number : Raytheon Main GETS Monthly Sample, 5
9171 Towne Centre Drive, Suite 375	Report To : Steve Netto
San Diego , CA 92122	Reported : 10/26/2020

SUMMARY OF SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
TB-100120	2002242-01	Water	10/01/20 8:00	10/01/20 16:11
CEFF	2002242-02	Groundwater	10/01/20 9:00	10/01/20 16:11
CBT	2002242-03	Groundwater	10/01/20 9:05	10/01/20 16:11
POX	2002242-04	Groundwater	10/01/20 9:10	10/01/20 16:11
PF	2002242-05	Groundwater	10/01/20 9:15	10/01/20 16:11
INF	2002242-06	Groundwater	10/01/20 9:20	10/01/20 16:11
EW-02	2002242-07	Groundwater	10/01/20 9:45	10/01/20 16:11
MW-29	2002242-08	Groundwater	10/01/20 10:15	10/01/20 16:11

CASE NARRATIVE

Samples for Bromate by IC-MS/MS was subcontracted to Element Materials Technology with CA-ELAP Cert. 2652.

Certificate of Analysis

Hargis & Associates, Inc.	Project Number : Raytheon Main GETS Monthly Sample, 5
9171 Towne Centre Drive, Suite 375	Report To : Steve Netto
San Diego , CA 92122	Reported : 10/26/2020

Client Sample ID: TB-100120

Lab ID: 2002242-01

Volatile Organic Compounds by EPA 8260B **Analyst: KL**

Analyte	Result (ug/L)	PQL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	0.50	1	B0J0026	10/02/2020	10/02/20 11:04	
1,1,1-Trichloroethane	ND	0.50	1	B0J0026	10/02/2020	10/02/20 11:04	
1,1,2,2-Tetrachloroethane	ND	0.50	1	B0J0026	10/02/2020	10/02/20 11:04	
1,1,2-Trichloroethane	ND	0.50	1	B0J0026	10/02/2020	10/02/20 11:04	
1,1-Dichloroethane	ND	0.50	1	B0J0026	10/02/2020	10/02/20 11:04	
1,1-Dichloroethene	ND	0.50	1	B0J0026	10/02/2020	10/02/20 11:04	
1,1-Dichloropropene	ND	0.50	1	B0J0026	10/02/2020	10/02/20 11:04	
1,2,3-Trichloropropane	ND	0.50	1	B0J0026	10/02/2020	10/02/20 11:04	
1,2,3-Trichlorobenzene	ND	0.50	1	B0J0026	10/02/2020	10/02/20 11:04	
1,2,4-Trichlorobenzene	ND	0.50	1	B0J0026	10/02/2020	10/02/20 11:04	
1,2,4-Trimethylbenzene	ND	0.50	1	B0J0026	10/02/2020	10/02/20 11:04	
1,2-Dibromo-3-chloropropane	ND	0.50	1	B0J0026	10/02/2020	10/02/20 11:04	
1,2-Dibromoethane	ND	0.50	1	B0J0026	10/02/2020	10/02/20 11:04	
1,2-Dichlorobenzene	ND	0.50	1	B0J0026	10/02/2020	10/02/20 11:04	
1,2-Dichloroethane	ND	0.50	1	B0J0026	10/02/2020	10/02/20 11:04	
1,2-Dichloropropane	ND	0.50	1	B0J0026	10/02/2020	10/02/20 11:04	
1,3,5-Trimethylbenzene	ND	0.50	1	B0J0026	10/02/2020	10/02/20 11:04	
1,3-Dichlorobenzene	ND	0.50	1	B0J0026	10/02/2020	10/02/20 11:04	
1,3-Dichloropropane	ND	0.50	1	B0J0026	10/02/2020	10/02/20 11:04	
1,4-Dichlorobenzene	ND	0.50	1	B0J0026	10/02/2020	10/02/20 11:04	
2,2-Dichloropropane	ND	0.50	1	B0J0026	10/02/2020	10/02/20 11:04	
2-Chlorotoluene	ND	0.50	1	B0J0026	10/02/2020	10/02/20 11:04	
4-Chlorotoluene	ND	0.50	1	B0J0026	10/02/2020	10/02/20 11:04	
4-Isopropyltoluene	ND	0.50	1	B0J0026	10/02/2020	10/02/20 11:04	
Benzene	ND	0.50	1	B0J0026	10/02/2020	10/02/20 11:04	
Bromobenzene	ND	0.50	1	B0J0026	10/02/2020	10/02/20 11:04	
Bromodichloromethane	ND	0.50	1	B0J0026	10/02/2020	10/02/20 11:04	
Bromoform	ND	0.50	1	B0J0026	10/02/2020	10/02/20 11:04	
Bromomethane	ND	0.50	1	B0J0026	10/02/2020	10/02/20 11:04	
Carbon tetrachloride	ND	0.50	1	B0J0026	10/02/2020	10/02/20 11:04	
Chlorobenzene	ND	0.50	1	B0J0026	10/02/2020	10/02/20 11:04	
Chloroethane	ND	0.50	1	B0J0026	10/02/2020	10/02/20 11:04	
Chloroform	ND	0.50	1	B0J0026	10/02/2020	10/02/20 11:04	
Chloromethane	ND	0.50	1	B0J0026	10/02/2020	10/02/20 11:04	
cis-1,2-Dichloroethene	ND	0.50	1	B0J0026	10/02/2020	10/02/20 11:04	
cis-1,3-Dichloropropene	ND	0.50	1	B0J0026	10/02/2020	10/02/20 11:04	
Dibromochloromethane	ND	0.50	1	B0J0026	10/02/2020	10/02/20 11:04	

Certificate of Analysis

Hargis & Associates, Inc.	Project Number : Raytheon Main GETS Monthly Sample, 5
9171 Towne Centre Drive, Suite 375	Report To : Steve Netto
San Diego , CA 92122	Reported : 10/26/2020

Client Sample ID: TB-100120

Lab ID: 2002242-01

Volatile Organic Compounds by EPA 8260B **Analyst: KL**

Analyte	Result (ug/L)	PQL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Dibromomethane	ND	0.50	1	B0J0026	10/02/2020	10/02/20 11:04	
Dichlorodifluoromethane	ND	0.50	1	B0J0026	10/02/2020	10/02/20 11:04	
Ethylbenzene	ND	0.50	1	B0J0026	10/02/2020	10/02/20 11:04	
Hexachlorobutadiene	ND	0.50	1	B0J0026	10/02/2020	10/02/20 11:04	
Isopropylbenzene	ND	0.50	1	B0J0026	10/02/2020	10/02/20 11:04	
m,p-Xylene	ND	1.0	1	B0J0026	10/02/2020	10/02/20 11:04	
Methylene chloride	ND	1.0	1	B0J0026	10/02/2020	10/02/20 11:04	
n-Butylbenzene	ND	0.50	1	B0J0026	10/02/2020	10/02/20 11:04	
n-Propylbenzene	ND	0.50	1	B0J0026	10/02/2020	10/02/20 11:04	
Naphthalene	ND	0.50	1	B0J0026	10/02/2020	10/02/20 11:04	
o-Xylene	ND	0.50	1	B0J0026	10/02/2020	10/02/20 11:04	
sec-Butylbenzene	ND	0.50	1	B0J0026	10/02/2020	10/02/20 11:04	
Styrene	ND	0.50	1	B0J0026	10/02/2020	10/02/20 11:04	
tert-Butylbenzene	ND	0.50	1	B0J0026	10/02/2020	10/02/20 11:04	
Tetrachloroethene	ND	0.50	1	B0J0026	10/02/2020	10/02/20 11:04	
Toluene	ND	0.50	1	B0J0026	10/02/2020	10/02/20 11:04	
trans-1,2-Dichloroethene	ND	0.50	1	B0J0026	10/02/2020	10/02/20 11:04	
Trichloroethene	ND	0.50	1	B0J0026	10/02/2020	10/02/20 11:04	
Trichlorofluoromethane	ND	0.50	1	B0J0026	10/02/2020	10/02/20 11:04	
Vinyl chloride	ND	0.50	1	B0J0026	10/02/2020	10/02/20 11:04	
Surrogate: 1,2-Dichloroethane-d4	*93.6 %*	*64 - 155*		B0J0026	10/02/2020	*10/02/20 11:04*	
Surrogate: 4-Bromofluorobenzene	*95.5 %*	*73 - 124*		B0J0026	10/02/2020	*10/02/20 11:04*	
Surrogate: Dibromofluoromethane	*94.6 %*	*78 - 129*		B0J0026	10/02/2020	*10/02/20 11:04*	
Surrogate: Toluene-d8	*96.1 %*	*84 - 117*		B0J0026	10/02/2020	*10/02/20 11:04*	

Certificate of Analysis

Hargis & Associates, Inc.	Project Number : Raytheon Main GETS Monthly Sample, 5
9171 Towne Centre Drive, Suite 375	Report To : Steve Netto
San Diego , CA 92122	Reported : 10/26/2020

Client Sample ID: CEFF

Lab ID: 2002242-02

Volatile Organic Compounds by EPA 8260B **Analyst: KL**

Analyte	Result (ug/L)	PQL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	0.50	1	B0J0026	10/02/2020	10/02/20 11:40	
1,1,1-Trichloroethane	ND	0.50	1	B0J0026	10/02/2020	10/02/20 11:40	
1,1,2,2-Tetrachloroethane	ND	0.50	1	B0J0026	10/02/2020	10/02/20 11:40	
1,1,2-Trichloroethane	ND	0.50	1	B0J0026	10/02/2020	10/02/20 11:40	
1,1-Dichloroethane	ND	0.50	1	B0J0026	10/02/2020	10/02/20 11:40	
1,1-Dichloroethene	ND	0.50	1	B0J0026	10/02/2020	10/02/20 11:40	
1,1-Dichloropropene	ND	0.50	1	B0J0026	10/02/2020	10/02/20 11:40	
1,2,3-Trichloropropane	ND	0.50	1	B0J0026	10/02/2020	10/02/20 11:40	
1,2,3-Trichlorobenzene	ND	0.50	1	B0J0026	10/02/2020	10/02/20 11:40	
1,2,4-Trichlorobenzene	ND	0.50	1	B0J0026	10/02/2020	10/02/20 11:40	
1,2,4-Trimethylbenzene	ND	0.50	1	B0J0026	10/02/2020	10/02/20 11:40	
1,2-Dibromo-3-chloropropane	ND	0.50	1	B0J0026	10/02/2020	10/02/20 11:40	
1,2-Dibromoethane	ND	0.50	1	B0J0026	10/02/2020	10/02/20 11:40	
1,2-Dichlorobenzene	ND	0.50	1	B0J0026	10/02/2020	10/02/20 11:40	
1,2-Dichloroethane	ND	0.50	1	B0J0026	10/02/2020	10/02/20 11:40	
1,2-Dichloropropane	ND	0.50	1	B0J0026	10/02/2020	10/02/20 11:40	
1,3,5-Trimethylbenzene	ND	0.50	1	B0J0026	10/02/2020	10/02/20 11:40	
1,3-Dichlorobenzene	ND	0.50	1	B0J0026	10/02/2020	10/02/20 11:40	
1,3-Dichloropropane	ND	0.50	1	B0J0026	10/02/2020	10/02/20 11:40	
1,4-Dichlorobenzene	ND	0.50	1	B0J0026	10/02/2020	10/02/20 11:40	
2,2-Dichloropropane	ND	0.50	1	B0J0026	10/02/2020	10/02/20 11:40	
2-Chlorotoluene	ND	0.50	1	B0J0026	10/02/2020	10/02/20 11:40	
4-Chlorotoluene	ND	0.50	1	B0J0026	10/02/2020	10/02/20 11:40	
4-Isopropyltoluene	ND	0.50	1	B0J0026	10/02/2020	10/02/20 11:40	
Benzene	ND	0.50	1	B0J0026	10/02/2020	10/02/20 11:40	
Bromobenzene	ND	0.50	1	B0J0026	10/02/2020	10/02/20 11:40	
Bromodichloromethane	ND	0.50	1	B0J0026	10/02/2020	10/02/20 11:40	
Bromoform	ND	0.50	1	B0J0026	10/02/2020	10/02/20 11:40	
Bromomethane	ND	0.50	1	B0J0026	10/02/2020	10/02/20 11:40	
Carbon tetrachloride	ND	0.50	1	B0J0026	10/02/2020	10/02/20 11:40	
Chlorobenzene	ND	0.50	1	B0J0026	10/02/2020	10/02/20 11:40	
Chloroethane	ND	0.50	1	B0J0026	10/02/2020	10/02/20 11:40	
Chloroform	ND	0.50	1	B0J0026	10/02/2020	10/02/20 11:40	
Chloromethane	ND	0.50	1	B0J0026	10/02/2020	10/02/20 11:40	
cis-1,2-Dichloroethene	ND	0.50	1	B0J0026	10/02/2020	10/02/20 11:40	
cis-1,3-Dichloropropene	ND	0.50	1	B0J0026	10/02/2020	10/02/20 11:40	
Dibromochloromethane	ND	0.50	1	B0J0026	10/02/2020	10/02/20 11:40	

Certificate of Analysis

Hargis & Associates, Inc.	Project Number : Raytheon Main GETS Monthly Sample, 5
9171 Towne Centre Drive, Suite 375	Report To : Steve Netto
San Diego , CA 92122	Reported : 10/26/2020

Client Sample ID: CEFF

Lab ID: 2002242-02

Volatile Organic Compounds by EPA 8260B **Analyst: KL**

Analyte	Result (ug/L)	PQL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Dibromomethane	ND	0.50	1	B0J0026	10/02/2020	10/02/20 11:40	
Dichlorodifluoromethane	ND	0.50	1	B0J0026	10/02/2020	10/02/20 11:40	
Ethylbenzene	ND	0.50	1	B0J0026	10/02/2020	10/02/20 11:40	
Hexachlorobutadiene	ND	0.50	1	B0J0026	10/02/2020	10/02/20 11:40	
Isopropylbenzene	ND	0.50	1	B0J0026	10/02/2020	10/02/20 11:40	
m,p-Xylene	ND	1.0	1	B0J0026	10/02/2020	10/02/20 11:40	
Methylene chloride	ND	1.0	1	B0J0026	10/02/2020	10/02/20 11:40	
n-Butylbenzene	ND	0.50	1	B0J0026	10/02/2020	10/02/20 11:40	
n-Propylbenzene	ND	0.50	1	B0J0026	10/02/2020	10/02/20 11:40	
Naphthalene	ND	0.50	1	B0J0026	10/02/2020	10/02/20 11:40	
o-Xylene	ND	0.50	1	B0J0026	10/02/2020	10/02/20 11:40	
sec-Butylbenzene	ND	0.50	1	B0J0026	10/02/2020	10/02/20 11:40	
Styrene	ND	0.50	1	B0J0026	10/02/2020	10/02/20 11:40	
tert-Butylbenzene	ND	0.50	1	B0J0026	10/02/2020	10/02/20 11:40	
Tetrachloroethene	ND	0.50	1	B0J0026	10/02/2020	10/02/20 11:40	
Toluene	ND	0.50	1	B0J0026	10/02/2020	10/02/20 11:40	
trans-1,2-Dichloroethene	ND	0.50	1	B0J0026	10/02/2020	10/02/20 11:40	
Trichloroethene	ND	0.50	1	B0J0026	10/02/2020	10/02/20 11:40	
Trichlorofluoromethane	ND	0.50	1	B0J0026	10/02/2020	10/02/20 11:40	
Vinyl chloride	ND	0.50	1	B0J0026	10/02/2020	10/02/20 11:40	
Surrogate: 1,2-Dichloroethane-d4	*94.6 %*	*64 - 155*		B0J0026	10/02/2020	*10/02/20 11:40*	
Surrogate: 4-Bromofluorobenzene	*96.4 %*	*73 - 124*		B0J0026	10/02/2020	*10/02/20 11:40*	
Surrogate: Dibromofluoromethane	*93.7 %*	*78 - 129*		B0J0026	10/02/2020	*10/02/20 11:40*	
Surrogate: Toluene-d8	*97.7 %*	*84 - 117*		B0J0026	10/02/2020	*10/02/20 11:40*	

Certificate of Analysis

Hargis & Associates, Inc.	Project Number : Raytheon Main GETS Monthly Sample, 5
9171 Towne Centre Drive, Suite 375	Report To : Steve Netto
San Diego , CA 92122	Reported : 10/26/2020

Client Sample ID: CEFF

Lab ID: 2002242-02

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

Analyte		Result (ug/L)	PQL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,4-Dioxane		ND	0.20	1	B0J0077	10/05/2020	10/06/20 12:02	
Surrogate: 1,2-Dichlorobenzene-d4	*62.7 %*		*13 - 99*		B0J0077	10/05/2020	*10/06/20 12:02*	
Surrogate: 2-Fluorobiphenyl	*74.4 %*		*8 - 111*		B0J0077	10/05/2020	*10/06/20 12:02*	
Surrogate: 4-Terphenyl-d14	*75.4 %*		*12 - 113*		B0J0077	10/05/2020	*10/06/20 12:02*	
Surrogate: Nitrobenzene-d5	*65.9 %*		*15 - 121*		B0J0077	10/05/2020	*10/06/20 12:02*	

Certificate of Analysis

Hargis & Associates, Inc.	Project Number : Raytheon Main GETS Monthly Sample, 5
9171 Towne Centre Drive, Suite 375	Report To : Steve Netto
San Diego , CA 92122	Reported : 10/26/2020

Client Sample ID: CBT

Lab ID: 2002242-03

Volatile Organic Compounds by EPA 8260B **Analyst: KL**

Analyte	Result (ug/L)	PQL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	0.50	1	B0J0026	10/02/2020	10/02/20 11:58	
1,1,1-Trichloroethane	ND	0.50	1	B0J0026	10/02/2020	10/02/20 11:58	
1,1,2,2-Tetrachloroethane	ND	0.50	1	B0J0026	10/02/2020	10/02/20 11:58	
1,1,2-Trichloroethane	ND	0.50	1	B0J0026	10/02/2020	10/02/20 11:58	
1,1-Dichloroethane	ND	0.50	1	B0J0026	10/02/2020	10/02/20 11:58	
1,1-Dichloroethene	ND	0.50	1	B0J0026	10/02/2020	10/02/20 11:58	
1,1-Dichloropropene	ND	0.50	1	B0J0026	10/02/2020	10/02/20 11:58	
1,2,3-Trichloropropane	ND	0.50	1	B0J0026	10/02/2020	10/02/20 11:58	
1,2,3-Trichlorobenzene	ND	0.50	1	B0J0026	10/02/2020	10/02/20 11:58	
1,2,4-Trichlorobenzene	ND	0.50	1	B0J0026	10/02/2020	10/02/20 11:58	
1,2,4-Trimethylbenzene	ND	0.50	1	B0J0026	10/02/2020	10/02/20 11:58	
1,2-Dibromo-3-chloropropane	ND	0.50	1	B0J0026	10/02/2020	10/02/20 11:58	
1,2-Dibromoethane	ND	0.50	1	B0J0026	10/02/2020	10/02/20 11:58	
1,2-Dichlorobenzene	ND	0.50	1	B0J0026	10/02/2020	10/02/20 11:58	
1,2-Dichloroethane	ND	0.50	1	B0J0026	10/02/2020	10/02/20 11:58	
1,2-Dichloropropane	ND	0.50	1	B0J0026	10/02/2020	10/02/20 11:58	
1,3,5-Trimethylbenzene	ND	0.50	1	B0J0026	10/02/2020	10/02/20 11:58	
1,3-Dichlorobenzene	ND	0.50	1	B0J0026	10/02/2020	10/02/20 11:58	
1,3-Dichloropropane	ND	0.50	1	B0J0026	10/02/2020	10/02/20 11:58	
1,4-Dichlorobenzene	ND	0.50	1	B0J0026	10/02/2020	10/02/20 11:58	
2,2-Dichloropropane	ND	0.50	1	B0J0026	10/02/2020	10/02/20 11:58	
2-Chlorotoluene	ND	0.50	1	B0J0026	10/02/2020	10/02/20 11:58	
4-Chlorotoluene	ND	0.50	1	B0J0026	10/02/2020	10/02/20 11:58	
4-Isopropyltoluene	ND	0.50	1	B0J0026	10/02/2020	10/02/20 11:58	
Benzene	ND	0.50	1	B0J0026	10/02/2020	10/02/20 11:58	
Bromobenzene	ND	0.50	1	B0J0026	10/02/2020	10/02/20 11:58	
Bromodichloromethane	ND	0.50	1	B0J0026	10/02/2020	10/02/20 11:58	
Bromoform	ND	0.50	1	B0J0026	10/02/2020	10/02/20 11:58	
Bromomethane	ND	0.50	1	B0J0026	10/02/2020	10/02/20 11:58	
Carbon tetrachloride	ND	0.50	1	B0J0026	10/02/2020	10/02/20 11:58	
Chlorobenzene	ND	0.50	1	B0J0026	10/02/2020	10/02/20 11:58	
Chloroethane	ND	0.50	1	B0J0026	10/02/2020	10/02/20 11:58	
Chloroform	ND	0.50	1	B0J0026	10/02/2020	10/02/20 11:58	
Chloromethane	ND	0.50	1	B0J0026	10/02/2020	10/02/20 11:58	
cis-1,2-Dichloroethene	ND	0.50	1	B0J0026	10/02/2020	10/02/20 11:58	
cis-1,3-Dichloropropene	ND	0.50	1	B0J0026	10/02/2020	10/02/20 11:58	
Dibromochloromethane	ND	0.50	1	B0J0026	10/02/2020	10/02/20 11:58	

Certificate of Analysis

Hargis & Associates, Inc.	Project Number : Raytheon Main GETS Monthly Sample, 5
9171 Towne Centre Drive, Suite 375	Report To : Steve Netto
San Diego , CA 92122	Reported : 10/26/2020

Client Sample ID: CBT

Lab ID: 2002242-03

Volatile Organic Compounds by EPA 8260B **Analyst: KL**

Analyte	Result (ug/L)	PQL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Dibromomethane	ND	0.50	1	B0J0026	10/02/2020	10/02/20 11:58	
Dichlorodifluoromethane	ND	0.50	1	B0J0026	10/02/2020	10/02/20 11:58	
Ethylbenzene	ND	0.50	1	B0J0026	10/02/2020	10/02/20 11:58	
Hexachlorobutadiene	ND	0.50	1	B0J0026	10/02/2020	10/02/20 11:58	
Isopropylbenzene	ND	0.50	1	B0J0026	10/02/2020	10/02/20 11:58	
m,p-Xylene	ND	1.0	1	B0J0026	10/02/2020	10/02/20 11:58	
Methylene chloride	ND	1.0	1	B0J0026	10/02/2020	10/02/20 11:58	
n-Butylbenzene	ND	0.50	1	B0J0026	10/02/2020	10/02/20 11:58	
n-Propylbenzene	ND	0.50	1	B0J0026	10/02/2020	10/02/20 11:58	
Naphthalene	ND	0.50	1	B0J0026	10/02/2020	10/02/20 11:58	
o-Xylene	ND	0.50	1	B0J0026	10/02/2020	10/02/20 11:58	
sec-Butylbenzene	ND	0.50	1	B0J0026	10/02/2020	10/02/20 11:58	
Styrene	ND	0.50	1	B0J0026	10/02/2020	10/02/20 11:58	
tert-Butylbenzene	ND	0.50	1	B0J0026	10/02/2020	10/02/20 11:58	
Tetrachloroethene	ND	0.50	1	B0J0026	10/02/2020	10/02/20 11:58	
Toluene	ND	0.50	1	B0J0026	10/02/2020	10/02/20 11:58	
trans-1,2-Dichloroethene	ND	0.50	1	B0J0026	10/02/2020	10/02/20 11:58	
Trichloroethene	ND	0.50	1	B0J0026	10/02/2020	10/02/20 11:58	
Trichlorofluoromethane	ND	0.50	1	B0J0026	10/02/2020	10/02/20 11:58	
Vinyl chloride	ND	0.50	1	B0J0026	10/02/2020	10/02/20 11:58	
Surrogate: 1,2-Dichloroethane-d4	*96.1 %*	*64 - 155*		B0J0026	10/02/2020	*10/02/20 11:58*	
Surrogate: 4-Bromofluorobenzene	*98.6 %*	*73 - 124*		B0J0026	10/02/2020	*10/02/20 11:58*	
Surrogate: Dibromofluoromethane	*97.2 %*	*78 - 129*		B0J0026	10/02/2020	*10/02/20 11:58*	
Surrogate: Toluene-d8	*99.8 %*	*84 - 117*		B0J0026	10/02/2020	*10/02/20 11:58*	

Certificate of Analysis

Hargis & Associates, Inc.	Project Number : Raytheon Main GETS Monthly Sample, 5
9171 Towne Centre Drive, Suite 375	Report To : Steve Netto
San Diego , CA 92122	Reported : 10/26/2020

Client Sample ID: CBT

Lab ID: 2002242-03

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

Analyte		Result (ug/L)	PQL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,4-Dioxane		ND	0.20	1	B0J0077	10/05/2020	10/06/20 12:28	
Surrogate: 1,2-Dichlorobenzene-d4	*67.9 %*		*13 - 99*		B0J0077	10/05/2020	*10/06/20 12:28*	
Surrogate: 2-Fluorobiphenyl	*77.2 %*		*8 - 111*		B0J0077	10/05/2020	*10/06/20 12:28*	
Surrogate: 4-Terphenyl-d14	*76.7 %*		*12 - 113*		B0J0077	10/05/2020	*10/06/20 12:28*	
Surrogate: Nitrobenzene-d5	*71.4 %*		*15 - 121*		B0J0077	10/05/2020	*10/06/20 12:28*	

Certificate of Analysis

Hargis & Associates, Inc.	Project Number : Raytheon Main GETS Monthly Sample, 5
9171 Towne Centre Drive, Suite 375	Report To : Steve Netto
San Diego , CA 92122	Reported : 10/26/2020

Client Sample ID: POX

Lab ID: 2002242-04

Alkalinity, Speciated by SM 2320B

Analyst: AH

Analyte	Result (mg/L)	PQL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Alkalinity, Bicarbonate (as CaCO3)	**220**	5.0	1	B0J0038	10/02/2020	10/02/20 14:25	
Alkalinity, Carbonate (as CaCO3)	ND	5.0	1	B0J0038	10/02/2020	10/02/20 14:25	
Alkalinity, Hydroxide (as CaCO3)	ND	5.0	1	B0J0038	10/02/2020	10/02/20 14:25	
Alkalinity, Total (as CaCO3)	**220**	5.0	1	B0J0038	10/02/2020	10/02/20 14:25	

Total Organic Carbon by SM 5310B

Analyst: AH

Analyte	Result (mg/L)	PQL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Organic Carbon, Total	ND	3.0	1	B0J0067	10/05/2020	10/05/20 17:50	

Volatile Organic Compounds by EPA 8260B

Analyst: KL

Analyte	Result (ug/L)	PQL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	0.50	1	B0J0026	10/02/2020	10/02/20 12:15	
1,1,1-Trichloroethane	ND	0.50	1	B0J0026	10/02/2020	10/02/20 12:15	
1,1,2,2-Tetrachloroethane	ND	0.50	1	B0J0026	10/02/2020	10/02/20 12:15	
1,1,2-Trichloroethane	ND	0.50	1	B0J0026	10/02/2020	10/02/20 12:15	
1,1-Dichloroethane	ND	0.50	1	B0J0026	10/02/2020	10/02/20 12:15	
1,1-Dichloroethene	ND	0.50	1	B0J0026	10/02/2020	10/02/20 12:15	
1,1-Dichloropropene	ND	0.50	1	B0J0026	10/02/2020	10/02/20 12:15	
1,2,3-Trichloropropane	ND	0.50	1	B0J0026	10/02/2020	10/02/20 12:15	
1,2,3-Trichlorobenzene	ND	0.50	1	B0J0026	10/02/2020	10/02/20 12:15	
1,2,4-Trichlorobenzene	ND	0.50	1	B0J0026	10/02/2020	10/02/20 12:15	
1,2,4-Trimethylbenzene	ND	0.50	1	B0J0026	10/02/2020	10/02/20 12:15	
1,2-Dibromo-3-chloropropane	ND	0.50	1	B0J0026	10/02/2020	10/02/20 12:15	
1,2-Dibromoethane	ND	0.50	1	B0J0026	10/02/2020	10/02/20 12:15	
1,2-Dichlorobenzene	ND	0.50	1	B0J0026	10/02/2020	10/02/20 12:15	
1,2-Dichloroethane	ND	0.50	1	B0J0026	10/02/2020	10/02/20 12:15	
1,2-Dichloropropane	ND	0.50	1	B0J0026	10/02/2020	10/02/20 12:15	
1,3,5-Trimethylbenzene	ND	0.50	1	B0J0026	10/02/2020	10/02/20 12:15	
1,3-Dichlorobenzene	ND	0.50	1	B0J0026	10/02/2020	10/02/20 12:15	
1,3-Dichloropropane	ND	0.50	1	B0J0026	10/02/2020	10/02/20 12:15	
1,4-Dichlorobenzene	ND	0.50	1	B0J0026	10/02/2020	10/02/20 12:15	
2,2-Dichloropropane	ND	0.50	1	B0J0026	10/02/2020	10/02/20 12:15	
2-Chlorotoluene	ND	0.50	1	B0J0026	10/02/2020	10/02/20 12:15	

Certificate of Analysis

Hargis & Associates, Inc.	Project Number : Raytheon Main GETS Monthly Sample, 5
9171 Towne Centre Drive, Suite 375	Report To : Steve Netto
San Diego , CA 92122	Reported : 10/26/2020

Client Sample ID: POX

Lab ID: 2002242-04

Volatile Organic Compounds by EPA 8260B **Analyst: KL**

Analyte	Result (ug/L)	PQL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
4-Chlorotoluene	ND	0.50	1	B0J0026	10/02/2020	10/02/20 12:15	
4-Isopropyltoluene	ND	0.50	1	B0J0026	10/02/2020	10/02/20 12:15	
Benzene	ND	0.50	1	B0J0026	10/02/2020	10/02/20 12:15	
Bromobenzene	ND	0.50	1	B0J0026	10/02/2020	10/02/20 12:15	
Bromodichloromethane	ND	0.50	1	B0J0026	10/02/2020	10/02/20 12:15	
Bromoform	ND	0.50	1	B0J0026	10/02/2020	10/02/20 12:15	
Bromomethane	ND	0.50	1	B0J0026	10/02/2020	10/02/20 12:15	
Carbon tetrachloride	ND	0.50	1	B0J0026	10/02/2020	10/02/20 12:15	
Chlorobenzene	ND	0.50	1	B0J0026	10/02/2020	10/02/20 12:15	
Chloroethane	ND	0.50	1	B0J0026	10/02/2020	10/02/20 12:15	
Chloroform	ND	0.50	1	B0J0026	10/02/2020	10/02/20 12:15	
Chloromethane	ND	0.50	1	B0J0026	10/02/2020	10/02/20 12:15	
cis-1,2-Dichloroethene	ND	0.50	1	B0J0026	10/02/2020	10/02/20 12:15	
cis-1,3-Dichloropropene	ND	0.50	1	B0J0026	10/02/2020	10/02/20 12:15	
Dibromochloromethane	ND	0.50	1	B0J0026	10/02/2020	10/02/20 12:15	
Dibromomethane	ND	0.50	1	B0J0026	10/02/2020	10/02/20 12:15	
Dichlorodifluoromethane	ND	0.50	1	B0J0026	10/02/2020	10/02/20 12:15	
Ethylbenzene	ND	0.50	1	B0J0026	10/02/2020	10/02/20 12:15	
Hexachlorobutadiene	ND	0.50	1	B0J0026	10/02/2020	10/02/20 12:15	
Isopropylbenzene	ND	0.50	1	B0J0026	10/02/2020	10/02/20 12:15	
m,p-Xylene	ND	1.0	1	B0J0026	10/02/2020	10/02/20 12:15	
Methylene chloride	ND	1.0	1	B0J0026	10/02/2020	10/02/20 12:15	
n-Butylbenzene	ND	0.50	1	B0J0026	10/02/2020	10/02/20 12:15	
n-Propylbenzene	ND	0.50	1	B0J0026	10/02/2020	10/02/20 12:15	
Naphthalene	ND	0.50	1	B0J0026	10/02/2020	10/02/20 12:15	
o-Xylene	ND	0.50	1	B0J0026	10/02/2020	10/02/20 12:15	
sec-Butylbenzene	ND	0.50	1	B0J0026	10/02/2020	10/02/20 12:15	
Styrene	ND	0.50	1	B0J0026	10/02/2020	10/02/20 12:15	
tert-Butylbenzene	ND	0.50	1	B0J0026	10/02/2020	10/02/20 12:15	
Tetrachloroethene	ND	0.50	1	B0J0026	10/02/2020	10/02/20 12:15	
Toluene	ND	0.50	1	B0J0026	10/02/2020	10/02/20 12:15	
trans-1,2-Dichloroethene	ND	0.50	1	B0J0026	10/02/2020	10/02/20 12:15	
Trichloroethene	ND	0.50	1	B0J0026	10/02/2020	10/02/20 12:15	
Trichlorofluoromethane	ND	0.50	1	B0J0026	10/02/2020	10/02/20 12:15	
Vinyl chloride	ND	0.50	1	B0J0026	10/02/2020	10/02/20 12:15	
Surrogate: 1,2-Dichloroethane-d4	*95.3 %*	*64 - 155*		B0J0026	10/02/2020	*10/02/20 12:15*	
Surrogate: 4-Bromofluorobenzene	*95.6 %*	*73 - 124*		B0J0026	10/02/2020	*10/02/20 12:15*	

Certificate of Analysis

Hargis & Associates, Inc.		Project Number :	Raytheon Main GETS Monthly Sample, 5
9171 Towne Centre Drive, Suite 375		Report To :	Steve Netto
San Diego , CA 92122		Reported :	10/26/2020

Client Sample ID: POX

Lab ID: 2002242-04

Volatile Organic Compounds by EPA 8260B — **Analyst: KL**

Analyte	Result (ug/L)	PQL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Surrogate: Dibromofluoromethane	*95.1 %*	*78 - 129*		B0J0026	10/02/2020	*10/02/20 12:15*	
Surrogate: Toluene-d8	*96.7 %*	*84 - 117*		B0J0026	10/02/2020	*10/02/20 12:15*	

1,4-Dioxane by EPA 8270/SIM: Isotope Dilution Technique — **Analyst: SP**

Analyte	Result (ug/L)	PQL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,4-Dioxane	ND	0.20	1	B0J0077	10/05/2020	10/06/20 12:54	
Surrogate: 1,2-Dichlorobenzene-d4	*67.1 %*	*13 - 99*		B0J0077	10/05/2020	*10/06/20 12:54*	
Surrogate: 2-Fluorobiphenyl	*76.5 %*	*8 - 111*		B0J0077	10/05/2020	*10/06/20 12:54*	
Surrogate: 4-Terphenyl-d14	*80.3 %*	*12 - 113*		B0J0077	10/05/2020	*10/06/20 12:54*	
Surrogate: Nitrobenzene-d5	*69.2 %*	*15 - 121*		B0J0077	10/05/2020	*10/06/20 12:54*	

Certificate of Analysis

Hargis & Associates, Inc.		Project Number :	Raytheon Main GETS Monthly Sample, 5
9171 Towne Centre Drive, Suite 375		Report To :	Steve Netto
San Diego , CA 92122		Reported :	10/26/2020

Client Sample ID: PF

Lab ID: 2002242-05

UV Absorption by EPA 415.3

Analyst: AH

Analyte	Result (1/cm)	PQL (1/cm)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
UV Absorption	ND	0.01	1	B0J0049	10/02/2020	10/02/20 19:35	

Alkalinity, Speciated by SM 2320B

Analyst: AH

Analyte	Result (mg/L)	PQL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Alkalinity, Bicarbonate (as CaCO3)	**220**	5.0	1	B0J0038	10/02/2020	10/02/20 14:30	
Alkalinity, Carbonate (as CaCO3)	ND	5.0	1	B0J0038	10/02/2020	10/02/20 14:30	
Alkalinity, Hydroxide (as CaCO3)	ND	5.0	1	B0J0038	10/02/2020	10/02/20 14:30	
Alkalinity, Total (as CaCO3)	**220**	5.0	1	B0J0038	10/02/2020	10/02/20 14:30	

Total Suspended Solids (Residue, Non-Filtrable) by SM 2540D

Analyst: AH

Analyte	Result (mg/L)	PQL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Residue, Suspended	ND	1.0	1	B0J0021	10/01/2020	10/02/20 20:04	

Total Organic Carbon by SM 5310B

Analyst: AH

Analyte	Result (mg/L)	PQL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Organic Carbon, Total	ND	3.0	1	B0J0067	10/05/2020	10/05/20 19:50	

Certificate of Analysis

Hargis & Associates, Inc.	Project Number : Raytheon Main GETS Monthly Sample, 5
9171 Towne Centre Drive, Suite 375	Report To : Steve Netto
San Diego , CA 92122	Reported : 10/26/2020

Client Sample ID: INF

Lab ID: 2002242-06

Bromide by Ion Chromatography EPA 300

Analyst: AH

Analyte	Result (mg/L)	PQL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Bromide	**0.64**	0.05	1	B0J0118	10/07/2020	10/07/20 13:39	

Volatile Organic Compounds by EPA 8260B

Analyst: KL

Analyte	Result (ug/L)	PQL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	0.50	1	B0J0026	10/02/2020	10/02/20 12:33	
1,1,1-Trichloroethane	ND	0.50	1	B0J0026	10/02/2020	10/02/20 12:33	
1,1,2,2-Tetrachloroethane	ND	0.50	1	B0J0026	10/02/2020	10/02/20 12:33	
1,1,2-Trichloroethane	ND	0.50	1	B0J0026	10/02/2020	10/02/20 12:33	
1,1-Dichloroethane	ND	0.50	1	B0J0026	10/02/2020	10/02/20 12:33	
1,1-Dichloroethene	**39**	0.50	1	B0J0026	10/02/2020	10/02/20 12:33	
1,1-Dichloropropene	ND	0.50	1	B0J0026	10/02/2020	10/02/20 12:33	
1,2,3-Trichloropropane	ND	0.50	1	B0J0026	10/02/2020	10/02/20 12:33	
1,2,3-Trichlorobenzene	ND	0.50	1	B0J0026	10/02/2020	10/02/20 12:33	
1,2,4-Trichlorobenzene	ND	0.50	1	B0J0026	10/02/2020	10/02/20 12:33	
1,2,4-Trimethylbenzene	ND	0.50	1	B0J0026	10/02/2020	10/02/20 12:33	
1,2-Dibromo-3-chloropropane	ND	0.50	1	B0J0026	10/02/2020	10/02/20 12:33	
1,2-Dibromoethane	ND	0.50	1	B0J0026	10/02/2020	10/02/20 12:33	
1,2-Dichlorobenzene	ND	0.50	1	B0J0026	10/02/2020	10/02/20 12:33	
1,2-Dichloroethane	ND	0.50	1	B0J0026	10/02/2020	10/02/20 12:33	
1,2-Dichloropropane	ND	0.50	1	B0J0026	10/02/2020	10/02/20 12:33	
1,3,5-Trimethylbenzene	ND	0.50	1	B0J0026	10/02/2020	10/02/20 12:33	
1,3-Dichlorobenzene	ND	0.50	1	B0J0026	10/02/2020	10/02/20 12:33	
1,3-Dichloropropane	ND	0.50	1	B0J0026	10/02/2020	10/02/20 12:33	
1,4-Dichlorobenzene	ND	0.50	1	B0J0026	10/02/2020	10/02/20 12:33	
2,2-Dichloropropane	ND	0.50	1	B0J0026	10/02/2020	10/02/20 12:33	
2-Chlorotoluene	ND	0.50	1	B0J0026	10/02/2020	10/02/20 12:33	
4-Chlorotoluene	ND	0.50	1	B0J0026	10/02/2020	10/02/20 12:33	
4-Isopropyltoluene	ND	0.50	1	B0J0026	10/02/2020	10/02/20 12:33	
Benzene	ND	0.50	1	B0J0026	10/02/2020	10/02/20 12:33	
Bromobenzene	ND	0.50	1	B0J0026	10/02/2020	10/02/20 12:33	
Bromodichloromethane	ND	0.50	1	B0J0026	10/02/2020	10/02/20 12:33	
Bromoform	ND	0.50	1	B0J0026	10/02/2020	10/02/20 12:33	
Bromomethane	ND	0.50	1	B0J0026	10/02/2020	10/02/20 12:33	
Carbon tetrachloride	ND	0.50	1	B0J0026	10/02/2020	10/02/20 12:33	
Chlorobenzene	ND	0.50	1	B0J0026	10/02/2020	10/02/20 12:33	

Certificate of Analysis

Hargis & Associates, Inc.	Project Number : Raytheon Main GETS Monthly Sample, 5
9171 Towne Centre Drive, Suite 375	Report To : Steve Netto
San Diego , CA 92122	Reported : 10/26/2020

Client Sample ID: INF

Lab ID: 2002242-06

Volatile Organic Compounds by EPA 8260B **Analyst: KL**

Analyte	Result (ug/L)	PQL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Chloroethane	ND	0.50	1	B0J0026	10/02/2020	10/02/20 12:33	
Chloroform	ND	0.50	1	B0J0026	10/02/2020	10/02/20 12:33	
Chloromethane	ND	0.50	1	B0J0026	10/02/2020	10/02/20 12:33	
cis-1,2-Dichloroethene	ND	0.50	1	B0J0026	10/02/2020	10/02/20 12:33	
cis-1,3-Dichloropropene	ND	0.50	1	B0J0026	10/02/2020	10/02/20 12:33	
Dibromochloromethane	ND	0.50	1	B0J0026	10/02/2020	10/02/20 12:33	
Dibromomethane	ND	0.50	1	B0J0026	10/02/2020	10/02/20 12:33	
Dichlorodifluoromethane	ND	0.50	1	B0J0026	10/02/2020	10/02/20 12:33	
Ethylbenzene	ND	0.50	1	B0J0026	10/02/2020	10/02/20 12:33	
Hexachlorobutadiene	ND	0.50	1	B0J0026	10/02/2020	10/02/20 12:33	
Isopropylbenzene	ND	0.50	1	B0J0026	10/02/2020	10/02/20 12:33	
m,p-Xylene	ND	1.0	1	B0J0026	10/02/2020	10/02/20 12:33	
Methylene chloride	ND	1.0	1	B0J0026	10/02/2020	10/02/20 12:33	
n-Butylbenzene	ND	0.50	1	B0J0026	10/02/2020	10/02/20 12:33	
n-Propylbenzene	ND	0.50	1	B0J0026	10/02/2020	10/02/20 12:33	
Naphthalene	ND	0.50	1	B0J0026	10/02/2020	10/02/20 12:33	
o-Xylene	ND	0.50	1	B0J0026	10/02/2020	10/02/20 12:33	
sec-Butylbenzene	ND	0.50	1	B0J0026	10/02/2020	10/02/20 12:33	
Styrene	ND	0.50	1	B0J0026	10/02/2020	10/02/20 12:33	
tert-Butylbenzene	ND	0.50	1	B0J0026	10/02/2020	10/02/20 12:33	
Tetrachloroethene	ND	0.50	1	B0J0026	10/02/2020	10/02/20 12:33	
Toluene	ND	0.50	1	B0J0026	10/02/2020	10/02/20 12:33	
trans-1,2-Dichloroethene	ND	0.50	1	B0J0026	10/02/2020	10/02/20 12:33	
Trichloroethene	ND	0.50	1	B0J0026	10/02/2020	10/02/20 12:33	
Trichlorofluoromethane	ND	0.50	1	B0J0026	10/02/2020	10/02/20 12:33	
Vinyl chloride	ND	0.50	1	B0J0026	10/02/2020	10/02/20 12:33	
Surrogate: 1,2-Dichloroethane-d4	*95.2 %*	*64 - 155*		B0J0026	10/02/2020	*10/02/20 12:33*	
Surrogate: 4-Bromofluorobenzene	*96.7 %*	*73 - 124*		B0J0026	10/02/2020	*10/02/20 12:33*	
Surrogate: Dibromofluoromethane	*95.3 %*	*78 - 129*		B0J0026	10/02/2020	*10/02/20 12:33*	
Surrogate: Toluene-d8	*98.1 %*	*84 - 117*		B0J0026	10/02/2020	*10/02/20 12:33*	

Certificate of Analysis

Hargis & Associates, Inc.	Project Number : Raytheon Main GETS Monthly Sample, 5
9171 Towne Centre Drive, Suite 375	Report To : Steve Netto
San Diego , CA 92122	Reported : 10/26/2020

Client Sample ID: INF

Lab ID: 2002242-06

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

Analyte		Result (ug/L)	PQL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,4-Dioxane		**24**	2.0	1	B0J0078	10/05/2020	10/06/20 14:02	
Surrogate: 1,2-Dichlorobenzene-d4	*49.6 %*		*17 - 119*		B0J0078	10/05/2020	*10/06/20 14:02*	
Surrogate: 2-Fluorobiphenyl	*54.7 %*		*10 - 133*		B0J0078	10/05/2020	*10/06/20 14:02*	
Surrogate: 4-Terphenyl-d14	*65.8 %*		*5 - 139*		B0J0078	10/05/2020	*10/06/20 14:02*	
Surrogate: Nitrobenzene-d5	*55.3 %*		*13 - 150*		B0J0078	10/05/2020	*10/06/20 14:02*	

Certificate of Analysis

Hargis & Associates, Inc.	Project Number : Raytheon Main GETS Monthly Sample, 5
9171 Towne Centre Drive, Suite 375	Report To : Steve Netto
San Diego , CA 92122	Reported : 10/26/2020

Client Sample ID: EW-02

Lab ID: 2002242-07

Bromide by Ion Chromatography EPA 300 — **Analyst: AH**

Analyte	Result (mg/L)	PQL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Bromide	**0.60**	0.05	1	B0J0118	10/07/2020	10/07/20 13:51	

Volatile Organic Compounds by EPA 8260B — **Analyst: KL**

Analyte	Result (ug/L)	PQL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	0.50	1	B0J0026	10/02/2020	10/02/20 12:51	
1,1,1-Trichloroethane	ND	0.50	1	B0J0026	10/02/2020	10/02/20 12:51	
1,1,2,2-Tetrachloroethane	ND	0.50	1	B0J0026	10/02/2020	10/02/20 12:51	
1,1,2-Trichloroethane	ND	0.50	1	B0J0026	10/02/2020	10/02/20 12:51	
1,1-Dichloroethane	ND	0.50	1	B0J0026	10/02/2020	10/02/20 12:51	
1,1-Dichloroethene	**15**	0.50	1	B0J0026	10/02/2020	10/02/20 12:51	
1,1-Dichloropropene	ND	0.50	1	B0J0026	10/02/2020	10/02/20 12:51	
1,2,3-Trichloropropane	ND	0.50	1	B0J0026	10/02/2020	10/02/20 12:51	
1,2,3-Trichlorobenzene	ND	0.50	1	B0J0026	10/02/2020	10/02/20 12:51	
1,2,4-Trichlorobenzene	ND	0.50	1	B0J0026	10/02/2020	10/02/20 12:51	
1,2,4-Trimethylbenzene	ND	0.50	1	B0J0026	10/02/2020	10/02/20 12:51	
1,2-Dibromo-3-chloropropane	ND	0.50	1	B0J0026	10/02/2020	10/02/20 12:51	
1,2-Dibromoethane	ND	0.50	1	B0J0026	10/02/2020	10/02/20 12:51	
1,2-Dichlorobenzene	ND	0.50	1	B0J0026	10/02/2020	10/02/20 12:51	
1,2-Dichloroethane	ND	0.50	1	B0J0026	10/02/2020	10/02/20 12:51	
1,2-Dichloropropane	ND	0.50	1	B0J0026	10/02/2020	10/02/20 12:51	
1,3,5-Trimethylbenzene	ND	0.50	1	B0J0026	10/02/2020	10/02/20 12:51	
1,3-Dichlorobenzene	ND	0.50	1	B0J0026	10/02/2020	10/02/20 12:51	
1,3-Dichloropropane	ND	0.50	1	B0J0026	10/02/2020	10/02/20 12:51	
1,4-Dichlorobenzene	ND	0.50	1	B0J0026	10/02/2020	10/02/20 12:51	
2,2-Dichloropropane	ND	0.50	1	B0J0026	10/02/2020	10/02/20 12:51	
2-Chlorotoluene	ND	0.50	1	B0J0026	10/02/2020	10/02/20 12:51	
4-Chlorotoluene	ND	0.50	1	B0J0026	10/02/2020	10/02/20 12:51	
4-Isopropyltoluene	ND	0.50	1	B0J0026	10/02/2020	10/02/20 12:51	
Benzene	ND	0.50	1	B0J0026	10/02/2020	10/02/20 12:51	
Bromobenzene	ND	0.50	1	B0J0026	10/02/2020	10/02/20 12:51	
Bromodichloromethane	ND	0.50	1	B0J0026	10/02/2020	10/02/20 12:51	
Bromoform	ND	0.50	1	B0J0026	10/02/2020	10/02/20 12:51	
Bromomethane	ND	0.50	1	B0J0026	10/02/2020	10/02/20 12:51	
Carbon tetrachloride	ND	0.50	1	B0J0026	10/02/2020	10/02/20 12:51	
Chlorobenzene	ND	0.50	1	B0J0026	10/02/2020	10/02/20 12:51	

Certificate of Analysis

Hargis & Associates, Inc.	Project Number : Raytheon Main GETS Monthly Sample, 5
9171 Towne Centre Drive, Suite 375	Report To : Steve Netto
San Diego , CA 92122	Reported : 10/26/2020

Client Sample ID: EW-02

Lab ID: 2002242-07

Volatile Organic Compounds by EPA 8260B **Analyst: KL**

Analyte	Result (ug/L)	PQL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Chloroethane	ND	0.50	1	B0J0026	10/02/2020	10/02/20 12:51	
Chloroform	ND	0.50	1	B0J0026	10/02/2020	10/02/20 12:51	
Chloromethane	ND	0.50	1	B0J0026	10/02/2020	10/02/20 12:51	
cis-1,2-Dichloroethene	ND	0.50	1	B0J0026	10/02/2020	10/02/20 12:51	
cis-1,3-Dichloropropene	ND	0.50	1	B0J0026	10/02/2020	10/02/20 12:51	
Dibromochloromethane	ND	0.50	1	B0J0026	10/02/2020	10/02/20 12:51	
Dibromomethane	ND	0.50	1	B0J0026	10/02/2020	10/02/20 12:51	
Dichlorodifluoromethane	ND	0.50	1	B0J0026	10/02/2020	10/02/20 12:51	
Ethylbenzene	ND	0.50	1	B0J0026	10/02/2020	10/02/20 12:51	
Hexachlorobutadiene	ND	0.50	1	B0J0026	10/02/2020	10/02/20 12:51	
Isopropylbenzene	ND	0.50	1	B0J0026	10/02/2020	10/02/20 12:51	
m,p-Xylene	ND	1.0	1	B0J0026	10/02/2020	10/02/20 12:51	
Methylene chloride	ND	1.0	1	B0J0026	10/02/2020	10/02/20 12:51	
n-Butylbenzene	ND	0.50	1	B0J0026	10/02/2020	10/02/20 12:51	
n-Propylbenzene	ND	0.50	1	B0J0026	10/02/2020	10/02/20 12:51	
Naphthalene	ND	0.50	1	B0J0026	10/02/2020	10/02/20 12:51	
o-Xylene	ND	0.50	1	B0J0026	10/02/2020	10/02/20 12:51	
sec-Butylbenzene	ND	0.50	1	B0J0026	10/02/2020	10/02/20 12:51	
Styrene	ND	0.50	1	B0J0026	10/02/2020	10/02/20 12:51	
tert-Butylbenzene	ND	0.50	1	B0J0026	10/02/2020	10/02/20 12:51	
Tetrachloroethene	ND	0.50	1	B0J0026	10/02/2020	10/02/20 12:51	
Toluene	ND	0.50	1	B0J0026	10/02/2020	10/02/20 12:51	
trans-1,2-Dichloroethene	ND	0.50	1	B0J0026	10/02/2020	10/02/20 12:51	
Trichloroethene	ND	0.50	1	B0J0026	10/02/2020	10/02/20 12:51	
Trichlorofluoromethane	ND	0.50	1	B0J0026	10/02/2020	10/02/20 12:51	
Vinyl chloride	ND	0.50	1	B0J0026	10/02/2020	10/02/20 12:51	
Surrogate: 1,2-Dichloroethane-d4	*96.2 %*	*64 - 155*		B0J0026	10/02/2020	*10/02/20 12:51*	
Surrogate: 4-Bromofluorobenzene	*98.0 %*	*73 - 124*		B0J0026	10/02/2020	*10/02/20 12:51*	
Surrogate: Dibromofluoromethane	*96.2 %*	*78 - 129*		B0J0026	10/02/2020	*10/02/20 12:51*	
Surrogate: Toluene-d8	*97.8 %*	*84 - 117*		B0J0026	10/02/2020	*10/02/20 12:51*	

Certificate of Analysis

Hargis & Associates, Inc.	Project Number : Raytheon Main GETS Monthly Sample, 5
9171 Towne Centre Drive, Suite 375	Report To : Steve Netto
San Diego , CA 92122	Reported : 10/26/2020

Client Sample ID: EW-02

Lab ID: 2002242-07

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

Analyte		Result (ug/L)	PQL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,4-Dioxane		**11**	2.0	1	B0J0078	10/05/2020	10/06/20 14:53	
Surrogate: 1,2-Dichlorobenzene-d4	*60.8 %*		*17 - 119*		B0J0078	10/05/2020	*10/06/20 14:53*	
Surrogate: 2-Fluorobiphenyl	*66.7 %*		*10 - 133*		B0J0078	10/05/2020	*10/06/20 14:53*	
Surrogate: 4-Terphenyl-d14	*73.8 %*		*5 - 139*		B0J0078	10/05/2020	*10/06/20 14:53*	
Surrogate: Nitrobenzene-d5	*66.1 %*		*13 - 150*		B0J0078	10/05/2020	*10/06/20 14:53*	

Certificate of Analysis

Hargis & Associates, Inc.	Project Number : Raytheon Main GETS Monthly Sample, 5
9171 Towne Centre Drive, Suite 375	Report To : Steve Netto
San Diego , CA 92122	Reported : 10/26/2020

Client Sample ID: MW-29

Lab ID: 2002242-08

Bromide by Ion Chromatography EPA 300

Analyst: AH

Analyte	Result (mg/L)	PQL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Bromide	**1.0**	0.05	1	B0J0118	10/07/2020	10/07/20 14:02	

Volatile Organic Compounds by EPA 8260B

Analyst: KL

Analyte	Result (ug/L)	PQL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	0.50	1	B0J0026	10/02/2020	10/02/20 13:10	
1,1,1-Trichloroethane	ND	0.50	1	B0J0026	10/02/2020	10/02/20 13:10	
1,1,2,2-Tetrachloroethane	ND	0.50	1	B0J0026	10/02/2020	10/02/20 13:10	
1,1,2-Trichloroethane	**0.52**	0.50	1	B0J0026	10/02/2020	10/02/20 13:10	
1,1-Dichloroethane	**1.4**	0.50	1	B0J0026	10/02/2020	10/02/20 13:10	
1,1-Dichloroethene	**160**	5.0	10	B0J0026	10/02/2020	10/02/20 13:28	
1,1-Dichloropropene	ND	0.50	1	B0J0026	10/02/2020	10/02/20 13:10	
1,2,3-Trichloropropane	ND	0.50	1	B0J0026	10/02/2020	10/02/20 13:10	
1,2,3-Trichlorobenzene	ND	0.50	1	B0J0026	10/02/2020	10/02/20 13:10	
1,2,4-Trichlorobenzene	ND	0.50	1	B0J0026	10/02/2020	10/02/20 13:10	
1,2,4-Trimethylbenzene	ND	0.50	1	B0J0026	10/02/2020	10/02/20 13:10	
1,2-Dibromo-3-chloropropane	ND	0.50	1	B0J0026	10/02/2020	10/02/20 13:10	
1,2-Dibromoethane	ND	0.50	1	B0J0026	10/02/2020	10/02/20 13:10	
1,2-Dichlorobenzene	ND	0.50	1	B0J0026	10/02/2020	10/02/20 13:10	
1,2-Dichloroethane	ND	0.50	1	B0J0026	10/02/2020	10/02/20 13:10	
1,2-Dichloropropane	ND	0.50	1	B0J0026	10/02/2020	10/02/20 13:10	
1,3,5-Trimethylbenzene	ND	0.50	1	B0J0026	10/02/2020	10/02/20 13:10	
1,3-Dichlorobenzene	ND	0.50	1	B0J0026	10/02/2020	10/02/20 13:10	
1,3-Dichloropropane	ND	0.50	1	B0J0026	10/02/2020	10/02/20 13:10	
1,4-Dichlorobenzene	ND	0.50	1	B0J0026	10/02/2020	10/02/20 13:10	
2,2-Dichloropropane	ND	0.50	1	B0J0026	10/02/2020	10/02/20 13:10	
2-Chlorotoluene	ND	0.50	1	B0J0026	10/02/2020	10/02/20 13:10	
4-Chlorotoluene	ND	0.50	1	B0J0026	10/02/2020	10/02/20 13:10	
4-Isopropyltoluene	ND	0.50	1	B0J0026	10/02/2020	10/02/20 13:10	
Benzene	ND	0.50	1	B0J0026	10/02/2020	10/02/20 13:10	
Bromobenzene	ND	0.50	1	B0J0026	10/02/2020	10/02/20 13:10	
Bromodichloromethane	ND	0.50	1	B0J0026	10/02/2020	10/02/20 13:10	
Bromoform	ND	0.50	1	B0J0026	10/02/2020	10/02/20 13:10	
Bromomethane	ND	0.50	1	B0J0026	10/02/2020	10/02/20 13:10	
Carbon tetrachloride	ND	0.50	1	B0J0026	10/02/2020	10/02/20 13:10	
Chlorobenzene	ND	0.50	1	B0J0026	10/02/2020	10/02/20 13:10	

Certificate of Analysis

Hargis & Associates, Inc.	Project Number : Raytheon Main GETS Monthly Sample, 5
9171 Towne Centre Drive, Suite 375	Report To : Steve Netto
San Diego , CA 92122	Reported : 10/26/2020

Client Sample ID: MW-29

Lab ID: 2002242-08

Volatile Organic Compounds by EPA 8260B **Analyst: KL**

Analyte	Result (ug/L)	PQL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Chloroethane	ND	0.50	1	B0J0026	10/02/2020	10/02/20 13:10	
Chloroform	ND	0.50	1	B0J0026	10/02/2020	10/02/20 13:10	
Chloromethane	ND	0.50	1	B0J0026	10/02/2020	10/02/20 13:10	
cis-1,2-Dichloroethene	ND	0.50	1	B0J0026	10/02/2020	10/02/20 13:10	
cis-1,3-Dichloropropene	ND	0.50	1	B0J0026	10/02/2020	10/02/20 13:10	
Dibromochloromethane	ND	0.50	1	B0J0026	10/02/2020	10/02/20 13:10	
Dibromomethane	ND	0.50	1	B0J0026	10/02/2020	10/02/20 13:10	
Dichlorodifluoromethane	ND	0.50	1	B0J0026	10/02/2020	10/02/20 13:10	
Ethylbenzene	ND	0.50	1	B0J0026	10/02/2020	10/02/20 13:10	
Hexachlorobutadiene	ND	0.50	1	B0J0026	10/02/2020	10/02/20 13:10	
Isopropylbenzene	ND	0.50	1	B0J0026	10/02/2020	10/02/20 13:10	
m,p-Xylene	ND	1.0	1	B0J0026	10/02/2020	10/02/20 13:10	
Methylene chloride	ND	1.0	1	B0J0026	10/02/2020	10/02/20 13:10	
n-Butylbenzene	ND	0.50	1	B0J0026	10/02/2020	10/02/20 13:10	
n-Propylbenzene	ND	0.50	1	B0J0026	10/02/2020	10/02/20 13:10	
Naphthalene	ND	0.50	1	B0J0026	10/02/2020	10/02/20 13:10	
o-Xylene	ND	0.50	1	B0J0026	10/02/2020	10/02/20 13:10	
sec-Butylbenzene	ND	0.50	1	B0J0026	10/02/2020	10/02/20 13:10	
Styrene	ND	0.50	1	B0J0026	10/02/2020	10/02/20 13:10	
tert-Butylbenzene	ND	0.50	1	B0J0026	10/02/2020	10/02/20 13:10	
Tetrachloroethene	**0.53**	0.50	1	B0J0026	10/02/2020	10/02/20 13:10	
Toluene	ND	0.50	1	B0J0026	10/02/2020	10/02/20 13:10	
trans-1,2-Dichloroethene	ND	0.50	1	B0J0026	10/02/2020	10/02/20 13:10	
Trichloroethene	**1.8**	0.50	1	B0J0026	10/02/2020	10/02/20 13:10	
Trichlorofluoromethane	**0.77**	0.50	1	B0J0026	10/02/2020	10/02/20 13:10	
Vinyl chloride	ND	0.50	1	B0J0026	10/02/2020	10/02/20 13:10	
Surrogate: 1,2-Dichloroethane-d4	*95.8 %*	*64 - 155*		B0J0026	10/02/2020	*10/02/20 13:10*	
Surrogate: 1,2-Dichloroethane-d4	*96.2 %*	*64 - 155*		B0J0026	10/02/2020	*10/02/20 13:28*	
Surrogate: 4-Bromofluorobenzene	*95.1 %*	*73 - 124*		B0J0026	10/02/2020	*10/02/20 13:10*	
Surrogate: 4-Bromofluorobenzene	*96.9 %*	*73 - 124*		B0J0026	10/02/2020	*10/02/20 13:28*	
Surrogate: Dibromofluoromethane	*93.7 %*	*78 - 129*		B0J0026	10/02/2020	*10/02/20 13:28*	
Surrogate: Dibromofluoromethane	*95.4 %*	*78 - 129*		B0J0026	10/02/2020	*10/02/20 13:10*	
Surrogate: Toluene-d8	*97.3 %*	*84 - 117*		B0J0026	10/02/2020	*10/02/20 13:10*	
Surrogate: Toluene-d8	*98.8 %*	*84 - 117*		B0J0026	10/02/2020	*10/02/20 13:28*	

Certificate of Analysis

Hargis & Associates, Inc.	Project Number : Raytheon Main GETS Monthly Sample, 5
9171 Towne Centre Drive, Suite 375	Report To : Steve Netto
San Diego , CA 92122	Reported : 10/26/2020

Client Sample ID: MW-29

Lab ID: 2002242-08

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

Analyte		Result (ug/L)	PQL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,4-Dioxane		**87**	2.0	1	B0J0078	10/05/2020	10/06/20 15:19	
Surrogate: 1,2-Dichlorobenzene-d4	*54.4 %*		*17 - 119*		B0J0078	10/05/2020	*10/06/20 15:19*	
Surrogate: 2-Fluorobiphenyl	*58.0 %*		*10 - 133*		B0J0078	10/05/2020	*10/06/20 15:19*	
Surrogate: 4-Terphenyl-d14	*61.6 %*		*5 - 139*		B0J0078	10/05/2020	*10/06/20 15:19*	
Surrogate: Nitrobenzene-d5	*56.6 %*		*13 - 150*		B0J0078	10/05/2020	*10/06/20 15:19*	

Certificate of Analysis

Hargis & Associates, Inc.	Project Number : Raytheon Main GETS Monthly Sample, 5
9171 Towne Centre Drive, Suite 375	Report To : Steve Netto
San Diego , CA 92122	Reported : 10/26/2020

QUALITY CONTROL SECTION

Alkalinity, Speciated by SM 2320B - Quality Control

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B0J0038 - No_Prep_WC1_W										
Blank (B0J0038-BLK1)					Prepared: 10/2/2020 Analyzed: 10/2/2020					
Alkalinity, Bicarbonate (as CaCO3)	ND	5.0	3.4							
Alkalinity, Carbonate (as CaCO3)	ND	5.0	3.4							
Alkalinity, Hydroxide (as CaCO3)	ND	5.0	3.4							
Alkalinity, Total (as CaCO3)	ND	5.0	3.4							
LCS (B0J0038-BS1)					Prepared: 10/2/2020 Analyzed: 10/2/2020					
Alkalinity, Total (as CaCO3)	99.8700	5.0	3.4	99.9580		99.9	80 - 120			
Matrix Spike (B0J0038-MS1)			**Source: 2002242-05**		Prepared: 10/2/2020 Analyzed: 10/2/2020					
Alkalinity, Total (as CaCO3)	312.870	5.0	3.4	99.9580	221.560	91.3	80 - 120			
Matrix Spike Dup (B0J0038-MSD1)			**Source: 2002242-05**		Prepared: 10/2/2020 Analyzed: 10/2/2020					
Alkalinity, Total (as CaCO3)	306.890	5.0	3.4	99.9580	221.560	85.4	80 - 120	1.93	20	

Certificate of Analysis

Hargis & Associates, Inc.	Project Number : Raytheon Main GETS Monthly Sample, 5
9171 Towne Centre Drive, Suite 375	Report To : Steve Netto
San Diego , CA 92122	Reported : 10/26/2020

Total Suspended Solids (Residue, Non-Filtrable) by SM 2540D - Quality Control

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B0J0021 - No_Prep_WC1_W										
Blank (B0J0021-BLK1)					Prepared: 10/1/2020 Analyzed: 10/2/2020					
Residue, Suspended	ND	1.0	1.0							
LCS (B0J0021-BS1)					Prepared: 10/1/2020 Analyzed: 10/2/2020					
Residue, Suspended	104.000	10	10	100.000		104	80 - 120			
Duplicate (B0J0021-DUP1)			**Source: 2002211-01**		Prepared: 10/1/2020 Analyzed: 10/2/2020					
Residue, Suspended	29.0000	5.0	5.0		26.5000			9.01	10	

Certificate of Analysis

Hargis & Associates, Inc.	Project Number : Raytheon Main GETS Monthly Sample, 5
9171 Towne Centre Drive, Suite 375	Report To : Steve Netto
San Diego , CA 92122	Reported : 10/26/2020

Bromide by Ion Chromatography EPA 300 - Quality Control

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B0J0118 - No_Prep_IC1_W										
Blank (B0J0118-BLK1)					Prepared: 10/7/2020 Analyzed: 10/7/2020					
Bromide	ND	0.05	0.02							
LCS (B0J0118-BS1)					Prepared: 10/7/2020 Analyzed: 10/7/2020					
Bromide	0.993700	0.05	0.02	1.00000		99.4	90 - 110			
Duplicate (B0J0118-DUP1)			**Source: 2002242-07**		Prepared: 10/7/2020 Analyzed: 10/7/2020					
Bromide	0.608300	0.05	0.02		0.595100			2.19	20	
Matrix Spike (B0J0118-MS1)			**Source: 2002242-07**		Prepared: 10/7/2020 Analyzed: 10/7/2020					
Bromide	3.33670	0.05	0.02	2.50000	0.595100	110	80 - 120			
Matrix Spike Dup (B0J0118-MSD1)			**Source: 2002242-07**		Prepared: 10/7/2020 Analyzed: 10/7/2020					
Bromide	3.33390	0.05	0.02	2.50000	0.595100	110	80 - 120	0.0840	20	

Certificate of Analysis

Hargis & Associates, Inc.	Project Number : Raytheon Main GETS Monthly Sample, 5
9171 Towne Centre Drive, Suite 375	Report To : Steve Netto
San Diego , CA 92122	Reported : 10/26/2020

UV Absorption by EPA 415.3 - Quality Control

Analyte	Result (1/cm)	PQL (1/cm)	MDL (1/cm)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B0J0049 - No_Prep_II_W										
Duplicate (B0J0049-DUP1)			**Source: 2002242-05**		Prepared: 10/2/2020 Analyzed: 10/2/2020					
UV Absorption	ND	0.01	0.01		ND				20	

Certificate of Analysis

Hargis & Associates, Inc.	Project Number : Raytheon Main GETS Monthly Sample, 5
9171 Towne Centre Drive, Suite 375	Report To : Steve Netto
San Diego , CA 92122	Reported : 10/26/2020

Total Organic Carbon by SM 5310B - Quality Control

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B0J0067 - No_Prep_II_W										
Blank (B0J0067-BLK1)					Prepared: 10/5/2020 Analyzed: 10/5/2020					
Organic Carbon, Total	ND	3.0	1.3							
LCS (B0J0067-BS1)					Prepared: 10/5/2020 Analyzed: 10/5/2020					
Organic Carbon, Total	24.7400	3.0	1.3	25.0000		99.0	80 - 120			
LCS Dup (B0J0067-BSD1)					Prepared: 10/5/2020 Analyzed: 10/5/2020					
Organic Carbon, Total	24.5300	3.0	1.3	25.0000		98.1	80 - 120	0.852	20	
Duplicate (B0J0067-DUP1)			**Source: 2002242-04**		Prepared: 10/5/2020 Analyzed: 10/5/2020					
Organic Carbon, Total	ND	3.0	1.3		ND			NR	20	
Matrix Spike (B0J0067-MS1)			**Source: 2002242-04**		Prepared: 10/5/2020 Analyzed: 10/6/2020					
Organic Carbon, Total	25.1500	3.0	1.3	25.0000	ND	101	80 - 120			
Matrix Spike Dup (B0J0067-MSD1)			**Source: 2002242-04**		Prepared: 10/5/2020 Analyzed: 10/6/2020					
Organic Carbon, Total	24.6900	3.0	1.3	25.0000	ND	98.8	80 - 120	1.85	20	

Certificate of Analysis

Hargis & Associates, Inc.	Project Number : Raytheon Main GETS Monthly Sample, 5
9171 Towne Centre Drive, Suite 375	Report To : Steve Netto
San Diego , CA 92122	Reported : 10/26/2020

Volatile Organic Compounds by EPA 8260B - Quality Control

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B0J0026 - MSVOA_LL_W										
Blank (B0J0026-BLK1)							Prepared: 10/2/2020 Analyzed: 10/2/2020			
1,1,1,2-Tetrachloroethane	ND	0.50	0.11							
1,1,1-Trichloroethane	ND	0.50	0.21							
1,1,2,2-Tetrachloroethane	ND	0.50	0.36							
1,1,2-Trichloroethane	ND	0.50	0.25							
1,1-Dichloroethane	ND	0.50	0.09							
1,1-Dichloroethene	ND	0.50	0.13							
1,1-Dichloropropene	ND	0.50	0.13							
1,2,3-Trichloropropane	ND	0.50	0.39							
1,2,3-Trichlorobenzene	ND	0.50	0.18							
1,2,4-Trichlorobenzene	ND	0.50	0.16							
1,2,4-Trimethylbenzene	ND	0.50	0.14							
1,2-Dibromo-3-chloropropane	ND	0.50	0.41							
1,2-Dibromoethane	ND	0.50	0.24							
1,2-Dichlorobenzene	ND	0.50	0.20							
1,2-Dichloroethane	ND	0.50	0.20							
1,2-Dichloropropane	ND	0.50	0.15							
1,3,5-Trimethylbenzene	ND	0.50	0.13							
1,3-Dichlorobenzene	ND	0.50	0.16							
1,3-Dichloropropane	ND	0.50	0.21							
1,4-Dichlorobenzene	ND	0.50	0.17							
2,2-Dichloropropane	ND	0.50	0.38							
2-Chlorotoluene	ND	0.50	0.11							
4-Chlorotoluene	ND	0.50	0.12							
4-Isopropyltoluene	ND	0.50	0.11							
Benzene	ND	0.50	0.13							
Bromobenzene	ND	0.50	0.21							
Bromodichloromethane	ND	0.50	0.14							
Bromoform	ND	0.50	0.20							
Bromomethane	ND	0.50	0.40							
Carbon tetrachloride	ND	0.50	0.09							
Chlorobenzene	ND	0.50	0.13							
Chloroethane	ND	0.50	0.15							
Chloroform	ND	0.50	0.11							
Chloromethane	ND	0.50	0.12							
cis-1,2-Dichloroethene	ND	0.50	0.14							
cis-1,3-Dichloropropene	ND	0.50	0.13							
Dibromochloromethane	ND	0.50	0.16							
Dibromomethane	ND	0.50	0.19							
Dichlorodifluoromethane	ND	0.50	0.18							
Ethylbenzene	ND	0.50	0.13							
Hexachlorobutadiene	ND	0.50	0.15							

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

Project Number : Raytheon Main GETS Monthly Sample, 5
Report To : Steve Netto
Reported : 10/26/2020

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

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B0J0026 - MSVOA_LL_W (continued)										
Blank (B0J0026-BLK1) - Continued					Prepared: 10/2/2020 Analyzed: 10/2/2020					
Isopropylbenzene	ND	0.50	0.10							
m,p-Xylene	ND	1.0	0.19							
Methylene chloride	ND	1.0	0.71							
n-Butylbenzene	ND	0.50	0.11							
n-Propylbenzene	ND	0.50	0.10							
Naphthalene	ND	0.50	0.41							
o-Xylene	ND	0.50	0.13							
sec-Butylbenzene	ND	0.50	0.09							
Styrene	ND	0.50	0.13							
tert-Butylbenzene	ND	0.50	0.09							
Tetrachloroethene	ND	0.50	0.10							
Toluene	ND	0.50	0.12							
trans-1,2-Dichloroethene	ND	0.50	0.09							
Trichloroethene	ND	0.50	0.10							
Trichlorofluoromethane	ND	0.50	0.23							
Vinyl chloride	ND	0.50	0.13							
Surrogate: 1,2-Dichloroethane-d4	*24.35*			*25.0000*		*97.4*	*64 - 155*			
Surrogate: 4-Bromofluorobenzene	*24.24*			*25.0000*		*97.0*	*73 - 124*			
Surrogate: Dibromofluoromethan	*23.89*			*25.0000*		*95.6*	*78 - 129*			
Surrogate: Toluene-d8	*24.33*			*25.0000*		*97.3*	*84 - 117*			
LCS (B0J0026-BS1)					Prepared: 10/2/2020 Analyzed: 10/2/2020					
1,1,1,2-Tetrachloroethane	19.5700	0.50	0.11	20.0000		97.8	79 - 116			
1,1,1-Trichloroethane	20.1800	0.50	0.21	20.0000		101	73 - 130			
1,1,2,2-Tetrachloroethane	18.5900	0.50	0.36	20.0000		93.0	71 - 122			
1,1,2-Trichloroethane	19.5800	0.50	0.25	20.0000		97.9	70 - 124			
1,1-Dichloroethane	19.6100	0.50	0.09	20.0000		98.0	69 - 128			
1,1-Dichloroethene	20.3500	0.50	0.13	20.0000		102	65 - 137			
1,1-Dichloropropene	20.4700	0.50	0.13	20.0000		102	74 - 129			
1,2,3-Trichloropropane	18.7400	0.50	0.39	20.0000		93.7	74 - 123			
1,2,3-Trichlorobenzene	18.8900	0.50	0.18	20.0000		94.4	59 - 130			
1,2,4-Trichlorobenzene	19.6300	0.50	0.16	20.0000		98.2	65 - 125			
1,2,4-Trimethylbenzene	19.8500	0.50	0.14	20.0000		99.2	88 - 124			
1,2-Dibromo-3-chloropropane	18.4900	0.50	0.41	20.0000		92.4	61 - 127			
1,2-Dibromoethane	19.7900	0.50	0.24	20.0000		99.0	72 - 125			
1,2-Dichlorobenzene	19.4900	0.50	0.20	20.0000		97.4	84 - 113			
1,2-Dichloroethane	20.0200	0.50	0.20	20.0000		100	68 - 130			
1,2-Dichloropropane	19.5700	0.50	0.15	20.0000		97.8	77 - 121			
1,3,5-Trimethylbenzene	20.0300	0.50	0.13	20.0000		100	83 - 124			
1,3-Dichlorobenzene	19.3800	0.50	0.16	20.0000		96.9	83 - 112			
1,3-Dichloropropane	19.3300	0.50	0.21	20.0000		96.6	77 - 119			

Certificate of Analysis

Hargis & Associates, Inc.	Project Number : Raytheon Main GETS Monthly Sample, 5
9171 Towne Centre Drive, Suite 375	Report To : Steve Netto
San Diego , CA 92122	Reported : 10/26/2020

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

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B0J0026 - MSVOA_LL_W (continued)										
LCS (B0J0026-BS1) - Continued					Prepared: 10/2/2020 Analyzed: 10/2/2020					
1,4-Dichlorobenzene	19.1500	0.50	0.17	20.0000		95.8	79 - 115			
2,2-Dichloropropane	20.5000	0.50	0.38	20.0000		102	67 - 149			
2-Chlorotoluene	19.4300	0.50	0.11	20.0000		97.2	81 - 119			
4-Chlorotoluene	19.2100	0.50	0.12	20.0000		96.0	86 - 117			
4-Isopropyltoluene	20.1800	0.50	0.11	20.0000		101	82 - 131			
Benzene	19.7400	0.50	0.13	20.0000		98.7	75 - 124			
Bromobenzene	19.4700	0.50	0.21	20.0000		97.4	82 - 108			
Bromodichloromethane	17.8200	0.50	0.14	20.0000		89.1	80 - 120			
Bromoform	18.4900	0.50	0.20	20.0000		92.4	70 - 123			
Bromomethane	19.7100	0.50	0.40	20.0000		98.6	44 - 151			
Carbon tetrachloride	20.3300	0.50	0.09	20.0000		102	62 - 140			
Chlorobenzene	19.3700	0.50	0.13	20.0000		96.8	80 - 112			
Chloroethane	19.2400	0.50	0.15	20.0000		96.2	42 - 167			
Chloroform	17.2900	0.50	0.11	20.0000		86.4	77 - 122			
Chloromethane	18.6700	0.50	0.12	20.0000		93.4	33 - 153			
cis-1,2-Dichloroethene	19.5900	0.50	0.14	20.0000		98.0	75 - 121			
cis-1,3-Dichloropropene	19.6500	0.50	0.13	20.0000		98.2	73 - 127			
Dibromochloromethane	18.3100	0.50	0.16	20.0000		91.6	77 - 122			
Dibromomethane	20.5100	0.50	0.19	20.0000		103	75 - 121			
Dichlorodifluoromethane	19.7700	0.50	0.18	20.0000		98.8	0 - 171			
Ethylbenzene	19.8900	0.50	0.13	20.0000		99.4	82 - 119			
Hexachlorobutadiene	20.3000	0.50	0.15	20.0000		102	71 - 131			
Isopropylbenzene	20.2800	0.50	0.10	20.0000		101	75 - 126			
m,p-Xylene	39.7600	1.0	0.19	40.0000		99.4	86 - 119			
Methylene chloride	19.5200	1.0	0.71	20.0000		97.6	76 - 125			
n-Butylbenzene	20.3800	0.50	0.11	20.0000		102	81 - 125			
n-Propylbenzene	20.0600	0.50	0.10	20.0000		100	78 - 130			
Naphthalene	19.2600	0.50	0.41	20.0000		96.3	47 - 128			
o-Xylene	19.3200	0.50	0.13	20.0000		96.6	85 - 119			
sec-Butylbenzene	20.0200	0.50	0.09	20.0000		100	78 - 130			
Styrene	19.8000	0.50	0.13	20.0000		99.0	62 - 148			
tert-Butylbenzene	19.8500	0.50	0.09	20.0000		99.2	77 - 125			
Tetrachloroethene	20.2300	0.50	0.10	20.0000		101	73 - 120			
Toluene	19.7300	0.50	0.12	20.0000		98.6	79 - 119			
trans-1,2-Dichloroethene	20.0900	0.50	0.09	20.0000		100	70 - 129			
Trichloroethene	20.4500	0.50	0.10	20.0000		102	73 - 117			
Trichlorofluoromethane	21.2100	0.50	0.23	20.0000		106	59 - 135			
Vinyl chloride	20.0600	0.50	0.13	20.0000		100	58 - 132			
Surrogate: 1,2-Dichloroethane-d4	*24.03*			*25.0000*		*96.1*	*64 - 155*			
Surrogate: 4-Bromofluorobenzene	*24.62*			*25.0000*		*98.5*	*73 - 124*			
Surrogate: Dibromofluoromethan	*24.73*			*25.0000*		*98.9*	*78 - 129*			

Certificate of Analysis

Hargis & Associates, Inc.	Project Number : Raytheon Main GETS Monthly Sample, 5
9171 Towne Centre Drive, Suite 375	Report To : Steve Netto
San Diego , CA 92122	Reported : 10/26/2020

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

Analyte	Result (ug/L)	PQL (ug/L)		Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B0J0026 - MSVOA_LL_W (continued)										
LCS (B0J0026-BS1) - Continued						Prepared: 10/2/2020 Analyzed: 10/2/2020				
Surrogate: Toluene-d8	*24.81*			*25.0000*		*99.2*	*84 - 117*			
LCS Dup (B0J0026-BSD1)						Prepared: 10/2/2020 Analyzed: 10/2/2020				
1,1,1,2-Tetrachloroethane	18.3800	0.50	0.11	20.0000		91.9	79 - 116	6.27	20	
1,1,1-Trichloroethane	19.1500	0.50	0.21	20.0000		95.8	73 - 130	5.24	20	
1,1,2,2-Tetrachloroethane	18.5400	0.50	0.36	20.0000		92.7	71 - 122	0.269	20	
1,1,2-Trichloroethane	19.6300	0.50	0.25	20.0000		98.2	70 - 124	0.255	20	
1,1-Dichloroethane	18.8500	0.50	0.09	20.0000		94.2	69 - 128	3.95	20	
1,1-Dichloroethene	19.0200	0.50	0.13	20.0000		95.1	65 - 137	6.76	20	
1,1-Dichloropropene	19.7500	0.50	0.13	20.0000		98.8	74 - 129	3.58	20	
1,2,3-Trichloropropane	18.9200	0.50	0.39	20.0000		94.6	74 - 123	0.956	20	
1,2,3-Trichlorobenzene	18.9500	0.50	0.18	20.0000		94.8	59 - 130	0.317	20	
1,2,4-Trichlorobenzene	18.9900	0.50	0.16	20.0000		95.0	65 - 125	3.31	20	
1,2,4-Trimethylbenzene	19.3000	0.50	0.14	20.0000		96.5	88 - 124	2.81	20	
1,2-Dibromo-3-chloropropane	18.4000	0.50	0.41	20.0000		92.0	61 - 127	0.488	20	
1,2-Dibromoethane	19.8700	0.50	0.24	20.0000		99.4	72 - 125	0.403	20	
1,2-Dichlorobenzene	18.8400	0.50	0.20	20.0000		94.2	84 - 113	3.39	20	
1,2-Dichloroethane	19.5500	0.50	0.20	20.0000		97.8	68 - 130	2.38	20	
1,2-Dichloropropane	19.0400	0.50	0.15	20.0000		95.2	77 - 121	2.75	20	
1,3,5-Trimethylbenzene	19.2600	0.50	0.13	20.0000		96.3	83 - 124	3.92	20	
1,3-Dichlorobenzene	18.4300	0.50	0.16	20.0000		92.2	83 - 112	5.03	20	
1,3-Dichloropropane	19.3100	0.50	0.21	20.0000		96.6	77 - 119	0.104	20	
1,4-Dichlorobenzene	18.4900	0.50	0.17	20.0000		92.4	79 - 115	3.51	20	
2,2-Dichloropropane	19.1600	0.50	0.38	20.0000		95.8	67 - 149	6.76	20	
2-Chlorotoluene	18.5400	0.50	0.11	20.0000		92.7	81 - 119	4.69	20	
4-Chlorotoluene	18.6800	0.50	0.12	20.0000		93.4	86 - 117	2.80	20	
4-Isopropyltoluene	19.4200	0.50	0.11	20.0000		97.1	82 - 131	3.84	20	
Benzene	19.0100	0.50	0.13	20.0000		95.0	75 - 124	3.77	20	
Bromobenzene	19.2500	0.50	0.21	20.0000		96.2	82 - 108	1.14	20	
Bromodichloromethane	17.4800	0.50	0.14	20.0000		87.4	80 - 120	1.93	20	
Bromoform	18.9300	0.50	0.20	20.0000		94.6	70 - 123	2.35	20	
Bromomethane	17.9400	0.50	0.40	20.0000		89.7	44 - 151	9.40	20	
Carbon tetrachloride	19.3700	0.50	0.09	20.0000		96.8	62 - 140	4.84	20	
Chlorobenzene	18.8400	0.50	0.13	20.0000		94.2	80 - 112	2.77	20	
Chloroethane	18.1800	0.50	0.15	20.0000		90.9	42 - 167	5.67	20	
Chloroform	16.7000	0.50	0.11	20.0000		83.5	77 - 122	3.47	20	
Chloromethane	17.4100	0.50	0.12	20.0000		87.0	33 - 153	6.98	20	
cis-1,2-Dichloroethene	18.7000	0.50	0.14	20.0000		93.5	75 - 121	4.65	20	
cis-1,3-Dichloropropene	18.9500	0.50	0.13	20.0000		94.8	73 - 127	3.63	20	
Dibromochloromethane	18.0500	0.50	0.16	20.0000		90.2	77 - 122	1.43	20	
Dibromomethane	20.7200	0.50	0.19	20.0000		104	75 - 121	1.02	20	
Dichlorodifluoromethane	18.4900	0.50	0.18	20.0000		92.4	0 - 171	6.69	20	

Certificate of Analysis

Hargis & Associates, Inc.	Project Number : Raytheon Main GETS Monthly Sample, 5
9171 Towne Centre Drive, Suite 375	Report To : Steve Netto
San Diego , CA 92122	Reported : 10/26/2020

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

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B0J0026 - MSVOA_LL_W (continued)										
LCS Dup (B0J0026-BSD1) - Continued					Prepared: 10/2/2020 Analyzed: 10/2/2020					
Ethylbenzene	19.3900	0.50	0.13	20.0000		97.0	82 - 119	2.55	20	
Hexachlorobutadiene	19.3400	0.50	0.15	20.0000		96.7	71 - 131	4.84	20	
Isopropylbenzene	19.3100	0.50	0.10	20.0000		96.6	75 - 126	4.90	20	
m,p-Xylene	38.4700	1.0	0.19	40.0000		96.2	86 - 119	3.30	20	
Methylene chloride	19.2400	1.0	0.71	20.0000		96.2	76 - 125	1.44	20	
n-Butylbenzene	19.3800	0.50	0.11	20.0000		96.9	81 - 125	5.03	20	
n-Propylbenzene	19.3200	0.50	0.10	20.0000		96.6	78 - 130	3.76	20	
Naphthalene	18.8600	0.50	0.41	20.0000		94.3	47 - 128	2.10	20	
o-Xylene	18.9600	0.50	0.13	20.0000		94.8	85 - 119	1.88	20	
sec-Butylbenzene	19.3800	0.50	0.09	20.0000		96.9	78 - 130	3.25	20	
Styrene	19.2000	0.50	0.13	20.0000		96.0	62 - 148	3.08	20	
tert-Butylbenzene	19.1000	0.50	0.09	20.0000		95.5	77 - 125	3.85	20	
Tetrachloroethene	19.6400	0.50	0.10	20.0000		98.2	73 - 120	2.96	20	
Toluene	19.1500	0.50	0.12	20.0000		95.8	79 - 119	2.98	20	
trans-1,2-Dichloroethene	19.0400	0.50	0.09	20.0000		95.2	70 - 129	5.37	20	
Trichloroethene	19.5300	0.50	0.10	20.0000		97.6	73 - 117	4.60	20	
Trichlorofluoromethane	19.8300	0.50	0.23	20.0000		99.2	59 - 135	6.73	20	
Vinyl chloride	18.6600	0.50	0.13	20.0000		93.3	58 - 132	7.23	20	
Surrogate: 1,2-Dichloroethane-d4	*23.59*			*25.0000*		*94.4*	*64 - 155*			
Surrogate: 4-Bromofluorobenzene	*23.97*			*25.0000*		*95.9*	*73 - 124*			
Surrogate: Dibromofluoromethan	*23.78*			*25.0000*		*95.1*	*78 - 129*			
Surrogate: Toluene-d8	*24.40*			*25.0000*		*97.6*	*84 - 117*			

Certificate of Analysis

Hargis & Associates, Inc.	Project Number : Raytheon Main GETS Monthly Sample, 5
9171 Towne Centre Drive, Suite 375	Report To : Steve Netto
San Diego , CA 92122	Reported : 10/26/2020

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

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B0J0078 - MSSEMI_W										
Blank (B0J0078-BLK1)					Prepared: 10/5/2020 Analyzed: 10/6/2020					
1,4-Dioxane	ND	2.0	0.84							
Surrogate: 1,2-Dichlorobenzene-d	*57.55*			*100.000*		*57.6*	*17 - 119*			
Surrogate: 2-Fluorobiphenyl	*64.18*			*100.000*		*64.2*	*10 - 133*			
Surrogate: 4-Terphenyl-d14	*75.90*			*100.000*		*75.9*	*5 - 139*			
Surrogate: Nitrobenzene-d5	*63.35*			*100.000*		*63.4*	*13 - 150*			
LCS (B0J0078-BS1)					Prepared: 10/5/2020 Analyzed: 10/6/2020					
1,4-Dioxane	105.310	2.0	0.84	100.000		105	75 - 155			
Surrogate: 1,2-Dichlorobenzene-d	*56.65*			*100.000*		*56.6*	*17 - 119*			
Surrogate: 2-Fluorobiphenyl	*68.43*			*100.000*		*68.4*	*10 - 133*			
Surrogate: 4-Terphenyl-d14	*77.73*			*100.000*		*77.7*	*5 - 139*			
Surrogate: Nitrobenzene-d5	*67.86*			*100.000*		*67.9*	*13 - 150*			
LCS Dup (B0J0078-BSD1)					Prepared: 10/5/2020 Analyzed: 10/6/2020					
1,4-Dioxane	108.440	2.0	0.84	100.000		108	75 - 155	2.93	20	
Surrogate: 1,2-Dichlorobenzene-d	*55.61*			*100.000*		*55.6*	*17 - 119*			
Surrogate: 2-Fluorobiphenyl	*66.76*			*100.000*		*66.8*	*10 - 133*			
Surrogate: 4-Terphenyl-d14	*76.57*			*100.000*		*76.6*	*5 - 139*			
Surrogate: Nitrobenzene-d5	*68.57*			*100.000*		*68.6*	*13 - 150*			

Certificate of Analysis

Hargis & Associates, Inc.	Project Number : Raytheon Main GETS Monthly Sample, 5
9171 Towne Centre Drive, Suite 375	Report To : Steve Netto
San Diego , CA 92122	Reported : 10/26/2020

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

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B0J0077 - MSSEMI_W										
Blank (B0J0077-BLK1)					Prepared: 10/5/2020 Analyzed: 10/6/2020					
1,4-Dioxane	ND	0.20	0.05							
Surrogate: 1,2-Dichlorobenzene-d	*0.5382*			*1.00000*		*53.8*	*13 - 99*			
Surrogate: 2-Fluorobiphenyl	*0.6156*			*1.00000*		*61.6*	*8 - 111*			
Surrogate: 4-Terphenyl-d14	*0.6961*			*1.00000*		*69.6*	*12 - 113*			
Surrogate: Nitrobenzene-d5	*0.5247*			*1.00000*		*52.5*	*15 - 121*			
LCS (B0J0077-BS1)					Prepared: 10/5/2020 Analyzed: 10/6/2020					
1,4-Dioxane	0.932500	0.20	0.05	1.00000		93.2	75 - 155			
Surrogate: 1,2-Dichlorobenzene-d	*0.4870*			*1.00000*		*48.7*	*13 - 99*			
Surrogate: 2-Fluorobiphenyl	*0.5386*			*1.00000*		*53.9*	*8 - 111*			
Surrogate: 4-Terphenyl-d14	*0.5998*			*1.00000*		*60.0*	*12 - 113*			
Surrogate: Nitrobenzene-d5	*0.5127*			*1.00000*		*51.3*	*15 - 121*			
LCS Dup (B0J0077-BSD1)					Prepared: 10/5/2020 Analyzed: 10/6/2020					
1,4-Dioxane	0.921450	0.20	0.05	1.00000		92.1	75 - 155	1.19	20	
Surrogate: 1,2-Dichlorobenzene-d	*0.4860*			*1.00000*		*48.6*	*13 - 99*			
Surrogate: 2-Fluorobiphenyl	*0.5507*			*1.00000*		*55.1*	*8 - 111*			
Surrogate: 4-Terphenyl-d14	*0.5441*			*1.00000*		*54.4*	*12 - 113*			
Surrogate: Nitrobenzene-d5	*0.5151*			*1.00000*		*51.5*	*15 - 121*			

Certificate of Analysis

Hargis & Associates, Inc.		Project Number :	Raytheon Main GETS Monthly Sample, 5
9171 Towne Centre Drive, Suite 375		Report To :	Steve Netto
San Diego , CA 92122		Reported :	10/26/2020

Notes and Definitions

ND	Analyte is not detected at or above the Practical Quantitation Limit (PQL). When client requests quantitation against MDL, analyte is not detected at or above the Method Detection Limit (MDL)
PQL	Practical Quantitation Limit
MDL	Method Detection Limit
NR	Not Reported
RPD	Relative Percent Difference
CA2	CA-ELAP (CDPH)
OR1	OR-NELAP (OSPHL)

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.
(3) Results are wet unless otherwise specified.

HARGIS+ASSOCIATES, INC.
HYDROGEOLOGY • ENGINEERING

Date: 10/1/2020
Page 1 of 1

PROJECT: Raytheon Main GETS Monthly Sample

TASK NO.: 532.15

Project Manager Steve Netto
QA Manager Ross Horton
Phone 858.455.6500
Fax 858.455.6533

Sampled By: Ruben Sanchez

LAB ID	SAMPLE ID	SAMPLE COLLECTION Date	Time	MATRIX: Groundwater	MATRIX: Lab prepared water	PRESERVATION: Hydrochloric Acid (HCl)	PRESERVATION: Nitric Acid (HNO_3)	PRESERVATION: Sulfuric Acid (H_2SO_4)	PRESERVATION: Ice	CONTAINERS: 40-ml VOA	CONTAINERS: 125 mL Poly	CONTAINERS: 250 mL Poly	CONTAINERS: 250 mL Glass	CONTAINERS: 1 L Poly	CONTAINERS: 1L Amber	ANALYSIS REQUESTED: VOCs by EPA 8260B	Bromate by EPA 317	Bromide by EPA 300	Alkalinity by SM2320B	Total Organic Carbon by SM5310B	Total Suspended Solids by SM2540D	UV Absorption EPA 415.3 @254 nm	1,4-Dioxane by EPA 8270C MOD	1,4-Dioxane by EPA 8270 SIM	Expected Concentration Range (ppb) for VOAs: 0 - 10	10 - 100	100 - 1,000	>1,000	SPECIAL HANDLING: 24 hr TAT	48 Hour TAT	5 Day TAT	Level IV Data Validation Requested	MS/MSD Requested	REMARKS
820R242-01	TB-100120	10/1/2020	8:00		X	X			X	2						X									X						X			
02	CEFF	10/1/2020	9:00	X		X			X	3					1	X								X	X						X			
03	CBT	10/1/2020	9:05	X		X			X	3					1	X								X	X						X			
04	POX	10/1/2020	9:10	X		X		X	X	5	1	1			1	X	X		X	X				X	X						X			
05	PF	10/1/2020	9:15	X				X	X	2		1	1	1					X	X	X	X									X			
06	INF	10/1/2020	9:20	X		X			X	3	2				1	X	X	X					X				X				X			
07	EW-02	10/1/2020	9:45	X		X			X	3	1				1	X		X					X			X					X			
08	MW-29	10/1/2020	10:15	X		X			X	3	1				1	X		X					X				X				X			
Total number of containers per analysis:										24	5	2	1	1	6																			Total No. of Containers: 39

Relinquished By: / Company:	Date / Time	Received By: / Company	Date / Time
HrtA	10-1-20 1045	HrtA	10-1-2020 1045
HrtA	10-1-2020 1610	KAR	10-1-2020 1611

- ✓ No. of containers correct
- ✓ Received in good condition
- ✓ Custody seals secure
- ✓ Conforms to COC document

L.6° Temperature on receipt
ice

Laboratory
Advanced Technology Laboratories
Attn: Tina Nguyen
3275 Walnut Ave
Signal Hill, CA 90755
(562) 989-4045

Send Results to:
Steve Netto & Ross Horton
9171 Towne Centre Drive
Suite 375
San Diego, CA 92122
Ph: 858.455.6500
snetto@hargis.com
rhorton@hargis.com

Instructions
1. Fill out form completely and sign only after verified for completeness

Complete in ballpoint pen. Draw one line through error, initial and date correction
Indicate the number of sample containers in analytical request space; indicate choice with ✓or ×
Note applicable preservatives, special instructions, and deviations from typical environmental samples.
Consult project QA documents for specific instructions.

element

9240 Santa Fe Springs Road
Santa Fe Springs, CA
90670 USA

P: 1 562 948 2225
F: 1 562 948 5850
info.santafesprings@element.com
element.com

Laboratory Report

October 21, 2020

Advanced Technology Laboratories
PO Box 92797
Long Beach, CA 90809-2797

Attn: Tina Nguyen

Element Job No:	242456
Purchase Order:	COD
Project Name:	2002242 / Groundwater
Samples Received:	2
Date Received:	10-02-2020

Analysis	Page
Bromate by SOP 5600, Rev 4	2

Michael Shelton
Technical Director

Robert Stead
Senior Chemist

This report is to be reproduced in its entirety. All documents and data will be destroyed 7 years past invoice.
All samples will be disposed of 30 days past invoice unless prior arrangements have been made.
The results given in this report apply only to the sample(s) provided and as received.

Bromate by SOP 5600, Rev 4
Ion Chromatography-Tandem Mass Spectrometry

Sample preparation: An aliquot of sample was spiked with internal standard (bromate-$^{18}O_3$), and diluted with water. The sample solutions were analyzed using IC-MS/MS.

Parts Per Billion (µg/L)

Sample ID	Result
ATL Lab#: 2002242-04 / POX	ND
ATL Lab#: 2002242-06 / INF	ND
Method Blank	ND
Detection Limit	0.5

Dates Analyzed: 10-14-2020 through 10-15-2020

Quality Control Summary

Sample ID: ATL Lab#: 2002242-06 / INF

Analyte	Sample Result	Spike Conc	Spike Result	Spike % Rec	Spike Duplicate	Duplicate % Rec	RPD
Bromate	ND	10.0	10.2	102	9.01	90	12
QC Guidelines				80-120		80-120	NMT 15

This report is to be reproduced in its entirety. All documents and data will be destroyed 7 years past invoice.
All samples will be disposed of 30 days past invoice unless prior arrangements have been made.
The results given in this report apply only to the sample(s) provided and as received.

ADVANCED TECHNOLOGY LABORATORIES

SUBCONTRACT ORDER

Work Order: 2002242

SENDING LABORATORY:

Advanced Technology Laboratories
3275 Walnut Avenue
Signal Hill, CA 90755
Phone: 562.989.4045
Fax: 562.989.6348
Project Manager: Tina Nguyen
(Tina.Nguyen@atlglobal.com)

Sampler: Ruben Sanchez

RECEIVING LABORATORY:

Element Materials Technology
9240 Santa Fe Springs Road
Santa Fe Springs, CA 90670
Phone :(562) 948-2225
Fax: (562) 948-5850
PO#: SC14886-STANDARD TAT

IMPORTANT : Please include Work Order # and PO # in your invoice.

Analysis	Due	Expires	Sampled	Comments
ATL Lab#: 2002242-04 (1) / POX		**Water**	**10/01/20 09:10**	
Bromate_ICMS/MS_SUB	**10/16/20 17:00**	10/29/20 09:10		
[Bromate by IC-MS/MS]				
1-Poly Unpres - 125mL				
ATL Lab#: 2002242-06 (2) / INF		**Water**	**10/01/20 09:20**	
Bromate_ICMS/MS_SUB (2) 10.02.2020 ck	**10/16/20 17:00**	10/29/20 09:20		
[Bromate by IC-MS/MS]				
1-Poly Unpres - 125mL				

10.02.2020 ck: (1) Also has -D

Approved by: 10/1/2020
ATL Project Manager Date

10.2.2020
Released By ATL Sample Control Date

10/2/20
Received By Courier Date

10/2/20 10:41
Released By Courier Date

Element 10.02.2020 10.30 AM
Received By Subcontract Laboratory Date

Released By Date

Received By Date

October 22, 2020

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

ELAP No.: 1838
CSDLAC No.: 10196
ORELAP No.: CA300003

Re: ATL Work Order Number : 2002332
Client Reference : Raytheon Main GETS Mid Month Sample 532.15

Enclosed are the results for sample(s) received on October 15, 2020 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,

Dr. Reza Karimi
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 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.		Project Number :	Raytheon Main GETS Mid Month Sample
9171 Towne Centre Drive, Suite 375		Report To :	Steve Netto
San Diego , CA 92122		Reported :	10/22/2020

SUMMARY OF SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
TB-101520	2002332-01	Lab Prepared Water	10/15/20 8:00	10/15/20 16:58
CEFF	2002332-02	Groundwater	10/15/20 9:00	10/15/20 16:58
CBT	2002332-03	Groundwater	10/15/20 9:05	10/15/20 16:58
POX	2002332-04	Groundwater	10/15/20 9:10	10/15/20 16:58
INF	2002332-05	Groundwater	10/15/20 9:15	10/15/20 16:58
EW-02	2002332-06	Groundwater	10/15/20 9:50	10/15/20 16:58
MW-29	2002332-07	Groundwater	10/15/20 10:15	10/15/20 16:58

Certificate of Analysis

Hargis & Associates, Inc.	Project Number : Raytheon Main GETS Mid Month Sample
9171 Towne Centre Drive, Suite 375	Report To : Steve Netto
San Diego , CA 92122	Reported : 10/22/2020

Client Sample ID: TB-101520

Lab ID: 2002332-01

Volatile Organic Compounds by EPA 8260B **Analyst: KL**

Analyte	Result (ug/L)	PQL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	0.50	1	B0J0245	10/16/2020	10/16/20 11:58	
1,1,1-Trichloroethane	ND	0.50	1	B0J0245	10/16/2020	10/16/20 11:58	
1,1,2,2-Tetrachloroethane	ND	0.50	1	B0J0245	10/16/2020	10/16/20 11:58	
1,1,2-Trichloroethane	ND	0.50	1	B0J0245	10/16/2020	10/16/20 11:58	
1,1-Dichloroethane	ND	0.50	1	B0J0245	10/16/2020	10/16/20 11:58	
1,1-Dichloroethene	ND	0.50	1	B0J0245	10/16/2020	10/16/20 11:58	
1,1-Dichloropropene	ND	0.50	1	B0J0245	10/16/2020	10/16/20 11:58	
1,2,3-Trichloropropane	ND	0.50	1	B0J0245	10/16/2020	10/16/20 11:58	
1,2,3-Trichlorobenzene	ND	0.50	1	B0J0245	10/16/2020	10/16/20 11:58	
1,2,4-Trichlorobenzene	ND	0.50	1	B0J0245	10/16/2020	10/16/20 11:58	
1,2,4-Trimethylbenzene	ND	0.50	1	B0J0245	10/16/2020	10/16/20 11:58	
1,2-Dibromo-3-chloropropane	ND	0.50	1	B0J0245	10/16/2020	10/16/20 11:58	
1,2-Dibromoethane	ND	0.50	1	B0J0245	10/16/2020	10/16/20 11:58	
1,2-Dichlorobenzene	ND	0.50	1	B0J0245	10/16/2020	10/16/20 11:58	
1,2-Dichloroethane	ND	0.50	1	B0J0245	10/16/2020	10/16/20 11:58	
1,2-Dichloropropane	ND	0.50	1	B0J0245	10/16/2020	10/16/20 11:58	
1,3,5-Trimethylbenzene	ND	0.50	1	B0J0245	10/16/2020	10/16/20 11:58	
1,3-Dichlorobenzene	ND	0.50	1	B0J0245	10/16/2020	10/16/20 11:58	
1,3-Dichloropropane	ND	0.50	1	B0J0245	10/16/2020	10/16/20 11:58	
1,4-Dichlorobenzene	ND	0.50	1	B0J0245	10/16/2020	10/16/20 11:58	
2,2-Dichloropropane	ND	0.50	1	B0J0245	10/16/2020	10/16/20 11:58	
2-Chlorotoluene	ND	0.50	1	B0J0245	10/16/2020	10/16/20 11:58	
4-Chlorotoluene	ND	0.50	1	B0J0245	10/16/2020	10/16/20 11:58	
4-Isopropyltoluene	ND	0.50	1	B0J0245	10/16/2020	10/16/20 11:58	
Benzene	ND	0.50	1	B0J0245	10/16/2020	10/16/20 11:58	
Bromobenzene	ND	0.50	1	B0J0245	10/16/2020	10/16/20 11:58	
Bromodichloromethane	ND	0.50	1	B0J0245	10/16/2020	10/16/20 11:58	
Bromoform	ND	0.50	1	B0J0245	10/16/2020	10/16/20 11:58	
Bromomethane	ND	0.50	1	B0J0245	10/16/2020	10/16/20 11:58	
Carbon tetrachloride	ND	0.50	1	B0J0245	10/16/2020	10/16/20 11:58	
Chlorobenzene	ND	0.50	1	B0J0245	10/16/2020	10/16/20 11:58	
Chloroethane	ND	0.50	1	B0J0245	10/16/2020	10/16/20 11:58	
Chloroform	ND	0.50	1	B0J0245	10/16/2020	10/16/20 11:58	
Chloromethane	ND	0.50	1	B0J0245	10/16/2020	10/16/20 11:58	
cis-1,2-Dichloroethene	ND	0.50	1	B0J0245	10/16/2020	10/16/20 11:58	
cis-1,3-Dichloropropene	ND	0.50	1	B0J0245	10/16/2020	10/16/20 11:58	
Dibromochloromethane	ND	0.50	1	B0J0245	10/16/2020	10/16/20 11:58	

Certificate of Analysis

Hargis & Associates, Inc.	Project Number : Raytheon Main GETS Mid Month Sample
9171 Towne Centre Drive, Suite 375	Report To : Steve Netto
San Diego , CA 92122	Reported : 10/22/2020

Client Sample ID: TB-101520

Lab ID: 2002332-01

Volatile Organic Compounds by EPA 8260B **Analyst: KL**

Analyte	Result (ug/L)	PQL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Dibromomethane	ND	0.50	1	B0J0245	10/16/2020	10/16/20 11:58	
Dichlorodifluoromethane	ND	0.50	1	B0J0245	10/16/2020	10/16/20 11:58	
Ethylbenzene	ND	0.50	1	B0J0245	10/16/2020	10/16/20 11:58	
Hexachlorobutadiene	ND	0.50	1	B0J0245	10/16/2020	10/16/20 11:58	
Isopropylbenzene	ND	0.50	1	B0J0245	10/16/2020	10/16/20 11:58	
m,p-Xylene	ND	1.0	1	B0J0245	10/16/2020	10/16/20 11:58	
Methylene chloride	ND	1.0	1	B0J0245	10/16/2020	10/16/20 11:58	
n-Butylbenzene	ND	0.50	1	B0J0245	10/16/2020	10/16/20 11:58	
n-Propylbenzene	ND	0.50	1	B0J0245	10/16/2020	10/16/20 11:58	
Naphthalene	ND	0.50	1	B0J0245	10/16/2020	10/16/20 11:58	
o-Xylene	ND	0.50	1	B0J0245	10/16/2020	10/16/20 11:58	
sec-Butylbenzene	ND	0.50	1	B0J0245	10/16/2020	10/16/20 11:58	
Styrene	ND	0.50	1	B0J0245	10/16/2020	10/16/20 11:58	
tert-Butylbenzene	ND	0.50	1	B0J0245	10/16/2020	10/16/20 11:58	
Tetrachloroethene	ND	0.50	1	B0J0245	10/16/2020	10/16/20 11:58	
Toluene	ND	0.50	1	B0J0245	10/16/2020	10/16/20 11:58	
trans-1,2-Dichloroethene	ND	0.50	1	B0J0245	10/16/2020	10/16/20 11:58	
Trichloroethene	ND	0.50	1	B0J0245	10/16/2020	10/16/20 11:58	
Trichlorofluoromethane	ND	0.50	1	B0J0245	10/16/2020	10/16/20 11:58	
Vinyl chloride	ND	0.50	1	B0J0245	10/16/2020	10/16/20 11:58	
Surrogate: 1,2-Dichloroethane-d4	*103 %*	*64 - 155*		B0J0245	10/16/2020	*10/16/20 11:58*	
Surrogate: 4-Bromofluorobenzene	*87.0 %*	*73 - 124*		B0J0245	10/16/2020	*10/16/20 11:58*	
Surrogate: Dibromofluoromethane	*106 %*	*78 - 129*		B0J0245	10/16/2020	*10/16/20 11:58*	
Surrogate: Toluene-d8	*95.9 %*	*84 - 117*		B0J0245	10/16/2020	*10/16/20 11:58*	

Certificate of Analysis

Hargis & Associates, Inc.	Project Number : Raytheon Main GETS Mid Month Sample
9171 Towne Centre Drive, Suite 375	Report To : Steve Netto
San Diego , CA 92122	Reported : 10/22/2020

Client Sample ID: CEFF

Lab ID: 2002332-02

Volatile Organic Compounds by EPA 8260B **Analyst: KL**

Analyte	Result (ug/L)	PQL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	0.50	1	B0J0245	10/16/2020	10/16/20 12:18	
1,1,1-Trichloroethane	ND	0.50	1	B0J0245	10/16/2020	10/16/20 12:18	
1,1,2,2-Tetrachloroethane	ND	0.50	1	B0J0245	10/16/2020	10/16/20 12:18	
1,1,2-Trichloroethane	ND	0.50	1	B0J0245	10/16/2020	10/16/20 12:18	
1,1-Dichloroethane	ND	0.50	1	B0J0245	10/16/2020	10/16/20 12:18	
1,1-Dichloroethene	ND	0.50	1	B0J0245	10/16/2020	10/16/20 12:18	
1,1-Dichloropropene	ND	0.50	1	B0J0245	10/16/2020	10/16/20 12:18	
1,2,3-Trichloropropane	ND	0.50	1	B0J0245	10/16/2020	10/16/20 12:18	
1,2,3-Trichlorobenzene	ND	0.50	1	B0J0245	10/16/2020	10/16/20 12:18	
1,2,4-Trichlorobenzene	ND	0.50	1	B0J0245	10/16/2020	10/16/20 12:18	
1,2,4-Trimethylbenzene	ND	0.50	1	B0J0245	10/16/2020	10/16/20 12:18	
1,2-Dibromo-3-chloropropane	ND	0.50	1	B0J0245	10/16/2020	10/16/20 12:18	
1,2-Dibromoethane	ND	0.50	1	B0J0245	10/16/2020	10/16/20 12:18	
1,2-Dichlorobenzene	ND	0.50	1	B0J0245	10/16/2020	10/16/20 12:18	
1,2-Dichloroethane	ND	0.50	1	B0J0245	10/16/2020	10/16/20 12:18	
1,2-Dichloropropane	ND	0.50	1	B0J0245	10/16/2020	10/16/20 12:18	
1,3,5-Trimethylbenzene	ND	0.50	1	B0J0245	10/16/2020	10/16/20 12:18	
1,3-Dichlorobenzene	ND	0.50	1	B0J0245	10/16/2020	10/16/20 12:18	
1,3-Dichloropropane	ND	0.50	1	B0J0245	10/16/2020	10/16/20 12:18	
1,4-Dichlorobenzene	ND	0.50	1	B0J0245	10/16/2020	10/16/20 12:18	
2,2-Dichloropropane	ND	0.50	1	B0J0245	10/16/2020	10/16/20 12:18	
2-Chlorotoluene	ND	0.50	1	B0J0245	10/16/2020	10/16/20 12:18	
4-Chlorotoluene	ND	0.50	1	B0J0245	10/16/2020	10/16/20 12:18	
4-Isopropyltoluene	ND	0.50	1	B0J0245	10/16/2020	10/16/20 12:18	
Benzene	ND	0.50	1	B0J0245	10/16/2020	10/16/20 12:18	
Bromobenzene	ND	0.50	1	B0J0245	10/16/2020	10/16/20 12:18	
Bromodichloromethane	ND	0.50	1	B0J0245	10/16/2020	10/16/20 12:18	
Bromoform	ND	0.50	1	B0J0245	10/16/2020	10/16/20 12:18	
Bromomethane	ND	0.50	1	B0J0245	10/16/2020	10/16/20 12:18	
Carbon tetrachloride	ND	0.50	1	B0J0245	10/16/2020	10/16/20 12:18	
Chlorobenzene	ND	0.50	1	B0J0245	10/16/2020	10/16/20 12:18	
Chloroethane	ND	0.50	1	B0J0245	10/16/2020	10/16/20 12:18	
Chloroform	ND	0.50	1	B0J0245	10/16/2020	10/16/20 12:18	
Chloromethane	ND	0.50	1	B0J0245	10/16/2020	10/16/20 12:18	
cis-1,2-Dichloroethene	ND	0.50	1	B0J0245	10/16/2020	10/16/20 12:18	
cis-1,3-Dichloropropene	ND	0.50	1	B0J0245	10/16/2020	10/16/20 12:18	
Dibromochloromethane	ND	0.50	1	B0J0245	10/16/2020	10/16/20 12:18	

Certificate of Analysis

Hargis & Associates, Inc.	Project Number : Raytheon Main GETS Mid Month Sample
9171 Towne Centre Drive, Suite 375	Report To : Steve Netto
San Diego , CA 92122	Reported : 10/22/2020

Client Sample ID: CEFF

Lab ID: 2002332-02

Volatile Organic Compounds by EPA 8260B **Analyst: KL**

Analyte	Result (ug/L)	PQL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Dibromomethane	ND	0.50	1	B0J0245	10/16/2020	10/16/20 12:18	
Dichlorodifluoromethane	ND	0.50	1	B0J0245	10/16/2020	10/16/20 12:18	
Ethylbenzene	ND	0.50	1	B0J0245	10/16/2020	10/16/20 12:18	
Hexachlorobutadiene	ND	0.50	1	B0J0245	10/16/2020	10/16/20 12:18	
Isopropylbenzene	ND	0.50	1	B0J0245	10/16/2020	10/16/20 12:18	
m,p-Xylene	ND	1.0	1	B0J0245	10/16/2020	10/16/20 12:18	
Methylene chloride	ND	1.0	1	B0J0245	10/16/2020	10/16/20 12:18	
n-Butylbenzene	ND	0.50	1	B0J0245	10/16/2020	10/16/20 12:18	
n-Propylbenzene	ND	0.50	1	B0J0245	10/16/2020	10/16/20 12:18	
Naphthalene	ND	0.50	1	B0J0245	10/16/2020	10/16/20 12:18	
o-Xylene	ND	0.50	1	B0J0245	10/16/2020	10/16/20 12:18	
sec-Butylbenzene	ND	0.50	1	B0J0245	10/16/2020	10/16/20 12:18	
Styrene	ND	0.50	1	B0J0245	10/16/2020	10/16/20 12:18	
tert-Butylbenzene	ND	0.50	1	B0J0245	10/16/2020	10/16/20 12:18	
Tetrachloroethene	ND	0.50	1	B0J0245	10/16/2020	10/16/20 12:18	
Toluene	ND	0.50	1	B0J0245	10/16/2020	10/16/20 12:18	
trans-1,2-Dichloroethene	ND	0.50	1	B0J0245	10/16/2020	10/16/20 12:18	
Trichloroethene	ND	0.50	1	B0J0245	10/16/2020	10/16/20 12:18	
Trichlorofluoromethane	ND	0.50	1	B0J0245	10/16/2020	10/16/20 12:18	
Vinyl chloride	ND	0.50	1	B0J0245	10/16/2020	10/16/20 12:18	
Surrogate: 1,2-Dichloroethane-d4	*104 %*	*64 - 155*		B0J0245	10/16/2020	*10/16/20 12:18*	
Surrogate: 4-Bromofluorobenzene	*88.6 %*	*73 - 124*		B0J0245	10/16/2020	*10/16/20 12:18*	
Surrogate: Dibromofluoromethane	*104 %*	*78 - 129*		B0J0245	10/16/2020	*10/16/20 12:18*	
Surrogate: Toluene-d8	*95.6 %*	*84 - 117*		B0J0245	10/16/2020	*10/16/20 12:18*	

Certificate of Analysis

Hargis & Associates, Inc.	Project Number : Raytheon Main GETS Mid Month Sample
9171 Towne Centre Drive, Suite 375	Report To : Steve Netto
San Diego , CA 92122	Reported : 10/22/2020

Client Sample ID: CEFF

Lab ID: 2002332-02

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

Analyte		Result (ug/L)	PQL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,4-Dioxane		ND	0.20	1	B0J0314	10/16/2020	10/16/20 15:32	
Surrogate: 1,2-Dichlorobenzene-d4	*61.3 %*		*13 - 99*		B0J0314	10/16/2020	*10/16/20 15:32*	
Surrogate: 2-Fluorobiphenyl	*72.6 %*		*8 - 111*		B0J0314	10/16/2020	*10/16/20 15:32*	
Surrogate: 4-Terphenyl-d14	*75.6 %*		*12 - 113*		B0J0314	10/16/2020	*10/16/20 15:32*	
Surrogate: Nitrobenzene-d5	*70.0 %*		*15 - 121*		B0J0314	10/16/2020	*10/16/20 15:32*	

Certificate of Analysis

Hargis & Associates, Inc.	Project Number : Raytheon Main GETS Mid Month Sample
9171 Towne Centre Drive, Suite 375	Report To : Steve Netto
San Diego , CA 92122	Reported : 10/22/2020

Client Sample ID: CBT

Lab ID: 2002332-03

Volatile Organic Compounds by EPA 8260B **Analyst: KL**

Analyte	Result (ug/L)	PQL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	0.50	1	B0J0245	10/16/2020	10/16/20 12:38	
1,1,1-Trichloroethane	ND	0.50	1	B0J0245	10/16/2020	10/16/20 12:38	
1,1,2,2-Tetrachloroethane	ND	0.50	1	B0J0245	10/16/2020	10/16/20 12:38	
1,1,2-Trichloroethane	ND	0.50	1	B0J0245	10/16/2020	10/16/20 12:38	
1,1-Dichloroethane	ND	0.50	1	B0J0245	10/16/2020	10/16/20 12:38	
1,1-Dichloroethene	ND	0.50	1	B0J0245	10/16/2020	10/16/20 12:38	
1,1-Dichloropropene	ND	0.50	1	B0J0245	10/16/2020	10/16/20 12:38	
1,2,3-Trichloropropane	ND	0.50	1	B0J0245	10/16/2020	10/16/20 12:38	
1,2,3-Trichlorobenzene	ND	0.50	1	B0J0245	10/16/2020	10/16/20 12:38	
1,2,4-Trichlorobenzene	ND	0.50	1	B0J0245	10/16/2020	10/16/20 12:38	
1,2,4-Trimethylbenzene	ND	0.50	1	B0J0245	10/16/2020	10/16/20 12:38	
1,2-Dibromo-3-chloropropane	ND	0.50	1	B0J0245	10/16/2020	10/16/20 12:38	
1,2-Dibromoethane	ND	0.50	1	B0J0245	10/16/2020	10/16/20 12:38	
1,2-Dichlorobenzene	ND	0.50	1	B0J0245	10/16/2020	10/16/20 12:38	
1,2-Dichloroethane	ND	0.50	1	B0J0245	10/16/2020	10/16/20 12:38	
1,2-Dichloropropane	ND	0.50	1	B0J0245	10/16/2020	10/16/20 12:38	
1,3,5-Trimethylbenzene	ND	0.50	1	B0J0245	10/16/2020	10/16/20 12:38	
1,3-Dichlorobenzene	ND	0.50	1	B0J0245	10/16/2020	10/16/20 12:38	
1,3-Dichloropropane	ND	0.50	1	B0J0245	10/16/2020	10/16/20 12:38	
1,4-Dichlorobenzene	ND	0.50	1	B0J0245	10/16/2020	10/16/20 12:38	
2,2-Dichloropropane	ND	0.50	1	B0J0245	10/16/2020	10/16/20 12:38	
2-Chlorotoluene	ND	0.50	1	B0J0245	10/16/2020	10/16/20 12:38	
4-Chlorotoluene	ND	0.50	1	B0J0245	10/16/2020	10/16/20 12:38	
4-Isopropyltoluene	ND	0.50	1	B0J0245	10/16/2020	10/16/20 12:38	
Benzene	ND	0.50	1	B0J0245	10/16/2020	10/16/20 12:38	
Bromobenzene	ND	0.50	1	B0J0245	10/16/2020	10/16/20 12:38	
Bromodichloromethane	ND	0.50	1	B0J0245	10/16/2020	10/16/20 12:38	
Bromoform	ND	0.50	1	B0J0245	10/16/2020	10/16/20 12:38	
Bromomethane	ND	0.50	1	B0J0245	10/16/2020	10/16/20 12:38	
Carbon tetrachloride	ND	0.50	1	B0J0245	10/16/2020	10/16/20 12:38	
Chlorobenzene	ND	0.50	1	B0J0245	10/16/2020	10/16/20 12:38	
Chloroethane	ND	0.50	1	B0J0245	10/16/2020	10/16/20 12:38	
Chloroform	ND	0.50	1	B0J0245	10/16/2020	10/16/20 12:38	
Chloromethane	ND	0.50	1	B0J0245	10/16/2020	10/16/20 12:38	
cis-1,2-Dichloroethene	ND	0.50	1	B0J0245	10/16/2020	10/16/20 12:38	
cis-1,3-Dichloropropene	ND	0.50	1	B0J0245	10/16/2020	10/16/20 12:38	
Dibromochloromethane	ND	0.50	1	B0J0245	10/16/2020	10/16/20 12:38	

Certificate of Analysis

Hargis & Associates, Inc.	Project Number : Raytheon Main GETS Mid Month Sample
9171 Towne Centre Drive, Suite 375	Report To : Steve Netto
San Diego , CA 92122	Reported : 10/22/2020

Client Sample ID: CBT

Lab ID: 2002332-03

Volatile Organic Compounds by EPA 8260B **Analyst: KL**

Analyte	Result (ug/L)	PQL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Dibromomethane	ND	0.50	1	B0J0245	10/16/2020	10/16/20 12:38	
Dichlorodifluoromethane	ND	0.50	1	B0J0245	10/16/2020	10/16/20 12:38	
Ethylbenzene	ND	0.50	1	B0J0245	10/16/2020	10/16/20 12:38	
Hexachlorobutadiene	ND	0.50	1	B0J0245	10/16/2020	10/16/20 12:38	
Isopropylbenzene	ND	0.50	1	B0J0245	10/16/2020	10/16/20 12:38	
m,p-Xylene	ND	1.0	1	B0J0245	10/16/2020	10/16/20 12:38	
Methylene chloride	ND	1.0	1	B0J0245	10/16/2020	10/16/20 12:38	
n-Butylbenzene	ND	0.50	1	B0J0245	10/16/2020	10/16/20 12:38	
n-Propylbenzene	ND	0.50	1	B0J0245	10/16/2020	10/16/20 12:38	
Naphthalene	ND	0.50	1	B0J0245	10/16/2020	10/16/20 12:38	
o-Xylene	ND	0.50	1	B0J0245	10/16/2020	10/16/20 12:38	
sec-Butylbenzene	ND	0.50	1	B0J0245	10/16/2020	10/16/20 12:38	
Styrene	ND	0.50	1	B0J0245	10/16/2020	10/16/20 12:38	
tert-Butylbenzene	ND	0.50	1	B0J0245	10/16/2020	10/16/20 12:38	
Tetrachloroethene	ND	0.50	1	B0J0245	10/16/2020	10/16/20 12:38	
Toluene	ND	0.50	1	B0J0245	10/16/2020	10/16/20 12:38	
trans-1,2-Dichloroethene	ND	0.50	1	B0J0245	10/16/2020	10/16/20 12:38	
Trichloroethene	ND	0.50	1	B0J0245	10/16/2020	10/16/20 12:38	
Trichlorofluoromethane	ND	0.50	1	B0J0245	10/16/2020	10/16/20 12:38	
Vinyl chloride	ND	0.50	1	B0J0245	10/16/2020	10/16/20 12:38	
Surrogate: 1,2-Dichloroethane-d4	*110 %*	*64 - 155*		B0J0245	10/16/2020	*10/16/20 12:38*	
Surrogate: 4-Bromofluorobenzene	*88.2 %*	*73 - 124*		B0J0245	10/16/2020	*10/16/20 12:38*	
Surrogate: Dibromofluoromethane	*106 %*	*78 - 129*		B0J0245	10/16/2020	*10/16/20 12:38*	
Surrogate: Toluene-d8	*96.4 %*	*84 - 117*		B0J0245	10/16/2020	*10/16/20 12:38*	

Certificate of Analysis

Hargis & Associates, Inc.	Project Number : Raytheon Main GETS Mid Month Sample
9171 Towne Centre Drive, Suite 375	Report To : Steve Netto
San Diego , CA 92122	Reported : 10/22/2020

Client Sample ID: CBT

Lab ID: 2002332-03

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

Analyte		Result (ug/L)	PQL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,4-Dioxane		ND	0.20	1	B0J0314	10/16/2020	10/16/20 15:59	
Surrogate: 1,2-Dichlorobenzene-d4	*59.8 %*		*13 - 99*		B0J0314	10/16/2020	*10/16/20 15:59*	
Surrogate: 2-Fluorobiphenyl	*74.1 %*		*8 - 111*		B0J0314	10/16/2020	*10/16/20 15:59*	
Surrogate: 4-Terphenyl-d14	*75.6 %*		*12 - 113*		B0J0314	10/16/2020	*10/16/20 15:59*	
Surrogate: Nitrobenzene-d5	*67.4 %*		*15 - 121*		B0J0314	10/16/2020	*10/16/20 15:59*	

Certificate of Analysis

Hargis & Associates, Inc.	Project Number : Raytheon Main GETS Mid Month Sample
9171 Towne Centre Drive, Suite 375	Report To : Steve Netto
San Diego , CA 92122	Reported : 10/22/2020

Client Sample ID: POX

Lab ID: 2002332-04

Volatile Organic Compounds by EPA 8260B **Analyst: KL**

Analyte	Result (ug/L)	PQL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	0.50	1	B0J0245	10/16/2020	10/16/20 12:58	
1,1,1-Trichloroethane	ND	0.50	1	B0J0245	10/16/2020	10/16/20 12:58	
1,1,2,2-Tetrachloroethane	ND	0.50	1	B0J0245	10/16/2020	10/16/20 12:58	
1,1,2-Trichloroethane	ND	0.50	1	B0J0245	10/16/2020	10/16/20 12:58	
1,1-Dichloroethane	ND	0.50	1	B0J0245	10/16/2020	10/16/20 12:58	
1,1-Dichloroethene	ND	0.50	1	B0J0245	10/16/2020	10/16/20 12:58	
1,1-Dichloropropene	ND	0.50	1	B0J0245	10/16/2020	10/16/20 12:58	
1,2,3-Trichloropropane	ND	0.50	1	B0J0245	10/16/2020	10/16/20 12:58	
1,2,3-Trichlorobenzene	ND	0.50	1	B0J0245	10/16/2020	10/16/20 12:58	
1,2,4-Trichlorobenzene	ND	0.50	1	B0J0245	10/16/2020	10/16/20 12:58	
1,2,4-Trimethylbenzene	ND	0.50	1	B0J0245	10/16/2020	10/16/20 12:58	
1,2-Dibromo-3-chloropropane	ND	0.50	1	B0J0245	10/16/2020	10/16/20 12:58	
1,2-Dibromoethane	ND	0.50	1	B0J0245	10/16/2020	10/16/20 12:58	
1,2-Dichlorobenzene	ND	0.50	1	B0J0245	10/16/2020	10/16/20 12:58	
1,2-Dichloroethane	ND	0.50	1	B0J0245	10/16/2020	10/16/20 12:58	
1,2-Dichloropropane	ND	0.50	1	B0J0245	10/16/2020	10/16/20 12:58	
1,3,5-Trimethylbenzene	ND	0.50	1	B0J0245	10/16/2020	10/16/20 12:58	
1,3-Dichlorobenzene	ND	0.50	1	B0J0245	10/16/2020	10/16/20 12:58	
1,3-Dichloropropane	ND	0.50	1	B0J0245	10/16/2020	10/16/20 12:58	
1,4-Dichlorobenzene	ND	0.50	1	B0J0245	10/16/2020	10/16/20 12:58	
2,2-Dichloropropane	ND	0.50	1	B0J0245	10/16/2020	10/16/20 12:58	
2-Chlorotoluene	ND	0.50	1	B0J0245	10/16/2020	10/16/20 12:58	
4-Chlorotoluene	ND	0.50	1	B0J0245	10/16/2020	10/16/20 12:58	
4-Isopropyltoluene	ND	0.50	1	B0J0245	10/16/2020	10/16/20 12:58	
Benzene	ND	0.50	1	B0J0245	10/16/2020	10/16/20 12:58	
Bromobenzene	ND	0.50	1	B0J0245	10/16/2020	10/16/20 12:58	
Bromodichloromethane	ND	0.50	1	B0J0245	10/16/2020	10/16/20 12:58	
Bromoform	ND	0.50	1	B0J0245	10/16/2020	10/16/20 12:58	
Bromomethane	ND	0.50	1	B0J0245	10/16/2020	10/16/20 12:58	
Carbon tetrachloride	ND	0.50	1	B0J0245	10/16/2020	10/16/20 12:58	
Chlorobenzene	ND	0.50	1	B0J0245	10/16/2020	10/16/20 12:58	
Chloroethane	ND	0.50	1	B0J0245	10/16/2020	10/16/20 12:58	
Chloroform	ND	0.50	1	B0J0245	10/16/2020	10/16/20 12:58	
Chloromethane	ND	0.50	1	B0J0245	10/16/2020	10/16/20 12:58	
cis-1,2-Dichloroethene	ND	0.50	1	B0J0245	10/16/2020	10/16/20 12:58	
cis-1,3-Dichloropropene	ND	0.50	1	B0J0245	10/16/2020	10/16/20 12:58	
Dibromochloromethane	ND	0.50	1	B0J0245	10/16/2020	10/16/20 12:58	

Certificate of Analysis

Hargis & Associates, Inc.	Project Number : Raytheon Main GETS Mid Month Sample
9171 Towne Centre Drive, Suite 375	Report To : Steve Netto
San Diego , CA 92122	Reported : 10/22/2020

Client Sample ID: POX

Lab ID: 2002332-04

Volatile Organic Compounds by EPA 8260B **Analyst: KL**

Analyte	Result (ug/L)	PQL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Dibromomethane	ND	0.50	1	B0J0245	10/16/2020	10/16/20 12:58	
Dichlorodifluoromethane	ND	0.50	1	B0J0245	10/16/2020	10/16/20 12:58	
Ethylbenzene	ND	0.50	1	B0J0245	10/16/2020	10/16/20 12:58	
Hexachlorobutadiene	ND	0.50	1	B0J0245	10/16/2020	10/16/20 12:58	
Isopropylbenzene	ND	0.50	1	B0J0245	10/16/2020	10/16/20 12:58	
m,p-Xylene	ND	1.0	1	B0J0245	10/16/2020	10/16/20 12:58	
Methylene chloride	ND	1.0	1	B0J0245	10/16/2020	10/16/20 12:58	
n-Butylbenzene	ND	0.50	1	B0J0245	10/16/2020	10/16/20 12:58	
n-Propylbenzene	ND	0.50	1	B0J0245	10/16/2020	10/16/20 12:58	
Naphthalene	ND	0.50	1	B0J0245	10/16/2020	10/16/20 12:58	
o-Xylene	ND	0.50	1	B0J0245	10/16/2020	10/16/20 12:58	
sec-Butylbenzene	ND	0.50	1	B0J0245	10/16/2020	10/16/20 12:58	
Styrene	ND	0.50	1	B0J0245	10/16/2020	10/16/20 12:58	
tert-Butylbenzene	ND	0.50	1	B0J0245	10/16/2020	10/16/20 12:58	
Tetrachloroethene	ND	0.50	1	B0J0245	10/16/2020	10/16/20 12:58	
Toluene	ND	0.50	1	B0J0245	10/16/2020	10/16/20 12:58	
trans-1,2-Dichloroethene	ND	0.50	1	B0J0245	10/16/2020	10/16/20 12:58	
Trichloroethene	ND	0.50	1	B0J0245	10/16/2020	10/16/20 12:58	
Trichlorofluoromethane	ND	0.50	1	B0J0245	10/16/2020	10/16/20 12:58	
Vinyl chloride	ND	0.50	1	B0J0245	10/16/2020	10/16/20 12:58	
Surrogate: 1,2-Dichloroethane-d4	*110 %*	*64 - 155*		B0J0245	10/16/2020	*10/16/20 12:58*	
Surrogate: 4-Bromofluorobenzene	*92.1 %*	*73 - 124*		B0J0245	10/16/2020	*10/16/20 12:58*	
Surrogate: Dibromofluoromethane	*109 %*	*78 - 129*		B0J0245	10/16/2020	*10/16/20 12:58*	
Surrogate: Toluene-d8	*101 %*	*84 - 117*		B0J0245	10/16/2020	*10/16/20 12:58*	

Certificate of Analysis

Hargis & Associates, Inc.	Project Number : Raytheon Main GETS Mid Month Sample
9171 Towne Centre Drive, Suite 375	Report To : Steve Netto
San Diego , CA 92122	Reported : 10/22/2020

Client Sample ID: POX

Lab ID: 2002332-04

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

Analyte		Result (ug/L)	PQL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,4-Dioxane		ND	0.20	1	B0J0314	10/16/2020	10/16/20 16:26	
Surrogate: 1,2-Dichlorobenzene-d4	*58.8 %*		*13 - 99*		B0J0314	10/16/2020	*10/16/20 16:26*	
Surrogate: 2-Fluorobiphenyl	*66.6 %*		*8 - 111*		B0J0314	10/16/2020	*10/16/20 16:26*	
Surrogate: 4-Terphenyl-d14	*81.3 %*		*12 - 113*		B0J0314	10/16/2020	*10/16/20 16:26*	
Surrogate: Nitrobenzene-d5	*65.3 %*		*15 - 121*		B0J0314	10/16/2020	*10/16/20 16:26*	

Certificate of Analysis

Hargis & Associates, Inc.	Project Number : Raytheon Main GETS Mid Month Sample
9171 Towne Centre Drive, Suite 375	Report To : Steve Netto
San Diego , CA 92122	Reported : 10/22/2020

Client Sample ID: INF

Lab ID: 2002332-05

Volatile Organic Compounds by EPA 8260B **Analyst: KL**

Analyte	Result (ug/L)	PQL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	0.50	1	B0J0245	10/16/2020	10/16/20 13:19	
1,1,1-Trichloroethane	ND	0.50	1	B0J0245	10/16/2020	10/16/20 13:19	
1,1,2,2-Tetrachloroethane	ND	0.50	1	B0J0245	10/16/2020	10/16/20 13:19	
1,1,2-Trichloroethane	ND	0.50	1	B0J0245	10/16/2020	10/16/20 13:19	
1,1-Dichloroethane	ND	0.50	1	B0J0245	10/16/2020	10/16/20 13:19	
1,1-Dichloroethene	**45**	0.50	1	B0J0245	10/16/2020	10/16/20 13:19	
1,1-Dichloropropene	ND	0.50	1	B0J0245	10/16/2020	10/16/20 13:19	
1,2,3-Trichloropropane	ND	0.50	1	B0J0245	10/16/2020	10/16/20 13:19	
1,2,3-Trichlorobenzene	ND	0.50	1	B0J0245	10/16/2020	10/16/20 13:19	
1,2,4-Trichlorobenzene	ND	0.50	1	B0J0245	10/16/2020	10/16/20 13:19	
1,2,4-Trimethylbenzene	ND	0.50	1	B0J0245	10/16/2020	10/16/20 13:19	
1,2-Dibromo-3-chloropropane	ND	0.50	1	B0J0245	10/16/2020	10/16/20 13:19	
1,2-Dibromoethane	ND	0.50	1	B0J0245	10/16/2020	10/16/20 13:19	
1,2-Dichlorobenzene	ND	0.50	1	B0J0245	10/16/2020	10/16/20 13:19	
1,2-Dichloroethane	ND	0.50	1	B0J0245	10/16/2020	10/16/20 13:19	
1,2-Dichloropropane	ND	0.50	1	B0J0245	10/16/2020	10/16/20 13:19	
1,3,5-Trimethylbenzene	ND	0.50	1	B0J0245	10/16/2020	10/16/20 13:19	
1,3-Dichlorobenzene	ND	0.50	1	B0J0245	10/16/2020	10/16/20 13:19	
1,3-Dichloropropane	ND	0.50	1	B0J0245	10/16/2020	10/16/20 13:19	
1,4-Dichlorobenzene	ND	0.50	1	B0J0245	10/16/2020	10/16/20 13:19	
2,2-Dichloropropane	ND	0.50	1	B0J0245	10/16/2020	10/16/20 13:19	
2-Chlorotoluene	ND	0.50	1	B0J0245	10/16/2020	10/16/20 13:19	
4-Chlorotoluene	ND	0.50	1	B0J0245	10/16/2020	10/16/20 13:19	
4-Isopropyltoluene	ND	0.50	1	B0J0245	10/16/2020	10/16/20 13:19	
Benzene	ND	0.50	1	B0J0245	10/16/2020	10/16/20 13:19	
Bromobenzene	ND	0.50	1	B0J0245	10/16/2020	10/16/20 13:19	
Bromodichloromethane	ND	0.50	1	B0J0245	10/16/2020	10/16/20 13:19	
Bromoform	ND	0.50	1	B0J0245	10/16/2020	10/16/20 13:19	
Bromomethane	ND	0.50	1	B0J0245	10/16/2020	10/16/20 13:19	
Carbon tetrachloride	ND	0.50	1	B0J0245	10/16/2020	10/16/20 13:19	
Chlorobenzene	ND	0.50	1	B0J0245	10/16/2020	10/16/20 13:19	
Chloroethane	ND	0.50	1	B0J0245	10/16/2020	10/16/20 13:19	
Chloroform	ND	0.50	1	B0J0245	10/16/2020	10/16/20 13:19	
Chloromethane	ND	0.50	1	B0J0245	10/16/2020	10/16/20 13:19	
cis-1,2-Dichloroethene	ND	0.50	1	B0J0245	10/16/2020	10/16/20 13:19	
cis-1,3-Dichloropropene	ND	0.50	1	B0J0245	10/16/2020	10/16/20 13:19	
Dibromochloromethane	ND	0.50	1	B0J0245	10/16/2020	10/16/20 13:19	

Certificate of Analysis

Hargis & Associates, Inc.	Project Number : Raytheon Main GETS Mid Month Sample
9171 Towne Centre Drive, Suite 375	Report To : Steve Netto
San Diego , CA 92122	Reported : 10/22/2020

Client Sample ID: INF

Lab ID: 2002332-05

Volatile Organic Compounds by EPA 8260B **Analyst: KL**

Analyte	Result (ug/L)	PQL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Dibromomethane	ND	0.50	1	B0J0245	10/16/2020	10/16/20 13:19	
Dichlorodifluoromethane	ND	0.50	1	B0J0245	10/16/2020	10/16/20 13:19	
Ethylbenzene	ND	0.50	1	B0J0245	10/16/2020	10/16/20 13:19	
Hexachlorobutadiene	ND	0.50	1	B0J0245	10/16/2020	10/16/20 13:19	
Isopropylbenzene	ND	0.50	1	B0J0245	10/16/2020	10/16/20 13:19	
m,p-Xylene	ND	1.0	1	B0J0245	10/16/2020	10/16/20 13:19	
Methylene chloride	ND	1.0	1	B0J0245	10/16/2020	10/16/20 13:19	
n-Butylbenzene	ND	0.50	1	B0J0245	10/16/2020	10/16/20 13:19	
n-Propylbenzene	ND	0.50	1	B0J0245	10/16/2020	10/16/20 13:19	
Naphthalene	ND	0.50	1	B0J0245	10/16/2020	10/16/20 13:19	
o-Xylene	ND	0.50	1	B0J0245	10/16/2020	10/16/20 13:19	
sec-Butylbenzene	ND	0.50	1	B0J0245	10/16/2020	10/16/20 13:19	
Styrene	ND	0.50	1	B0J0245	10/16/2020	10/16/20 13:19	
tert-Butylbenzene	ND	0.50	1	B0J0245	10/16/2020	10/16/20 13:19	
Tetrachloroethene	ND	0.50	1	B0J0245	10/16/2020	10/16/20 13:19	
Toluene	ND	0.50	1	B0J0245	10/16/2020	10/16/20 13:19	
trans-1,2-Dichloroethene	ND	0.50	1	B0J0245	10/16/2020	10/16/20 13:19	
Trichloroethene	ND	0.50	1	B0J0245	10/16/2020	10/16/20 13:19	
Trichlorofluoromethane	ND	0.50	1	B0J0245	10/16/2020	10/16/20 13:19	
Vinyl chloride	ND	0.50	1	B0J0245	10/16/2020	10/16/20 13:19	
Surrogate: 1,2-Dichloroethane-d4	*106 %*	*64 - 155*		B0J0245	10/16/2020	*10/16/20 13:19*	
Surrogate: 4-Bromofluorobenzene	*87.9 %*	*73 - 124*		B0J0245	10/16/2020	*10/16/20 13:19*	
Surrogate: Dibromofluoromethane	*107 %*	*78 - 129*		B0J0245	10/16/2020	*10/16/20 13:19*	
Surrogate: Toluene-d8	*94.7 %*	*84 - 117*		B0J0245	10/16/2020	*10/16/20 13:19*	

Certificate of Analysis

Hargis & Associates, Inc.	Project Number : Raytheon Main GETS Mid Month Sample
9171 Towne Centre Drive, Suite 375	Report To : Steve Netto
San Diego , CA 92122	Reported : 10/22/2020

Client Sample ID: INF

Lab ID: 2002332-05

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

Analyte		Result (ug/L)	PQL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,4-Dioxane		**30**	2.0	1	B0J0311	10/16/2020	10/16/20 17:37	
Surrogate: 1,2-Dichlorobenzene-d4	*71.5 %*		*17 - 119*		B0J0311	10/16/2020	*10/16/20 17:37*	
Surrogate: 2-Fluorobiphenyl	*80.1 %*		*10 - 133*		B0J0311	10/16/2020	*10/16/20 17:37*	
Surrogate: 4-Terphenyl-d14	*93.9 %*		*5 - 139*		B0J0311	10/16/2020	*10/16/20 17:37*	
Surrogate: Nitrobenzene-d5	*81.7 %*		*13 - 150*		B0J0311	10/16/2020	*10/16/20 17:37*	

Certificate of Analysis

Hargis & Associates, Inc.	Project Number : Raytheon Main GETS Mid Month Sample
9171 Towne Centre Drive, Suite 375	Report To : Steve Netto
San Diego , CA 92122	Reported : 10/22/2020

Client Sample ID: EW-02

Lab ID: 2002332-06

Volatile Organic Compounds by EPA 8260B **Analyst: KL**

Analyte	Result (ug/L)	PQL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	0.50	1	B0J0245	10/16/2020	10/16/20 13:39	
1,1,1-Trichloroethane	ND	0.50	1	B0J0245	10/16/2020	10/16/20 13:39	
1,1,2,2-Tetrachloroethane	ND	0.50	1	B0J0245	10/16/2020	10/16/20 13:39	
1,1,2-Trichloroethane	ND	0.50	1	B0J0245	10/16/2020	10/16/20 13:39	
1,1-Dichloroethane	ND	0.50	1	B0J0245	10/16/2020	10/16/20 13:39	
1,1-Dichloroethene	**17**	0.50	1	B0J0245	10/16/2020	10/16/20 13:39	
1,1-Dichloropropene	ND	0.50	1	B0J0245	10/16/2020	10/16/20 13:39	
1,2,3-Trichloropropane	ND	0.50	1	B0J0245	10/16/2020	10/16/20 13:39	
1,2,3-Trichlorobenzene	ND	0.50	1	B0J0245	10/16/2020	10/16/20 13:39	
1,2,4-Trichlorobenzene	ND	0.50	1	B0J0245	10/16/2020	10/16/20 13:39	
1,2,4-Trimethylbenzene	ND	0.50	1	B0J0245	10/16/2020	10/16/20 13:39	
1,2-Dibromo-3-chloropropane	ND	0.50	1	B0J0245	10/16/2020	10/16/20 13:39	
1,2-Dibromoethane	ND	0.50	1	B0J0245	10/16/2020	10/16/20 13:39	
1,2-Dichlorobenzene	ND	0.50	1	B0J0245	10/16/2020	10/16/20 13:39	
1,2-Dichloroethane	ND	0.50	1	B0J0245	10/16/2020	10/16/20 13:39	
1,2-Dichloropropane	ND	0.50	1	B0J0245	10/16/2020	10/16/20 13:39	
1,3,5-Trimethylbenzene	ND	0.50	1	B0J0245	10/16/2020	10/16/20 13:39	
1,3-Dichlorobenzene	ND	0.50	1	B0J0245	10/16/2020	10/16/20 13:39	
1,3-Dichloropropane	ND	0.50	1	B0J0245	10/16/2020	10/16/20 13:39	
1,4-Dichlorobenzene	ND	0.50	1	B0J0245	10/16/2020	10/16/20 13:39	
2,2-Dichloropropane	ND	0.50	1	B0J0245	10/16/2020	10/16/20 13:39	
2-Chlorotoluene	ND	0.50	1	B0J0245	10/16/2020	10/16/20 13:39	
4-Chlorotoluene	ND	0.50	1	B0J0245	10/16/2020	10/16/20 13:39	
4-Isopropyltoluene	ND	0.50	1	B0J0245	10/16/2020	10/16/20 13:39	
Benzene	ND	0.50	1	B0J0245	10/16/2020	10/16/20 13:39	
Bromobenzene	ND	0.50	1	B0J0245	10/16/2020	10/16/20 13:39	
Bromodichloromethane	ND	0.50	1	B0J0245	10/16/2020	10/16/20 13:39	
Bromoform	ND	0.50	1	B0J0245	10/16/2020	10/16/20 13:39	
Bromomethane	ND	0.50	1	B0J0245	10/16/2020	10/16/20 13:39	
Carbon tetrachloride	ND	0.50	1	B0J0245	10/16/2020	10/16/20 13:39	
Chlorobenzene	ND	0.50	1	B0J0245	10/16/2020	10/16/20 13:39	
Chloroethane	ND	0.50	1	B0J0245	10/16/2020	10/16/20 13:39	
Chloroform	ND	0.50	1	B0J0245	10/16/2020	10/16/20 13:39	
Chloromethane	ND	0.50	1	B0J0245	10/16/2020	10/16/20 13:39	
cis-1,2-Dichloroethene	ND	0.50	1	B0J0245	10/16/2020	10/16/20 13:39	
cis-1,3-Dichloropropene	ND	0.50	1	B0J0245	10/16/2020	10/16/20 13:39	
Dibromochloromethane	ND	0.50	1	B0J0245	10/16/2020	10/16/20 13:39	

Certificate of Analysis

Hargis & Associates, Inc.	Project Number : Raytheon Main GETS Mid Month Sample
9171 Towne Centre Drive, Suite 375	Report To : Steve Netto
San Diego , CA 92122	Reported : 10/22/2020

Client Sample ID: EW-02

Lab ID: 2002332-06

Volatile Organic Compounds by EPA 8260B **Analyst: KL**

Analyte	Result (ug/L)	PQL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Dibromomethane	ND	0.50	1	B0J0245	10/16/2020	10/16/20 13:39	
Dichlorodifluoromethane	ND	0.50	1	B0J0245	10/16/2020	10/16/20 13:39	
Ethylbenzene	ND	0.50	1	B0J0245	10/16/2020	10/16/20 13:39	
Hexachlorobutadiene	ND	0.50	1	B0J0245	10/16/2020	10/16/20 13:39	
Isopropylbenzene	ND	0.50	1	B0J0245	10/16/2020	10/16/20 13:39	
m,p-Xylene	ND	1.0	1	B0J0245	10/16/2020	10/16/20 13:39	
Methylene chloride	ND	1.0	1	B0J0245	10/16/2020	10/16/20 13:39	
n-Butylbenzene	ND	0.50	1	B0J0245	10/16/2020	10/16/20 13:39	
n-Propylbenzene	ND	0.50	1	B0J0245	10/16/2020	10/16/20 13:39	
Naphthalene	ND	0.50	1	B0J0245	10/16/2020	10/16/20 13:39	
o-Xylene	ND	0.50	1	B0J0245	10/16/2020	10/16/20 13:39	
sec-Butylbenzene	ND	0.50	1	B0J0245	10/16/2020	10/16/20 13:39	
Styrene	ND	0.50	1	B0J0245	10/16/2020	10/16/20 13:39	
tert-Butylbenzene	ND	0.50	1	B0J0245	10/16/2020	10/16/20 13:39	
Tetrachloroethene	ND	0.50	1	B0J0245	10/16/2020	10/16/20 13:39	
Toluene	ND	0.50	1	B0J0245	10/16/2020	10/16/20 13:39	
trans-1,2-Dichloroethene	ND	0.50	1	B0J0245	10/16/2020	10/16/20 13:39	
Trichloroethene	ND	0.50	1	B0J0245	10/16/2020	10/16/20 13:39	
Trichlorofluoromethane	ND	0.50	1	B0J0245	10/16/2020	10/16/20 13:39	
Vinyl chloride	ND	0.50	1	B0J0245	10/16/2020	10/16/20 13:39	
Surrogate: 1,2-Dichloroethane-d4	*111 %*	*64 - 155*		B0J0245	10/16/2020	*10/16/20 13:39*	
Surrogate: 4-Bromofluorobenzene	*88.8 %*	*73 - 124*		B0J0245	10/16/2020	*10/16/20 13:39*	
Surrogate: Dibromofluoromethane	*107 %*	*78 - 129*		B0J0245	10/16/2020	*10/16/20 13:39*	
Surrogate: Toluene-d8	*98.8 %*	*84 - 117*		B0J0245	10/16/2020	*10/16/20 13:39*	

Certificate of Analysis

Hargis & Associates, Inc.	Project Number : Raytheon Main GETS Mid Month Sample
9171 Towne Centre Drive, Suite 375	Report To : Steve Netto
San Diego , CA 92122	Reported : 10/22/2020

Client Sample ID: EW-02

Lab ID: 2002332-06

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

Analyte		Result (ug/L)	PQL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,4-Dioxane		**12**	2.0	1	B0J0311	10/16/2020	10/16/20 18:04	
Surrogate: 1,2-Dichlorobenzene-d4	*53.0 %*		*17 - 119*		B0J0311	10/16/2020	*10/16/20 18:04*	
Surrogate: 2-Fluorobiphenyl	*62.9 %*		*10 - 133*		B0J0311	10/16/2020	*10/16/20 18:04*	
Surrogate: 4-Terphenyl-d14	*79.0 %*		*5 - 139*		B0J0311	10/16/2020	*10/16/20 18:04*	
Surrogate: Nitrobenzene-d5	*63.5 %*		*13 - 150*		B0J0311	10/16/2020	*10/16/20 18:04*	

Certificate of Analysis

Hargis & Associates, Inc.	Project Number : Raytheon Main GETS Mid Month Sample
9171 Towne Centre Drive, Suite 375	Report To : Steve Netto
San Diego , CA 92122	Reported : 10/22/2020

Client Sample ID: MW-29

Lab ID: 2002332-07

Volatile Organic Compounds by EPA 8260B **Analyst: KL**

Analyte	Result (ug/L)	PQL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	0.50	1	B0J0245	10/16/2020	10/16/20 13:59	
1,1,1-Trichloroethane	ND	0.50	1	B0J0245	10/16/2020	10/16/20 13:59	
1,1,2,2-Tetrachloroethane	ND	0.50	1	B0J0245	10/16/2020	10/16/20 13:59	
1,1,2-Trichloroethane	ND	0.50	1	B0J0245	10/16/2020	10/16/20 13:59	
1,1-Dichloroethane	**1.6**	0.50	1	B0J0245	10/16/2020	10/16/20 13:59	
1,1-Dichloroethene	**180**	5.0	10	B0J0245	10/16/2020	10/16/20 14:19	
1,1-Dichloropropene	ND	0.50	1	B0J0245	10/16/2020	10/16/20 13:59	
1,2,3-Trichloropropane	ND	0.50	1	B0J0245	10/16/2020	10/16/20 13:59	
1,2,3-Trichlorobenzene	ND	0.50	1	B0J0245	10/16/2020	10/16/20 13:59	
1,2,4-Trichlorobenzene	ND	0.50	1	B0J0245	10/16/2020	10/16/20 13:59	
1,2,4-Trimethylbenzene	ND	0.50	1	B0J0245	10/16/2020	10/16/20 13:59	
1,2-Dibromo-3-chloropropane	ND	0.50	1	B0J0245	10/16/2020	10/16/20 13:59	
1,2-Dibromoethane	ND	0.50	1	B0J0245	10/16/2020	10/16/20 13:59	
1,2-Dichlorobenzene	ND	0.50	1	B0J0245	10/16/2020	10/16/20 13:59	
1,2-Dichloroethane	ND	0.50	1	B0J0245	10/16/2020	10/16/20 13:59	
1,2-Dichloropropane	ND	0.50	1	B0J0245	10/16/2020	10/16/20 13:59	
1,3,5-Trimethylbenzene	ND	0.50	1	B0J0245	10/16/2020	10/16/20 13:59	
1,3-Dichlorobenzene	ND	0.50	1	B0J0245	10/16/2020	10/16/20 13:59	
1,3-Dichloropropane	ND	0.50	1	B0J0245	10/16/2020	10/16/20 13:59	
1,4-Dichlorobenzene	ND	0.50	1	B0J0245	10/16/2020	10/16/20 13:59	
2,2-Dichloropropane	ND	0.50	1	B0J0245	10/16/2020	10/16/20 13:59	
2-Chlorotoluene	ND	0.50	1	B0J0245	10/16/2020	10/16/20 13:59	
4-Chlorotoluene	ND	0.50	1	B0J0245	10/16/2020	10/16/20 13:59	
4-Isopropyltoluene	ND	0.50	1	B0J0245	10/16/2020	10/16/20 13:59	
Benzene	ND	0.50	1	B0J0245	10/16/2020	10/16/20 13:59	
Bromobenzene	ND	0.50	1	B0J0245	10/16/2020	10/16/20 13:59	
Bromodichloromethane	ND	0.50	1	B0J0245	10/16/2020	10/16/20 13:59	
Bromoform	ND	0.50	1	B0J0245	10/16/2020	10/16/20 13:59	
Bromomethane	ND	0.50	1	B0J0245	10/16/2020	10/16/20 13:59	
Carbon tetrachloride	ND	0.50	1	B0J0245	10/16/2020	10/16/20 13:59	
Chlorobenzene	ND	0.50	1	B0J0245	10/16/2020	10/16/20 13:59	
Chloroethane	ND	0.50	1	B0J0245	10/16/2020	10/16/20 13:59	
Chloroform	ND	0.50	1	B0J0245	10/16/2020	10/16/20 13:59	
Chloromethane	ND	0.50	1	B0J0245	10/16/2020	10/16/20 13:59	
cis-1,2-Dichloroethene	ND	0.50	1	B0J0245	10/16/2020	10/16/20 13:59	
cis-1,3-Dichloropropene	ND	0.50	1	B0J0245	10/16/2020	10/16/20 13:59	
Dibromochloromethane	ND	0.50	1	B0J0245	10/16/2020	10/16/20 13:59	

Certificate of Analysis

Hargis & Associates, Inc.	Project Number : Raytheon Main GETS Mid Month Sample
9171 Towne Centre Drive, Suite 375	Report To : Steve Netto
San Diego , CA 92122	Reported : 10/22/2020

Client Sample ID: MW-29

Lab ID: 2002332-07

Volatile Organic Compounds by EPA 8260B **Analyst: KL**

Analyte	Result (ug/L)	PQL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Dibromomethane	ND	0.50	1	B0J0245	10/16/2020	10/16/20 13:59	
Dichlorodifluoromethane	ND	0.50	1	B0J0245	10/16/2020	10/16/20 13:59	
Ethylbenzene	ND	0.50	1	B0J0245	10/16/2020	10/16/20 13:59	
Hexachlorobutadiene	ND	0.50	1	B0J0245	10/16/2020	10/16/20 13:59	
Isopropylbenzene	ND	0.50	1	B0J0245	10/16/2020	10/16/20 13:59	
m,p-Xylene	ND	1.0	1	B0J0245	10/16/2020	10/16/20 13:59	
Methylene chloride	ND	1.0	1	B0J0245	10/16/2020	10/16/20 13:59	
n-Butylbenzene	ND	0.50	1	B0J0245	10/16/2020	10/16/20 13:59	
n-Propylbenzene	ND	0.50	1	B0J0245	10/16/2020	10/16/20 13:59	
Naphthalene	ND	0.50	1	B0J0245	10/16/2020	10/16/20 13:59	
o-Xylene	ND	0.50	1	B0J0245	10/16/2020	10/16/20 13:59	
sec-Butylbenzene	ND	0.50	1	B0J0245	10/16/2020	10/16/20 13:59	
Styrene	ND	0.50	1	B0J0245	10/16/2020	10/16/20 13:59	
tert-Butylbenzene	ND	0.50	1	B0J0245	10/16/2020	10/16/20 13:59	
Tetrachloroethene	**0.51**	0.50	1	B0J0245	10/16/2020	10/16/20 13:59	
Toluene	ND	0.50	1	B0J0245	10/16/2020	10/16/20 13:59	
trans-1,2-Dichloroethene	ND	0.50	1	B0J0245	10/16/2020	10/16/20 13:59	
Trichloroethene	**2.1**	0.50	1	B0J0245	10/16/2020	10/16/20 13:59	
Trichlorofluoromethane	**0.90**	0.50	1	B0J0245	10/16/2020	10/16/20 13:59	
Vinyl chloride	ND	0.50	1	B0J0245	10/16/2020	10/16/20 13:59	
Surrogate: 1,2-Dichloroethane-d4	*105 %*	*64 - 155*		B0J0245	10/16/2020	*10/16/20 13:59*	
Surrogate: 1,2-Dichloroethane-d4	*107 %*	*64 - 155*		B0J0245	10/16/2020	*10/16/20 14:19*	
Surrogate: 4-Bromofluorobenzene	*86.4 %*	*73 - 124*		B0J0245	10/16/2020	*10/16/20 13:59*	
Surrogate: 4-Bromofluorobenzene	*89.6 %*	*73 - 124*		B0J0245	10/16/2020	*10/16/20 14:19*	
Surrogate: Dibromofluoromethane	*107 %*	*78 - 129*		B0J0245	10/16/2020	*10/16/20 13:59*	
Surrogate: Dibromofluoromethane	*113 %*	*78 - 129*		B0J0245	10/16/2020	*10/16/20 14:19*	
Surrogate: Toluene-d8	*97.8 %*	*84 - 117*		B0J0245	10/16/2020	*10/16/20 13:59*	
Surrogate: Toluene-d8	*99.1 %*	*84 - 117*		B0J0245	10/16/2020	*10/16/20 14:19*	

Certificate of Analysis

Hargis & Associates, Inc.	Project Number : Raytheon Main GETS Mid Month Sample
9171 Towne Centre Drive, Suite 375	Report To : Steve Netto
San Diego , CA 92122	Reported : 10/22/2020

Client Sample ID: MW-29

Lab ID: 2002332-07

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

Analyte		Result (ug/L)	PQL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,4-Dioxane		**100**	2.0	1	B0J0311	10/16/2020	10/16/20 18:30	
Surrogate: 1,2-Dichlorobenzene-d4	*60.9 %*		*17 - 119*		B0J0311	10/16/2020	*10/16/20 18:30*	
Surrogate: 2-Fluorobiphenyl	*67.1 %*		*10 - 133*		B0J0311	10/16/2020	*10/16/20 18:30*	
Surrogate: 4-Terphenyl-d14	*85.3 %*		*5 - 139*		B0J0311	10/16/2020	*10/16/20 18:30*	
Surrogate: Nitrobenzene-d5	*69.2 %*		*13 - 150*		B0J0311	10/16/2020	*10/16/20 18:30*	

Certificate of Analysis

Hargis & Associates, Inc.	Project Number : Raytheon Main GETS Mid Month Sample
9171 Towne Centre Drive, Suite 375	Report To : Steve Netto
San Diego , CA 92122	Reported : 10/22/2020

QUALITY CONTROL SECTION

Volatile Organic Compounds by EPA 8260B - Quality Control

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B0J0245 - MSVOA_LL_W										
Blank (B0J0245-BLK1)							Prepared: 10/16/2020 Analyzed: 10/16/2020			
1,1,1,2-Tetrachloroethane	ND	0.50	0.11							
1,1,1-Trichloroethane	ND	0.50	0.21							
1,1,2,2-Tetrachloroethane	ND	0.50	0.36							
1,1,2-Trichloroethane	ND	0.50	0.25							
1,1-Dichloroethane	ND	0.50	0.09							
1,1-Dichloroethene	ND	0.50	0.13							
1,1-Dichloropropene	ND	0.50	0.13							
1,2,3-Trichloropropane	ND	0.50	0.39							
1,2,3-Trichlorobenzene	ND	0.50	0.18							
1,2,4-Trichlorobenzene	ND	0.50	0.16							
1,2,4-Trimethylbenzene	ND	0.50	0.14							
1,2-Dibromo-3-chloropropane	ND	0.50	0.41							
1,2-Dibromoethane	ND	0.50	0.24							
1,2-Dichlorobenzene	ND	0.50	0.20							
1,2-Dichloroethane	ND	0.50	0.20							
1,2-Dichloropropane	ND	0.50	0.15							
1,3,5-Trimethylbenzene	ND	0.50	0.13							
1,3-Dichlorobenzene	ND	0.50	0.16							
1,3-Dichloropropane	ND	0.50	0.21							
1,4-Dichlorobenzene	ND	0.50	0.17							
2,2-Dichloropropane	ND	0.50	0.38							
2-Chlorotoluene	ND	0.50	0.11							
4-Chlorotoluene	ND	0.50	0.12							
4-Isopropyltoluene	ND	0.50	0.11							
Benzene	ND	0.50	0.13							
Bromobenzene	ND	0.50	0.21							
Bromodichloromethane	ND	0.50	0.14							
Bromoform	ND	0.50	0.20							
Bromomethane	ND	0.50	0.40							
Carbon tetrachloride	ND	0.50	0.09							
Chlorobenzene	ND	0.50	0.13							
Chloroethane	ND	0.50	0.15							
Chloroform	ND	0.50	0.11							
Chloromethane	ND	0.50	0.12							
cis-1,2-Dichloroethene	ND	0.50	0.14							
cis-1,3-Dichloropropene	ND	0.50	0.13							
Dibromochloromethane	ND	0.50	0.16							
Dibromomethane	ND	0.50	0.19							
Dichlorodifluoromethane	ND	0.50	0.18							

Certificate of Analysis

Hargis & Associates, Inc.	Project Number : Raytheon Main GETS Mid Month Sample
9171 Towne Centre Drive, Suite 375	Report To : Steve Netto
San Diego , CA 92122	Reported : 10/22/2020

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

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B0J0245 - MSVOA_LL_W (continued)										
Blank (B0J0245-BLK1) - Continued					Prepared: 10/16/2020 Analyzed: 10/16/2020					
Ethylbenzene	ND	0.50	0.13							
Hexachlorobutadiene	ND	0.50	0.15							
Isopropylbenzene	ND	0.50	0.10							
m,p-Xylene	ND	1.0	0.19							
Methylene chloride	ND	1.0	0.71							
n-Butylbenzene	ND	0.50	0.11							
n-Propylbenzene	ND	0.50	0.10							
Naphthalene	ND	0.50	0.41							
o-Xylene	ND	0.50	0.13							
sec-Butylbenzene	ND	0.50	0.09							
Styrene	ND	0.50	0.13							
tert-Butylbenzene	ND	0.50	0.09							
Tetrachloroethene	ND	0.50	0.10							
Toluene	ND	0.50	0.12							
trans-1,2-Dichloroethene	ND	0.50	0.09							
Trichloroethene	ND	0.50	0.10							
Trichlorofluoromethane	ND	0.50	0.23							
Vinyl chloride	ND	0.50	0.13							
Surrogate: 1,2-Dichloroethane-d4	*26.65*			*25.0000*		*107*	*64 - 155*			
Surrogate: 4-Bromofluorobenzene	*22.63*			*25.0000*		*90.5*	*73 - 124*			
Surrogate: Dibromofluoromethan	*26.24*			*25.0000*		*105*	*78 - 129*			
Surrogate: Toluene-d8	*24.38*			*25.0000*		*97.5*	*84 - 117*			
LCS (B0J0245-BS1)					Prepared: 10/16/2020 Analyzed: 10/16/2020					
1,1,1,2-Tetrachloroethane	20.3700	0.50	0.11	20.0000		102	79 - 116			
1,1,1-Trichloroethane	20.4800	0.50	0.21	20.0000		102	73 - 130			
1,1,2,2-Tetrachloroethane	19.1900	0.50	0.36	20.0000		96.0	71 - 122			
1,1,2-Trichloroethane	18.9600	0.50	0.25	20.0000		94.8	70 - 124			
1,1-Dichloroethane	21.4700	0.50	0.09	20.0000		107	69 - 128			
1,1-Dichloroethene	20.5300	0.50	0.13	20.0000		103	65 - 137			
1,1-Dichloropropene	20.2000	0.50	0.13	20.0000		101	74 - 129			
1,2,3-Trichloropropane	20.3600	0.50	0.39	20.0000		102	74 - 123			
1,2,3-Trichlorobenzene	20.1100	0.50	0.18	20.0000		101	59 - 130			
1,2,4-Trichlorobenzene	19.6800	0.50	0.16	20.0000		98.4	65 - 125			
1,2,4-Trimethylbenzene	18.7600	0.50	0.14	20.0000		93.8	88 - 124			
1,2-Dibromo-3-chloropropane	18.9000	0.50	0.41	20.0000		94.5	61 - 127			
1,2-Dibromoethane	19.9000	0.50	0.24	20.0000		99.5	72 - 125			
1,2-Dichlorobenzene	19.3300	0.50	0.20	20.0000		96.6	84 - 113			
1,2-Dichloroethane	20.0400	0.50	0.20	20.0000		100	68 - 130			
1,2-Dichloropropane	20.2500	0.50	0.15	20.0000		101	77 - 121			
1,3,5-Trimethylbenzene	20.8600	0.50	0.13	20.0000		104	83 - 124			

Certificate of Analysis

Hargis & Associates, Inc.	Project Number : Raytheon Main GETS Mid Month Sample
9171 Towne Centre Drive, Suite 375	Report To : Steve Netto
San Diego , CA 92122	Reported : 10/22/2020

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

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B0J0245 - MSVOA_LL_W (continued)										
LCS (B0J0245-BS1) - Continued					Prepared: 10/16/2020 Analyzed: 10/16/2020					
1,3-Dichlorobenzene	18.8500	0.50	0.16	20.0000		94.2	83 - 112			
1,3-Dichloropropane	20.2600	0.50	0.21	20.0000		101	77 - 119			
1,4-Dichlorobenzene	19.2600	0.50	0.17	20.0000		96.3	79 - 115			
2,2-Dichloropropane	20.9800	0.50	0.38	20.0000		105	67 - 149			
2-Chlorotoluene	19.1900	0.50	0.11	20.0000		96.0	81 - 119			
4-Chlorotoluene	19.7400	0.50	0.12	20.0000		98.7	86 - 117			
4-Isopropyltoluene	21.2700	0.50	0.11	20.0000		106	82 - 131			
Benzene	20.0100	0.50	0.13	20.0000		100	75 - 124			
Bromobenzene	18.8600	0.50	0.21	20.0000		94.3	82 - 108			
Bromodichloromethane	19.5500	0.50	0.14	20.0000		97.8	80 - 120			
Bromoform	19.8500	0.50	0.20	20.0000		99.2	70 - 123			
Bromomethane	23.3800	0.50	0.40	20.0000		117	44 - 151			
Carbon tetrachloride	21.2900	0.50	0.09	20.0000		106	62 - 140			
Chlorobenzene	19.6900	0.50	0.13	20.0000		98.4	80 - 112			
Chloroethane	24.3300	0.50	0.15	20.0000		122	42 - 167			
Chloroform	17.2100	0.50	0.11	20.0000		86.0	77 - 122			
Chloromethane	25.5200	0.50	0.12	20.0000		128	33 - 153			
cis-1,2-Dichloroethene	20.9300	0.50	0.14	20.0000		105	75 - 121			
cis-1,3-Dichloropropene	18.6800	0.50	0.13	20.0000		93.4	73 - 127			
Dibromochloromethane	18.6900	0.50	0.16	20.0000		93.4	77 - 122			
Dibromomethane	19.1200	0.50	0.19	20.0000		95.6	75 - 121			
Dichlorodifluoromethane	22.7500	0.50	0.18	20.0000		114	0 - 171			
Ethylbenzene	19.9000	0.50	0.13	20.0000		99.5	82 - 119			
Hexachlorobutadiene	18.7500	0.50	0.15	20.0000		93.8	71 - 131			
Isopropylbenzene	19.5900	0.50	0.10	20.0000		98.0	75 - 126			
m,p-Xylene	41.0800	1.0	0.19	40.0000		103	86 - 119			
Methylene chloride	20.5800	1.0	0.71	20.0000		103	76 - 125			
n-Butylbenzene	21.4900	0.50	0.11	20.0000		107	81 - 125			
n-Propylbenzene	20.3400	0.50	0.10	20.0000		102	78 - 130			
Naphthalene	16.4900	0.50	0.41	20.0000		82.4	47 - 128			
o-Xylene	20.2700	0.50	0.13	20.0000		101	85 - 119			
sec-Butylbenzene	20.5600	0.50	0.09	20.0000		103	78 - 130			
Styrene	18.5200	0.50	0.13	20.0000		92.6	62 - 148			
tert-Butylbenzene	19.7100	0.50	0.09	20.0000		98.6	77 - 125			
Tetrachloroethene	20.0500	0.50	0.10	20.0000		100	73 - 120			
Toluene	20.2700	0.50	0.12	20.0000		101	79 - 119			
trans-1,2-Dichloroethene	19.6600	0.50	0.09	20.0000		98.3	70 - 129			
Trichloroethene	19.7000	0.50	0.10	20.0000		98.5	73 - 117			
Trichlorofluoromethane	21.5000	0.50	0.23	20.0000		108	59 - 135			
Vinyl chloride	24.8200	0.50	0.13	20.0000		124	58 - 132			
Surrogate: 1,2-Dichloroethane-d4	*25.26*			*25.0000*		*101*	*64 - 155*			

Certificate of Analysis

Hargis & Associates, Inc.	Project Number : Raytheon Main GETS Mid Month Sample
9171 Towne Centre Drive, Suite 375	Report To : Steve Netto
San Diego , CA 92122	Reported : 10/22/2020

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

Analyte	Result (ug/L)	PQL (ug/L)		Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B0J0245 - MSVOA_LL_W (continued)										
LCS (B0J0245-BS1) - Continued						Prepared: 10/16/2020 Analyzed: 10/16/2020				
Surrogate: 4-Bromofluorobenzene	*24.33*			*25.0000*		*97.3*	*73 - 124*			
Surrogate: Dibromofluoromethan	*26.66*			*25.0000*		*107*	*78 - 129*			
Surrogate: Toluene-d8	*24.50*			*25.0000*		*98.0*	*84 - 117*			
LCS Dup (B0J0245-BSD1)						Prepared: 10/16/2020 Analyzed: 10/16/2020				
1,1,1,2-Tetrachloroethane	19.9700	0.50	0.11	20.0000		99.8	79 - 116	1.98	20	
1,1,1-Trichloroethane	20.5100	0.50	0.21	20.0000		103	73 - 130	0.146	20	
1,1,2,2-Tetrachloroethane	19.4400	0.50	0.36	20.0000		97.2	71 - 122	1.29	20	
1,1,2-Trichloroethane	19.4400	0.50	0.25	20.0000		97.2	70 - 124	2.50	20	
1,1-Dichloroethane	21.0500	0.50	0.09	20.0000		105	69 - 128	1.98	20	
1,1-Dichloroethene	19.8000	0.50	0.13	20.0000		99.0	65 - 137	3.62	20	
1,1-Dichloropropene	19.6200	0.50	0.13	20.0000		98.1	74 - 129	2.91	20	
1,2,3-Trichloropropane	20.0400	0.50	0.39	20.0000		100	74 - 123	1.58	20	
1,2,3-Trichlorobenzene	19.0100	0.50	0.18	20.0000		95.0	59 - 130	5.62	20	
1,2,4-Trichlorobenzene	19.3300	0.50	0.16	20.0000		96.6	65 - 125	1.79	20	
1,2,4-Trimethylbenzene	19.3300	0.50	0.14	20.0000		96.6	88 - 124	2.99	20	
1,2-Dibromo-3-chloropropane	17.2200	0.50	0.41	20.0000		86.1	61 - 127	9.30	20	
1,2-Dibromoethane	20.3800	0.50	0.24	20.0000		102	72 - 125	2.38	20	
1,2-Dichlorobenzene	19.6300	0.50	0.20	20.0000		98.2	84 - 113	1.54	20	
1,2-Dichloroethane	20.3500	0.50	0.20	20.0000		102	68 - 130	1.54	20	
1,2-Dichloropropane	19.9300	0.50	0.15	20.0000		99.6	77 - 121	1.59	20	
1,3,5-Trimethylbenzene	20.7500	0.50	0.13	20.0000		104	83 - 124	0.529	20	
1,3-Dichlorobenzene	19.5500	0.50	0.16	20.0000		97.8	83 - 112	3.65	20	
1,3-Dichloropropane	20.4300	0.50	0.21	20.0000		102	77 - 119	0.836	20	
1,4-Dichlorobenzene	18.8400	0.50	0.17	20.0000		94.2	79 - 115	2.20	20	
2,2-Dichloropropane	20.4500	0.50	0.38	20.0000		102	67 - 149	2.56	20	
2-Chlorotoluene	19.7500	0.50	0.11	20.0000		98.8	81 - 119	2.88	20	
4-Chlorotoluene	20.0600	0.50	0.12	20.0000		100	86 - 117	1.61	20	
4-Isopropyltoluene	21.0200	0.50	0.11	20.0000		105	82 - 131	1.18	20	
Benzene	20.1400	0.50	0.13	20.0000		101	75 - 124	0.648	20	
Bromobenzene	19.5400	0.50	0.21	20.0000		97.7	82 - 108	3.54	20	
Bromodichloromethane	19.7500	0.50	0.14	20.0000		98.8	80 - 120	1.02	20	
Bromoform	20.0900	0.50	0.20	20.0000		100	70 - 123	1.20	20	
Bromomethane	23.2100	0.50	0.40	20.0000		116	44 - 151	0.730	20	
Carbon tetrachloride	21.3000	0.50	0.09	20.0000		106	62 - 140	0.0470	20	
Chlorobenzene	20.0900	0.50	0.13	20.0000		100	80 - 112	2.01	20	
Chloroethane	23.4000	0.50	0.15	20.0000		117	42 - 167	3.90	20	
Chloroform	16.8200	0.50	0.11	20.0000		84.1	77 - 122	2.29	20	
Chloromethane	22.5200	0.50	0.12	20.0000		113	33 - 153	12.5	20	
cis-1,2-Dichloroethene	20.2300	0.50	0.14	20.0000		101	75 - 121	3.40	20	
cis-1,3-Dichloropropene	18.8400	0.50	0.13	20.0000		94.2	73 - 127	0.853	20	
Dibromochloromethane	18.3100	0.50	0.16	20.0000		91.6	77 - 122	2.05	20	

Certificate of Analysis

Hargis & Associates, Inc.	Project Number : Raytheon Main GETS Mid Month Sample
9171 Towne Centre Drive, Suite 375	Report To : Steve Netto
San Diego , CA 92122	Reported : 10/22/2020

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

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B0J0245 - MSVOA_LL_W (continued)										
LCS Dup (B0J0245-BSD1) - Continued					Prepared: 10/16/2020 Analyzed: 10/16/2020					
Dibromomethane	18.8700	0.50	0.19	20.0000		94.4	75 - 121	1.32	20	
Dichlorodifluoromethane	22.2200	0.50	0.18	20.0000		111	0 - 171	2.36	20	
Ethylbenzene	19.7100	0.50	0.13	20.0000		98.6	82 - 119	0.959	20	
Hexachlorobutadiene	19.6600	0.50	0.15	20.0000		98.3	71 - 131	4.74	20	
Isopropylbenzene	19.3700	0.50	0.10	20.0000		96.8	75 - 126	1.13	20	
m,p-Xylene	40.6500	1.0	0.19	40.0000		102	86 - 119	1.05	20	
Methylene chloride	20.3300	1.0	0.71	20.0000		102	76 - 125	1.22	20	
n-Butylbenzene	21.0700	0.50	0.11	20.0000		105	81 - 125	1.97	20	
n-Propylbenzene	19.7800	0.50	0.10	20.0000		98.9	78 - 130	2.79	20	
Naphthalene	16.6000	0.50	0.41	20.0000		83.0	47 - 128	0.665	20	
o-Xylene	20.3400	0.50	0.13	20.0000		102	85 - 119	0.345	20	
sec-Butylbenzene	20.2600	0.50	0.09	20.0000		101	78 - 130	1.47	20	
Styrene	18.3200	0.50	0.13	20.0000		91.6	62 - 148	1.09	20	
tert-Butylbenzene	19.5500	0.50	0.09	20.0000		97.8	77 - 125	0.815	20	
Tetrachloroethene	20.1500	0.50	0.10	20.0000		101	73 - 120	0.498	20	
Toluene	19.9500	0.50	0.12	20.0000		99.8	79 - 119	1.59	20	
trans-1,2-Dichloroethene	20.2800	0.50	0.09	20.0000		101	70 - 129	3.10	20	
Trichloroethene	19.3100	0.50	0.10	20.0000		96.6	73 - 117	2.00	20	
Trichlorofluoromethane	22.1900	0.50	0.23	20.0000		111	59 - 135	3.16	20	
Vinyl chloride	24.2800	0.50	0.13	20.0000		121	58 - 132	2.20	20	
Surrogate: 1,2-Dichloroethane-d4	*26.22*			*25.0000*		*105*	*64 - 155*			
Surrogate: 4-Bromofluorobenzene	*25.35*			*25.0000*		*101*	*73 - 124*			
Surrogate: Dibromofluoromethan	*26.31*			*25.0000*		*105*	*78 - 129*			
Surrogate: Toluene-d8	*25.03*			*25.0000*		*100*	*84 - 117*			

Certificate of Analysis

Hargis & Associates, Inc.	Project Number : Raytheon Main GETS Mid Month Sample
9171 Towne Centre Drive, Suite 375	Report To : Steve Netto
San Diego , CA 92122	Reported : 10/22/2020

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

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B0J0311 - MSSEMI_W										
Blank (B0J0311-BLK1)						Prepared: 10/16/2020 Analyzed: 10/16/2020				
1,4-Dioxane	ND	2.0	0.84							
Surrogate: 1,2-Dichlorobenzene-d	*57.68*			*100.000*		*57.7*	*17 - 119*			
Surrogate: 2-Fluorobiphenyl	*68.02*			*100.000*		*68.0*	*10 - 133*			
Surrogate: 4-Terphenyl-d14	*92.91*			*100.000*		*92.9*	*5 - 139*			
Surrogate: Nitrobenzene-d5	*75.47*			*100.000*		*75.5*	*13 - 150*			
LCS (B0J0311-BS1)						Prepared: 10/16/2020 Analyzed: 10/16/2020				
1,4-Dioxane	119.960	2.0	0.84	100.000		120	75 - 155			
Surrogate: 1,2-Dichlorobenzene-d	*51.26*			*100.000*		*51.3*	*17 - 119*			
Surrogate: 2-Fluorobiphenyl	*68.95*			*100.000*		*69.0*	*10 - 133*			
Surrogate: 4-Terphenyl-d14	*85.25*			*100.000*		*85.2*	*5 - 139*			
Surrogate: Nitrobenzene-d5	*65.60*			*100.000*		*65.6*	*13 - 150*			
LCS Dup (B0J0311-BSD1)						Prepared: 10/16/2020 Analyzed: 10/16/2020				
1,4-Dioxane	116.300	2.0	0.84	100.000		116	75 - 155	3.10	20	
Surrogate: 1,2-Dichlorobenzene-d	*53.01*			*100.000*		*53.0*	*17 - 119*			
Surrogate: 2-Fluorobiphenyl	*67.09*			*100.000*		*67.1*	*10 - 133*			
Surrogate: 4-Terphenyl-d14	*90.29*			*100.000*		*90.3*	*5 - 139*			
Surrogate: Nitrobenzene-d5	*68.59*			*100.000*		*68.6*	*13 - 150*			

Certificate of Analysis

Hargis & Associates, Inc.	Project Number : Raytheon Main GETS Mid Month Sample
9171 Towne Centre Drive, Suite 375	Report To : Steve Netto
San Diego , CA 92122	Reported : 10/22/2020

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

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B0J0314 - MSSEMI_W										
Blank (B0J0314-BLK1)						Prepared: 10/16/2020 Analyzed: 10/16/2020				
1,4-Dioxane	ND	0.20	0.05							
Surrogate: 1,2-Dichlorobenzene-d	*0.6484*			*1.00000*		*64.8*	*13 - 99*			
Surrogate: 2-Fluorobiphenyl	*0.7276*			*1.00000*		*72.8*	*8 - 111*			
Surrogate: 4-Terphenyl-d14	*0.7208*			*1.00000*		*72.1*	*12 - 113*			
Surrogate: Nitrobenzene-d5	*0.7148*			*1.00000*		*71.5*	*15 - 121*			
LCS (B0J0314-BS1)						Prepared: 10/16/2020 Analyzed: 10/16/2020				
1,4-Dioxane	0.978000	0.20	0.05	1.00000		97.8	75 - 155			
Surrogate: 1,2-Dichlorobenzene-d	*0.5089*			*1.00000*		*50.9*	*13 - 99*			
Surrogate: 2-Fluorobiphenyl	*0.5852*			*1.00000*		*58.5*	*8 - 111*			
Surrogate: 4-Terphenyl-d14	*0.6237*			*1.00000*		*62.4*	*12 - 113*			
Surrogate: Nitrobenzene-d5	*0.5905*			*1.00000*		*59.0*	*15 - 121*			
LCS Dup (B0J0314-BSD1)						Prepared: 10/16/2020 Analyzed: 10/16/2020				
1,4-Dioxane	0.992900	0.20	0.05	1.00000		99.3	75 - 155	1.51	20	
Surrogate: 1,2-Dichlorobenzene-d	*0.5129*			*1.00000*		*51.3*	*13 - 99*			
Surrogate: 2-Fluorobiphenyl	*0.5928*			*1.00000*		*59.3*	*8 - 111*			
Surrogate: 4-Terphenyl-d14	*0.6359*			*1.00000*		*63.6*	*12 - 113*			
Surrogate: Nitrobenzene-d5	*0.5917*			*1.00000*		*59.2*	*15 - 121*			

Certificate of Analysis

Hargis & Associates, Inc.		Project Number :	Raytheon Main GETS Mid Month Sample
9171 Towne Centre Drive, Suite 375		Report To :	Steve Netto
San Diego , CA 92122		Reported :	10/22/2020

Notes and Definitions

ND	Analyte is not detected at or above the Practical Quantitation Limit (PQL). When client requests quantitation against MDL, analyte is not detected at or above the Method Detection Limit (MDL)
PQL	Practical Quantitation Limit
MDL	Method Detection Limit
NR	Not Reported
RPD	Relative Percent Difference
CA2	CA-ELAP (CDPH)
OR1	OR-NELAP (OSPHL)

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.
(3) Results are wet unless otherwise specified.

2002332

HARGIS+ASSOCIATES, INC.
HYDROGEOLOGY • ENGINEERING

Date: 10/15/2020
Page 1 of 1

PROJECT: Raytheon Main GETS Mid Month Sample

TASK NO.: 532.15

Project Manager Steve Netto
QA Manager Ross Horton
Phone 858.455.6500
Fax 858.455.6533

Sampled By: Ruben Sanchez

SAMPLE COLLECTION

	LAB ID	SAMPLE ID	Date	Time	MATRIX: Groundwater	MATRIX: Lab prepared water	PRESERVATION: Hydrochloric Acid (HCl)	PRESERVATION: Nitric Acid (HNO_3)	PRESERVATION: Sulfuric Acid (H_2SO_4)	PRESERVATION: Ice	CONTAINERS: 40-ml VOA	CONTAINERS: 125 mL Poly	CONTAINERS: 250 mL Poly	CONTAINERS: 250 mL Glass	CONTAINERS: 1 L Poly	CONTAINERS: 1L Amber	ANALYSIS REQUESTED: VOCs by EPA 8260B	Bromate by EPA 317	Bromide by EPA 300	Alkalinity by SM2320B	Total Organic Carbon by SM5310B	Total Suspended Solids by SM2540D	UV Absorption EPA 415.3 @254 nm	1,4-Dioxane by EPA 8270C MOD	1,4-Dioxane by EPA 8270C SIM	Expected Concentration Range (ppb) for VOAs: 0 - 10	10 - 100	100 - 1,000	>1,000	SPECIAL HANDLING: 24 hr TAT	48 Hour TAT	5 Day TAT	Level IV Data Validation Requested	MS/MSD Requested	REMARKS
01		TB-101520	10/15/2020	8:00		X	X			X	2						X									X						X			
02		CEFF	10/15/2020	9:00	X		X			X	3					1	X								X	X						X			
03		CBT	10/15/2020	9:05	X		X			X	3					1	X								X	X						X			
04		POX	10/15/2020	9:10	X		X			X	3					1	X								X	X						X			
05		INF	10/15/2020	9:15	X		X			X	3					1	X							X				X				X			
06		EW-02	10/15/2020	9:50	X		X			X	3					1	X							X			X					X			
07		MW-29	10/15/2020	10:15	X		X			X	3					1	X							X				X				X			
Total number of containers per analysis:											20					6																			

Total No. of Containers: 26

Relinquished By: / Company:	Date / Time	Received By: / Company	Date / Time
HHA	10-15-20 12:00	HHA	10-15-20 12:30
Relinquished By: / Company:	Date / Time	Received By: / Company	Date / Time
HHA	10-15-20 16:58		10/15/2020 16:58

- ✓ No. of containers correct
- ✓ Received in good condition
- ✓ Custody seals secure
- ✓ Conforms to COC document

1.6 °C Temperature on receipt

Laboratory
Adcanced Technology Laboratories
Attn: Rachelle Arada
3275 Walnut Ave
Signal Hill, CA 90755
(562) 989-4045

Send Results to:
Steve Netto & Ross Horton
9171 Towne Centre Drive
Suite 375
San Diego, CA 92122
Ph: 858.455.6500
snetto@hargis.com
rhorton@hargis.com

Instructions
1. Fill out form completely and sign only after verified for completeness
2. Complete in ballpoint pen. Draw one line through error, initial and date correction
3. Indicate the number of sample containers in analytical request space; indicate choice with ✓or ×
4. Note applicable preservatives, special instructions, and deviations from typical environmental samples.
5. Consult project QA documents for specific instructions.

November 20, 2020

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

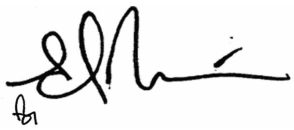
ELAP No.: 1838
CSDLAC No.: 10196
ORELAP No.: CA300003

Re: ATL Work Order Number : 2002469
Client Reference : Raytheon Main GETS Monthly Sample, 532.15

Enclosed are the results for sample(s) received on November 05, 2020 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,



Edgar P. Caballero
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 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.	Project Number : Raytheon Main GETS Monthly Sample, 5
9171 Towne Centre Drive, Suite 375	Report To : Steve Netto
San Diego , CA 92122	Reported : 11/20/2020

SUMMARY OF SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
TB-110520	2002469-01	Water	11/05/20 8:00	11/05/20 15:55
CEFF	2002469-02	Groundwater	11/05/20 11:00	11/05/20 15:55
CBT	2002469-03	Groundwater	11/05/20 11:10	11/05/20 15:55
POX	2002469-04	Groundwater	11/05/20 11:15	11/05/20 15:55
PF	2002469-05	Groundwater	11/05/20 11:20	11/05/20 15:55
INF	2002469-06	Groundwater	11/05/20 11:25	11/05/20 15:55
EW-02	2002469-07	Groundwater	11/05/20 11:55	11/05/20 15:55
MW-29	2002469-08	Groundwater	11/05/20 12:15	11/05/20 15:55

CASE NARRATIVE

Samples for Bromate by IC-MS/MS was subcontracted to Element Materials Technology with CA-ELAP Cert. 2652.

Certificate of Analysis

Hargis & Associates, Inc.	Project Number : Raytheon Main GETS Monthly Sample, 5
9171 Towne Centre Drive, Suite 375	Report To : Steve Netto
San Diego , CA 92122	Reported : 11/20/2020

Client Sample ID: TB-110520

Lab ID: 2002469-01

Volatile Organic Compounds by EPA 8260B **Analyst: KL**

Analyte	Result (ug/L)	PQL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	0.50	1	B0K0109	11/06/2020	11/06/20 11:26	
1,1,1-Trichloroethane	ND	0.50	1	B0K0109	11/06/2020	11/06/20 11:26	
1,1,2,2-Tetrachloroethane	ND	0.50	1	B0K0109	11/06/2020	11/06/20 11:26	
1,1,2-Trichloroethane	ND	0.50	1	B0K0109	11/06/2020	11/06/20 11:26	
1,1-Dichloroethane	ND	0.50	1	B0K0109	11/06/2020	11/06/20 11:26	
1,1-Dichloroethene	ND	0.50	1	B0K0109	11/06/2020	11/06/20 11:26	
1,1-Dichloropropene	ND	0.50	1	B0K0109	11/06/2020	11/06/20 11:26	
1,2,3-Trichloropropane	ND	0.50	1	B0K0109	11/06/2020	11/06/20 11:26	
1,2,3-Trichlorobenzene	ND	0.50	1	B0K0109	11/06/2020	11/06/20 11:26	
1,2,4-Trichlorobenzene	ND	0.50	1	B0K0109	11/06/2020	11/06/20 11:26	
1,2,4-Trimethylbenzene	ND	0.50	1	B0K0109	11/06/2020	11/06/20 11:26	
1,2-Dibromo-3-chloropropane	ND	0.50	1	B0K0109	11/06/2020	11/06/20 11:26	
1,2-Dibromoethane	ND	0.50	1	B0K0109	11/06/2020	11/06/20 11:26	
1,2-Dichlorobenzene	ND	0.50	1	B0K0109	11/06/2020	11/06/20 11:26	
1,2-Dichloroethane	ND	0.50	1	B0K0109	11/06/2020	11/06/20 11:26	
1,2-Dichloropropane	ND	0.50	1	B0K0109	11/06/2020	11/06/20 11:26	
1,3,5-Trimethylbenzene	ND	0.50	1	B0K0109	11/06/2020	11/06/20 11:26	
1,3-Dichlorobenzene	ND	0.50	1	B0K0109	11/06/2020	11/06/20 11:26	
1,3-Dichloropropane	ND	0.50	1	B0K0109	11/06/2020	11/06/20 11:26	
1,4-Dichlorobenzene	ND	0.50	1	B0K0109	11/06/2020	11/06/20 11:26	
2,2-Dichloropropane	ND	0.50	1	B0K0109	11/06/2020	11/06/20 11:26	
2-Chlorotoluene	ND	0.50	1	B0K0109	11/06/2020	11/06/20 11:26	
4-Chlorotoluene	ND	0.50	1	B0K0109	11/06/2020	11/06/20 11:26	
4-Isopropyltoluene	ND	0.50	1	B0K0109	11/06/2020	11/06/20 11:26	
Benzene	ND	0.50	1	B0K0109	11/06/2020	11/06/20 11:26	
Bromobenzene	ND	0.50	1	B0K0109	11/06/2020	11/06/20 11:26	
Bromodichloromethane	ND	0.50	1	B0K0109	11/06/2020	11/06/20 11:26	
Bromoform	ND	0.50	1	B0K0109	11/06/2020	11/06/20 11:26	
Bromomethane	ND	0.50	1	B0K0109	11/06/2020	11/06/20 11:26	
Carbon tetrachloride	ND	0.50	1	B0K0109	11/06/2020	11/06/20 11:26	
Chlorobenzene	ND	0.50	1	B0K0109	11/06/2020	11/06/20 11:26	
Chloroethane	ND	0.50	1	B0K0109	11/06/2020	11/06/20 11:26	
Chloroform	ND	0.50	1	B0K0109	11/06/2020	11/06/20 11:26	
Chloromethane	ND	0.50	1	B0K0109	11/06/2020	11/06/20 11:26	
cis-1,2-Dichloroethene	ND	0.50	1	B0K0109	11/06/2020	11/06/20 11:26	
cis-1,3-Dichloropropene	ND	0.50	1	B0K0109	11/06/2020	11/06/20 11:26	
Dibromochloromethane	ND	0.50	1	B0K0109	11/06/2020	11/06/20 11:26	

Certificate of Analysis

Hargis & Associates, Inc.	Project Number : Raytheon Main GETS Monthly Sample, 5
9171 Towne Centre Drive, Suite 375	Report To : Steve Netto
San Diego , CA 92122	Reported : 11/20/2020

Client Sample ID: TB-110520

Lab ID: 2002469-01

Volatile Organic Compounds by EPA 8260B **Analyst: KL**

Analyte	Result (ug/L)	PQL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Dibromomethane	ND	0.50	1	B0K0109	11/06/2020	11/06/20 11:26	
Dichlorodifluoromethane	ND	0.50	1	B0K0109	11/06/2020	11/06/20 11:26	
Ethylbenzene	ND	0.50	1	B0K0109	11/06/2020	11/06/20 11:26	
Hexachlorobutadiene	ND	0.50	1	B0K0109	11/06/2020	11/06/20 11:26	
Isopropylbenzene	ND	0.50	1	B0K0109	11/06/2020	11/06/20 11:26	
m,p-Xylene	ND	1.0	1	B0K0109	11/06/2020	11/06/20 11:26	
Methylene chloride	ND	1.0	1	B0K0109	11/06/2020	11/06/20 11:26	
n-Butylbenzene	ND	0.50	1	B0K0109	11/06/2020	11/06/20 11:26	
n-Propylbenzene	ND	0.50	1	B0K0109	11/06/2020	11/06/20 11:26	
Naphthalene	ND	0.50	1	B0K0109	11/06/2020	11/06/20 11:26	
o-Xylene	ND	0.50	1	B0K0109	11/06/2020	11/06/20 11:26	
sec-Butylbenzene	ND	0.50	1	B0K0109	11/06/2020	11/06/20 11:26	
Styrene	ND	0.50	1	B0K0109	11/06/2020	11/06/20 11:26	
tert-Butylbenzene	ND	0.50	1	B0K0109	11/06/2020	11/06/20 11:26	
Tetrachloroethene	ND	0.50	1	B0K0109	11/06/2020	11/06/20 11:26	
Toluene	ND	0.50	1	B0K0109	11/06/2020	11/06/20 11:26	
trans-1,2-Dichloroethene	ND	0.50	1	B0K0109	11/06/2020	11/06/20 11:26	
Trichloroethene	ND	0.50	1	B0K0109	11/06/2020	11/06/20 11:26	
Trichlorofluoromethane	ND	0.50	1	B0K0109	11/06/2020	11/06/20 11:26	
Vinyl chloride	ND	0.50	1	B0K0109	11/06/2020	11/06/20 11:26	
Surrogate: 1,2-Dichloroethane-d4	*90.1 %*	*64 - 155*		B0K0109	11/06/2020	*11/06/20 11:26*	
Surrogate: 4-Bromofluorobenzene	*80.0 %*	*73 - 124*		B0K0109	11/06/2020	*11/06/20 11:26*	
Surrogate: Dibromofluoromethane	*103 %*	*78 - 129*		B0K0109	11/06/2020	*11/06/20 11:26*	
Surrogate: Toluene-d8	*94.0 %*	*84 - 117*		B0K0109	11/06/2020	*11/06/20 11:26*	

Certificate of Analysis

Hargis & Associates, Inc.	Project Number : Raytheon Main GETS Monthly Sample, 5
9171 Towne Centre Drive, Suite 375	Report To : Steve Netto
San Diego , CA 92122	Reported : 11/20/2020

Client Sample ID: CEFF

Lab ID: 2002469-02

Volatile Organic Compounds by EPA 8260B **Analyst: KL**

Analyte	Result (ug/L)	PQL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	0.50	1	B0K0109	11/06/2020	11/06/20 11:46	
1,1,1-Trichloroethane	ND	0.50	1	B0K0109	11/06/2020	11/06/20 11:46	
1,1,2,2-Tetrachloroethane	ND	0.50	1	B0K0109	11/06/2020	11/06/20 11:46	
1,1,2-Trichloroethane	ND	0.50	1	B0K0109	11/06/2020	11/06/20 11:46	
1,1-Dichloroethane	ND	0.50	1	B0K0109	11/06/2020	11/06/20 11:46	
1,1-Dichloroethene	ND	0.50	1	B0K0109	11/06/2020	11/06/20 11:46	
1,1-Dichloropropene	ND	0.50	1	B0K0109	11/06/2020	11/06/20 11:46	
1,2,3-Trichloropropane	ND	0.50	1	B0K0109	11/06/2020	11/06/20 11:46	
1,2,3-Trichlorobenzene	ND	0.50	1	B0K0109	11/06/2020	11/06/20 11:46	
1,2,4-Trichlorobenzene	ND	0.50	1	B0K0109	11/06/2020	11/06/20 11:46	
1,2,4-Trimethylbenzene	ND	0.50	1	B0K0109	11/06/2020	11/06/20 11:46	
1,2-Dibromo-3-chloropropane	ND	0.50	1	B0K0109	11/06/2020	11/06/20 11:46	
1,2-Dibromoethane	ND	0.50	1	B0K0109	11/06/2020	11/06/20 11:46	
1,2-Dichlorobenzene	ND	0.50	1	B0K0109	11/06/2020	11/06/20 11:46	
1,2-Dichloroethane	ND	0.50	1	B0K0109	11/06/2020	11/06/20 11:46	
1,2-Dichloropropane	ND	0.50	1	B0K0109	11/06/2020	11/06/20 11:46	
1,3,5-Trimethylbenzene	ND	0.50	1	B0K0109	11/06/2020	11/06/20 11:46	
1,3-Dichlorobenzene	ND	0.50	1	B0K0109	11/06/2020	11/06/20 11:46	
1,3-Dichloropropane	ND	0.50	1	B0K0109	11/06/2020	11/06/20 11:46	
1,4-Dichlorobenzene	ND	0.50	1	B0K0109	11/06/2020	11/06/20 11:46	
2,2-Dichloropropane	ND	0.50	1	B0K0109	11/06/2020	11/06/20 11:46	
2-Chlorotoluene	ND	0.50	1	B0K0109	11/06/2020	11/06/20 11:46	
4-Chlorotoluene	ND	0.50	1	B0K0109	11/06/2020	11/06/20 11:46	
4-Isopropyltoluene	ND	0.50	1	B0K0109	11/06/2020	11/06/20 11:46	
Benzene	ND	0.50	1	B0K0109	11/06/2020	11/06/20 11:46	
Bromobenzene	ND	0.50	1	B0K0109	11/06/2020	11/06/20 11:46	
Bromodichloromethane	ND	0.50	1	B0K0109	11/06/2020	11/06/20 11:46	
Bromoform	ND	0.50	1	B0K0109	11/06/2020	11/06/20 11:46	
Bromomethane	ND	0.50	1	B0K0109	11/06/2020	11/06/20 11:46	
Carbon tetrachloride	ND	0.50	1	B0K0109	11/06/2020	11/06/20 11:46	
Chlorobenzene	ND	0.50	1	B0K0109	11/06/2020	11/06/20 11:46	
Chloroethane	ND	0.50	1	B0K0109	11/06/2020	11/06/20 11:46	
Chloroform	ND	0.50	1	B0K0109	11/06/2020	11/06/20 11:46	
Chloromethane	ND	0.50	1	B0K0109	11/06/2020	11/06/20 11:46	
cis-1,2-Dichloroethene	ND	0.50	1	B0K0109	11/06/2020	11/06/20 11:46	
cis-1,3-Dichloropropene	ND	0.50	1	B0K0109	11/06/2020	11/06/20 11:46	
Dibromochloromethane	ND	0.50	1	B0K0109	11/06/2020	11/06/20 11:46	

Certificate of Analysis

Hargis & Associates, Inc.	Project Number : Raytheon Main GETS Monthly Sample, 5
9171 Towne Centre Drive, Suite 375	Report To : Steve Netto
San Diego , CA 92122	Reported : 11/20/2020

Client Sample ID: CEFF

Lab ID: 2002469-02

Volatile Organic Compounds by EPA 8260B **Analyst: KL**

Analyte	Result (ug/L)	PQL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Dibromomethane	ND	0.50	1	B0K0109	11/06/2020	11/06/20 11:46	
Dichlorodifluoromethane	ND	0.50	1	B0K0109	11/06/2020	11/06/20 11:46	
Ethylbenzene	ND	0.50	1	B0K0109	11/06/2020	11/06/20 11:46	
Hexachlorobutadiene	ND	0.50	1	B0K0109	11/06/2020	11/06/20 11:46	
Isopropylbenzene	ND	0.50	1	B0K0109	11/06/2020	11/06/20 11:46	
m,p-Xylene	ND	1.0	1	B0K0109	11/06/2020	11/06/20 11:46	
Methylene chloride	ND	1.0	1	B0K0109	11/06/2020	11/06/20 11:46	
n-Butylbenzene	ND	0.50	1	B0K0109	11/06/2020	11/06/20 11:46	
n-Propylbenzene	ND	0.50	1	B0K0109	11/06/2020	11/06/20 11:46	
Naphthalene	ND	0.50	1	B0K0109	11/06/2020	11/06/20 11:46	
o-Xylene	ND	0.50	1	B0K0109	11/06/2020	11/06/20 11:46	
sec-Butylbenzene	ND	0.50	1	B0K0109	11/06/2020	11/06/20 11:46	
Styrene	ND	0.50	1	B0K0109	11/06/2020	11/06/20 11:46	
tert-Butylbenzene	ND	0.50	1	B0K0109	11/06/2020	11/06/20 11:46	
Tetrachloroethene	ND	0.50	1	B0K0109	11/06/2020	11/06/20 11:46	
Toluene	ND	0.50	1	B0K0109	11/06/2020	11/06/20 11:46	
trans-1,2-Dichloroethene	ND	0.50	1	B0K0109	11/06/2020	11/06/20 11:46	
Trichloroethene	ND	0.50	1	B0K0109	11/06/2020	11/06/20 11:46	
Trichlorofluoromethane	ND	0.50	1	B0K0109	11/06/2020	11/06/20 11:46	
Vinyl chloride	ND	0.50	1	B0K0109	11/06/2020	11/06/20 11:46	
Surrogate: 1,2-Dichloroethane-d4	*91.4 %*	*64 - 155*		B0K0109	11/06/2020	*11/06/20 11:46*	
Surrogate: 4-Bromofluorobenzene	*79.6 %*	*73 - 124*		B0K0109	11/06/2020	*11/06/20 11:46*	
Surrogate: Dibromofluoromethane	*98.8 %*	*78 - 129*		B0K0109	11/06/2020	*11/06/20 11:46*	
Surrogate: Toluene-d8	*92.6 %*	*84 - 117*		B0K0109	11/06/2020	*11/06/20 11:46*	

Certificate of Analysis

Hargis & Associates, Inc.	Project Number : Raytheon Main GETS Monthly Sample, 5
9171 Towne Centre Drive, Suite 375	Report To : Steve Netto
San Diego , CA 92122	Reported : 11/20/2020

Client Sample ID: CEFF

Lab ID: 2002469-02

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

Analyte		Result (ug/L)	PQL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,4-Dioxane		ND	0.20	1	B0K0156	11/09/2020	11/09/20 19:19	
Surrogate: 1,2-Dichlorobenzene-d4	*51.4 %*		*13 - 99*		B0K0156	11/09/2020	*11/09/20 19:19*	
Surrogate: 2-Fluorobiphenyl	*58.2 %*		*8 - 111*		B0K0156	11/09/2020	*11/09/20 19:19*	
Surrogate: 4-Terphenyl-d14	*73.7 %*		*12 - 113*		B0K0156	11/09/2020	*11/09/20 19:19*	
Surrogate: Nitrobenzene-d5	*51.1 %*		*15 - 121*		B0K0156	11/09/2020	*11/09/20 19:19*	

Certificate of Analysis

Hargis & Associates, Inc.	Project Number : Raytheon Main GETS Monthly Sample, 5
9171 Towne Centre Drive, Suite 375	Report To : Steve Netto
San Diego , CA 92122	Reported : 11/20/2020

Client Sample ID: CBT

Lab ID: 2002469-03

Volatile Organic Compounds by EPA 8260B **Analyst: KL**

Analyte	Result (ug/L)	PQL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	0.50	1	B0K0109	11/06/2020	11/06/20 12:07	
1,1,1-Trichloroethane	ND	0.50	1	B0K0109	11/06/2020	11/06/20 12:07	
1,1,2,2-Tetrachloroethane	ND	0.50	1	B0K0109	11/06/2020	11/06/20 12:07	
1,1,2-Trichloroethane	ND	0.50	1	B0K0109	11/06/2020	11/06/20 12:07	
1,1-Dichloroethane	ND	0.50	1	B0K0109	11/06/2020	11/06/20 12:07	
1,1-Dichloroethene	ND	0.50	1	B0K0109	11/06/2020	11/06/20 12:07	
1,1-Dichloropropene	ND	0.50	1	B0K0109	11/06/2020	11/06/20 12:07	
1,2,3-Trichloropropane	ND	0.50	1	B0K0109	11/06/2020	11/06/20 12:07	
1,2,3-Trichlorobenzene	ND	0.50	1	B0K0109	11/06/2020	11/06/20 12:07	
1,2,4-Trichlorobenzene	ND	0.50	1	B0K0109	11/06/2020	11/06/20 12:07	
1,2,4-Trimethylbenzene	ND	0.50	1	B0K0109	11/06/2020	11/06/20 12:07	
1,2-Dibromo-3-chloropropane	ND	0.50	1	B0K0109	11/06/2020	11/06/20 12:07	
1,2-Dibromoethane	ND	0.50	1	B0K0109	11/06/2020	11/06/20 12:07	
1,2-Dichlorobenzene	ND	0.50	1	B0K0109	11/06/2020	11/06/20 12:07	
1,2-Dichloroethane	ND	0.50	1	B0K0109	11/06/2020	11/06/20 12:07	
1,2-Dichloropropane	ND	0.50	1	B0K0109	11/06/2020	11/06/20 12:07	
1,3,5-Trimethylbenzene	ND	0.50	1	B0K0109	11/06/2020	11/06/20 12:07	
1,3-Dichlorobenzene	ND	0.50	1	B0K0109	11/06/2020	11/06/20 12:07	
1,3-Dichloropropane	ND	0.50	1	B0K0109	11/06/2020	11/06/20 12:07	
1,4-Dichlorobenzene	ND	0.50	1	B0K0109	11/06/2020	11/06/20 12:07	
2,2-Dichloropropane	ND	0.50	1	B0K0109	11/06/2020	11/06/20 12:07	
2-Chlorotoluene	ND	0.50	1	B0K0109	11/06/2020	11/06/20 12:07	
4-Chlorotoluene	ND	0.50	1	B0K0109	11/06/2020	11/06/20 12:07	
4-Isopropyltoluene	ND	0.50	1	B0K0109	11/06/2020	11/06/20 12:07	
Benzene	ND	0.50	1	B0K0109	11/06/2020	11/06/20 12:07	
Bromobenzene	ND	0.50	1	B0K0109	11/06/2020	11/06/20 12:07	
Bromodichloromethane	ND	0.50	1	B0K0109	11/06/2020	11/06/20 12:07	
Bromoform	ND	0.50	1	B0K0109	11/06/2020	11/06/20 12:07	
Bromomethane	ND	0.50	1	B0K0109	11/06/2020	11/06/20 12:07	
Carbon tetrachloride	ND	0.50	1	B0K0109	11/06/2020	11/06/20 12:07	
Chlorobenzene	ND	0.50	1	B0K0109	11/06/2020	11/06/20 12:07	
Chloroethane	ND	0.50	1	B0K0109	11/06/2020	11/06/20 12:07	
Chloroform	ND	0.50	1	B0K0109	11/06/2020	11/06/20 12:07	
Chloromethane	ND	0.50	1	B0K0109	11/06/2020	11/06/20 12:07	
cis-1,2-Dichloroethene	ND	0.50	1	B0K0109	11/06/2020	11/06/20 12:07	
cis-1,3-Dichloropropene	ND	0.50	1	B0K0109	11/06/2020	11/06/20 12:07	
Dibromochloromethane	ND	0.50	1	B0K0109	11/06/2020	11/06/20 12:07	

Certificate of Analysis

Hargis & Associates, Inc.	Project Number : Raytheon Main GETS Monthly Sample, 5
9171 Towne Centre Drive, Suite 375	Report To : Steve Netto
San Diego , CA 92122	Reported : 11/20/2020

Client Sample ID: CBT

Lab ID: 2002469-03

Volatile Organic Compounds by EPA 8260B **Analyst: KL**

Analyte	Result (ug/L)	PQL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Dibromomethane	ND	0.50	1	B0K0109	11/06/2020	11/06/20 12:07	
Dichlorodifluoromethane	ND	0.50	1	B0K0109	11/06/2020	11/06/20 12:07	
Ethylbenzene	ND	0.50	1	B0K0109	11/06/2020	11/06/20 12:07	
Hexachlorobutadiene	ND	0.50	1	B0K0109	11/06/2020	11/06/20 12:07	
Isopropylbenzene	ND	0.50	1	B0K0109	11/06/2020	11/06/20 12:07	
m,p-Xylene	ND	1.0	1	B0K0109	11/06/2020	11/06/20 12:07	
Methylene chloride	ND	1.0	1	B0K0109	11/06/2020	11/06/20 12:07	
n-Butylbenzene	ND	0.50	1	B0K0109	11/06/2020	11/06/20 12:07	
n-Propylbenzene	ND	0.50	1	B0K0109	11/06/2020	11/06/20 12:07	
Naphthalene	ND	0.50	1	B0K0109	11/06/2020	11/06/20 12:07	
o-Xylene	ND	0.50	1	B0K0109	11/06/2020	11/06/20 12:07	
sec-Butylbenzene	ND	0.50	1	B0K0109	11/06/2020	11/06/20 12:07	
Styrene	ND	0.50	1	B0K0109	11/06/2020	11/06/20 12:07	
tert-Butylbenzene	ND	0.50	1	B0K0109	11/06/2020	11/06/20 12:07	
Tetrachloroethene	ND	0.50	1	B0K0109	11/06/2020	11/06/20 12:07	
Toluene	ND	0.50	1	B0K0109	11/06/2020	11/06/20 12:07	
trans-1,2-Dichloroethene	ND	0.50	1	B0K0109	11/06/2020	11/06/20 12:07	
Trichloroethene	ND	0.50	1	B0K0109	11/06/2020	11/06/20 12:07	
Trichlorofluoromethane	ND	0.50	1	B0K0109	11/06/2020	11/06/20 12:07	
Vinyl chloride	ND	0.50	1	B0K0109	11/06/2020	11/06/20 12:07	
Surrogate: 1,2-Dichloroethane-d4	*94.4 %*	*64 - 155*		B0K0109	11/06/2020	*11/06/20 12:07*	
Surrogate: 4-Bromofluorobenzene	*78.5 %*	*73 - 124*		B0K0109	11/06/2020	*11/06/20 12:07*	
Surrogate: Dibromofluoromethane	*102 %*	*78 - 129*		B0K0109	11/06/2020	*11/06/20 12:07*	
Surrogate: Toluene-d8	*94.8 %*	*84 - 117*		B0K0109	11/06/2020	*11/06/20 12:07*	

Certificate of Analysis

Hargis & Associates, Inc.	Project Number : Raytheon Main GETS Monthly Sample, 5
9171 Towne Centre Drive, Suite 375	Report To : Steve Netto
San Diego , CA 92122	Reported : 11/20/2020

Client Sample ID: CBT

Lab ID: 2002469-03

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

Analyte		Result (ug/L)	PQL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,4-Dioxane		ND	0.20	1	B0K0156	11/09/2020	11/09/20 19:45	
Surrogate: 1,2-Dichlorobenzene-d4	*57.4 %*		*13 - 99*		B0K0156	11/09/2020	*11/09/20 19:45*	
Surrogate: 2-Fluorobiphenyl	*63.0 %*		*8 - 111*		B0K0156	11/09/2020	*11/09/20 19:45*	
Surrogate: 4-Terphenyl-d14	*82.2 %*		*12 - 113*		B0K0156	11/09/2020	*11/09/20 19:45*	
Surrogate: Nitrobenzene-d5	*57.1 %*		*15 - 121*		B0K0156	11/09/2020	*11/09/20 19:45*	

Certificate of Analysis

Hargis & Associates, Inc.	Project Number : Raytheon Main GETS Monthly Sample, 5
9171 Towne Centre Drive, Suite 375	Report To : Steve Netto
San Diego , CA 92122	Reported : 11/20/2020

Client Sample ID: POX

Lab ID: 2002469-04

Alkalinity, Speciated by SM 2320B

Analyst: SH

Analyte	Result (mg/L)	PQL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Alkalinity, Bicarbonate (as CaCO3)	**230**	5.0	1	B0K0184	11/10/2020	11/10/20 16:48	
Alkalinity, Carbonate (as CaCO3)	ND	5.0	1	B0K0184	11/10/2020	11/10/20 16:48	
Alkalinity, Hydroxide (as CaCO3)	ND	5.0	1	B0K0184	11/10/2020	11/10/20 16:48	
Alkalinity, Total (as CaCO3)	**230**	5.0	1	B0K0184	11/10/2020	11/10/20 16:48	

Total Organic Carbon by SM 5310B

Analyst: SH

Analyte	Result (mg/L)	PQL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Organic Carbon, Total	ND	3.0	1	B0K0175	11/10/2020	11/10/20 16:18	

Volatile Organic Compounds by EPA 8260B

Analyst: KL

Analyte	Result (ug/L)	PQL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	0.50	1	B0K0109	11/06/2020	11/06/20 12:27	
1,1,1-Trichloroethane	ND	0.50	1	B0K0109	11/06/2020	11/06/20 12:27	
1,1,2,2-Tetrachloroethane	ND	0.50	1	B0K0109	11/06/2020	11/06/20 12:27	
1,1,2-Trichloroethane	ND	0.50	1	B0K0109	11/06/2020	11/06/20 12:27	
1,1-Dichloroethane	ND	0.50	1	B0K0109	11/06/2020	11/06/20 12:27	
1,1-Dichloroethene	ND	0.50	1	B0K0109	11/06/2020	11/06/20 12:27	
1,1-Dichloropropene	ND	0.50	1	B0K0109	11/06/2020	11/06/20 12:27	
1,2,3-Trichloropropane	ND	0.50	1	B0K0109	11/06/2020	11/06/20 12:27	
1,2,3-Trichlorobenzene	ND	0.50	1	B0K0109	11/06/2020	11/06/20 12:27	
1,2,4-Trichlorobenzene	ND	0.50	1	B0K0109	11/06/2020	11/06/20 12:27	
1,2,4-Trimethylbenzene	ND	0.50	1	B0K0109	11/06/2020	11/06/20 12:27	
1,2-Dibromo-3-chloropropane	ND	0.50	1	B0K0109	11/06/2020	11/06/20 12:27	
1,2-Dibromoethane	ND	0.50	1	B0K0109	11/06/2020	11/06/20 12:27	
1,2-Dichlorobenzene	ND	0.50	1	B0K0109	11/06/2020	11/06/20 12:27	
1,2-Dichloroethane	ND	0.50	1	B0K0109	11/06/2020	11/06/20 12:27	
1,2-Dichloropropane	ND	0.50	1	B0K0109	11/06/2020	11/06/20 12:27	
1,3,5-Trimethylbenzene	ND	0.50	1	B0K0109	11/06/2020	11/06/20 12:27	
1,3-Dichlorobenzene	ND	0.50	1	B0K0109	11/06/2020	11/06/20 12:27	
1,3-Dichloropropane	ND	0.50	1	B0K0109	11/06/2020	11/06/20 12:27	
1,4-Dichlorobenzene	ND	0.50	1	B0K0109	11/06/2020	11/06/20 12:27	
2,2-Dichloropropane	ND	0.50	1	B0K0109	11/06/2020	11/06/20 12:27	
2-Chlorotoluene	ND	0.50	1	B0K0109	11/06/2020	11/06/20 12:27	

Certificate of Analysis

Hargis & Associates, Inc.	Project Number : Raytheon Main GETS Monthly Sample, 5
9171 Towne Centre Drive, Suite 375	Report To : Steve Netto
San Diego , CA 92122	Reported : 11/20/2020

Client Sample ID: POX

Lab ID: 2002469-04

Volatile Organic Compounds by EPA 8260B **Analyst: KL**

Analyte	Result (ug/L)	PQL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
4-Chlorotoluene	ND	0.50	1	B0K0109	11/06/2020	11/06/20 12:27	
4-Isopropyltoluene	ND	0.50	1	B0K0109	11/06/2020	11/06/20 12:27	
Benzene	ND	0.50	1	B0K0109	11/06/2020	11/06/20 12:27	
Bromobenzene	ND	0.50	1	B0K0109	11/06/2020	11/06/20 12:27	
Bromodichloromethane	ND	0.50	1	B0K0109	11/06/2020	11/06/20 12:27	
Bromoform	ND	0.50	1	B0K0109	11/06/2020	11/06/20 12:27	
Bromomethane	ND	0.50	1	B0K0109	11/06/2020	11/06/20 12:27	
Carbon tetrachloride	ND	0.50	1	B0K0109	11/06/2020	11/06/20 12:27	
Chlorobenzene	ND	0.50	1	B0K0109	11/06/2020	11/06/20 12:27	
Chloroethane	ND	0.50	1	B0K0109	11/06/2020	11/06/20 12:27	
Chloroform	ND	0.50	1	B0K0109	11/06/2020	11/06/20 12:27	
Chloromethane	ND	0.50	1	B0K0109	11/06/2020	11/06/20 12:27	
cis-1,2-Dichloroethene	ND	0.50	1	B0K0109	11/06/2020	11/06/20 12:27	
cis-1,3-Dichloropropene	ND	0.50	1	B0K0109	11/06/2020	11/06/20 12:27	
Dibromochloromethane	ND	0.50	1	B0K0109	11/06/2020	11/06/20 12:27	
Dibromomethane	ND	0.50	1	B0K0109	11/06/2020	11/06/20 12:27	
Dichlorodifluoromethane	ND	0.50	1	B0K0109	11/06/2020	11/06/20 12:27	
Ethylbenzene	ND	0.50	1	B0K0109	11/06/2020	11/06/20 12:27	
Hexachlorobutadiene	ND	0.50	1	B0K0109	11/06/2020	11/06/20 12:27	
Isopropylbenzene	ND	0.50	1	B0K0109	11/06/2020	11/06/20 12:27	
m,p-Xylene	ND	1.0	1	B0K0109	11/06/2020	11/06/20 12:27	
Methylene chloride	ND	1.0	1	B0K0109	11/06/2020	11/06/20 12:27	
n-Butylbenzene	ND	0.50	1	B0K0109	11/06/2020	11/06/20 12:27	
n-Propylbenzene	ND	0.50	1	B0K0109	11/06/2020	11/06/20 12:27	
Naphthalene	ND	0.50	1	B0K0109	11/06/2020	11/06/20 12:27	
o-Xylene	ND	0.50	1	B0K0109	11/06/2020	11/06/20 12:27	
sec-Butylbenzene	ND	0.50	1	B0K0109	11/06/2020	11/06/20 12:27	
Styrene	ND	0.50	1	B0K0109	11/06/2020	11/06/20 12:27	
tert-Butylbenzene	ND	0.50	1	B0K0109	11/06/2020	11/06/20 12:27	
Tetrachloroethene	ND	0.50	1	B0K0109	11/06/2020	11/06/20 12:27	
Toluene	ND	0.50	1	B0K0109	11/06/2020	11/06/20 12:27	
trans-1,2-Dichloroethene	ND	0.50	1	B0K0109	11/06/2020	11/06/20 12:27	
Trichloroethene	ND	0.50	1	B0K0109	11/06/2020	11/06/20 12:27	
Trichlorofluoromethane	ND	0.50	1	B0K0109	11/06/2020	11/06/20 12:27	
Vinyl chloride	ND	0.50	1	B0K0109	11/06/2020	11/06/20 12:27	
Surrogate: 1,2-Dichloroethane-d4	*95.7 %*	*64 - 155*		B0K0109	11/06/2020	*11/06/20 12:27*	
Surrogate: 4-Bromofluorobenzene	*78.0 %*	*73 - 124*		B0K0109	11/06/2020	*11/06/20 12:27*	

Certificate of Analysis

Hargis & Associates, Inc.	Project Number : Raytheon Main GETS Monthly Sample, 5
9171 Towne Centre Drive, Suite 375	Report To : Steve Netto
San Diego , CA 92122	Reported : 11/20/2020

Client Sample ID: POX

Lab ID: 2002469-04

Volatile Organic Compounds by EPA 8260B — **Analyst: KL**

Analyte		Result (ug/L)	PQL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Surrogate: Dibromofluoromethane	*106 %*		*78 - 129*		B0K0109	11/06/2020	*11/06/20 12:27*	
Surrogate: Toluene-d8	*93.0 %*		*84 - 117*		B0K0109	11/06/2020	*11/06/20 12:27*	

1,4-Dioxane by EPA 8270/SIM: Isotope Dilution Technique — **Analyst: SP**

Analyte		Result (ug/L)	PQL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,4-Dioxane		ND	0.20	1	B0K0156	11/09/2020	11/09/20 20:11	
Surrogate: 1,2-Dichlorobenzene-d4	*58.6 %*		*13 - 99*		B0K0156	11/09/2020	*11/09/20 20:11*	
Surrogate: 2-Fluorobiphenyl	*64.7 %*		*8 - 111*		B0K0156	11/09/2020	*11/09/20 20:11*	
Surrogate: 4-Terphenyl-d14	*83.5 %*		*12 - 113*		B0K0156	11/09/2020	*11/09/20 20:11*	
Surrogate: Nitrobenzene-d5	*56.6 %*		*15 - 121*		B0K0156	11/09/2020	*11/09/20 20:11*	

Certificate of Analysis

Hargis & Associates, Inc.	Project Number : Raytheon Main GETS Monthly Sample, 5
9171 Towne Centre Drive, Suite 375	Report To : Steve Netto
San Diego , CA 92122	Reported : 11/20/2020

Client Sample ID: PF

Lab ID: 2002469-05

UV Absorption by EPA 415.3

Analyst: SH

Analyte	Result (1/cm)	PQL (1/cm)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
UV Absorption	ND	0.01	1	B0K0127	11/06/2020	11/06/20 17:37	

Alkalinity, Speciated by SM 2320B

Analyst: SH

Analyte	Result (mg/L)	PQL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Alkalinity, Bicarbonate (as CaCO3)	**230**	5.0	1	B0K0184	11/10/2020	11/10/20 16:48	
Alkalinity, Carbonate (as CaCO3)	ND	5.0	1	B0K0184	11/10/2020	11/10/20 16:48	
Alkalinity, Hydroxide (as CaCO3)	ND	5.0	1	B0K0184	11/10/2020	11/10/20 16:48	
Alkalinity, Total (as CaCO3)	**230**	5.0	1	B0K0184	11/10/2020	11/10/20 16:48	

Total Suspended Solids (Residue, Non-Filtrable) by SM 2540D

Analyst: SH

Analyte	Result (mg/L)	PQL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Residue, Suspended	ND	2.0	1	B0K0137	11/09/2020	11/09/20 14:30	

Total Organic Carbon by SM 5310B

Analyst: SH

Analyte	Result (mg/L)	PQL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Organic Carbon, Total	ND	3.0	1	B0K0175	11/10/2020	11/10/20 17:15	

Certificate of Analysis

Hargis & Associates, Inc.	Project Number : Raytheon Main GETS Monthly Sample, 5
9171 Towne Centre Drive, Suite 375	Report To : Steve Netto
San Diego , CA 92122	Reported : 11/20/2020

Client Sample ID: INF

Lab ID: 2002469-06

Bromide by Ion Chromatography EPA 300

Analyst: AH

Analyte	Result (mg/L)	PQL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Bromide	**1.5**	0.05	1	B0K0202	11/10/2020	11/10/20 20:00	

Volatile Organic Compounds by EPA 8260B

Analyst: KL

Analyte	Result (ug/L)	PQL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	0.50	1	B0K0109	11/06/2020	11/06/20 13:07	
1,1,1-Trichloroethane	ND	0.50	1	B0K0109	11/06/2020	11/06/20 13:07	
1,1,2,2-Tetrachloroethane	ND	0.50	1	B0K0109	11/06/2020	11/06/20 13:07	
1,1,2-Trichloroethane	ND	0.50	1	B0K0109	11/06/2020	11/06/20 13:07	
1,1-Dichloroethane	**0.50**	0.50	1	B0K0109	11/06/2020	11/06/20 13:07	
1,1-Dichloroethene	**57**	0.50	1	B0K0109	11/06/2020	11/06/20 13:07	
1,1-Dichloropropene	ND	0.50	1	B0K0109	11/06/2020	11/06/20 13:07	
1,2,3-Trichloropropane	ND	0.50	1	B0K0109	11/06/2020	11/06/20 13:07	
1,2,3-Trichlorobenzene	ND	0.50	1	B0K0109	11/06/2020	11/06/20 13:07	
1,2,4-Trichlorobenzene	ND	0.50	1	B0K0109	11/06/2020	11/06/20 13:07	
1,2,4-Trimethylbenzene	ND	0.50	1	B0K0109	11/06/2020	11/06/20 13:07	
1,2-Dibromo-3-chloropropane	ND	0.50	1	B0K0109	11/06/2020	11/06/20 13:07	
1,2-Dibromoethane	ND	0.50	1	B0K0109	11/06/2020	11/06/20 13:07	
1,2-Dichlorobenzene	ND	0.50	1	B0K0109	11/06/2020	11/06/20 13:07	
1,2-Dichloroethane	ND	0.50	1	B0K0109	11/06/2020	11/06/20 13:07	
1,2-Dichloropropane	ND	0.50	1	B0K0109	11/06/2020	11/06/20 13:07	
1,3,5-Trimethylbenzene	ND	0.50	1	B0K0109	11/06/2020	11/06/20 13:07	
1,3-Dichlorobenzene	ND	0.50	1	B0K0109	11/06/2020	11/06/20 13:07	
1,3-Dichloropropane	ND	0.50	1	B0K0109	11/06/2020	11/06/20 13:07	
1,4-Dichlorobenzene	ND	0.50	1	B0K0109	11/06/2020	11/06/20 13:07	
2,2-Dichloropropane	ND	0.50	1	B0K0109	11/06/2020	11/06/20 13:07	
2-Chlorotoluene	ND	0.50	1	B0K0109	11/06/2020	11/06/20 13:07	
4-Chlorotoluene	ND	0.50	1	B0K0109	11/06/2020	11/06/20 13:07	
4-Isopropyltoluene	ND	0.50	1	B0K0109	11/06/2020	11/06/20 13:07	
Benzene	ND	0.50	1	B0K0109	11/06/2020	11/06/20 13:07	
Bromobenzene	ND	0.50	1	B0K0109	11/06/2020	11/06/20 13:07	
Bromodichloromethane	ND	0.50	1	B0K0109	11/06/2020	11/06/20 13:07	
Bromoform	ND	0.50	1	B0K0109	11/06/2020	11/06/20 13:07	
Bromomethane	ND	0.50	1	B0K0109	11/06/2020	11/06/20 13:07	
Carbon tetrachloride	ND	0.50	1	B0K0109	11/06/2020	11/06/20 13:07	
Chlorobenzene	ND	0.50	1	B0K0109	11/06/2020	11/06/20 13:07	

Certificate of Analysis

Hargis & Associates, Inc.	Project Number : Raytheon Main GETS Monthly Sample, 5
9171 Towne Centre Drive, Suite 375	Report To : Steve Netto
San Diego , CA 92122	Reported : 11/20/2020

Client Sample ID: INF

Lab ID: 2002469-06

Volatile Organic Compounds by EPA 8260B **Analyst: KL**

Analyte	Result (ug/L)	PQL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Chloroethane	ND	0.50	1	B0K0109	11/06/2020	11/06/20 13:07	
Chloroform	ND	0.50	1	B0K0109	11/06/2020	11/06/20 13:07	
Chloromethane	ND	0.50	1	B0K0109	11/06/2020	11/06/20 13:07	
cis-1,2-Dichloroethene	ND	0.50	1	B0K0109	11/06/2020	11/06/20 13:07	
cis-1,3-Dichloropropene	ND	0.50	1	B0K0109	11/06/2020	11/06/20 13:07	
Dibromochloromethane	ND	0.50	1	B0K0109	11/06/2020	11/06/20 13:07	
Dibromomethane	ND	0.50	1	B0K0109	11/06/2020	11/06/20 13:07	
Dichlorodifluoromethane	ND	0.50	1	B0K0109	11/06/2020	11/06/20 13:07	
Ethylbenzene	ND	0.50	1	B0K0109	11/06/2020	11/06/20 13:07	
Hexachlorobutadiene	ND	0.50	1	B0K0109	11/06/2020	11/06/20 13:07	
Isopropylbenzene	ND	0.50	1	B0K0109	11/06/2020	11/06/20 13:07	
m,p-Xylene	ND	1.0	1	B0K0109	11/06/2020	11/06/20 13:07	
Methylene chloride	ND	1.0	1	B0K0109	11/06/2020	11/06/20 13:07	
n-Butylbenzene	ND	0.50	1	B0K0109	11/06/2020	11/06/20 13:07	
n-Propylbenzene	ND	0.50	1	B0K0109	11/06/2020	11/06/20 13:07	
Naphthalene	ND	0.50	1	B0K0109	11/06/2020	11/06/20 13:07	
o-Xylene	ND	0.50	1	B0K0109	11/06/2020	11/06/20 13:07	
sec-Butylbenzene	ND	0.50	1	B0K0109	11/06/2020	11/06/20 13:07	
Styrene	ND	0.50	1	B0K0109	11/06/2020	11/06/20 13:07	
tert-Butylbenzene	ND	0.50	1	B0K0109	11/06/2020	11/06/20 13:07	
Tetrachloroethene	ND	0.50	1	B0K0109	11/06/2020	11/06/20 13:07	
Toluene	ND	0.50	1	B0K0109	11/06/2020	11/06/20 13:07	
trans-1,2-Dichloroethene	ND	0.50	1	B0K0109	11/06/2020	11/06/20 13:07	
Trichloroethene	**0.73**	0.50	1	B0K0109	11/06/2020	11/06/20 13:07	
Trichlorofluoromethane	ND	0.50	1	B0K0109	11/06/2020	11/06/20 13:07	
Vinyl chloride	ND	0.50	1	B0K0109	11/06/2020	11/06/20 13:07	
Surrogate: 1,2-Dichloroethane-d4	*95.7 %*	*64 - 155*		B0K0109	11/06/2020	*11/06/20 13:07*	
Surrogate: 4-Bromofluorobenzene	*78.1 %*	*73 - 124*		B0K0109	11/06/2020	*11/06/20 13:07*	
Surrogate: Dibromofluoromethane	*106 %*	*78 - 129*		B0K0109	11/06/2020	*11/06/20 13:07*	
Surrogate: Toluene-d8	*95.3 %*	*84 - 117*		B0K0109	11/06/2020	*11/06/20 13:07*	

Certificate of Analysis

Hargis & Associates, Inc.	Project Number : Raytheon Main GETS Monthly Sample, 5
9171 Towne Centre Drive, Suite 375	Report To : Steve Netto
San Diego , CA 92122	Reported : 11/20/2020

Client Sample ID: INF

Lab ID: 2002469-06

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

Analyte		Result (ug/L)	PQL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,4-Dioxane		**34**	2.0	1	B0K0112	11/06/2020	11/06/20 21:11	
Surrogate: 1,2-Dichlorobenzene-d4	*64.5 %*		*17 - 119*		B0K0112	11/06/2020	*11/06/20 21:11*	
Surrogate: 2-Fluorobiphenyl	*64.8 %*		*10 - 133*		B0K0112	11/06/2020	*11/06/20 21:11*	
Surrogate: 4-Terphenyl-d14	*114 %*		*5 - 139*		B0K0112	11/06/2020	*11/06/20 21:11*	
Surrogate: Nitrobenzene-d5	*66.1 %*		*13 - 150*		B0K0112	11/06/2020	*11/06/20 21:11*	

Certificate of Analysis

Hargis & Associates, Inc.	Project Number : Raytheon Main GETS Monthly Sample, 5
9171 Towne Centre Drive, Suite 375	Report To : Steve Netto
San Diego , CA 92122	Reported : 11/20/2020

Client Sample ID: EW-02

Lab ID: 2002469-07

Bromide by Ion Chromatography EPA 300

Analyst: AH

Analyte	Result (mg/L)	PQL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Bromide	**1.1**	0.05	1	B0K0202	11/10/2020	11/10/20 20:11	

Volatile Organic Compounds by EPA 8260B

Analyst: KL

Analyte	Result (ug/L)	PQL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	0.50	1	B0K0109	11/06/2020	11/06/20 12:47	
1,1,1-Trichloroethane	ND	0.50	1	B0K0109	11/06/2020	11/06/20 12:47	
1,1,2,2-Tetrachloroethane	ND	0.50	1	B0K0109	11/06/2020	11/06/20 12:47	
1,1,2-Trichloroethane	ND	0.50	1	B0K0109	11/06/2020	11/06/20 12:47	
1,1-Dichloroethane	ND	0.50	1	B0K0109	11/06/2020	11/06/20 12:47	
1,1-Dichloroethene	**17**	0.50	1	B0K0109	11/06/2020	11/06/20 12:47	
1,1-Dichloropropene	ND	0.50	1	B0K0109	11/06/2020	11/06/20 12:47	
1,2,3-Trichloropropane	ND	0.50	1	B0K0109	11/06/2020	11/06/20 12:47	
1,2,3-Trichlorobenzene	ND	0.50	1	B0K0109	11/06/2020	11/06/20 12:47	
1,2,4-Trichlorobenzene	ND	0.50	1	B0K0109	11/06/2020	11/06/20 12:47	
1,2,4-Trimethylbenzene	ND	0.50	1	B0K0109	11/06/2020	11/06/20 12:47	
1,2-Dibromo-3-chloropropane	ND	0.50	1	B0K0109	11/06/2020	11/06/20 12:47	
1,2-Dibromoethane	ND	0.50	1	B0K0109	11/06/2020	11/06/20 12:47	
1,2-Dichlorobenzene	ND	0.50	1	B0K0109	11/06/2020	11/06/20 12:47	
1,2-Dichloroethane	ND	0.50	1	B0K0109	11/06/2020	11/06/20 12:47	
1,2-Dichloropropane	ND	0.50	1	B0K0109	11/06/2020	11/06/20 12:47	
1,3,5-Trimethylbenzene	ND	0.50	1	B0K0109	11/06/2020	11/06/20 12:47	
1,3-Dichlorobenzene	ND	0.50	1	B0K0109	11/06/2020	11/06/20 12:47	
1,3-Dichloropropane	ND	0.50	1	B0K0109	11/06/2020	11/06/20 12:47	
1,4-Dichlorobenzene	ND	0.50	1	B0K0109	11/06/2020	11/06/20 12:47	
2,2-Dichloropropane	ND	0.50	1	B0K0109	11/06/2020	11/06/20 12:47	
2-Chlorotoluene	ND	0.50	1	B0K0109	11/06/2020	11/06/20 12:47	
4-Chlorotoluene	ND	0.50	1	B0K0109	11/06/2020	11/06/20 12:47	
4-Isopropyltoluene	ND	0.50	1	B0K0109	11/06/2020	11/06/20 12:47	
Benzene	ND	0.50	1	B0K0109	11/06/2020	11/06/20 12:47	
Bromobenzene	ND	0.50	1	B0K0109	11/06/2020	11/06/20 12:47	
Bromodichloromethane	ND	0.50	1	B0K0109	11/06/2020	11/06/20 12:47	
Bromoform	ND	0.50	1	B0K0109	11/06/2020	11/06/20 12:47	
Bromomethane	ND	0.50	1	B0K0109	11/06/2020	11/06/20 12:47	
Carbon tetrachloride	ND	0.50	1	B0K0109	11/06/2020	11/06/20 12:47	
Chlorobenzene	ND	0.50	1	B0K0109	11/06/2020	11/06/20 12:47	

Certificate of Analysis

Hargis & Associates, Inc.	Project Number : Raytheon Main GETS Monthly Sample, 5
9171 Towne Centre Drive, Suite 375	Report To : Steve Netto
San Diego , CA 92122	Reported : 11/20/2020

Client Sample ID: EW-02

Lab ID: 2002469-07

Volatile Organic Compounds by EPA 8260B **Analyst: KL**

Analyte	Result (ug/L)	PQL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Chloroethane	ND	0.50	1	B0K0109	11/06/2020	11/06/20 12:47	
Chloroform	ND	0.50	1	B0K0109	11/06/2020	11/06/20 12:47	
Chloromethane	ND	0.50	1	B0K0109	11/06/2020	11/06/20 12:47	
cis-1,2-Dichloroethene	ND	0.50	1	B0K0109	11/06/2020	11/06/20 12:47	
cis-1,3-Dichloropropene	ND	0.50	1	B0K0109	11/06/2020	11/06/20 12:47	
Dibromochloromethane	ND	0.50	1	B0K0109	11/06/2020	11/06/20 12:47	
Dibromomethane	ND	0.50	1	B0K0109	11/06/2020	11/06/20 12:47	
Dichlorodifluoromethane	ND	0.50	1	B0K0109	11/06/2020	11/06/20 12:47	
Ethylbenzene	ND	0.50	1	B0K0109	11/06/2020	11/06/20 12:47	
Hexachlorobutadiene	ND	0.50	1	B0K0109	11/06/2020	11/06/20 12:47	
Isopropylbenzene	ND	0.50	1	B0K0109	11/06/2020	11/06/20 12:47	
m,p-Xylene	ND	1.0	1	B0K0109	11/06/2020	11/06/20 12:47	
Methylene chloride	ND	1.0	1	B0K0109	11/06/2020	11/06/20 12:47	
n-Butylbenzene	ND	0.50	1	B0K0109	11/06/2020	11/06/20 12:47	
n-Propylbenzene	ND	0.50	1	B0K0109	11/06/2020	11/06/20 12:47	
Naphthalene	ND	0.50	1	B0K0109	11/06/2020	11/06/20 12:47	
o-Xylene	ND	0.50	1	B0K0109	11/06/2020	11/06/20 12:47	
sec-Butylbenzene	ND	0.50	1	B0K0109	11/06/2020	11/06/20 12:47	
Styrene	ND	0.50	1	B0K0109	11/06/2020	11/06/20 12:47	
tert-Butylbenzene	ND	0.50	1	B0K0109	11/06/2020	11/06/20 12:47	
Tetrachloroethene	ND	0.50	1	B0K0109	11/06/2020	11/06/20 12:47	
Toluene	ND	0.50	1	B0K0109	11/06/2020	11/06/20 12:47	
trans-1,2-Dichloroethene	ND	0.50	1	B0K0109	11/06/2020	11/06/20 12:47	
Trichloroethene	ND	0.50	1	B0K0109	11/06/2020	11/06/20 12:47	
Trichlorofluoromethane	ND	0.50	1	B0K0109	11/06/2020	11/06/20 12:47	
Vinyl chloride	ND	0.50	1	B0K0109	11/06/2020	11/06/20 12:47	
Surrogate: 1,2-Dichloroethane-d4	*89.6 %*	*64 - 155*		B0K0109	11/06/2020	*11/06/20 12:47*	
Surrogate: 4-Bromofluorobenzene	*78.5 %*	*73 - 124*		B0K0109	11/06/2020	*11/06/20 12:47*	
Surrogate: Dibromofluoromethane	*103 %*	*78 - 129*		B0K0109	11/06/2020	*11/06/20 12:47*	
Surrogate: Toluene-d8	*94.7 %*	*84 - 117*		B0K0109	11/06/2020	*11/06/20 12:47*	

Certificate of Analysis

Hargis & Associates, Inc.	Project Number : Raytheon Main GETS Monthly Sample, 5
9171 Towne Centre Drive, Suite 375	Report To : Steve Netto
San Diego , CA 92122	Reported : 11/20/2020

Client Sample ID: EW-02

Lab ID: 2002469-07

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

Analyte		Result (ug/L)	PQL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,4-Dioxane		**8.6**	2.0	1	B0K0112	11/06/2020	11/06/20 21:37	
Surrogate: 1,2-Dichlorobenzene-d4	*61.9 %*		*17 - 119*		B0K0112	11/06/2020	*11/06/20 21:37*	
Surrogate: 2-Fluorobiphenyl	*63.2 %*		*10 - 133*		B0K0112	11/06/2020	*11/06/20 21:37*	
Surrogate: 4-Terphenyl-d14	*116 %*		*5 - 139*		B0K0112	11/06/2020	*11/06/20 21:37*	
Surrogate: Nitrobenzene-d5	*64.7 %*		*13 - 150*		B0K0112	11/06/2020	*11/06/20 21:37*	

Certificate of Analysis

Hargis & Associates, Inc.	Project Number : Raytheon Main GETS Monthly Sample, 5
9171 Towne Centre Drive, Suite 375	Report To : Steve Netto
San Diego , CA 92122	Reported : 11/20/2020

Client Sample ID: MW-29

Lab ID: 2002469-08

Bromide by Ion Chromatography EPA 300

Analyst: AH

Analyte	Result (mg/L)	PQL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Bromide	**2.2**	0.05	1	B0K0202	11/10/2020	11/10/20 20:23	

Volatile Organic Compounds by EPA 8260B

Analyst: KL

Analyte	Result (ug/L)	PQL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	0.50	1	B0K0109	11/06/2020	11/06/20 13:28	
1,1,1-Trichloroethane	ND	0.50	1	B0K0109	11/06/2020	11/06/20 13:28	
1,1,2,2-Tetrachloroethane	ND	0.50	1	B0K0109	11/06/2020	11/06/20 13:28	
1,1,2-Trichloroethane	**0.57**	0.50	1	B0K0109	11/06/2020	11/06/20 13:28	
1,1-Dichloroethane	**1.4**	0.50	1	B0K0109	11/06/2020	11/06/20 13:28	
1,1-Dichloroethene	**170**	5.0	10	B0K0109	11/06/2020	11/06/20 13:48	
1,1-Dichloropropene	ND	0.50	1	B0K0109	11/06/2020	11/06/20 13:28	
1,2,3-Trichloropropane	ND	0.50	1	B0K0109	11/06/2020	11/06/20 13:28	
1,2,3-Trichlorobenzene	ND	0.50	1	B0K0109	11/06/2020	11/06/20 13:28	
1,2,4-Trichlorobenzene	ND	0.50	1	B0K0109	11/06/2020	11/06/20 13:28	
1,2,4-Trimethylbenzene	ND	0.50	1	B0K0109	11/06/2020	11/06/20 13:28	
1,2-Dibromo-3-chloropropane	ND	0.50	1	B0K0109	11/06/2020	11/06/20 13:28	
1,2-Dibromoethane	ND	0.50	1	B0K0109	11/06/2020	11/06/20 13:28	
1,2-Dichlorobenzene	ND	0.50	1	B0K0109	11/06/2020	11/06/20 13:28	
1,2-Dichloroethane	ND	0.50	1	B0K0109	11/06/2020	11/06/20 13:28	
1,2-Dichloropropane	ND	0.50	1	B0K0109	11/06/2020	11/06/20 13:28	
1,3,5-Trimethylbenzene	ND	0.50	1	B0K0109	11/06/2020	11/06/20 13:28	
1,3-Dichlorobenzene	ND	0.50	1	B0K0109	11/06/2020	11/06/20 13:28	
1,3-Dichloropropane	ND	0.50	1	B0K0109	11/06/2020	11/06/20 13:28	
1,4-Dichlorobenzene	ND	0.50	1	B0K0109	11/06/2020	11/06/20 13:28	
2,2-Dichloropropane	ND	0.50	1	B0K0109	11/06/2020	11/06/20 13:28	
2-Chlorotoluene	ND	0.50	1	B0K0109	11/06/2020	11/06/20 13:28	
4-Chlorotoluene	ND	0.50	1	B0K0109	11/06/2020	11/06/20 13:28	
4-Isopropyltoluene	ND	0.50	1	B0K0109	11/06/2020	11/06/20 13:28	
Benzene	ND	0.50	1	B0K0109	11/06/2020	11/06/20 13:28	
Bromobenzene	ND	0.50	1	B0K0109	11/06/2020	11/06/20 13:28	
Bromodichloromethane	ND	0.50	1	B0K0109	11/06/2020	11/06/20 13:28	
Bromoform	ND	0.50	1	B0K0109	11/06/2020	11/06/20 13:28	
Bromomethane	ND	0.50	1	B0K0109	11/06/2020	11/06/20 13:28	
Carbon tetrachloride	ND	0.50	1	B0K0109	11/06/2020	11/06/20 13:28	
Chlorobenzene	ND	0.50	1	B0K0109	11/06/2020	11/06/20 13:28	

Certificate of Analysis

Hargis & Associates, Inc.	Project Number : Raytheon Main GETS Monthly Sample, 5
9171 Towne Centre Drive, Suite 375	Report To : Steve Netto
San Diego , CA 92122	Reported : 11/20/2020

Client Sample ID: MW-29

Lab ID: 2002469-08

Volatile Organic Compounds by EPA 8260B **Analyst: KL**

Analyte	Result (ug/L)	PQL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Chloroethane	ND	0.50	1	B0K0109	11/06/2020	11/06/20 13:28	
Chloroform	ND	0.50	1	B0K0109	11/06/2020	11/06/20 13:28	
Chloromethane	ND	0.50	1	B0K0109	11/06/2020	11/06/20 13:28	
cis-1,2-Dichloroethene	ND	0.50	1	B0K0109	11/06/2020	11/06/20 13:28	
cis-1,3-Dichloropropene	ND	0.50	1	B0K0109	11/06/2020	11/06/20 13:28	
Dibromochloromethane	ND	0.50	1	B0K0109	11/06/2020	11/06/20 13:28	
Dibromomethane	ND	0.50	1	B0K0109	11/06/2020	11/06/20 13:28	
Dichlorodifluoromethane	ND	0.50	1	B0K0109	11/06/2020	11/06/20 13:28	
Ethylbenzene	ND	0.50	1	B0K0109	11/06/2020	11/06/20 13:28	
Hexachlorobutadiene	ND	0.50	1	B0K0109	11/06/2020	11/06/20 13:28	
Isopropylbenzene	ND	0.50	1	B0K0109	11/06/2020	11/06/20 13:28	
m,p-Xylene	ND	1.0	1	B0K0109	11/06/2020	11/06/20 13:28	
Methylene chloride	ND	1.0	1	B0K0109	11/06/2020	11/06/20 13:28	
n-Butylbenzene	ND	0.50	1	B0K0109	11/06/2020	11/06/20 13:28	
n-Propylbenzene	ND	0.50	1	B0K0109	11/06/2020	11/06/20 13:28	
Naphthalene	ND	0.50	1	B0K0109	11/06/2020	11/06/20 13:28	
o-Xylene	ND	0.50	1	B0K0109	11/06/2020	11/06/20 13:28	
sec-Butylbenzene	ND	0.50	1	B0K0109	11/06/2020	11/06/20 13:28	
Styrene	ND	0.50	1	B0K0109	11/06/2020	11/06/20 13:28	
tert-Butylbenzene	ND	0.50	1	B0K0109	11/06/2020	11/06/20 13:28	
Tetrachloroethene	**0.50**	0.50	1	B0K0109	11/06/2020	11/06/20 13:28	
Toluene	ND	0.50	1	B0K0109	11/06/2020	11/06/20 13:28	
trans-1,2-Dichloroethene	ND	0.50	1	B0K0109	11/06/2020	11/06/20 13:28	
Trichloroethene	**2.0**	0.50	1	B0K0109	11/06/2020	11/06/20 13:28	
Trichlorofluoromethane	**0.90**	0.50	1	B0K0109	11/06/2020	11/06/20 13:28	
Vinyl chloride	ND	0.50	1	B0K0109	11/06/2020	11/06/20 13:28	
Surrogate: 1,2-Dichloroethane-d4	*93.1 %*	*64 - 155*		B0K0109	11/06/2020	*11/06/20 13:48*	
Surrogate: 1,2-Dichloroethane-d4	*95.4 %*	*64 - 155*		B0K0109	11/06/2020	*11/06/20 13:28*	
Surrogate: 4-Bromofluorobenzene	*78.4 %*	*73 - 124*		B0K0109	11/06/2020	*11/06/20 13:48*	
Surrogate: 4-Bromofluorobenzene	*81.1 %*	*73 - 124*		B0K0109	11/06/2020	*11/06/20 13:28*	
Surrogate: Dibromofluoromethane	*103 %*	*78 - 129*		B0K0109	11/06/2020	*11/06/20 13:28*	
Surrogate: Dibromofluoromethane	*104 %*	*78 - 129*		B0K0109	11/06/2020	*11/06/20 13:48*	
Surrogate: Toluene-d8	*95.1 %*	*84 - 117*		B0K0109	11/06/2020	*11/06/20 13:48*	
Surrogate: Toluene-d8	*95.5 %*	*84 - 117*		B0K0109	11/06/2020	*11/06/20 13:28*	

Certificate of Analysis

Hargis & Associates, Inc.	Project Number : Raytheon Main GETS Monthly Sample, 5
9171 Towne Centre Drive, Suite 375	Report To : Steve Netto
San Diego , CA 92122	Reported : 11/20/2020

Client Sample ID: MW-29

Lab ID: 2002469-08

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

Analyte		Result (ug/L)	PQL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,4-Dioxane		**100**	2.0	1	B0K0112	11/06/2020	11/06/20 22:03	
Surrogate: 1,2-Dichlorobenzene-d4	*56.0 %*		*17 - 119*		B0K0112	11/06/2020	*11/06/20 22:03*	
Surrogate: 2-Fluorobiphenyl	*59.6 %*		*10 - 133*		B0K0112	11/06/2020	*11/06/20 22:03*	
Surrogate: 4-Terphenyl-d14	*99.5 %*		*5 - 139*		B0K0112	11/06/2020	*11/06/20 22:03*	
Surrogate: Nitrobenzene-d5	*62.0 %*		*13 - 150*		B0K0112	11/06/2020	*11/06/20 22:03*	

Certificate of Analysis

Hargis & Associates, Inc.	Project Number : Raytheon Main GETS Monthly Sample, 5
9171 Towne Centre Drive, Suite 375	Report To : Steve Netto
San Diego , CA 92122	Reported : 11/20/2020

QUALITY CONTROL SECTION

Alkalinity, Speciated by SM 2320B - Quality Control

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B0K0184 - No_Prep_WC1_W										
Blank (B0K0184-BLK1)					Prepared: 11/10/2020 Analyzed: 11/10/2020					
Alkalinity, Bicarbonate (as CaCO3)	ND	5.0	3.4							
Alkalinity, Carbonate (as CaCO3)	ND	5.0	3.4							
Alkalinity, Hydroxide (as CaCO3)	ND	5.0	3.4							
Alkalinity, Total (as CaCO3)	ND	5.0	3.4							
LCS (B0K0184-BS1)					Prepared: 11/10/2020 Analyzed: 11/10/2020					
Alkalinity, Total (as CaCO3)	99.9100	5.0	3.4	99.9580		100	80 - 120			
Matrix Spike (B0K0184-MS1)			**Source: 2002469-05**		Prepared: 11/10/2020 Analyzed: 11/10/2020					
Alkalinity, Total (as CaCO3)	325.580	5.0	3.4	99.9580	226.740	98.9	80 - 120			
Matrix Spike Dup (B0K0184-MSD1)			**Source: 2002469-05**		Prepared: 11/10/2020 Analyzed: 11/10/2020					
Alkalinity, Total (as CaCO3)	326.010	5.0	3.4	99.9580	226.740	99.3	80 - 120	0.132	20	

Certificate of Analysis

Hargis & Associates, Inc.	Project Number : Raytheon Main GETS Monthly Sample, 5
9171 Towne Centre Drive, Suite 375	Report To : Steve Netto
San Diego , CA 92122	Reported : 11/20/2020

Total Suspended Solids (Residue, Non-Filtrable) by SM 2540D - Quality Control

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B0K0137 - No_Prep_WC1_W										
Blank (B0K0137-BLK1)					Prepared: 11/9/2020 Analyzed: 11/9/2020					
Residue, Suspended	ND	1.0	1.0							
LCS (B0K0137-BS1)					Prepared: 11/9/2020 Analyzed: 11/9/2020					
Residue, Suspended	92.0000	10	10	100.000		92.0	80 - 120			
Duplicate (B0K0137-DUP1)			**Source: 2002451-01**		Prepared: 11/9/2020 Analyzed: 11/9/2020					
Residue, Suspended	80.0000	10	10		97.0000			19.2	10	R3

Certificate of Analysis

Hargis & Associates, Inc.	Project Number : Raytheon Main GETS Monthly Sample, 5
9171 Towne Centre Drive, Suite 375	Report To : Steve Netto
San Diego , CA 92122	Reported : 11/20/2020

Bromide by Ion Chromatography EPA 300 - Quality Control

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B0K0202 - No_Prep_IC1_W										
Blank (B0K0202-BLK1)					Prepared: 11/10/2020 Analyzed: 11/10/2020					
Bromide	ND	0.05	0.02							
LCS (B0K0202-BS1)					Prepared: 11/10/2020 Analyzed: 11/10/2020					
Bromide	0.915900	0.05	0.02	1.00000		91.6	90 - 110			
Duplicate (B0K0202-DUP1)			**Source: 2002495-04**		Prepared: 11/10/2020 Analyzed: 11/10/2020					
Bromide	1.85500	0.50	0.18		1.93400			4.17	20	
Matrix Spike (B0K0202-MS1)			**Source: 2002495-04**		Prepared: 11/10/2020 Analyzed: 11/10/2020					
Bromide	3.44000	0.50	0.18	2.50000	1.93400	60.2	80 - 120			M2
Matrix Spike Dup (B0K0202-MSD1)			**Source: 2002495-04**		Prepared: 11/10/2020 Analyzed: 11/10/2020					
Bromide	3.52000	0.50	0.18	2.50000	1.93400	63.4	80 - 120	2.30	20	M2

Certificate of Analysis

Hargis & Associates, Inc.	Project Number : Raytheon Main GETS Monthly Sample, 5
9171 Towne Centre Drive, Suite 375	Report To : Steve Netto
San Diego , CA 92122	Reported : 11/20/2020

UV Absorption by EPA 415.3 - Quality Control

Analyte	Result (1/cm)	PQL (1/cm)	MDL (1/cm)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B0K0127 - No_Prep_II_W										
Blank (B0K0127-BLK1)					Prepared: 11/6/2020 Analyzed: 11/6/2020					
UV Absorption	ND	0.01	0.01							
Duplicate (B0K0127-DUP1)			**Source: 2002469-05**		Prepared: 11/6/2020 Analyzed: 11/6/2020					
UV Absorption	ND	0.01	0.01		ND			NR	20	

Certificate of Analysis

Hargis & Associates, Inc.	Project Number : Raytheon Main GETS Monthly Sample, 5
9171 Towne Centre Drive, Suite 375	Report To : Steve Netto
San Diego , CA 92122	Reported : 11/20/2020

Total Organic Carbon by SM 5310B - Quality Control

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B0K0175 - No_Prep_II_W										
Blank (B0K0175-BLK1)					Prepared: 11/10/2020 Analyzed: 11/10/2020					
Organic Carbon, Total	ND	3.0	1.3							
LCS (B0K0175-BS1)					Prepared: 11/10/2020 Analyzed: 11/10/2020					
Organic Carbon, Total	24.8200	3.0	1.3	25.0000		99.3	80 - 120			
Matrix Spike (B0K0175-MS1)			**Source: 2002469-04**		Prepared: 11/10/2020 Analyzed: 11/10/2020					
Organic Carbon, Total	24.9100	3.0	1.3	25.0000	ND	99.6	80 - 120			
Matrix Spike Dup (B0K0175-MSD1)			**Source: 2002469-04**		Prepared: 11/10/2020 Analyzed: 11/10/2020					
Organic Carbon, Total	25.4300	3.0	1.3	25.0000	ND	102	80 - 120	2.07	20	

Certificate of Analysis

Hargis & Associates, Inc.	Project Number : Raytheon Main GETS Monthly Sample, 5
9171 Towne Centre Drive, Suite 375	Report To : Steve Netto
San Diego , CA 92122	Reported : 11/20/2020

Volatile Organic Compounds by EPA 8260B - Quality Control

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B0K0109 - MSVOA_LL_W										
Blank (B0K0109-BLK1)							Prepared: 11/6/2020 Analyzed: 11/6/2020			
1,1,1,2-Tetrachloroethane	ND	0.50	0.11							
1,1,1-Trichloroethane	ND	0.50	0.21							
1,1,2,2-Tetrachloroethane	ND	0.50	0.36							
1,1,2-Trichloroethane	ND	0.50	0.25							
1,1-Dichloroethane	ND	0.50	0.09							
1,1-Dichloroethene	ND	0.50	0.13							
1,1-Dichloropropene	ND	0.50	0.13							
1,2,3-Trichloropropane	ND	0.50	0.39							
1,2,3-Trichlorobenzene	ND	0.50	0.18							
1,2,4-Trichlorobenzene	ND	0.50	0.16							
1,2,4-Trimethylbenzene	ND	0.50	0.14							
1,2-Dibromo-3-chloropropane	ND	0.50	0.41							
1,2-Dibromoethane	ND	0.50	0.24							
1,2-Dichlorobenzene	ND	0.50	0.20							
1,2-Dichloroethane	ND	0.50	0.20							
1,2-Dichloropropane	ND	0.50	0.15							
1,3,5-Trimethylbenzene	ND	0.50	0.13							
1,3-Dichlorobenzene	ND	0.50	0.16							
1,3-Dichloropropane	ND	0.50	0.21							
1,4-Dichlorobenzene	ND	0.50	0.17							
2,2-Dichloropropane	ND	0.50	0.38							
2-Chlorotoluene	ND	0.50	0.11							
4-Chlorotoluene	ND	0.50	0.12							
4-Isopropyltoluene	ND	0.50	0.11							
Benzene	ND	0.50	0.13							
Bromobenzene	ND	0.50	0.21							
Bromodichloromethane	ND	0.50	0.14							
Bromoform	ND	0.50	0.20							
Bromomethane	ND	0.50	0.40							
Carbon tetrachloride	ND	0.50	0.09							
Chlorobenzene	ND	0.50	0.13							
Chloroethane	ND	0.50	0.15							
Chloroform	ND	0.50	0.11							
Chloromethane	ND	0.50	0.12							
cis-1,2-Dichloroethene	ND	0.50	0.14							
cis-1,3-Dichloropropene	ND	0.50	0.13							
Dibromochloromethane	ND	0.50	0.16							
Dibromomethane	ND	0.50	0.19							
Dichlorodifluoromethane	ND	0.50	0.18							
Ethylbenzene	ND	0.50	0.13							
Hexachlorobutadiene	ND	0.50	0.15							

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

Project Number : Raytheon Main GETS Monthly Sample, 5
Report To : Steve Netto
Reported : 11/20/2020

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

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B0K0109 - MSVOA_LL_W (continued)										
Blank (B0K0109-BLK1) - Continued					Prepared: 11/6/2020 Analyzed: 11/6/2020					
Isopropylbenzene	ND	0.50	0.10							
m,p-Xylene	ND	1.0	0.19							
Methylene chloride	ND	1.0	0.71							
n-Butylbenzene	ND	0.50	0.11							
n-Propylbenzene	ND	0.50	0.10							
Naphthalene	ND	0.50	0.41							
o-Xylene	ND	0.50	0.13							
sec-Butylbenzene	ND	0.50	0.09							
Styrene	ND	0.50	0.13							
tert-Butylbenzene	ND	0.50	0.09							
Tetrachloroethene	ND	0.50	0.10							
Toluene	ND	0.50	0.12							
trans-1,2-Dichloroethene	ND	0.50	0.09							
Trichloroethene	ND	0.50	0.10							
Trichlorofluoromethane	ND	0.50	0.23							
Vinyl chloride	ND	0.50	0.13							
Surrogate: 1,2-Dichloroethane-d4	*22.70*			*25.0000*		*90.8*	*64 - 155*			
Surrogate: 4-Bromofluorobenzene	*19.63*			*25.0000*		*78.5*	*73 - 124*			
Surrogate: Dibromofluoromethan	*25.77*			*25.0000*		*103*	*78 - 129*			
Surrogate: Toluene-d8	*23.50*			*25.0000*		*94.0*	*84 - 117*			
LCS (B0K0109-BS1)					Prepared: 11/6/2020 Analyzed: 11/6/2020					
1,1,1,2-Tetrachloroethane	19.9400	0.50	0.11	20.0000		99.7	79 - 116			
1,1,1-Trichloroethane	18.4600	0.50	0.21	20.0000		92.3	73 - 130			
1,1,2,2-Tetrachloroethane	18.7900	0.50	0.36	20.0000		94.0	71 - 122			
1,1,2-Trichloroethane	19.1600	0.50	0.25	20.0000		95.8	70 - 124			
1,1-Dichloroethane	17.5000	0.50	0.09	20.0000		87.5	69 - 128			
1,1-Dichloroethene	17.5000	0.50	0.13	20.0000		87.5	65 - 137			
1,1-Dichloropropene	18.2400	0.50	0.13	20.0000		91.2	74 - 129			
1,2,3-Trichloropropane	19.0000	0.50	0.39	20.0000		95.0	74 - 123			
1,2,3-Trichlorobenzene	18.5400	0.50	0.18	20.0000		92.7	59 - 130			
1,2,4-Trichlorobenzene	18.2900	0.50	0.16	20.0000		91.4	65 - 125			
1,2,4-Trimethylbenzene	17.6500	0.50	0.14	20.0000		88.2	88 - 124			
1,2-Dibromo-3-chloropropane	18.1300	0.50	0.41	20.0000		90.6	61 - 127			
1,2-Dibromoethane	19.1000	0.50	0.24	20.0000		95.5	72 - 125			
1,2-Dichlorobenzene	19.5900	0.50	0.20	20.0000		98.0	84 - 113			
1,2-Dichloroethane	17.3300	0.50	0.20	20.0000		86.6	68 - 130			
1,2-Dichloropropane	17.4600	0.50	0.15	20.0000		87.3	77 - 121			
1,3,5-Trimethylbenzene	19.1500	0.50	0.13	20.0000		95.8	83 - 124			
1,3-Dichlorobenzene	18.7000	0.50	0.16	20.0000		93.5	83 - 112			
1,3-Dichloropropane	18.6900	0.50	0.21	20.0000		93.4	77 - 119			

Certificate of Analysis

Hargis & Associates, Inc.	Project Number : Raytheon Main GETS Monthly Sample, 5
9171 Towne Centre Drive, Suite 375	Report To : Steve Netto
San Diego , CA 92122	Reported : 11/20/2020

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

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B0K0109 - MSVOA_LL_W (continued)										
LCS (B0K0109-BS1) - Continued					Prepared: 11/6/2020 Analyzed: 11/6/2020					
1,4-Dichlorobenzene	18.8200	0.50	0.17	20.0000		94.1	79 - 115			
2,2-Dichloropropane	18.7800	0.50	0.38	20.0000		93.9	67 - 149			
2-Chlorotoluene	17.9000	0.50	0.11	20.0000		89.5	81 - 119			
4-Chlorotoluene	18.2400	0.50	0.12	20.0000		91.2	86 - 117			
4-Isopropyltoluene	20.1100	0.50	0.11	20.0000		101	82 - 131			
Benzene	19.1500	0.50	0.13	20.0000		95.8	75 - 124			
Bromobenzene	19.0200	0.50	0.21	20.0000		95.1	82 - 108			
Bromodichloromethane	18.4100	0.50	0.14	20.0000		92.0	80 - 120			
Bromoform	20.1700	0.50	0.20	20.0000		101	70 - 123			
Bromomethane	17.2200	0.50	0.40	20.0000		86.1	44 - 151			
Carbon tetrachloride	19.9700	0.50	0.09	20.0000		99.8	62 - 140			
Chlorobenzene	18.4500	0.50	0.13	20.0000		92.2	80 - 112			
Chloroethane	17.3100	0.50	0.15	20.0000		86.6	42 - 167			
Chloroform	15.4200	0.50	0.11	20.0000		77.1	77 - 122			
Chloromethane	17.8300	0.50	0.12	20.0000		89.2	33 - 153			
cis-1,2-Dichloroethene	18.3700	0.50	0.14	20.0000		91.8	75 - 121			
cis-1,3-Dichloropropene	17.1000	0.50	0.13	20.0000		85.5	73 - 127			
Dibromochloromethane	17.6800	0.50	0.16	20.0000		88.4	77 - 122			
Dibromomethane	19.2100	0.50	0.19	20.0000		96.0	75 - 121			
Dichlorodifluoromethane	17.0000	0.50	0.18	20.0000		85.0	0 - 171			
Ethylbenzene	18.1300	0.50	0.13	20.0000		90.6	82 - 119			
Hexachlorobutadiene	18.4400	0.50	0.15	20.0000		92.2	71 - 131			
Isopropylbenzene	18.1100	0.50	0.10	20.0000		90.6	75 - 126			
m,p-Xylene	37.6100	1.0	0.19	40.0000		94.0	86 - 119			
Methylene chloride	17.4100	1.0	0.71	20.0000		87.0	76 - 125			
n-Butylbenzene	19.4700	0.50	0.11	20.0000		97.4	81 - 125			
n-Propylbenzene	18.7000	0.50	0.10	20.0000		93.5	78 - 130			
Naphthalene	16.0500	0.50	0.41	20.0000		80.2	47 - 128			
o-Xylene	18.0900	0.50	0.13	20.0000		90.4	85 - 119			
sec-Butylbenzene	18.8500	0.50	0.09	20.0000		94.2	78 - 130			
Styrene	16.7700	0.50	0.13	20.0000		83.8	62 - 148			
tert-Butylbenzene	18.5000	0.50	0.09	20.0000		92.5	77 - 125			
Tetrachloroethene	20.0600	0.50	0.10	20.0000		100	73 - 120			
Toluene	18.8700	0.50	0.12	20.0000		94.4	79 - 119			
trans-1,2-Dichloroethene	17.0100	0.50	0.09	20.0000		85.0	70 - 129			
Trichloroethene	19.1600	0.50	0.10	20.0000		95.8	73 - 117			
Trichlorofluoromethane	21.3800	0.50	0.23	20.0000		107	59 - 135			
Vinyl chloride	16.8100	0.50	0.13	20.0000		84.0	58 - 132			
Surrogate: 1,2-Dichloroethane-d4	*21.07*			*25.0000*		*84.3*	*64 - 155*			
Surrogate: 4-Bromofluorobenzene	*22.90*			*25.0000*		*91.6*	*73 - 124*			
Surrogate: Dibromofluoromethan	*24.27*			*25.0000*		*97.1*	*78 - 129*			

Certificate of Analysis

Hargis & Associates, Inc.	Project Number : Raytheon Main GETS Monthly Sample, 5
9171 Towne Centre Drive, Suite 375	Report To : Steve Netto
San Diego , CA 92122	Reported : 11/20/2020

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

Analyte	Result (ug/L)	PQL (ug/L)		Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B0K0109 - MSVOA_LL_W (continued)										
LCS (B0K0109-BS1) - Continued					Prepared: 11/6/2020 Analyzed: 11/6/2020					
Surrogate: Toluene-d8	*24.32*			*25.0000*		*97.3*	*84 - 117*			
LCS Dup (B0K0109-BSD1)					Prepared: 11/6/2020 Analyzed: 11/6/2020					
1,1,1,2-Tetrachloroethane	18.5600	0.50	0.11	20.0000		92.8	79 - 116	7.17	20	
1,1,1-Trichloroethane	16.7900	0.50	0.21	20.0000		84.0	73 - 130	9.48	20	
1,1,2,2-Tetrachloroethane	18.3400	0.50	0.36	20.0000		91.7	71 - 122	2.42	20	
1,1,2-Trichloroethane	17.5600	0.50	0.25	20.0000		87.8	70 - 124	8.71	20	
1,1-Dichloroethane	16.7900	0.50	0.09	20.0000		84.0	69 - 128	4.14	20	
1,1-Dichloroethene	16.2400	0.50	0.13	20.0000		81.2	65 - 137	7.47	20	
1,1-Dichloropropene	16.9700	0.50	0.13	20.0000		84.8	74 - 129	7.21	20	
1,2,3-Trichloropropane	18.6200	0.50	0.39	20.0000		93.1	74 - 123	2.02	20	
1,2,3-Trichlorobenzene	17.1700	0.50	0.18	20.0000		85.8	59 - 130	7.67	20	
1,2,4-Trichlorobenzene	16.8200	0.50	0.16	20.0000		84.1	65 - 125	8.37	20	
1,2,4-Trimethylbenzene	16.4400	0.50	0.14	20.0000		82.2	88 - 124	7.10	20	L3
1,2-Dibromo-3-chloropropane	15.8900	0.50	0.41	20.0000		79.4	61 - 127	13.2	20	
1,2-Dibromoethane	18.3300	0.50	0.24	20.0000		91.6	72 - 125	4.11	20	
1,2-Dichlorobenzene	17.8100	0.50	0.20	20.0000		89.0	84 - 113	9.52	20	
1,2-Dichloroethane	17.1500	0.50	0.20	20.0000		85.8	68 - 130	1.04	20	
1,2-Dichloropropane	17.0000	0.50	0.15	20.0000		85.0	77 - 121	2.67	20	
1,3,5-Trimethylbenzene	17.7500	0.50	0.13	20.0000		88.8	83 - 124	7.59	20	
1,3-Dichlorobenzene	17.4500	0.50	0.16	20.0000		87.2	83 - 112	6.92	20	
1,3-Dichloropropane	18.0300	0.50	0.21	20.0000		90.2	77 - 119	3.59	20	
1,4-Dichlorobenzene	17.7300	0.50	0.17	20.0000		88.6	79 - 115	5.96	20	
2,2-Dichloropropane	17.0700	0.50	0.38	20.0000		85.4	67 - 149	9.54	20	
2-Chlorotoluene	16.2100	0.50	0.11	20.0000		81.0	81 - 119	9.91	20	
4-Chlorotoluene	16.8000	0.50	0.12	20.0000		84.0	86 - 117	8.22	20	L3
4-Isopropyltoluene	18.2000	0.50	0.11	20.0000		91.0	82 - 131	9.97	20	
Benzene	17.9900	0.50	0.13	20.0000		90.0	75 - 124	6.25	20	
Bromobenzene	17.7200	0.50	0.21	20.0000		88.6	82 - 108	7.08	20	
Bromodichloromethane	17.2800	0.50	0.14	20.0000		86.4	80 - 120	6.33	20	
Bromoform	20.2900	0.50	0.20	20.0000		101	70 - 123	0.593	20	
Bromomethane	14.8700	0.50	0.40	20.0000		74.4	44 - 151	14.6	20	
Carbon tetrachloride	18.4000	0.50	0.09	20.0000		92.0	62 - 140	8.18	20	
Chlorobenzene	17.9100	0.50	0.13	20.0000		89.6	80 - 112	2.97	20	
Chloroethane	15.9800	0.50	0.15	20.0000		79.9	42 - 167	7.99	20	
Chloroform	14.3700	0.50	0.11	20.0000		71.8	77 - 122	7.05	20	L3
Chloromethane	16.2500	0.50	0.12	20.0000		81.2	33 - 153	9.27	20	
cis-1,2-Dichloroethene	17.3000	0.50	0.14	20.0000		86.5	75 - 121	6.00	20	
cis-1,3-Dichloropropene	16.5500	0.50	0.13	20.0000		82.8	73 - 127	3.27	20	
Dibromochloromethane	17.1800	0.50	0.16	20.0000		85.9	77 - 122	2.87	20	
Dibromomethane	18.7900	0.50	0.19	20.0000		94.0	75 - 121	2.21	20	
Dichlorodifluoromethane	15.2900	0.50	0.18	20.0000		76.4	0 - 171	10.6	20	

Certificate of Analysis

Hargis & Associates, Inc.	Project Number : Raytheon Main GETS Monthly Sample, 5
9171 Towne Centre Drive, Suite 375	Report To : Steve Netto
San Diego , CA 92122	Reported : 11/20/2020

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

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B0K0109 - MSVOA_LL_W (continued)										
LCS Dup (B0K0109-BSD1) - Continued					Prepared: 11/6/2020 Analyzed: 11/6/2020					
Ethylbenzene	16.9400	0.50	0.13	20.0000		84.7	82 - 119	6.79	20	
Hexachlorobutadiene	16.5100	0.50	0.15	20.0000		82.6	71 - 131	11.0	20	
Isopropylbenzene	16.5500	0.50	0.10	20.0000		82.8	75 - 126	9.00	20	
m,p-Xylene	34.9800	1.0	0.19	40.0000		87.4	86 - 119	7.25	20	
Methylene chloride	16.0900	1.0	0.71	20.0000		80.4	76 - 125	7.88	20	
n-Butylbenzene	17.2700	0.50	0.11	20.0000		86.4	81 - 125	12.0	20	
n-Propylbenzene	16.8200	0.50	0.10	20.0000		84.1	78 - 130	10.6	20	
Naphthalene	15.7300	0.50	0.41	20.0000		78.6	47 - 128	2.01	20	
o-Xylene	16.7600	0.50	0.13	20.0000		83.8	85 - 119	7.63	20	L3
sec-Butylbenzene	17.2400	0.50	0.09	20.0000		86.2	78 - 130	8.92	20	
Styrene	16.1500	0.50	0.13	20.0000		80.8	62 - 148	3.77	20	
tert-Butylbenzene	16.9900	0.50	0.09	20.0000		85.0	77 - 125	8.51	20	
Tetrachloroethene	18.1600	0.50	0.10	20.0000		90.8	73 - 120	9.94	20	
Toluene	17.0400	0.50	0.12	20.0000		85.2	79 - 119	10.2	20	
trans-1,2-Dichloroethene	16.3000	0.50	0.09	20.0000		81.5	70 - 129	4.26	20	
Trichloroethene	17.5100	0.50	0.10	20.0000		87.6	73 - 117	9.00	20	
Trichlorofluoromethane	20.4900	0.50	0.23	20.0000		102	59 - 135	4.25	20	
Vinyl chloride	14.5300	0.50	0.13	20.0000		72.6	58 - 132	14.6	20	
Surrogate: 1,2-Dichloroethane-d4	*21.02*			*25.0000*		*84.1*	*64 - 155*			
Surrogate: 4-Bromofluorobenzene	*23.30*			*25.0000*		*93.2*	*73 - 124*			
Surrogate: Dibromofluoromethan	*24.66*			*25.0000*		*98.6*	*78 - 129*			
Surrogate: Toluene-d8	*24.30*			*25.0000*		*97.2*	*84 - 117*			

Certificate of Analysis

Hargis & Associates, Inc.	Project Number : Raytheon Main GETS Monthly Sample, 5
9171 Towne Centre Drive, Suite 375	Report To : Steve Netto
San Diego , CA 92122	Reported : 11/20/2020

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

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B0K0112 - MSSEMI_W										
Blank (B0K0112-BLK1)						Prepared: 11/6/2020 Analyzed: 11/6/2020				
1,4-Dioxane	ND	2.0	0.84							
Surrogate: 1,2-Dichlorobenzene-d	*56.79*			*100.000*		*56.8*	*17 - 119*			
Surrogate: 2-Fluorobiphenyl	*58.57*			*100.000*		*58.6*	*10 - 133*			
Surrogate: 4-Terphenyl-d14	*93.61*			*100.000*		*93.6*	*5 - 139*			
Surrogate: Nitrobenzene-d5	*62.79*			*100.000*		*62.8*	*13 - 150*			
LCS (B0K0112-BS1)						Prepared: 11/6/2020 Analyzed: 11/6/2020				
1,4-Dioxane	104.240	2.0	0.84	100.000		104	75 - 155			
Surrogate: 1,2-Dichlorobenzene-d	*56.58*			*100.000*		*56.6*	*17 - 119*			
Surrogate: 2-Fluorobiphenyl	*69.07*			*100.000*		*69.1*	*10 - 133*			
Surrogate: 4-Terphenyl-d14	*105.8*			*100.000*		*106*	*5 - 139*			
Surrogate: Nitrobenzene-d5	*69.99*			*100.000*		*70.0*	*13 - 150*			
LCS Dup (B0K0112-BSD1)						Prepared: 11/6/2020 Analyzed: 11/6/2020				
1,4-Dioxane	108.400	2.0	0.84	100.000		108	75 - 155	3.91	20	
Surrogate: 1,2-Dichlorobenzene-d	*52.81*			*100.000*		*52.8*	*17 - 119*			
Surrogate: 2-Fluorobiphenyl	*59.24*			*100.000*		*59.2*	*10 - 133*			
Surrogate: 4-Terphenyl-d14	*89.85*			*100.000*		*89.8*	*5 - 139*			
Surrogate: Nitrobenzene-d5	*63.83*			*100.000*		*63.8*	*13 - 150*			

Certificate of Analysis

Hargis & Associates, Inc.	Project Number : Raytheon Main GETS Monthly Sample, 5
9171 Towne Centre Drive, Suite 375	Report To : Steve Netto
San Diego , CA 92122	Reported : 11/20/2020

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

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B0K0156 - MSSEMI_W										
Blank (B0K0156-BLK1)						Prepared: 11/9/2020 Analyzed: 11/9/2020				
1,4-Dioxane	ND	0.20	0.05							
Surrogate: 1,2-Dichlorobenzene-d	*0.8549*			*2.00000*		*42.7*	*13 - 99*			
Surrogate: 2-Fluorobiphenyl	*0.9639*			*2.00000*		*48.2*	*8 - 111*			
Surrogate: 4-Terphenyl-d14	*1.240*			*2.00000*		*62.0*	*12 - 113*			
Surrogate: Nitrobenzene-d5	*0.8060*			*2.00000*		*40.3*	*15 - 121*			
LCS (B0K0156-BS1)						Prepared: 11/9/2020 Analyzed: 11/9/2020				
1,4-Dioxane	1.04199	0.20	0.05	1.00000		104	75 - 155			
Surrogate: 1,2-Dichlorobenzene-d	*0.8756*			*2.00000*		*43.8*	*13 - 99*			
Surrogate: 2-Fluorobiphenyl	*1.083*			*2.00000*		*54.2*	*8 - 111*			
Surrogate: 4-Terphenyl-d14	*1.146*			*2.00000*		*57.3*	*12 - 113*			
Surrogate: Nitrobenzene-d5	*0.9328*			*2.00000*		*46.6*	*15 - 121*			
LCS Dup (B0K0156-BSD1)						Prepared: 11/9/2020 Analyzed: 11/9/2020				
1,4-Dioxane	1.02128	0.20	0.05	1.00000		102	75 - 155	2.01	20	
Surrogate: 1,2-Dichlorobenzene-d	*0.8664*			*2.00000*		*43.3*	*13 - 99*			
Surrogate: 2-Fluorobiphenyl	*1.070*			*2.00000*		*53.5*	*8 - 111*			
Surrogate: 4-Terphenyl-d14	*1.150*			*2.00000*		*57.5*	*12 - 113*			
Surrogate: Nitrobenzene-d5	*0.9347*			*2.00000*		*46.7*	*15 - 121*			

Certificate of Analysis

Hargis & Associates, Inc.	Project Number : Raytheon Main GETS Monthly Sample, 5
9171 Towne Centre Drive, Suite 375	Report To : Steve Netto
San Diego , CA 92122	Reported : 11/20/2020

Notes and Definitions

R3	RPD value outside acceptance criteria. Calculation is based on raw values. The analytical batch was validated by the Laboratory Control Sample (LCS).
M2	Matrix spike recovery outside of acceptance limit due to possible matrix interference. The analytical batch was validated by the laboratory control sample.
L3	Laboratory control sample outside in-house established limits but within method criteria.
ND	Analyte is not detected at or above the Practical Quantitation Limit (PQL). When client requests quantitation against MDL, analyte is not detected at or above the Method Detection Limit (MDL)
PQL	Practical Quantitation Limit
MDL	Method Detection Limit
NR	Not Reported
RPD	Relative Percent Difference
CA2	CA-ELAP (CDPH)
OR1	OR-NELAP (OSPHL)

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.
(3) Results are wet unless otherwise specified.

element

9240 Santa Fe Springs Road
Santa Fe Springs, CA
90670 USA

P: 1 562 948 2225
F: 1 562 948 5850
info.santafesprings@element.com
element.com

Laboratory Report

November 20, 2020

Advanced Technology Laboratories
PO Box 92797
Long Beach, CA 90809-2797

Attn: Tina Nguyen

Element Job No:	243258
Purchase Order:	COD - CC
Project Name:	2002469 / Groundwater
Samples Received:	2
Date Received:	11-06-2020

Analysis	Page
Bromate by SOP 5600, Rev 4	2

Michael Shelton
Technical Director

Cathy Moore Ph.D
Principal Chemist

This report is to be reproduced in its entirety. All documents and data will be destroyed 7 years past invoice.
All samples will be disposed of 30 days past invoice unless prior arrangements have been made.
The results given in this report apply only to the sample(s) provided and as received.

Bromate by SOP 5600, Rev 3
Ion Chromatography-Tandem Mass Spectrometry

Sample preparation: An aliquot of sample was spiked with internal standard (bromate-$^{18}O_3$), and diluted with water. The sample solutions were analyzed using IC-MS/MS.

Parts Per Billion (µg/L)

Sample ID	Result
ATL Lab#: 2002469-04 / POX	ND
ATL Lab#: 2002469-06 / INF	ND
Method Blank	ND
Detection Limit	0.5

Date Analyzed: 11-13-2020

Quality Control Summary

Sample ID: ATL Lab#: 2002469-04 / POX

Analyte	Sample Result	Spike Conc	Spike Result	Spike % Rec	Spike Duplicate	Duplicate % Rec	RPD
Bromate	ND	5.00	5.12	102	4.66	93	10
QC Guidelines				80-120		80-120	NMT 15

This report is to be reproduced in its entirety. All documents and data will be destroyed 7 years past invoice.
All samples will be disposed of 30 days past invoice unless prior arrangements have been made.
The results given in this report apply only to the sample(s) provided and as received.

ADVANCED TECHNOLOGY LABORATORIES

SUBCONTRACT ORDER

Work Order: 2002469

SENDING LABORATORY:

Advanced Technology Laboratories
3275 Walnut Avenue
Signal Hill, CA 90755
Phone: 562.989.4045
Fax: 562.989.6348
Project Manager: Tina Nguyen
(Tina.Nguyen@atlglobal.com)

Sampler: Ruben Sanchez

RECEIVING LABORATORY:

Element Materials Technology
9240 Santa Fe Springs Road
Santa Fe Springs, CA 90670
Phone :(562) 948-2225
Fax: (562) 948-5850
PO#: SC14918-STANDARD TAT

IMPORTANT : Please include Work Order # and PO # in your invoice.

Analysis	Due	Expires	Sampled	Comments
ATL Lab#: 2002469-04 (D) / POX		**Groundwater**	**11/05/20 11:15**	
Bromate_ICMS/MS_SUB	**11/20/20 17:00**	12/03/20 11:15		
[Bromate by IC-MS/MS]				
1-Poly Unpres - 125mL				
ATL Lab#: 2002469-06 (D) / INF		**Groundwater**	**11/05/20 11:25**	
Bromate_ICMS/MS_SUB	**11/20/20 17:00**	12/03/20 11:25		
[Bromate by IC-MS/MS]				
1-Poly Unpres - 125mL				

11.06.2020 cf: D Also has: D

243258

Approved by: _____ 11/6/2020
ATL Project Manager — Date

11/6/20 — Released By ATL Sample Control — Date
Max Rathnadha 11/6/20 12:50 — Received By Courier — Date

Max Rathnadha 11/6/20 14:36 — Released By Courier — Date
Element 11-06-2020 2:36PM — Received By Subcontract Laboratory — Date

Released By — Date — Received By — Date

HARGIS+ASSOCIATES, INC.
HYDROGEOLOGY ★ ENGINEERING

200269

Date: 11/5/2020
Page 1 of 1

PROJECT: Raytheon Main GETS Monthly Sample

TASK NO.: 532.15

Project Manager Steve Netto
QA Manager Ross Horton
Phone 858.455.6500
Fax 858.455.6533

Sampled By: Ruben Sanchez

SAMPLE COLLECTION

LAB ID	SAMPLE ID	Date	Time	MATRIX: Groundwater	MATRIX: Lab prepared water	PRESERVATION: Hydrochloric Acid (HCl)	PRESERVATION: Nitric Acid (HNO_3)	PRESERVATION: Sulfuric Acid (H_2SO_4)	PRESERVATION: Ice	CONTAINERS: 40-ml VOA	CONTAINERS: 125 mL Poly	CONTAINERS: 250 mL Poly	CONTAINERS: 250 mL Glass	CONTAINERS: 1 L Poly	CONTAINERS: 1L Amber	ANALYSIS REQUESTED: VOCs by EPA 8260B	ANALYSIS REQUESTED: Bromate by EPA 317	ANALYSIS REQUESTED: Bromide by EPA 300	ANALYSIS REQUESTED: Alkalinity by SM2320B	ANALYSIS REQUESTED: Total Organic Carbon by SM5310B	ANALYSIS REQUESTED: Total Suspended Solids by SM2540D	ANALYSIS REQUESTED: UV Absorption EPA 415.3 @254 nm	ANALYSIS REQUESTED: 1,4-Dioxane by EPA 8270C MOD	ANALYSIS REQUESTED: 1,4-Dioxane by EPA 8270 SIM	Expected Concentration Range (ppb) for VOAs: 0 - 10	10 - 100	100 - 1,000	>1,000	SPECIAL HANDLING: 24 hr TAT	48 Hour TAT	5 Day TAT	Level IV Data Validation Requested	MS/MSD Requested	REMARKS
	TB-110520	11/5/2020	8:00		X	X			X	2						X									X						X			
	CEFF	11/5/2020	11:00	X		X			X	3					1	X								X	X						X			
	CBT	11/5/2020	11:10	X		X			X	3					1	X								X	X						X			
	POX	11/5/2020	11:15	X		X			X	X	5	1	1			1	X	X		X	X				X	X						X			
	PF	11/5/2020	11:20	X					X	X	2		1	1	1					X	X	X	X									X			
	INF	11/5/2020	11:25	X		X				X	3	2				1	X	X	X					X				X				X			
	EW-02	11/5/2020	11:55	X		X				X	3	1				1	X		X					X			X					X			
	MW-29	11/5/2020	12:15	X		X				X	3	1				1	X		X					X				X				X			
Total number of containers per analysis:										24	5	2	1	1	6																			

Total No. of Containers: 39

Relinquished By: / Company:	Date / Time	Received By: / Company	Date / Time
H+A	11-5-20 1305	H+A	11-5-2020 1305
H+A	11-5-2020 15:55		11/5/20 15:55

1.8C Temperature on receipt

- ✓ No. of containers correct
- ✓ Received in good condition
- ✓ Custody seals secure
- ✓ Conforms to COC document

Laboratory

Advanced Technology Laboratories
Attn: Tina Nguyen
3275 Walnut Ave
Signal Hill, CA 90755
(562) 989-4045

Send Results to:
Steve Netto & Ross Horton
9171 Towne Centre Drive
Suite 375
San Diego, CA 92122
Ph: 858.455.6500
snetto@hargis.com
rhorton@hargis.com

Instructions

1. Fill out form completely and sign only after verified for completeness
2. Complete in ballpoint pen. Draw one line through error, initial and date correction
3. Indicate the number of sample containers in analytical request space; indicate choice with ✓or ×
4. Note applicable preservatives, special instructions, and deviations from typical environmental samples. Consult project QA documents for specific instructions.

HARGIS + ASSOCIATES, INC.
HYDROGEOLOGY • ENGINEERING

Date: 11/5/2020
Page 1 of 1

PROJECT: Raytheon Main GETS Lab Requested QC

TASK NO.: 532.15

Project Manager Steve Netto
QA Manager Ross Horton
Phone 858.455.6500
Fax 858.455.6533

Sampled By: Ruben Sanchez

SAMPLE COLLECTION

LAB ID	SAMPLE ID	Date	Time	MATRIX: Groundwater	MATRIX: Lab prepared water	PRESERVATION: Hydrochloric Acid (HCl)	PRESERVATION: Nitric Acid (HNO_3)	PRESERVATION: Sulfuric Acid (H_2SO_4)	PRESERVATION: Ice	CONTAINERS: 40-ml VOA	CONTAINERS: 125 mL Poly	CONTAINERS: 250 mL Poly	CONTAINERS: 500 Ml Poly	CONTAINERS: 250 mL Glass	CONTAINERS: 1L Amber	ANALYSIS REQUESTED: VOCs by EPA 8260B	ANALYSIS REQUESTED: Bromate by EPA 317	ANALYSIS REQUESTED: Bromide by EPA 300	ANALYSIS REQUESTED: Alkalinity by SM2320B	ANALYSIS REQUESTED: Total Organic Carbon by SM5310B	ANALYSIS REQUESTED: Total Suspended Solids by SM2540D	ANALYSIS REQUESTED: UV Absorption EPA 415.3 @254 nm	ANALYSIS REQUESTED: 1,4-Dioxane by EPA 8270C MOD	ANALYSIS REQUESTED: 1,4-Dioxane by EPA 8270 SIM	Expected Concentration Range (ppb) for VOAs: 0 - 10	10 - 100	100 - 1,000	>1,000	SPECIAL HANDLING: 24 hr TAT	48 Hour TAT	5 Day TAT	Level IV Data Validation Requested	MS/MSD Requested	REMARKS
	CBT-QC	11/5/2020	11:10	X					X						1									X	X							X			
	POX-QC	11/5/2020	11:15	X		X			X	X	4					1	X				X				X	X							X			Samples are included per
	INF-QC	11/5/2020	11:25	X						X						1								X			X						X			laboratory request for QC
	EW-02-QC	11/5/2020	11:55	X						X						1								X			X						X			purposes. Do not include
																																				samples or results
																																				in final report.
Total number of containers per analysis:										4					4																					Total No. of Containers: 8

Relinquished By: / Company:	Date / Time	Received By: / Company	Date / Time
H+A	11-5-20 1305	H&A	11-5-2020 13:05
Relinquished By: / Company:	Date / Time	Received By: / Company	Date / Time
H&A	11-5-2020 15:55		11/5/20 1555

1.6c Temperature on receipt

- / No. of containers correct
- / Received in good condition
- / Custody seals secure
- / Conforms to COC document

Laboratory

Advanced Technology Laboratories
Attn: Tina Nguyen
3275 Walnut Ave
Signal Hill, CA 90755
(562) 989-4045

Send Results to:
Steve Netto & Ross Horton
9171 Towne Centre Drive
Suite 375
San Diego, CA 92122
Ph: 858.455.6500
snetto@hargis.com
rhorton@hargis.com

Instructions

1. Fill out form completely and sign only after verified for completeness
2. Complete in ballpoint pen. Draw one line through error, initial and date correction
3. Indicate the number of sample containers in analytical request space; indicate choice with ✓or ×
   Note applicable preservatives, special instructions, and deviations from typical environmental samples.
   Consult project QA documents for specific instructions.

ADVANCED TECHNOLOGY LABORATORIES

November 30, 2020

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

ELAP No.: 1838
CSDLAC No.: 10196
ORELAP No.: CA300003

Re: ATL Work Order Number : 2002562
Client Reference : Raytheon Main GETS Mid Month Sample 532.15

Enclosed are the results for sample(s) received on November 19, 2020 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,

Edgar P. Caballero
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 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.	Project Number : Raytheon Main GETS Mid Month Sample
9171 Towne Centre Drive, Suite 375	Report To : Steve Netto
San Diego , CA 92122	Reported : 11/30/2020

SUMMARY OF SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
TB-111920	2002562-01	Lab Prepared Water	11/19/20 8:00	11/19/20 15:51
CEFF	2002562-02	Groundwater	11/19/20 10:00	11/19/20 15:51
CBT	2002562-03	Groundwater	11/19/20 10:05	11/19/20 15:51
POX	2002562-04	Groundwater	11/19/20 10:10	11/19/20 15:51
INF	2002562-05	Groundwater	11/19/20 10:15	11/19/20 15:51
EW-02	2002562-06	Groundwater	11/19/20 10:40	11/19/20 15:51
MW-29	2002562-07	Groundwater	11/19/20 11:00	11/19/20 15:51

Certificate of Analysis

Hargis & Associates, Inc.	Project Number : Raytheon Main GETS Mid Month Sample
9171 Towne Centre Drive, Suite 375	Report To : Steve Netto
San Diego , CA 92122	Reported : 11/30/2020

Client Sample ID: TB-111920

Lab ID: 2002562-01

Volatile Organic Compounds by EPA 8260B **Analyst: KL**

Analyte	Result (ug/L)	PQL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	0.50	1	B0K0346	11/20/2020	11/20/20 13:15	
1,1,1-Trichloroethane	ND	0.50	1	B0K0346	11/20/2020	11/20/20 13:15	
1,1,2,2-Tetrachloroethane	ND	0.50	1	B0K0346	11/20/2020	11/20/20 13:15	
1,1,2-Trichloroethane	ND	0.50	1	B0K0346	11/20/2020	11/20/20 13:15	
1,1-Dichloroethane	ND	0.50	1	B0K0346	11/20/2020	11/20/20 13:15	
1,1-Dichloroethene	ND	0.50	1	B0K0346	11/20/2020	11/20/20 13:15	
1,1-Dichloropropene	ND	0.50	1	B0K0346	11/20/2020	11/20/20 13:15	
1,2,3-Trichloropropane	ND	0.50	1	B0K0346	11/20/2020	11/20/20 13:15	
1,2,3-Trichlorobenzene	ND	0.50	1	B0K0346	11/20/2020	11/20/20 13:15	
1,2,4-Trichlorobenzene	ND	0.50	1	B0K0346	11/20/2020	11/20/20 13:15	
1,2,4-Trimethylbenzene	ND	0.50	1	B0K0346	11/20/2020	11/20/20 13:15	
1,2-Dibromo-3-chloropropane	ND	0.50	1	B0K0346	11/20/2020	11/20/20 13:15	
1,2-Dibromoethane	ND	0.50	1	B0K0346	11/20/2020	11/20/20 13:15	
1,2-Dichlorobenzene	ND	0.50	1	B0K0346	11/20/2020	11/20/20 13:15	
1,2-Dichloroethane	ND	0.50	1	B0K0346	11/20/2020	11/20/20 13:15	
1,2-Dichloropropane	ND	0.50	1	B0K0346	11/20/2020	11/20/20 13:15	
1,3,5-Trimethylbenzene	ND	0.50	1	B0K0346	11/20/2020	11/20/20 13:15	
1,3-Dichlorobenzene	ND	0.50	1	B0K0346	11/20/2020	11/20/20 13:15	
1,3-Dichloropropane	ND	0.50	1	B0K0346	11/20/2020	11/20/20 13:15	
1,4-Dichlorobenzene	ND	0.50	1	B0K0346	11/20/2020	11/20/20 13:15	
2,2-Dichloropropane	ND	0.50	1	B0K0346	11/20/2020	11/20/20 13:15	
2-Chlorotoluene	ND	0.50	1	B0K0346	11/20/2020	11/20/20 13:15	
4-Chlorotoluene	ND	0.50	1	B0K0346	11/20/2020	11/20/20 13:15	
4-Isopropyltoluene	ND	0.50	1	B0K0346	11/20/2020	11/20/20 13:15	
Benzene	ND	0.50	1	B0K0346	11/20/2020	11/20/20 13:15	
Bromobenzene	ND	0.50	1	B0K0346	11/20/2020	11/20/20 13:15	
Bromodichloromethane	ND	0.50	1	B0K0346	11/20/2020	11/20/20 13:15	
Bromoform	ND	0.50	1	B0K0346	11/20/2020	11/20/20 13:15	
Bromomethane	ND	0.50	1	B0K0346	11/20/2020	11/20/20 13:15	
Carbon tetrachloride	ND	0.50	1	B0K0346	11/20/2020	11/20/20 13:15	
Chlorobenzene	ND	0.50	1	B0K0346	11/20/2020	11/20/20 13:15	
Chloroethane	ND	0.50	1	B0K0346	11/20/2020	11/20/20 13:15	
Chloroform	ND	0.50	1	B0K0346	11/20/2020	11/20/20 13:15	
Chloromethane	ND	0.50	1	B0K0346	11/20/2020	11/20/20 13:15	
cis-1,2-Dichloroethene	ND	0.50	1	B0K0346	11/20/2020	11/20/20 13:15	
cis-1,3-Dichloropropene	ND	0.50	1	B0K0346	11/20/2020	11/20/20 13:15	

Certificate of Analysis

Hargis & Associates, Inc.	Project Number : Raytheon Main GETS Mid Month Sample
9171 Towne Centre Drive, Suite 375	Report To : Steve Netto
San Diego , CA 92122	Reported : 11/30/2020

Client Sample ID: TB-111920

Lab ID: 2002562-01

Volatile Organic Compounds by EPA 8260B **Analyst: KL**

Analyte	Result (ug/L)	PQL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Dibromochloromethane	ND	0.50	1	B0K0346	11/20/2020	11/20/20 13:15	
Dibromomethane	ND	0.50	1	B0K0346	11/20/2020	11/20/20 13:15	
Dichlorodifluoromethane	ND	0.50	1	B0K0346	11/20/2020	11/20/20 13:15	
Ethylbenzene	ND	0.50	1	B0K0346	11/20/2020	11/20/20 13:15	
Hexachlorobutadiene	ND	0.50	1	B0K0346	11/20/2020	11/20/20 13:15	
Isopropylbenzene	ND	0.50	1	B0K0346	11/20/2020	11/20/20 13:15	
m,p-Xylene	ND	1.0	1	B0K0346	11/20/2020	11/20/20 13:15	
Methylene chloride	ND	1.0	1	B0K0346	11/20/2020	11/20/20 13:15	
n-Butylbenzene	ND	0.50	1	B0K0346	11/20/2020	11/20/20 13:15	
n-Propylbenzene	ND	0.50	1	B0K0346	11/20/2020	11/20/20 13:15	
Naphthalene	ND	0.50	1	B0K0346	11/20/2020	11/20/20 13:15	
o-Xylene	ND	0.50	1	B0K0346	11/20/2020	11/20/20 13:15	
sec-Butylbenzene	ND	0.50	1	B0K0346	11/20/2020	11/20/20 13:15	
Styrene	ND	0.50	1	B0K0346	11/20/2020	11/20/20 13:15	
tert-Butylbenzene	ND	0.50	1	B0K0346	11/20/2020	11/20/20 13:15	
Tetrachloroethene	ND	0.50	1	B0K0346	11/20/2020	11/20/20 13:15	
Toluene	ND	0.50	1	B0K0346	11/20/2020	11/20/20 13:15	
trans-1,2-Dichloroethene	ND	0.50	1	B0K0346	11/20/2020	11/20/20 13:15	
Trichloroethene	ND	0.50	1	B0K0346	11/20/2020	11/20/20 13:15	
Trichlorofluoromethane	ND	0.50	1	B0K0346	11/20/2020	11/20/20 13:15	
Vinyl chloride	ND	0.50	1	B0K0346	11/20/2020	11/20/20 13:15	
Surrogate: 1,2-Dichloroethane-d4	*98.2 %*	*64 - 155*		B0K0346	11/20/2020	*11/20/20 13:15*	
Surrogate: 4-Bromofluorobenzene	*90.8 %*	*73 - 124*		B0K0346	11/20/2020	*11/20/20 13:15*	
Surrogate: Dibromofluoromethane	*97.1 %*	*78 - 129*		B0K0346	11/20/2020	*11/20/20 13:15*	
Surrogate: Toluene-d8	*98.0 %*	*84 - 117*		B0K0346	11/20/2020	*11/20/20 13:15*	

Certificate of Analysis

Hargis & Associates, Inc.	Project Number : Raytheon Main GETS Mid Month Sample
9171 Towne Centre Drive, Suite 375	Report To : Steve Netto
San Diego , CA 92122	Reported : 11/30/2020

Client Sample ID: CEFF

Lab ID: 2002562-02

Volatile Organic Compounds by EPA 8260B **Analyst: KL**

Analyte	Result (ug/L)	PQL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	0.50	1	B0K0346	11/20/2020	11/20/20 13:35	
1,1,1-Trichloroethane	ND	0.50	1	B0K0346	11/20/2020	11/20/20 13:35	
1,1,2,2-Tetrachloroethane	ND	0.50	1	B0K0346	11/20/2020	11/20/20 13:35	
1,1,2-Trichloroethane	ND	0.50	1	B0K0346	11/20/2020	11/20/20 13:35	
1,1-Dichloroethane	ND	0.50	1	B0K0346	11/20/2020	11/20/20 13:35	
1,1-Dichloroethene	ND	0.50	1	B0K0346	11/20/2020	11/20/20 13:35	
1,1-Dichloropropene	ND	0.50	1	B0K0346	11/20/2020	11/20/20 13:35	
1,2,3-Trichloropropane	ND	0.50	1	B0K0346	11/20/2020	11/20/20 13:35	
1,2,3-Trichlorobenzene	ND	0.50	1	B0K0346	11/20/2020	11/20/20 13:35	
1,2,4-Trichlorobenzene	ND	0.50	1	B0K0346	11/20/2020	11/20/20 13:35	
1,2,4-Trimethylbenzene	ND	0.50	1	B0K0346	11/20/2020	11/20/20 13:35	
1,2-Dibromo-3-chloropropane	ND	0.50	1	B0K0346	11/20/2020	11/20/20 13:35	
1,2-Dibromoethane	ND	0.50	1	B0K0346	11/20/2020	11/20/20 13:35	
1,2-Dichlorobenzene	ND	0.50	1	B0K0346	11/20/2020	11/20/20 13:35	
1,2-Dichloroethane	ND	0.50	1	B0K0346	11/20/2020	11/20/20 13:35	
1,2-Dichloropropane	ND	0.50	1	B0K0346	11/20/2020	11/20/20 13:35	
1,3,5-Trimethylbenzene	ND	0.50	1	B0K0346	11/20/2020	11/20/20 13:35	
1,3-Dichlorobenzene	ND	0.50	1	B0K0346	11/20/2020	11/20/20 13:35	
1,3-Dichloropropane	ND	0.50	1	B0K0346	11/20/2020	11/20/20 13:35	
1,4-Dichlorobenzene	ND	0.50	1	B0K0346	11/20/2020	11/20/20 13:35	
2,2-Dichloropropane	ND	0.50	1	B0K0346	11/20/2020	11/20/20 13:35	
2-Chlorotoluene	ND	0.50	1	B0K0346	11/20/2020	11/20/20 13:35	
4-Chlorotoluene	ND	0.50	1	B0K0346	11/20/2020	11/20/20 13:35	
4-Isopropyltoluene	ND	0.50	1	B0K0346	11/20/2020	11/20/20 13:35	
Benzene	ND	0.50	1	B0K0346	11/20/2020	11/20/20 13:35	
Bromobenzene	ND	0.50	1	B0K0346	11/20/2020	11/20/20 13:35	
Bromodichloromethane	ND	0.50	1	B0K0346	11/20/2020	11/20/20 13:35	
Bromoform	ND	0.50	1	B0K0346	11/20/2020	11/20/20 13:35	
Bromomethane	ND	0.50	1	B0K0346	11/20/2020	11/20/20 13:35	
Carbon tetrachloride	ND	0.50	1	B0K0346	11/20/2020	11/20/20 13:35	
Chlorobenzene	ND	0.50	1	B0K0346	11/20/2020	11/20/20 13:35	
Chloroethane	ND	0.50	1	B0K0346	11/20/2020	11/20/20 13:35	
Chloroform	ND	0.50	1	B0K0346	11/20/2020	11/20/20 13:35	
Chloromethane	ND	0.50	1	B0K0346	11/20/2020	11/20/20 13:35	
cis-1,2-Dichloroethene	ND	0.50	1	B0K0346	11/20/2020	11/20/20 13:35	
cis-1,3-Dichloropropene	ND	0.50	1	B0K0346	11/20/2020	11/20/20 13:35	

Certificate of Analysis

Hargis & Associates, Inc.	Project Number : Raytheon Main GETS Mid Month Sample
9171 Towne Centre Drive, Suite 375	Report To : Steve Netto
San Diego , CA 92122	Reported : 11/30/2020

Client Sample ID: CEFF

Lab ID: 2002562-02

Volatile Organic Compounds by EPA 8260B **Analyst: KL**

Analyte	Result (ug/L)	PQL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Dibromochloromethane	ND	0.50	1	B0K0346	11/20/2020	11/20/20 13:35	
Dibromomethane	ND	0.50	1	B0K0346	11/20/2020	11/20/20 13:35	
Dichlorodifluoromethane	ND	0.50	1	B0K0346	11/20/2020	11/20/20 13:35	
Ethylbenzene	ND	0.50	1	B0K0346	11/20/2020	11/20/20 13:35	
Hexachlorobutadiene	ND	0.50	1	B0K0346	11/20/2020	11/20/20 13:35	
Isopropylbenzene	ND	0.50	1	B0K0346	11/20/2020	11/20/20 13:35	
m,p-Xylene	ND	1.0	1	B0K0346	11/20/2020	11/20/20 13:35	
Methylene chloride	ND	1.0	1	B0K0346	11/20/2020	11/20/20 13:35	
n-Butylbenzene	ND	0.50	1	B0K0346	11/20/2020	11/20/20 13:35	
n-Propylbenzene	ND	0.50	1	B0K0346	11/20/2020	11/20/20 13:35	
Naphthalene	ND	0.50	1	B0K0346	11/20/2020	11/20/20 13:35	
o-Xylene	ND	0.50	1	B0K0346	11/20/2020	11/20/20 13:35	
sec-Butylbenzene	ND	0.50	1	B0K0346	11/20/2020	11/20/20 13:35	
Styrene	ND	0.50	1	B0K0346	11/20/2020	11/20/20 13:35	
tert-Butylbenzene	ND	0.50	1	B0K0346	11/20/2020	11/20/20 13:35	
Tetrachloroethene	ND	0.50	1	B0K0346	11/20/2020	11/20/20 13:35	
Toluene	ND	0.50	1	B0K0346	11/20/2020	11/20/20 13:35	
trans-1,2-Dichloroethene	ND	0.50	1	B0K0346	11/20/2020	11/20/20 13:35	
Trichloroethene	ND	0.50	1	B0K0346	11/20/2020	11/20/20 13:35	
Trichlorofluoromethane	ND	0.50	1	B0K0346	11/20/2020	11/20/20 13:35	
Vinyl chloride	ND	0.50	1	B0K0346	11/20/2020	11/20/20 13:35	
Surrogate: 1,2-Dichloroethane-d4	*101 %*	*64 - 155*		B0K0346	11/20/2020	*11/20/20 13:35*	
Surrogate: 4-Bromofluorobenzene	*87.8 %*	*73 - 124*		B0K0346	11/20/2020	*11/20/20 13:35*	
Surrogate: Dibromofluoromethane	*99.0 %*	*78 - 129*		B0K0346	11/20/2020	*11/20/20 13:35*	
Surrogate: Toluene-d8	*96.7 %*	*84 - 117*		B0K0346	11/20/2020	*11/20/20 13:35*	

Certificate of Analysis

Hargis & Associates, Inc.	Project Number : Raytheon Main GETS Mid Month Sample
9171 Towne Centre Drive, Suite 375	Report To : Steve Netto
San Diego , CA 92122	Reported : 11/30/2020

Client Sample ID: CEFF

Lab ID: 2002562-02

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

Analyte		Result (ug/L)	PQL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,4-Dioxane		ND	0.20	1	B0K0357	11/20/2020	11/24/20 16:41	
Surrogate: 1,2-Dichlorobenzene-d4	*49.5 %*		*13 - 99*		B0K0357	11/20/2020	*11/24/20 16:41*	
Surrogate: 2-Fluorobiphenyl	*73.6 %*		*8 - 111*		B0K0357	11/20/2020	*11/24/20 16:41*	
Surrogate: 4-Terphenyl-d14	*61.1 %*		*12 - 113*		B0K0357	11/20/2020	*11/24/20 16:41*	
Surrogate: Nitrobenzene-d5	*51.6 %*		*15 - 121*		B0K0357	11/20/2020	*11/24/20 16:41*	

Certificate of Analysis

Hargis & Associates, Inc.	Project Number : Raytheon Main GETS Mid Month Sample
9171 Towne Centre Drive, Suite 375	Report To : Steve Netto
San Diego , CA 92122	Reported : 11/30/2020

Client Sample ID: CBT

Lab ID: 2002562-03

Volatile Organic Compounds by EPA 8260B **Analyst: KL**

Analyte	Result (ug/L)	PQL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	0.50	1	B0K0346	11/20/2020	11/20/20 13:55	
1,1,1-Trichloroethane	ND	0.50	1	B0K0346	11/20/2020	11/20/20 13:55	
1,1,2,2-Tetrachloroethane	ND	0.50	1	B0K0346	11/20/2020	11/20/20 13:55	
1,1,2-Trichloroethane	ND	0.50	1	B0K0346	11/20/2020	11/20/20 13:55	
1,1-Dichloroethane	ND	0.50	1	B0K0346	11/20/2020	11/20/20 13:55	
1,1-Dichloroethene	ND	0.50	1	B0K0346	11/20/2020	11/20/20 13:55	
1,1-Dichloropropene	ND	0.50	1	B0K0346	11/20/2020	11/20/20 13:55	
1,2,3-Trichloropropane	ND	0.50	1	B0K0346	11/20/2020	11/20/20 13:55	
1,2,3-Trichlorobenzene	ND	0.50	1	B0K0346	11/20/2020	11/20/20 13:55	
1,2,4-Trichlorobenzene	ND	0.50	1	B0K0346	11/20/2020	11/20/20 13:55	
1,2,4-Trimethylbenzene	ND	0.50	1	B0K0346	11/20/2020	11/20/20 13:55	
1,2-Dibromo-3-chloropropane	ND	0.50	1	B0K0346	11/20/2020	11/20/20 13:55	
1,2-Dibromoethane	ND	0.50	1	B0K0346	11/20/2020	11/20/20 13:55	
1,2-Dichlorobenzene	ND	0.50	1	B0K0346	11/20/2020	11/20/20 13:55	
1,2-Dichloroethane	ND	0.50	1	B0K0346	11/20/2020	11/20/20 13:55	
1,2-Dichloropropane	ND	0.50	1	B0K0346	11/20/2020	11/20/20 13:55	
1,3,5-Trimethylbenzene	ND	0.50	1	B0K0346	11/20/2020	11/20/20 13:55	
1,3-Dichlorobenzene	ND	0.50	1	B0K0346	11/20/2020	11/20/20 13:55	
1,3-Dichloropropane	ND	0.50	1	B0K0346	11/20/2020	11/20/20 13:55	
1,4-Dichlorobenzene	ND	0.50	1	B0K0346	11/20/2020	11/20/20 13:55	
2,2-Dichloropropane	ND	0.50	1	B0K0346	11/20/2020	11/20/20 13:55	
2-Chlorotoluene	ND	0.50	1	B0K0346	11/20/2020	11/20/20 13:55	
4-Chlorotoluene	ND	0.50	1	B0K0346	11/20/2020	11/20/20 13:55	
4-Isopropyltoluene	ND	0.50	1	B0K0346	11/20/2020	11/20/20 13:55	
Benzene	ND	0.50	1	B0K0346	11/20/2020	11/20/20 13:55	
Bromobenzene	ND	0.50	1	B0K0346	11/20/2020	11/20/20 13:55	
Bromodichloromethane	ND	0.50	1	B0K0346	11/20/2020	11/20/20 13:55	
Bromoform	ND	0.50	1	B0K0346	11/20/2020	11/20/20 13:55	
Bromomethane	ND	0.50	1	B0K0346	11/20/2020	11/20/20 13:55	
Carbon tetrachloride	ND	0.50	1	B0K0346	11/20/2020	11/20/20 13:55	
Chlorobenzene	ND	0.50	1	B0K0346	11/20/2020	11/20/20 13:55	
Chloroethane	ND	0.50	1	B0K0346	11/20/2020	11/20/20 13:55	
Chloroform	ND	0.50	1	B0K0346	11/20/2020	11/20/20 13:55	
Chloromethane	ND	0.50	1	B0K0346	11/20/2020	11/20/20 13:55	
cis-1,2-Dichloroethene	ND	0.50	1	B0K0346	11/20/2020	11/20/20 13:55	
cis-1,3-Dichloropropene	ND	0.50	1	B0K0346	11/20/2020	11/20/20 13:55	

Certificate of Analysis

Hargis & Associates, Inc.	Project Number : Raytheon Main GETS Mid Month Sample
9171 Towne Centre Drive, Suite 375	Report To : Steve Netto
San Diego , CA 92122	Reported : 11/30/2020

Client Sample ID: CBT

Lab ID: 2002562-03

Volatile Organic Compounds by EPA 8260B **Analyst: KL**

Analyte	Result (ug/L)	PQL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Dibromochloromethane	ND	0.50	1	B0K0346	11/20/2020	11/20/20 13:55	
Dibromomethane	ND	0.50	1	B0K0346	11/20/2020	11/20/20 13:55	
Dichlorodifluoromethane	ND	0.50	1	B0K0346	11/20/2020	11/20/20 13:55	
Ethylbenzene	ND	0.50	1	B0K0346	11/20/2020	11/20/20 13:55	
Hexachlorobutadiene	ND	0.50	1	B0K0346	11/20/2020	11/20/20 13:55	
Isopropylbenzene	ND	0.50	1	B0K0346	11/20/2020	11/20/20 13:55	
m,p-Xylene	ND	1.0	1	B0K0346	11/20/2020	11/20/20 13:55	
Methylene chloride	ND	1.0	1	B0K0346	11/20/2020	11/20/20 13:55	
n-Butylbenzene	ND	0.50	1	B0K0346	11/20/2020	11/20/20 13:55	
n-Propylbenzene	ND	0.50	1	B0K0346	11/20/2020	11/20/20 13:55	
Naphthalene	ND	0.50	1	B0K0346	11/20/2020	11/20/20 13:55	
o-Xylene	ND	0.50	1	B0K0346	11/20/2020	11/20/20 13:55	
sec-Butylbenzene	ND	0.50	1	B0K0346	11/20/2020	11/20/20 13:55	
Styrene	ND	0.50	1	B0K0346	11/20/2020	11/20/20 13:55	
tert-Butylbenzene	ND	0.50	1	B0K0346	11/20/2020	11/20/20 13:55	
Tetrachloroethene	ND	0.50	1	B0K0346	11/20/2020	11/20/20 13:55	
Toluene	ND	0.50	1	B0K0346	11/20/2020	11/20/20 13:55	
trans-1,2-Dichloroethene	ND	0.50	1	B0K0346	11/20/2020	11/20/20 13:55	
Trichloroethene	ND	0.50	1	B0K0346	11/20/2020	11/20/20 13:55	
Trichlorofluoromethane	ND	0.50	1	B0K0346	11/20/2020	11/20/20 13:55	
Vinyl chloride	ND	0.50	1	B0K0346	11/20/2020	11/20/20 13:55	
Surrogate: 1,2-Dichloroethane-d4	*104 %*	*64 - 155*		B0K0346	11/20/2020	*11/20/20 13:55*	
Surrogate: 4-Bromofluorobenzene	*92.3 %*	*73 - 124*		B0K0346	11/20/2020	*11/20/20 13:55*	
Surrogate: Dibromofluoromethane	*100 %*	*78 - 129*		B0K0346	11/20/2020	*11/20/20 13:55*	
Surrogate: Toluene-d8	*95.8 %*	*84 - 117*		B0K0346	11/20/2020	*11/20/20 13:55*	

Certificate of Analysis

Hargis & Associates, Inc.	Project Number : Raytheon Main GETS Mid Month Sample
9171 Towne Centre Drive, Suite 375	Report To : Steve Netto
San Diego , CA 92122	Reported : 11/30/2020

Client Sample ID: CBT

Lab ID: 2002562-03

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

Analyte		Result (ug/L)	PQL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,4-Dioxane		ND	0.20	1	B0K0357	11/20/2020	11/24/20 17:07	
Surrogate: 1,2-Dichlorobenzene-d4	*52.5 %*		*13 - 99*		B0K0357	11/20/2020	*11/24/20 17:07*	
Surrogate: 2-Fluorobiphenyl	*76.7 %*		*8 - 111*		B0K0357	11/20/2020	*11/24/20 17:07*	
Surrogate: 4-Terphenyl-d14	*63.3 %*		*12 - 113*		B0K0357	11/20/2020	*11/24/20 17:07*	
Surrogate: Nitrobenzene-d5	*52.8 %*		*15 - 121*		B0K0357	11/20/2020	*11/24/20 17:07*	

Certificate of Analysis

Hargis & Associates, Inc.	Project Number : Raytheon Main GETS Mid Month Sample
9171 Towne Centre Drive, Suite 375	Report To : Steve Netto
San Diego , CA 92122	Reported : 11/30/2020

Client Sample ID: POX

Lab ID: 2002562-04

Volatile Organic Compounds by EPA 8260B **Analyst: KL**

Analyte	Result (ug/L)	PQL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	0.50	1	B0K0346	11/20/2020	11/20/20 14:15	
1,1,1-Trichloroethane	ND	0.50	1	B0K0346	11/20/2020	11/20/20 14:15	
1,1,2,2-Tetrachloroethane	ND	0.50	1	B0K0346	11/20/2020	11/20/20 14:15	
1,1,2-Trichloroethane	ND	0.50	1	B0K0346	11/20/2020	11/20/20 14:15	
1,1-Dichloroethane	ND	0.50	1	B0K0346	11/20/2020	11/20/20 14:15	
1,1-Dichloroethene	ND	0.50	1	B0K0346	11/20/2020	11/20/20 14:15	
1,1-Dichloropropene	ND	0.50	1	B0K0346	11/20/2020	11/20/20 14:15	
1,2,3-Trichloropropane	ND	0.50	1	B0K0346	11/20/2020	11/20/20 14:15	
1,2,3-Trichlorobenzene	ND	0.50	1	B0K0346	11/20/2020	11/20/20 14:15	
1,2,4-Trichlorobenzene	ND	0.50	1	B0K0346	11/20/2020	11/20/20 14:15	
1,2,4-Trimethylbenzene	ND	0.50	1	B0K0346	11/20/2020	11/20/20 14:15	
1,2-Dibromo-3-chloropropane	ND	0.50	1	B0K0346	11/20/2020	11/20/20 14:15	
1,2-Dibromoethane	ND	0.50	1	B0K0346	11/20/2020	11/20/20 14:15	
1,2-Dichlorobenzene	ND	0.50	1	B0K0346	11/20/2020	11/20/20 14:15	
1,2-Dichloroethane	ND	0.50	1	B0K0346	11/20/2020	11/20/20 14:15	
1,2-Dichloropropane	ND	0.50	1	B0K0346	11/20/2020	11/20/20 14:15	
1,3,5-Trimethylbenzene	ND	0.50	1	B0K0346	11/20/2020	11/20/20 14:15	
1,3-Dichlorobenzene	ND	0.50	1	B0K0346	11/20/2020	11/20/20 14:15	
1,3-Dichloropropane	ND	0.50	1	B0K0346	11/20/2020	11/20/20 14:15	
1,4-Dichlorobenzene	ND	0.50	1	B0K0346	11/20/2020	11/20/20 14:15	
2,2-Dichloropropane	ND	0.50	1	B0K0346	11/20/2020	11/20/20 14:15	
2-Chlorotoluene	ND	0.50	1	B0K0346	11/20/2020	11/20/20 14:15	
4-Chlorotoluene	ND	0.50	1	B0K0346	11/20/2020	11/20/20 14:15	
4-Isopropyltoluene	ND	0.50	1	B0K0346	11/20/2020	11/20/20 14:15	
Benzene	ND	0.50	1	B0K0346	11/20/2020	11/20/20 14:15	
Bromobenzene	ND	0.50	1	B0K0346	11/20/2020	11/20/20 14:15	
Bromodichloromethane	ND	0.50	1	B0K0346	11/20/2020	11/20/20 14:15	
Bromoform	ND	0.50	1	B0K0346	11/20/2020	11/20/20 14:15	
Bromomethane	ND	0.50	1	B0K0346	11/20/2020	11/20/20 14:15	
Carbon tetrachloride	ND	0.50	1	B0K0346	11/20/2020	11/20/20 14:15	
Chlorobenzene	ND	0.50	1	B0K0346	11/20/2020	11/20/20 14:15	
Chloroethane	ND	0.50	1	B0K0346	11/20/2020	11/20/20 14:15	
Chloroform	ND	0.50	1	B0K0346	11/20/2020	11/20/20 14:15	
Chloromethane	ND	0.50	1	B0K0346	11/20/2020	11/20/20 14:15	
cis-1,2-Dichloroethene	ND	0.50	1	B0K0346	11/20/2020	11/20/20 14:15	
cis-1,3-Dichloropropene	ND	0.50	1	B0K0346	11/20/2020	11/20/20 14:15	

Certificate of Analysis

Hargis & Associates, Inc.	Project Number : Raytheon Main GETS Mid Month Sample
9171 Towne Centre Drive, Suite 375	Report To : Steve Netto
San Diego , CA 92122	Reported : 11/30/2020

Client Sample ID: POX

Lab ID: 2002562-04

Volatile Organic Compounds by EPA 8260B **Analyst: KL**

Analyte	Result (ug/L)	PQL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Dibromochloromethane	ND	0.50	1	B0K0346	11/20/2020	11/20/20 14:15	
Dibromomethane	ND	0.50	1	B0K0346	11/20/2020	11/20/20 14:15	
Dichlorodifluoromethane	ND	0.50	1	B0K0346	11/20/2020	11/20/20 14:15	
Ethylbenzene	ND	0.50	1	B0K0346	11/20/2020	11/20/20 14:15	
Hexachlorobutadiene	ND	0.50	1	B0K0346	11/20/2020	11/20/20 14:15	
Isopropylbenzene	ND	0.50	1	B0K0346	11/20/2020	11/20/20 14:15	
m,p-Xylene	ND	1.0	1	B0K0346	11/20/2020	11/20/20 14:15	
Methylene chloride	ND	1.0	1	B0K0346	11/20/2020	11/20/20 14:15	
n-Butylbenzene	ND	0.50	1	B0K0346	11/20/2020	11/20/20 14:15	
n-Propylbenzene	ND	0.50	1	B0K0346	11/20/2020	11/20/20 14:15	
Naphthalene	ND	0.50	1	B0K0346	11/20/2020	11/20/20 14:15	
o-Xylene	ND	0.50	1	B0K0346	11/20/2020	11/20/20 14:15	
sec-Butylbenzene	ND	0.50	1	B0K0346	11/20/2020	11/20/20 14:15	
Styrene	ND	0.50	1	B0K0346	11/20/2020	11/20/20 14:15	
tert-Butylbenzene	ND	0.50	1	B0K0346	11/20/2020	11/20/20 14:15	
Tetrachloroethene	ND	0.50	1	B0K0346	11/20/2020	11/20/20 14:15	
Toluene	ND	0.50	1	B0K0346	11/20/2020	11/20/20 14:15	
trans-1,2-Dichloroethene	ND	0.50	1	B0K0346	11/20/2020	11/20/20 14:15	
Trichloroethene	ND	0.50	1	B0K0346	11/20/2020	11/20/20 14:15	
Trichlorofluoromethane	ND	0.50	1	B0K0346	11/20/2020	11/20/20 14:15	
Vinyl chloride	ND	0.50	1	B0K0346	11/20/2020	11/20/20 14:15	
Surrogate: 1,2-Dichloroethane-d4	*102 %*	*64 - 155*		B0K0346	11/20/2020	*11/20/20 14:15*	
Surrogate: 4-Bromofluorobenzene	*91.4 %*	*73 - 124*		B0K0346	11/20/2020	*11/20/20 14:15*	
Surrogate: Dibromofluoromethane	*98.7 %*	*78 - 129*		B0K0346	11/20/2020	*11/20/20 14:15*	
Surrogate: Toluene-d8	*96.4 %*	*84 - 117*		B0K0346	11/20/2020	*11/20/20 14:15*	

Certificate of Analysis

Hargis & Associates, Inc.	Project Number : Raytheon Main GETS Mid Month Sample
9171 Towne Centre Drive, Suite 375	Report To : Steve Netto
San Diego , CA 92122	Reported : 11/30/2020

Client Sample ID: POX

Lab ID: 2002562-04

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

Analyte		Result (ug/L)	PQL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,4-Dioxane		ND	0.20	1	B0K0357	11/20/2020	11/24/20 17:33	
Surrogate: 1,2-Dichlorobenzene-d4	*50.9 %*		*13 - 99*		B0K0357	11/20/2020	*11/24/20 17:33*	
Surrogate: 2-Fluorobiphenyl	*77.0 %*		*8 - 111*		B0K0357	11/20/2020	*11/24/20 17:33*	
Surrogate: 4-Terphenyl-d14	*70.3 %*		*12 - 113*		B0K0357	11/20/2020	*11/24/20 17:33*	
Surrogate: Nitrobenzene-d5	*51.4 %*		*15 - 121*		B0K0357	11/20/2020	*11/24/20 17:33*	

Certificate of Analysis

Hargis & Associates, Inc.	Project Number : Raytheon Main GETS Mid Month Sample
9171 Towne Centre Drive, Suite 375	Report To : Steve Netto
San Diego , CA 92122	Reported : 11/30/2020

Client Sample ID: INF

Lab ID: 2002562-05

Volatile Organic Compounds by EPA 8260B **Analyst: KL**

Analyte	Result (ug/L)	PQL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	0.50	1	B0K0346	11/20/2020	11/20/20 14:55	
1,1,1-Trichloroethane	ND	0.50	1	B0K0346	11/20/2020	11/20/20 14:55	
1,1,2,2-Tetrachloroethane	ND	0.50	1	B0K0346	11/20/2020	11/20/20 14:55	
1,1,2-Trichloroethane	ND	0.50	1	B0K0346	11/20/2020	11/20/20 14:55	
1,1-Dichloroethane	ND	0.50	1	B0K0346	11/20/2020	11/20/20 14:55	
1,1-Dichloroethene	**55**	0.50	1	B0K0346	11/20/2020	11/20/20 14:55	
1,1-Dichloropropene	ND	0.50	1	B0K0346	11/20/2020	11/20/20 14:55	
1,2,3-Trichloropropane	ND	0.50	1	B0K0346	11/20/2020	11/20/20 14:55	
1,2,3-Trichlorobenzene	ND	0.50	1	B0K0346	11/20/2020	11/20/20 14:55	
1,2,4-Trichlorobenzene	ND	0.50	1	B0K0346	11/20/2020	11/20/20 14:55	
1,2,4-Trimethylbenzene	ND	0.50	1	B0K0346	11/20/2020	11/20/20 14:55	
1,2-Dibromo-3-chloropropane	ND	0.50	1	B0K0346	11/20/2020	11/20/20 14:55	
1,2-Dibromoethane	ND	0.50	1	B0K0346	11/20/2020	11/20/20 14:55	
1,2-Dichlorobenzene	ND	0.50	1	B0K0346	11/20/2020	11/20/20 14:55	
1,2-Dichloroethane	ND	0.50	1	B0K0346	11/20/2020	11/20/20 14:55	
1,2-Dichloropropane	ND	0.50	1	B0K0346	11/20/2020	11/20/20 14:55	
1,3,5-Trimethylbenzene	ND	0.50	1	B0K0346	11/20/2020	11/20/20 14:55	
1,3-Dichlorobenzene	ND	0.50	1	B0K0346	11/20/2020	11/20/20 14:55	
1,3-Dichloropropane	ND	0.50	1	B0K0346	11/20/2020	11/20/20 14:55	
1,4-Dichlorobenzene	ND	0.50	1	B0K0346	11/20/2020	11/20/20 14:55	
2,2-Dichloropropane	ND	0.50	1	B0K0346	11/20/2020	11/20/20 14:55	
2-Chlorotoluene	ND	0.50	1	B0K0346	11/20/2020	11/20/20 14:55	
4-Chlorotoluene	ND	0.50	1	B0K0346	11/20/2020	11/20/20 14:55	
4-Isopropyltoluene	ND	0.50	1	B0K0346	11/20/2020	11/20/20 14:55	
Benzene	ND	0.50	1	B0K0346	11/20/2020	11/20/20 14:55	
Bromobenzene	ND	0.50	1	B0K0346	11/20/2020	11/20/20 14:55	
Bromodichloromethane	ND	0.50	1	B0K0346	11/20/2020	11/20/20 14:55	
Bromoform	ND	0.50	1	B0K0346	11/20/2020	11/20/20 14:55	
Bromomethane	ND	0.50	1	B0K0346	11/20/2020	11/20/20 14:55	
Carbon tetrachloride	ND	0.50	1	B0K0346	11/20/2020	11/20/20 14:55	
Chlorobenzene	ND	0.50	1	B0K0346	11/20/2020	11/20/20 14:55	
Chloroethane	ND	0.50	1	B0K0346	11/20/2020	11/20/20 14:55	
Chloroform	ND	0.50	1	B0K0346	11/20/2020	11/20/20 14:55	
Chloromethane	ND	0.50	1	B0K0346	11/20/2020	11/20/20 14:55	
cis-1,2-Dichloroethene	ND	0.50	1	B0K0346	11/20/2020	11/20/20 14:55	
cis-1,3-Dichloropropene	ND	0.50	1	B0K0346	11/20/2020	11/20/20 14:55	

Certificate of Analysis

Hargis & Associates, Inc.	Project Number : Raytheon Main GETS Mid Month Sample
9171 Towne Centre Drive, Suite 375	Report To : Steve Netto
San Diego , CA 92122	Reported : 11/30/2020

Client Sample ID: INF

Lab ID: 2002562-05

Volatile Organic Compounds by EPA 8260B **Analyst: KL**

Analyte	Result (ug/L)	PQL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Dibromochloromethane	ND	0.50	1	B0K0346	11/20/2020	11/20/20 14:55	
Dibromomethane	ND	0.50	1	B0K0346	11/20/2020	11/20/20 14:55	
Dichlorodifluoromethane	ND	0.50	1	B0K0346	11/20/2020	11/20/20 14:55	
Ethylbenzene	ND	0.50	1	B0K0346	11/20/2020	11/20/20 14:55	
Hexachlorobutadiene	ND	0.50	1	B0K0346	11/20/2020	11/20/20 14:55	
Isopropylbenzene	ND	0.50	1	B0K0346	11/20/2020	11/20/20 14:55	
m,p-Xylene	ND	1.0	1	B0K0346	11/20/2020	11/20/20 14:55	
Methylene chloride	ND	1.0	1	B0K0346	11/20/2020	11/20/20 14:55	
n-Butylbenzene	ND	0.50	1	B0K0346	11/20/2020	11/20/20 14:55	
n-Propylbenzene	ND	0.50	1	B0K0346	11/20/2020	11/20/20 14:55	
Naphthalene	ND	0.50	1	B0K0346	11/20/2020	11/20/20 14:55	
o-Xylene	ND	0.50	1	B0K0346	11/20/2020	11/20/20 14:55	
sec-Butylbenzene	ND	0.50	1	B0K0346	11/20/2020	11/20/20 14:55	
Styrene	ND	0.50	1	B0K0346	11/20/2020	11/20/20 14:55	
tert-Butylbenzene	ND	0.50	1	B0K0346	11/20/2020	11/20/20 14:55	
Tetrachloroethene	ND	0.50	1	B0K0346	11/20/2020	11/20/20 14:55	
Toluene	ND	0.50	1	B0K0346	11/20/2020	11/20/20 14:55	
trans-1,2-Dichloroethene	ND	0.50	1	B0K0346	11/20/2020	11/20/20 14:55	
Trichloroethene	**0.70**	0.50	1	B0K0346	11/20/2020	11/20/20 14:55	
Trichlorofluoromethane	ND	0.50	1	B0K0346	11/20/2020	11/20/20 14:55	
Vinyl chloride	ND	0.50	1	B0K0346	11/20/2020	11/20/20 14:55	
Surrogate: 1,2-Dichloroethane-d4	*99.9 %*	*64 - 155*		B0K0346	11/20/2020	*11/20/20 14:55*	
Surrogate: 4-Bromofluorobenzene	*89.8 %*	*73 - 124*		B0K0346	11/20/2020	*11/20/20 14:55*	
Surrogate: Dibromofluoromethane	*104 %*	*78 - 129*		B0K0346	11/20/2020	*11/20/20 14:55*	
Surrogate: Toluene-d8	*98.1 %*	*84 - 117*		B0K0346	11/20/2020	*11/20/20 14:55*	

Certificate of Analysis

Hargis & Associates, Inc.	Project Number : Raytheon Main GETS Mid Month Sample
9171 Towne Centre Drive, Suite 375	Report To : Steve Netto
San Diego , CA 92122	Reported : 11/30/2020

Client Sample ID: INF

Lab ID: 2002562-05

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

Analyte		Result (ug/L)	PQL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,4-Dioxane		**28**	2.0	1	B0K0356	11/20/2020	11/25/20 12:55	
Surrogate: 1,2-Dichlorobenzene-d4	*27.4 %*		*17 - 119*		B0K0356	11/20/2020	*11/25/20 12:55*	
Surrogate: 2-Fluorobiphenyl	*30.1 %*		*10 - 133*		B0K0356	11/20/2020	*11/25/20 12:55*	
Surrogate: 4-Terphenyl-d14	*31.2 %*		*5 - 139*		B0K0356	11/20/2020	*11/25/20 12:55*	
Surrogate: Nitrobenzene-d5	*25.0 %*		*13 - 150*		B0K0356	11/20/2020	*11/25/20 12:55*	

Certificate of Analysis

Hargis & Associates, Inc.	Project Number : Raytheon Main GETS Mid Month Sample
9171 Towne Centre Drive, Suite 375	Report To : Steve Netto
San Diego , CA 92122	Reported : 11/30/2020

Client Sample ID: EW-02

Lab ID: 2002562-06

Volatile Organic Compounds by EPA 8260B **Analyst: KL**

Analyte	Result (ug/L)	PQL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	0.50	1	B0K0346	11/20/2020	11/20/20 14:35	
1,1,1-Trichloroethane	ND	0.50	1	B0K0346	11/20/2020	11/20/20 14:35	
1,1,2,2-Tetrachloroethane	ND	0.50	1	B0K0346	11/20/2020	11/20/20 14:35	
1,1,2-Trichloroethane	ND	0.50	1	B0K0346	11/20/2020	11/20/20 14:35	
1,1-Dichloroethane	ND	0.50	1	B0K0346	11/20/2020	11/20/20 14:35	
1,1-Dichloroethene	**17**	0.50	1	B0K0346	11/20/2020	11/20/20 14:35	
1,1-Dichloropropene	ND	0.50	1	B0K0346	11/20/2020	11/20/20 14:35	
1,2,3-Trichloropropane	ND	0.50	1	B0K0346	11/20/2020	11/20/20 14:35	
1,2,3-Trichlorobenzene	ND	0.50	1	B0K0346	11/20/2020	11/20/20 14:35	
1,2,4-Trichlorobenzene	ND	0.50	1	B0K0346	11/20/2020	11/20/20 14:35	
1,2,4-Trimethylbenzene	ND	0.50	1	B0K0346	11/20/2020	11/20/20 14:35	
1,2-Dibromo-3-chloropropane	ND	0.50	1	B0K0346	11/20/2020	11/20/20 14:35	
1,2-Dibromoethane	ND	0.50	1	B0K0346	11/20/2020	11/20/20 14:35	
1,2-Dichlorobenzene	ND	0.50	1	B0K0346	11/20/2020	11/20/20 14:35	
1,2-Dichloroethane	ND	0.50	1	B0K0346	11/20/2020	11/20/20 14:35	
1,2-Dichloropropane	ND	0.50	1	B0K0346	11/20/2020	11/20/20 14:35	
1,3,5-Trimethylbenzene	ND	0.50	1	B0K0346	11/20/2020	11/20/20 14:35	
1,3-Dichlorobenzene	ND	0.50	1	B0K0346	11/20/2020	11/20/20 14:35	
1,3-Dichloropropane	ND	0.50	1	B0K0346	11/20/2020	11/20/20 14:35	
1,4-Dichlorobenzene	ND	0.50	1	B0K0346	11/20/2020	11/20/20 14:35	
2,2-Dichloropropane	ND	0.50	1	B0K0346	11/20/2020	11/20/20 14:35	
2-Chlorotoluene	ND	0.50	1	B0K0346	11/20/2020	11/20/20 14:35	
4-Chlorotoluene	ND	0.50	1	B0K0346	11/20/2020	11/20/20 14:35	
4-Isopropyltoluene	ND	0.50	1	B0K0346	11/20/2020	11/20/20 14:35	
Benzene	ND	0.50	1	B0K0346	11/20/2020	11/20/20 14:35	
Bromobenzene	ND	0.50	1	B0K0346	11/20/2020	11/20/20 14:35	
Bromodichloromethane	ND	0.50	1	B0K0346	11/20/2020	11/20/20 14:35	
Bromoform	ND	0.50	1	B0K0346	11/20/2020	11/20/20 14:35	
Bromomethane	ND	0.50	1	B0K0346	11/20/2020	11/20/20 14:35	
Carbon tetrachloride	ND	0.50	1	B0K0346	11/20/2020	11/20/20 14:35	
Chlorobenzene	ND	0.50	1	B0K0346	11/20/2020	11/20/20 14:35	
Chloroethane	ND	0.50	1	B0K0346	11/20/2020	11/20/20 14:35	
Chloroform	ND	0.50	1	B0K0346	11/20/2020	11/20/20 14:35	
Chloromethane	ND	0.50	1	B0K0346	11/20/2020	11/20/20 14:35	
cis-1,2-Dichloroethene	ND	0.50	1	B0K0346	11/20/2020	11/20/20 14:35	
cis-1,3-Dichloropropene	ND	0.50	1	B0K0346	11/20/2020	11/20/20 14:35	

Certificate of Analysis

Hargis & Associates, Inc.	Project Number : Raytheon Main GETS Mid Month Sample
9171 Towne Centre Drive, Suite 375	Report To : Steve Netto
San Diego , CA 92122	Reported : 11/30/2020

Client Sample ID: EW-02

Lab ID: 2002562-06

Volatile Organic Compounds by EPA 8260B **Analyst: KL**

Analyte	Result (ug/L)	PQL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Dibromochloromethane	ND	0.50	1	B0K0346	11/20/2020	11/20/20 14:35	
Dibromomethane	ND	0.50	1	B0K0346	11/20/2020	11/20/20 14:35	
Dichlorodifluoromethane	ND	0.50	1	B0K0346	11/20/2020	11/20/20 14:35	
Ethylbenzene	ND	0.50	1	B0K0346	11/20/2020	11/20/20 14:35	
Hexachlorobutadiene	ND	0.50	1	B0K0346	11/20/2020	11/20/20 14:35	
Isopropylbenzene	ND	0.50	1	B0K0346	11/20/2020	11/20/20 14:35	
m,p-Xylene	ND	1.0	1	B0K0346	11/20/2020	11/20/20 14:35	
Methylene chloride	ND	1.0	1	B0K0346	11/20/2020	11/20/20 14:35	
n-Butylbenzene	ND	0.50	1	B0K0346	11/20/2020	11/20/20 14:35	
n-Propylbenzene	ND	0.50	1	B0K0346	11/20/2020	11/20/20 14:35	
Naphthalene	ND	0.50	1	B0K0346	11/20/2020	11/20/20 14:35	
o-Xylene	ND	0.50	1	B0K0346	11/20/2020	11/20/20 14:35	
sec-Butylbenzene	ND	0.50	1	B0K0346	11/20/2020	11/20/20 14:35	
Styrene	ND	0.50	1	B0K0346	11/20/2020	11/20/20 14:35	
tert-Butylbenzene	ND	0.50	1	B0K0346	11/20/2020	11/20/20 14:35	
Tetrachloroethene	ND	0.50	1	B0K0346	11/20/2020	11/20/20 14:35	
Toluene	ND	0.50	1	B0K0346	11/20/2020	11/20/20 14:35	
trans-1,2-Dichloroethene	ND	0.50	1	B0K0346	11/20/2020	11/20/20 14:35	
Trichloroethene	ND	0.50	1	B0K0346	11/20/2020	11/20/20 14:35	
Trichlorofluoromethane	ND	0.50	1	B0K0346	11/20/2020	11/20/20 14:35	
Vinyl chloride	ND	0.50	1	B0K0346	11/20/2020	11/20/20 14:35	
Surrogate: 1,2-Dichloroethane-d4	*105 %*	*64 - 155*		B0K0346	11/20/2020	*11/20/20 14:35*	
Surrogate: 4-Bromofluorobenzene	*89.3 %*	*73 - 124*		B0K0346	11/20/2020	*11/20/20 14:35*	
Surrogate: Dibromofluoromethane	*99.1 %*	*78 - 129*		B0K0346	11/20/2020	*11/20/20 14:35*	
Surrogate: Toluene-d8	*97.2 %*	*84 - 117*		B0K0346	11/20/2020	*11/20/20 14:35*	

Certificate of Analysis

Hargis & Associates, Inc.	Project Number : Raytheon Main GETS Mid Month Sample
9171 Towne Centre Drive, Suite 375	Report To : Steve Netto
San Diego , CA 92122	Reported : 11/30/2020

Client Sample ID: EW-02

Lab ID: 2002562-06

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

Analyte		Result (ug/L)	PQL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,4-Dioxane		**6.8**	2.0	1	B0K0356	11/20/2020	11/25/20 13:47	
Surrogate: 1,2-Dichlorobenzene-d4	*25.9 %*		*17 - 119*		B0K0356	11/20/2020	*11/25/20 13:47*	
Surrogate: 2-Fluorobiphenyl	*27.8 %*		*10 - 133*		B0K0356	11/20/2020	*11/25/20 13:47*	
Surrogate: 4-Terphenyl-d14	*28.9 %*		*5 - 139*		B0K0356	11/20/2020	*11/25/20 13:47*	
Surrogate: Nitrobenzene-d5	*24.8 %*		*13 - 150*		B0K0356	11/20/2020	*11/25/20 13:47*	

Certificate of Analysis

Hargis & Associates, Inc.	Project Number : Raytheon Main GETS Mid Month Sample
9171 Towne Centre Drive, Suite 375	Report To : Steve Netto
San Diego , CA 92122	Reported : 11/30/2020

Client Sample ID: MW-29

Lab ID: 2002562-07

Volatile Organic Compounds by EPA 8260B **Analyst: KL**

Analyte	Result (ug/L)	PQL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	0.50	1	B0K0370	11/23/2020	11/23/20 16:03	
1,1,1-Trichloroethane	ND	0.50	1	B0K0370	11/23/2020	11/23/20 16:03	
1,1,2,2-Tetrachloroethane	ND	0.50	1	B0K0370	11/23/2020	11/23/20 16:03	
1,1,2-Trichloroethane	**0.56**	0.50	1	B0K0370	11/23/2020	11/23/20 16:03	
1,1-Dichloroethane	**1.7**	0.50	1	B0K0370	11/23/2020	11/23/20 16:03	
1,1-Dichloroethene	**180**	2.5	5	B0K0346	11/20/2020	11/20/20 15:15	
1,1-Dichloropropene	ND	0.50	1	B0K0370	11/23/2020	11/23/20 16:03	
1,2,3-Trichloropropane	ND	0.50	1	B0K0370	11/23/2020	11/23/20 16:03	
1,2,3-Trichlorobenzene	ND	0.50	1	B0K0370	11/23/2020	11/23/20 16:03	
1,2,4-Trichlorobenzene	ND	0.50	1	B0K0370	11/23/2020	11/23/20 16:03	
1,2,4-Trimethylbenzene	ND	0.50	1	B0K0370	11/23/2020	11/23/20 16:03	
1,2-Dibromo-3-chloropropane	ND	0.50	1	B0K0370	11/23/2020	11/23/20 16:03	
1,2-Dibromoethane	ND	0.50	1	B0K0370	11/23/2020	11/23/20 16:03	
1,2-Dichlorobenzene	ND	0.50	1	B0K0370	11/23/2020	11/23/20 16:03	
1,2-Dichloroethane	ND	0.50	1	B0K0370	11/23/2020	11/23/20 16:03	
1,2-Dichloropropane	ND	0.50	1	B0K0370	11/23/2020	11/23/20 16:03	
1,3,5-Trimethylbenzene	ND	0.50	1	B0K0370	11/23/2020	11/23/20 16:03	
1,3-Dichlorobenzene	ND	0.50	1	B0K0370	11/23/2020	11/23/20 16:03	
1,3-Dichloropropane	ND	0.50	1	B0K0370	11/23/2020	11/23/20 16:03	
1,4-Dichlorobenzene	ND	0.50	1	B0K0370	11/23/2020	11/23/20 16:03	
2,2-Dichloropropane	ND	0.50	1	B0K0370	11/23/2020	11/23/20 16:03	
2-Chlorotoluene	ND	0.50	1	B0K0370	11/23/2020	11/23/20 16:03	
4-Chlorotoluene	ND	0.50	1	B0K0370	11/23/2020	11/23/20 16:03	
4-Isopropyltoluene	ND	0.50	1	B0K0370	11/23/2020	11/23/20 16:03	
Benzene	ND	0.50	1	B0K0370	11/23/2020	11/23/20 16:03	
Bromobenzene	ND	0.50	1	B0K0370	11/23/2020	11/23/20 16:03	
Bromodichloromethane	ND	0.50	1	B0K0370	11/23/2020	11/23/20 16:03	
Bromoform	ND	0.50	1	B0K0370	11/23/2020	11/23/20 16:03	
Bromomethane	ND	0.50	1	B0K0370	11/23/2020	11/23/20 16:03	
Carbon tetrachloride	ND	0.50	1	B0K0370	11/23/2020	11/23/20 16:03	
Chlorobenzene	ND	0.50	1	B0K0370	11/23/2020	11/23/20 16:03	
Chloroethane	ND	0.50	1	B0K0370	11/23/2020	11/23/20 16:03	
Chloroform	ND	0.50	1	B0K0370	11/23/2020	11/23/20 16:03	
Chloromethane	ND	0.50	1	B0K0370	11/23/2020	11/23/20 16:03	
cis-1,2-Dichloroethene	ND	0.50	1	B0K0370	11/23/2020	11/23/20 16:03	
cis-1,3-Dichloropropene	ND	0.50	1	B0K0370	11/23/2020	11/23/20 16:03	

Certificate of Analysis

Hargis & Associates, Inc.	Project Number : Raytheon Main GETS Mid Month Sample
9171 Towne Centre Drive, Suite 375	Report To : Steve Netto
San Diego , CA 92122	Reported : 11/30/2020

Client Sample ID: MW-29

Lab ID: 2002562-07

Volatile Organic Compounds by EPA 8260B **Analyst: KL**

Analyte	Result (ug/L)	PQL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Dibromochloromethane	ND	0.50	1	B0K0370	11/23/2020	11/23/20 16:03	
Dibromomethane	ND	0.50	1	B0K0370	11/23/2020	11/23/20 16:03	
Dichlorodifluoromethane	ND	0.50	1	B0K0370	11/23/2020	11/23/20 16:03	
Ethylbenzene	ND	0.50	1	B0K0370	11/23/2020	11/23/20 16:03	
Hexachlorobutadiene	ND	0.50	1	B0K0370	11/23/2020	11/23/20 16:03	
Isopropylbenzene	ND	0.50	1	B0K0370	11/23/2020	11/23/20 16:03	
m,p-Xylene	ND	1.0	1	B0K0370	11/23/2020	11/23/20 16:03	
Methylene chloride	ND	1.0	1	B0K0370	11/23/2020	11/23/20 16:03	
n-Butylbenzene	ND	0.50	1	B0K0370	11/23/2020	11/23/20 16:03	
n-Propylbenzene	ND	0.50	1	B0K0370	11/23/2020	11/23/20 16:03	
Naphthalene	ND	0.50	1	B0K0370	11/23/2020	11/23/20 16:03	
o-Xylene	ND	0.50	1	B0K0370	11/23/2020	11/23/20 16:03	
sec-Butylbenzene	ND	0.50	1	B0K0370	11/23/2020	11/23/20 16:03	
Styrene	ND	0.50	1	B0K0370	11/23/2020	11/23/20 16:03	
tert-Butylbenzene	ND	0.50	1	B0K0370	11/23/2020	11/23/20 16:03	
Tetrachloroethene	**0.61**	0.50	1	B0K0370	11/23/2020	11/23/20 16:03	
Toluene	ND	0.50	1	B0K0370	11/23/2020	11/23/20 16:03	
trans-1,2-Dichloroethene	ND	0.50	1	B0K0370	11/23/2020	11/23/20 16:03	
Trichloroethene	**2.4**	0.50	1	B0K0370	11/23/2020	11/23/20 16:03	
Trichlorofluoromethane	**1.2**	0.50	1	B0K0370	11/23/2020	11/23/20 16:03	
Vinyl chloride	ND	0.50	1	B0K0370	11/23/2020	11/23/20 16:03	
Surrogate: 1,2-Dichloroethane-d4	*104 %*	*64 - 155*		B0K0370	11/23/2020	*11/23/20 16:03*	
Surrogate: 1,2-Dichloroethane-d4	*108 %*	*64 - 155*		B0K0346	11/20/2020	*11/20/20 15:15*	
Surrogate: 4-Bromofluorobenzene	*89.2 %*	*73 - 124*		B0K0370	11/23/2020	*11/23/20 16:03*	
Surrogate: 4-Bromofluorobenzene	*90.2 %*	*73 - 124*		B0K0346	11/20/2020	*11/20/20 15:15*	
Surrogate: Dibromofluoromethane	*101 %*	*78 - 129*		B0K0370	11/23/2020	*11/23/20 16:03*	
Surrogate: Dibromofluoromethane	*104 %*	*78 - 129*		B0K0346	11/20/2020	*11/20/20 15:15*	
Surrogate: Toluene-d8	*96.3 %*	*84 - 117*		B0K0346	11/20/2020	*11/20/20 15:15*	
Surrogate: Toluene-d8	*98.3 %*	*84 - 117*		B0K0370	11/23/2020	*11/23/20 16:03*	

Certificate of Analysis

Hargis & Associates, Inc.	Project Number : Raytheon Main GETS Mid Month Sample
9171 Towne Centre Drive, Suite 375	Report To : Steve Netto
San Diego , CA 92122	Reported : 11/30/2020

Client Sample ID: MW-29

Lab ID: 2002562-07

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

Analyte		Result (ug/L)	PQL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,4-Dioxane		**96**	2.0	1	B0K0356	11/20/2020	11/25/20 14:12	
Surrogate: 1,2-Dichlorobenzene-d4	*27.1 %*		*17 - 119*		B0K0356	11/20/2020	*11/25/20 14:12*	
Surrogate: 2-Fluorobiphenyl	*30.2 %*		*10 - 133*		B0K0356	11/20/2020	*11/25/20 14:12*	
Surrogate: 4-Terphenyl-d14	*31.1 %*		*5 - 139*		B0K0356	11/20/2020	*11/25/20 14:12*	
Surrogate: Nitrobenzene-d5	*25.2 %*		*13 - 150*		B0K0356	11/20/2020	*11/25/20 14:12*	

Certificate of Analysis

Hargis & Associates, Inc.	Project Number : Raytheon Main GETS Mid Month Sample
9171 Towne Centre Drive, Suite 375	Report To : Steve Netto
San Diego , CA 92122	Reported : 11/30/2020

QUALITY CONTROL SECTION

Volatile Organic Compounds by EPA 8260B - Quality Control

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B0K0346 - MSVOA_LL_W										
Blank (B0K0346-BLK1)					Prepared: 11/20/2020 Analyzed: 11/20/2020					
1,1,1,2-Tetrachloroethane	ND	0.50	0.11							
1,1,1-Trichloroethane	ND	0.50	0.21							
1,1,2,2-Tetrachloroethane	ND	0.50	0.36							
1,1,2-Trichloroethane	ND	0.50	0.25							
1,1-Dichloroethane	ND	0.50	0.09							
1,1-Dichloroethene	ND	0.50	0.13							
1,1-Dichloropropene	ND	0.50	0.13							
1,2,3-Trichloropropane	ND	0.50	0.39							
1,2,3-Trichlorobenzene	ND	0.50	0.18							
1,2,4-Trichlorobenzene	ND	0.50	0.16							
1,2,4-Trimethylbenzene	ND	0.50	0.14							
1,2-Dibromo-3-chloropropane	ND	0.50	0.41							
1,2-Dibromoethane	ND	0.50	0.24							
1,2-Dichlorobenzene	ND	0.50	0.20							
1,2-Dichloroethane	ND	0.50	0.20							
1,2-Dichloropropane	ND	0.50	0.15							
1,3,5-Trimethylbenzene	ND	0.50	0.13							
1,3-Dichlorobenzene	ND	0.50	0.16							
1,3-Dichloropropane	ND	0.50	0.21							
1,4-Dichlorobenzene	ND	0.50	0.17							
2,2-Dichloropropane	ND	0.50	0.38							
2-Chlorotoluene	ND	0.50	0.11							
4-Chlorotoluene	ND	0.50	0.12							
4-Isopropyltoluene	ND	0.50	0.11							
Benzene	ND	0.50	0.13							
Bromobenzene	ND	0.50	0.21							
Bromodichloromethane	ND	0.50	0.14							
Bromoform	ND	0.50	0.20							
Bromomethane	ND	0.50	0.40							
Carbon tetrachloride	ND	0.50	0.09							
Chlorobenzene	ND	0.50	0.13							
Chloroethane	ND	0.50	0.15							
Chloroform	ND	0.50	0.11							
Chloromethane	ND	0.50	0.12							
cis-1,2-Dichloroethene	ND	0.50	0.14							
cis-1,3-Dichloropropene	ND	0.50	0.13							
Dibromochloromethane	ND	0.50	0.16							
Dibromomethane	ND	0.50	0.19							

Certificate of Analysis

Hargis & Associates, Inc.	Project Number : Raytheon Main GETS Mid Month Sample
9171 Towne Centre Drive, Suite 375	Report To : Steve Netto
San Diego , CA 92122	Reported : 11/30/2020

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

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B0K0346 - MSVOA_LL_W (continued)										
Blank (B0K0346-BLK1) - Continued					Prepared: 11/20/2020 Analyzed: 11/20/2020					
Dichlorodifluoromethane	ND	0.50	0.18							
Ethylbenzene	ND	0.50	0.13							
Hexachlorobutadiene	ND	0.50	0.15							
Isopropylbenzene	ND	0.50	0.10							
m,p-Xylene	ND	1.0	0.19							
Methylene chloride	ND	1.0	0.71							
n-Butylbenzene	ND	0.50	0.11							
n-Propylbenzene	ND	0.50	0.10							
Naphthalene	ND	0.50	0.41							
o-Xylene	ND	0.50	0.13							
sec-Butylbenzene	ND	0.50	0.09							
Styrene	ND	0.50	0.13							
tert-Butylbenzene	ND	0.50	0.09							
Tetrachloroethene	ND	0.50	0.10							
Toluene	ND	0.50	0.12							
trans-1,2-Dichloroethene	ND	0.50	0.09							
Trichloroethene	ND	0.50	0.10							
Trichlorofluoromethane	ND	0.50	0.23							
Vinyl chloride	ND	0.50	0.13							
Surrogate: 1,2-Dichloroethane-d4	*25.27*			*25.0000*		*101*	*64 - 155*			
Surrogate: 4-Bromofluorobenzene	*22.99*			*25.0000*		*92.0*	*73 - 124*			
Surrogate: Dibromofluoromethan	*25.08*			*25.0000*		*100*	*78 - 129*			
Surrogate: Toluene-d8	*23.99*			*25.0000*		*96.0*	*84 - 117*			
LCS (B0K0346-BS1)					Prepared: 11/20/2020 Analyzed: 11/20/2020					
1,1,1,2-Tetrachloroethane	18.5000	0.50	0.11	20.0000		92.5	79 - 116			
1,1,1-Trichloroethane	17.2100	0.50	0.21	20.0000		86.0	73 - 130			
1,1,2,2-Tetrachloroethane	16.3000	0.50	0.36	20.0000		81.5	71 - 122			
1,1,2-Trichloroethane	17.6100	0.50	0.25	20.0000		88.0	70 - 124			
1,1-Dichloroethane	17.8000	0.50	0.09	20.0000		89.0	69 - 128			
1,1-Dichloroethene	17.3100	0.50	0.13	20.0000		86.6	65 - 137			
1,1-Dichloropropene	18.0500	0.50	0.13	20.0000		90.2	74 - 129			
1,2,3-Trichloropropane	18.3100	0.50	0.39	20.0000		91.6	74 - 123			
1,2,3-Trichlorobenzene	19.5400	0.50	0.18	20.0000		97.7	59 - 130			
1,2,4-Trichlorobenzene	18.9700	0.50	0.16	20.0000		94.8	65 - 125			
1,2,4-Trimethylbenzene	18.0200	0.50	0.14	20.0000		90.1	88 - 124			
1,2-Dibromo-3-chloropropane	17.2500	0.50	0.41	20.0000		86.2	61 - 127			
1,2-Dibromoethane	17.4700	0.50	0.24	20.0000		87.4	72 - 125			
1,2-Dichlorobenzene	18.5000	0.50	0.20	20.0000		92.5	84 - 113			
1,2-Dichloroethane	17.9200	0.50	0.20	20.0000		89.6	68 - 130			

Certificate of Analysis

Hargis & Associates, Inc.	Project Number : Raytheon Main GETS Mid Month Sample
9171 Towne Centre Drive, Suite 375	Report To : Steve Netto
San Diego , CA 92122	Reported : 11/30/2020

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

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B0K0346 - MSVOA_LL_W (continued)										
LCS (B0K0346-BS1) - Continued					Prepared: 11/20/2020 Analyzed: 11/20/2020					
1,2-Dichloropropane	18.7500	0.50	0.15	20.0000		93.8	77 - 121			
1,3,5-Trimethylbenzene	17.8400	0.50	0.13	20.0000		89.2	83 - 124			
1,3-Dichlorobenzene	18.5400	0.50	0.16	20.0000		92.7	83 - 112			
1,3-Dichloropropane	18.7400	0.50	0.21	20.0000		93.7	77 - 119			
1,4-Dichlorobenzene	17.8700	0.50	0.17	20.0000		89.4	79 - 115			
2,2-Dichloropropane	18.6800	0.50	0.38	20.0000		93.4	67 - 149			
2-Chlorotoluene	18.1700	0.50	0.11	20.0000		90.8	81 - 119			
4-Chlorotoluene	18.8400	0.50	0.12	20.0000		94.2	86 - 117			
4-Isopropyltoluene	18.2300	0.50	0.11	20.0000		91.2	82 - 131			
Benzene	17.8100	0.50	0.13	20.0000		89.0	75 - 124			
Bromobenzene	18.0500	0.50	0.21	20.0000		90.2	82 - 108			
Bromodichloromethane	17.8200	0.50	0.14	20.0000		89.1	80 - 120			
Bromoform	17.8400	0.50	0.20	20.0000		89.2	70 - 123			
Bromomethane	15.2300	0.50	0.40	20.0000		76.2	44 - 151			
Carbon tetrachloride	17.8700	0.50	0.09	20.0000		89.4	62 - 140			
Chlorobenzene	18.2900	0.50	0.13	20.0000		91.4	80 - 112			
Chloroethane	15.6200	0.50	0.15	20.0000		78.1	42 - 167			
Chloroform	17.1600	0.50	0.11	20.0000		85.8	77 - 122			
Chloromethane	14.6700	0.50	0.12	20.0000		73.4	33 - 153			
cis-1,2-Dichloroethene	18.1000	0.50	0.14	20.0000		90.5	75 - 121			
cis-1,3-Dichloropropene	18.8300	0.50	0.13	20.0000		94.2	73 - 127			
Dibromochloromethane	17.7900	0.50	0.16	20.0000		89.0	77 - 122			
Dibromomethane	18.4700	0.50	0.19	20.0000		92.4	75 - 121			
Dichlorodifluoromethane	14.3400	0.50	0.18	20.0000		71.7	0 - 171			
Ethylbenzene	19.1200	0.50	0.13	20.0000		95.6	82 - 119			
Hexachlorobutadiene	19.6600	0.50	0.15	20.0000		98.3	71 - 131			
Isopropylbenzene	18.6200	0.50	0.10	20.0000		93.1	75 - 126			
m,p-Xylene	39.3100	1.0	0.19	40.0000		98.3	86 - 119			
Methylene chloride	17.3400	1.0	0.71	20.0000		86.7	76 - 125			
n-Butylbenzene	20.2000	0.50	0.11	20.0000		101	81 - 125			
n-Propylbenzene	19.0000	0.50	0.10	20.0000		95.0	78 - 130			
Naphthalene	16.9000	0.50	0.41	20.0000		84.5	47 - 128			
o-Xylene	19.7200	0.50	0.13	20.0000		98.6	85 - 119			
sec-Butylbenzene	19.5300	0.50	0.09	20.0000		97.6	78 - 130			
Styrene	17.4500	0.50	0.13	20.0000		87.2	62 - 148			
tert-Butylbenzene	18.9700	0.50	0.09	20.0000		94.8	77 - 125			
Tetrachloroethene	18.9800	0.50	0.10	20.0000		94.9	73 - 120			
Toluene	17.7300	0.50	0.12	20.0000		88.6	79 - 119			
trans-1,2-Dichloroethene	17.9300	0.50	0.09	20.0000		89.6	70 - 129			
Trichloroethene	18.3600	0.50	0.10	20.0000		91.8	73 - 117			

Certificate of Analysis

Hargis & Associates, Inc.	Project Number : Raytheon Main GETS Mid Month Sample
9171 Towne Centre Drive, Suite 375	Report To : Steve Netto
San Diego , CA 92122	Reported : 11/30/2020

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

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B0K0346 - MSVOA_LL_W (continued)										
LCS (B0K0346-BS1) - Continued					Prepared: 11/20/2020 Analyzed: 11/20/2020					
Trichlorofluoromethane	16.2800	0.50	0.23	20.0000		81.4	59 - 135			
Vinyl chloride	16.1800	0.50	0.13	20.0000		80.9	58 - 132			
Surrogate: 1,2-Dichloroethane-d4	*23.38*			*25.0000*		*93.5*	*64 - 155*			
Surrogate: 4-Bromofluorobenzene	*25.81*			*25.0000*		*103*	*73 - 124*			
Surrogate: Dibromofluoromethan	*24.01*			*25.0000*		*96.0*	*78 - 129*			
Surrogate: Toluene-d8	*24.69*			*25.0000*		*98.8*	*84 - 117*			
LCS Dup (B0K0346-BSD1)					Prepared: 11/20/2020 Analyzed: 11/20/2020					
1,1,1,2-Tetrachloroethane	19.9200	0.50	0.11	20.0000		99.6	79 - 116	7.39	20	
1,1,1-Trichloroethane	18.9900	0.50	0.21	20.0000		95.0	73 - 130	9.83	20	
1,1,2,2-Tetrachloroethane	18.4700	0.50	0.36	20.0000		92.4	71 - 122	12.5	20	
1,1,2-Trichloroethane	19.4400	0.50	0.25	20.0000		97.2	70 - 124	9.88	20	
1,1-Dichloroethane	19.3300	0.50	0.09	20.0000		96.6	69 - 128	8.24	20	
1,1-Dichloroethene	18.4300	0.50	0.13	20.0000		92.2	65 - 137	6.27	20	
1,1-Dichloropropene	19.0200	0.50	0.13	20.0000		95.1	74 - 129	5.23	20	
1,2,3-Trichloropropane	19.2300	0.50	0.39	20.0000		96.2	74 - 123	4.90	20	
1,2,3-Trichlorobenzene	21.3900	0.50	0.18	20.0000		107	59 - 130	9.04	20	
1,2,4-Trichlorobenzene	20.8600	0.50	0.16	20.0000		104	65 - 125	9.49	20	
1,2,4-Trimethylbenzene	19.1900	0.50	0.14	20.0000		96.0	88 - 124	6.29	20	
1,2-Dibromo-3-chloropropane	19.7400	0.50	0.41	20.0000		98.7	61 - 127	13.5	20	
1,2-Dibromoethane	20.1100	0.50	0.24	20.0000		101	72 - 125	14.1	20	
1,2-Dichlorobenzene	19.8700	0.50	0.20	20.0000		99.4	84 - 113	7.14	20	
1,2-Dichloroethane	19.1300	0.50	0.20	20.0000		95.6	68 - 130	6.53	20	
1,2-Dichloropropane	19.8600	0.50	0.15	20.0000		99.3	77 - 121	5.75	20	
1,3,5-Trimethylbenzene	19.3300	0.50	0.13	20.0000		96.6	83 - 124	8.02	20	
1,3-Dichlorobenzene	19.9500	0.50	0.16	20.0000		99.8	83 - 112	7.33	20	
1,3-Dichloropropane	20.3600	0.50	0.21	20.0000		102	77 - 119	8.29	20	
1,4-Dichlorobenzene	19.2600	0.50	0.17	20.0000		96.3	79 - 115	7.49	20	
2,2-Dichloropropane	21.0600	0.50	0.38	20.0000		105	67 - 149	12.0	20	
2-Chlorotoluene	19.3300	0.50	0.11	20.0000		96.6	81 - 119	6.19	20	
4-Chlorotoluene	19.6800	0.50	0.12	20.0000		98.4	86 - 117	4.36	20	
4-Isopropyltoluene	19.3300	0.50	0.11	20.0000		96.6	82 - 131	5.86	20	
Benzene	19.4600	0.50	0.13	20.0000		97.3	75 - 124	8.85	20	
Bromobenzene	18.7900	0.50	0.21	20.0000		94.0	82 - 108	4.02	20	
Bromodichloromethane	19.2700	0.50	0.14	20.0000		96.4	80 - 120	7.82	20	
Bromoform	19.8300	0.50	0.20	20.0000		99.2	70 - 123	10.6	20	
Bromomethane	17.0500	0.50	0.40	20.0000		85.2	44 - 151	11.3	20	
Carbon tetrachloride	19.5300	0.50	0.09	20.0000		97.6	62 - 140	8.88	20	
Chlorobenzene	19.9500	0.50	0.13	20.0000		99.8	80 - 112	8.68	20	
Chloroethane	17.0600	0.50	0.15	20.0000		85.3	42 - 167	8.81	20	

Certificate of Analysis

Hargis & Associates, Inc.	Project Number : Raytheon Main GETS Mid Month Sample
9171 Towne Centre Drive, Suite 375	Report To : Steve Netto
San Diego , CA 92122	Reported : 11/30/2020

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

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B0K0346 - MSVOA_LL_W (continued)										
LCS Dup (B0K0346-BSD1) - Continued					Prepared: 11/20/2020 Analyzed: 11/20/2020					
Chloroform	18.7500	0.50	0.11	20.0000		93.8	77 - 122	8.86	20	
Chloromethane	16.8200	0.50	0.12	20.0000		84.1	33 - 153	13.7	20	
cis-1,2-Dichloroethene	19.0100	0.50	0.14	20.0000		95.0	75 - 121	4.90	20	
cis-1,3-Dichloropropene	20.5400	0.50	0.13	20.0000		103	73 - 127	8.69	20	
Dibromochloromethane	19.5200	0.50	0.16	20.0000		97.6	77 - 122	9.27	20	
Dibromomethane	20.2800	0.50	0.19	20.0000		101	75 - 121	9.34	20	
Dichlorodifluoromethane	16.4500	0.50	0.18	20.0000		82.2	0 - 171	13.7	20	
Ethylbenzene	20.4100	0.50	0.13	20.0000		102	82 - 119	6.53	20	
Hexachlorobutadiene	20.2800	0.50	0.15	20.0000		101	71 - 131	3.10	20	
Isopropylbenzene	19.9900	0.50	0.10	20.0000		100	75 - 126	7.10	20	
m,p-Xylene	41.9900	1.0	0.19	40.0000		105	86 - 119	6.59	20	
Methylene chloride	18.1500	1.0	0.71	20.0000		90.8	76 - 125	4.56	20	
n-Butylbenzene	21.9300	0.50	0.11	20.0000		110	81 - 125	8.21	20	
n-Propylbenzene	19.8900	0.50	0.10	20.0000		99.4	78 - 130	4.58	20	
Naphthalene	18.8900	0.50	0.41	20.0000		94.4	47 - 128	11.1	20	
o-Xylene	21.3900	0.50	0.13	20.0000		107	85 - 119	8.12	20	
sec-Butylbenzene	20.9800	0.50	0.09	20.0000		105	78 - 130	7.16	20	
Styrene	19.4600	0.50	0.13	20.0000		97.3	62 - 148	10.9	20	
tert-Butylbenzene	20.4500	0.50	0.09	20.0000		102	77 - 125	7.51	20	
Tetrachloroethene	19.8000	0.50	0.10	20.0000		99.0	73 - 120	4.23	20	
Toluene	19.0600	0.50	0.12	20.0000		95.3	79 - 119	7.23	20	
trans-1,2-Dichloroethene	18.9300	0.50	0.09	20.0000		94.6	70 - 129	5.43	20	
Trichloroethene	19.2800	0.50	0.10	20.0000		96.4	73 - 117	4.89	20	
Trichlorofluoromethane	18.7100	0.50	0.23	20.0000		93.6	59 - 135	13.9	20	
Vinyl chloride	17.5400	0.50	0.13	20.0000		87.7	58 - 132	8.07	20	
Surrogate: 1,2-Dichloroethane-d4	*23.71*			*25.0000*		*94.8*	*64 - 155*			
Surrogate: 4-Bromofluorobenzene	*25.99*			*25.0000*		*104*	*73 - 124*			
Surrogate: Dibromofluoromethan	*23.88*			*25.0000*		*95.5*	*78 - 129*			
Surrogate: Toluene-d8	*24.64*			*25.0000*		*98.6*	*84 - 117*			

Certificate of Analysis

Hargis & Associates, Inc.	Project Number : Raytheon Main GETS Mid Month Sample
9171 Towne Centre Drive, Suite 375	Report To : Steve Netto
San Diego , CA 92122	Reported : 11/30/2020

Volatile Organic Compounds by EPA 8260B - Quality Control

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B0K0370 - MSVOA_LL_W										
Blank (B0K0370-BLK1)							Prepared: 11/23/2020 Analyzed: 11/23/2020			
1,1,1,2-Tetrachloroethane	ND	0.50	0.11							
1,1,1-Trichloroethane	ND	0.50	0.21							
1,1,2,2-Tetrachloroethane	ND	0.50	0.36							
1,1,2-Trichloroethane	ND	0.50	0.25							
1,1-Dichloroethane	ND	0.50	0.09							
1,1-Dichloroethene	ND	0.50	0.13							
1,1-Dichloropropene	ND	0.50	0.13							
1,2,3-Trichloropropane	ND	0.50	0.39							
1,2,3-Trichlorobenzene	ND	0.50	0.18							
1,2,4-Trichlorobenzene	ND	0.50	0.16							
1,2,4-Trimethylbenzene	ND	0.50	0.14							
1,2-Dibromo-3-chloropropane	ND	0.50	0.41							
1,2-Dibromoethane	ND	0.50	0.24							
1,2-Dichlorobenzene	ND	0.50	0.20							
1,2-Dichloroethane	ND	0.50	0.20							
1,2-Dichloropropane	ND	0.50	0.15							
1,3,5-Trimethylbenzene	ND	0.50	0.13							
1,3-Dichlorobenzene	ND	0.50	0.16							
1,3-Dichloropropane	ND	0.50	0.21							
1,4-Dichlorobenzene	ND	0.50	0.17							
2,2-Dichloropropane	ND	0.50	0.38							
2-Chlorotoluene	ND	0.50	0.11							
4-Chlorotoluene	ND	0.50	0.12							
4-Isopropyltoluene	ND	0.50	0.11							
Benzene	ND	0.50	0.13							
Bromobenzene	ND	0.50	0.21							
Bromodichloromethane	ND	0.50	0.14							
Bromoform	ND	0.50	0.20							
Bromomethane	ND	0.50	0.40							
Carbon tetrachloride	ND	0.50	0.09							
Chlorobenzene	ND	0.50	0.13							
Chloroethane	ND	0.50	0.15							
Chloroform	ND	0.50	0.11							
Chloromethane	ND	0.50	0.12							
cis-1,2-Dichloroethene	ND	0.50	0.14							
cis-1,3-Dichloropropene	ND	0.50	0.13							
Dibromochloromethane	ND	0.50	0.16							
Dibromomethane	ND	0.50	0.19							
Dichlorodifluoromethane	ND	0.50	0.18							
Ethylbenzene	ND	0.50	0.13							

Certificate of Analysis

Hargis & Associates, Inc.	Project Number : Raytheon Main GETS Mid Month Sample
9171 Towne Centre Drive, Suite 375	Report To : Steve Netto
San Diego , CA 92122	Reported : 11/30/2020

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

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B0K0370 - MSVOA_LL_W (continued)										
Blank (B0K0370-BLK1) - Continued					Prepared: 11/23/2020 Analyzed: 11/23/2020					
Hexachlorobutadiene	ND	0.50	0.15							
Isopropylbenzene	ND	0.50	0.10							
m,p-Xylene	ND	1.0	0.19							
Methylene chloride	ND	1.0	0.71							
n-Butylbenzene	ND	0.50	0.11							
n-Propylbenzene	ND	0.50	0.10							
Naphthalene	ND	0.50	0.41							
o-Xylene	ND	0.50	0.13							
sec-Butylbenzene	ND	0.50	0.09							
Styrene	ND	0.50	0.13							
tert-Butylbenzene	ND	0.50	0.09							
Tetrachloroethene	ND	0.50	0.10							
Toluene	ND	0.50	0.12							
trans-1,2-Dichloroethene	ND	0.50	0.09							
Trichloroethene	ND	0.50	0.10							
Trichlorofluoromethane	ND	0.50	0.23							
Vinyl chloride	ND	0.50	0.13							
Surrogate: 1,2-Dichloroethane-d4	*25.81*			*25.0000*		*103*	*64 - 155*			
Surrogate: 4-Bromofluorobenzene	*22.82*			*25.0000*		*91.3*	*73 - 124*			
Surrogate: Dibromofluoromethan	*25.38*			*25.0000*		*102*	*78 - 129*			
Surrogate: Toluene-d8	*24.26*			*25.0000*		*97.0*	*84 - 117*			
LCS (B0K0370-BS1)					Prepared: 11/23/2020 Analyzed: 11/23/2020					
1,1,1,2-Tetrachloroethane	17.5800	0.50	0.11	20.0000		87.9	79 - 116			
1,1,1-Trichloroethane	18.1100	0.50	0.21	20.0000		90.6	73 - 130			
1,1,2,2-Tetrachloroethane	16.2000	0.50	0.36	20.0000		81.0	71 - 122			
1,1,2-Trichloroethane	17.3100	0.50	0.25	20.0000		86.6	70 - 124			
1,1-Dichloroethane	17.9900	0.50	0.09	20.0000		90.0	69 - 128			
1,1-Dichloroethene	17.6200	0.50	0.13	20.0000		88.1	65 - 137			
1,1-Dichloropropene	18.2100	0.50	0.13	20.0000		91.0	74 - 129			
1,2,3-Trichloropropane	16.8200	0.50	0.39	20.0000		84.1	74 - 123			
1,2,3-Trichlorobenzene	18.9000	0.50	0.18	20.0000		94.5	59 - 130			
1,2,4-Trichlorobenzene	18.1000	0.50	0.16	20.0000		90.5	65 - 125			
1,2,4-Trimethylbenzene	17.5700	0.50	0.14	20.0000		87.8	88 - 124			L3
1,2-Dibromo-3-chloropropane	15.8500	0.50	0.41	20.0000		79.2	61 - 127			
1,2-Dibromoethane	16.7800	0.50	0.24	20.0000		83.9	72 - 125			
1,2-Dichlorobenzene	17.8200	0.50	0.20	20.0000		89.1	84 - 113			
1,2-Dichloroethane	17.5900	0.50	0.20	20.0000		88.0	68 - 130			
1,2-Dichloropropane	17.6700	0.50	0.15	20.0000		88.4	77 - 121			
1,3,5-Trimethylbenzene	17.9000	0.50	0.13	20.0000		89.5	83 - 124			

Certificate of Analysis

Hargis & Associates, Inc.	Project Number : Raytheon Main GETS Mid Month Sample
9171 Towne Centre Drive, Suite 375	Report To : Steve Netto
San Diego , CA 92122	Reported : 11/30/2020

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

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B0K0370 - MSVOA_LL_W (continued)										
LCS (B0K0370-BS1) - Continued					Prepared: 11/23/2020 Analyzed: 11/23/2020					
1,3-Dichlorobenzene	17.7600	0.50	0.16	20.0000		88.8	83 - 112			
1,3-Dichloropropane	17.6700	0.50	0.21	20.0000		88.4	77 - 119			
1,4-Dichlorobenzene	17.7200	0.50	0.17	20.0000		88.6	79 - 115			
2,2-Dichloropropane	19.9500	0.50	0.38	20.0000		99.8	67 - 149			
2-Chlorotoluene	17.9700	0.50	0.11	20.0000		89.8	81 - 119			
4-Chlorotoluene	18.6300	0.50	0.12	20.0000		93.2	86 - 117			
4-Isopropyltoluene	18.2100	0.50	0.11	20.0000		91.0	82 - 131			
Benzene	17.7600	0.50	0.13	20.0000		88.8	75 - 124			
Bromobenzene	17.0600	0.50	0.21	20.0000		85.3	82 - 108			
Bromodichloromethane	17.6400	0.50	0.14	20.0000		88.2	80 - 120			
Bromoform	17.8500	0.50	0.20	20.0000		89.2	70 - 123			
Bromomethane	14.2500	0.50	0.40	20.0000		71.2	44 - 151			
Carbon tetrachloride	18.4700	0.50	0.09	20.0000		92.4	62 - 140			
Chlorobenzene	17.8700	0.50	0.13	20.0000		89.4	80 - 112			
Chloroethane	15.5000	0.50	0.15	20.0000		77.5	42 - 167			
Chloroform	17.3900	0.50	0.11	20.0000		87.0	77 - 122			
Chloromethane	18.1000	0.50	0.12	20.0000		90.5	33 - 153			
cis-1,2-Dichloroethene	17.6000	0.50	0.14	20.0000		88.0	75 - 121			
cis-1,3-Dichloropropene	17.9700	0.50	0.13	20.0000		89.8	73 - 127			
Dibromochloromethane	17.4400	0.50	0.16	20.0000		87.2	77 - 122			
Dibromomethane	17.8100	0.50	0.19	20.0000		89.0	75 - 121			
Dichlorodifluoromethane	13.9100	0.50	0.18	20.0000		69.6	0 - 171			
Ethylbenzene	18.7600	0.50	0.13	20.0000		93.8	82 - 119			
Hexachlorobutadiene	19.4900	0.50	0.15	20.0000		97.4	71 - 131			
Isopropylbenzene	18.8700	0.50	0.10	20.0000		94.4	75 - 126			
m,p-Xylene	38.5500	1.0	0.19	40.0000		96.4	86 - 119			
Methylene chloride	16.4100	1.0	0.71	20.0000		82.0	76 - 125			
n-Butylbenzene	20.5800	0.50	0.11	20.0000		103	81 - 125			
n-Propylbenzene	18.9800	0.50	0.10	20.0000		94.9	78 - 130			
Naphthalene	16.3900	0.50	0.41	20.0000		82.0	47 - 128			
o-Xylene	18.9200	0.50	0.13	20.0000		94.6	85 - 119			
sec-Butylbenzene	19.7000	0.50	0.09	20.0000		98.5	78 - 130			
Styrene	17.1700	0.50	0.13	20.0000		85.8	62 - 148			
tert-Butylbenzene	18.9900	0.50	0.09	20.0000		95.0	77 - 125			
Tetrachloroethene	18.3600	0.50	0.10	20.0000		91.8	73 - 120			
Toluene	17.9000	0.50	0.12	20.0000		89.5	79 - 119			
trans-1,2-Dichloroethene	17.3700	0.50	0.09	20.0000		86.8	70 - 129			
Trichloroethene	18.5500	0.50	0.10	20.0000		92.8	73 - 117			
Trichlorofluoromethane	17.2800	0.50	0.23	20.0000		86.4	59 - 135			
Vinyl chloride	16.6500	0.50	0.13	20.0000		83.2	58 - 132			

Certificate of Analysis

Hargis & Associates, Inc.	Project Number : Raytheon Main GETS Mid Month Sample
9171 Towne Centre Drive, Suite 375	Report To : Steve Netto
San Diego , CA 92122	Reported : 11/30/2020

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

Analyte	Result (ug/L)	PQL (ug/L)		Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B0K0370 - MSVOA_LL_W (continued)										
LCS (B0K0370-BS1) - Continued						Prepared: 11/23/2020 Analyzed: 11/23/2020				
Surrogate: 1,2-Dichloroethane-d4	*23.91*			*25.0000*		*95.6*	*64 - 155*			
Surrogate: 4-Bromofluorobenzene	*25.47*			*25.0000*		*102*	*73 - 124*			
Surrogate: Dibromofluoromethan	*24.68*			*25.0000*		*98.7*	*78 - 129*			
Surrogate: Toluene-d8	*25.19*			*25.0000*		*101*	*84 - 117*			
LCS Dup (B0K0370-BSD1)						Prepared: 11/23/2020 Analyzed: 11/23/2020				
1,1,1,2-Tetrachloroethane	17.4000	0.50	0.11	20.0000		87.0	79 - 116	1.03	20	
1,1,1-Trichloroethane	14.8400	0.50	0.21	20.0000		74.2	73 - 130	19.8	20	
1,1,2,2-Tetrachloroethane	17.0700	0.50	0.36	20.0000		85.4	71 - 122	5.23	20	
1,1,2-Trichloroethane	17.8400	0.50	0.25	20.0000		89.2	70 - 124	3.02	20	
1,1-Dichloroethane	16.2000	0.50	0.09	20.0000		81.0	69 - 128	10.5	20	
1,1-Dichloroethene	14.0700	0.50	0.13	20.0000		70.4	65 - 137	22.4	20	R
1,1-Dichloropropene	13.9900	0.50	0.13	20.0000		70.0	74 - 129	26.2	20	L3, R
1,2,3-Trichloropropane	17.5100	0.50	0.39	20.0000		87.6	74 - 123	4.02	20	
1,2,3-Trichlorobenzene	17.8800	0.50	0.18	20.0000		89.4	59 - 130	5.55	20	
1,2,4-Trichlorobenzene	16.5200	0.50	0.16	20.0000		82.6	65 - 125	9.13	20	
1,2,4-Trimethylbenzene	15.4700	0.50	0.14	20.0000		77.4	88 - 124	12.7	20	L3
1,2-Dibromo-3-chloropropane	19.6400	0.50	0.41	20.0000		98.2	61 - 127	21.4	20	R
1,2-Dibromoethane	18.6200	0.50	0.24	20.0000		93.1	72 - 125	10.4	20	
1,2-Dichlorobenzene	16.4900	0.50	0.20	20.0000		82.4	84 - 113	7.75	20	L3
1,2-Dichloroethane	17.9100	0.50	0.20	20.0000		89.6	68 - 130	1.80	20	
1,2-Dichloropropane	17.6600	0.50	0.15	20.0000		88.3	77 - 121	0.0566	20	
1,3,5-Trimethylbenzene	14.7900	0.50	0.13	20.0000		74.0	83 - 124	19.0	20	L3
1,3-Dichlorobenzene	16.1900	0.50	0.16	20.0000		81.0	83 - 112	9.25	20	L3
1,3-Dichloropropane	18.9900	0.50	0.21	20.0000		95.0	77 - 119	7.20	20	
1,4-Dichlorobenzene	15.8200	0.50	0.17	20.0000		79.1	79 - 115	11.3	20	
2,2-Dichloropropane	14.9600	0.50	0.38	20.0000		74.8	67 - 149	28.6	20	R
2-Chlorotoluene	15.5700	0.50	0.11	20.0000		77.8	81 - 119	14.3	20	L3
4-Chlorotoluene	16.1300	0.50	0.12	20.0000		80.6	86 - 117	14.4	20	L3
4-Isopropyltoluene	14.4200	0.50	0.11	20.0000		72.1	82 - 131	23.2	20	L3, R
Benzene	16.5700	0.50	0.13	20.0000		82.8	75 - 124	6.93	20	
Bromobenzene	16.4400	0.50	0.21	20.0000		82.2	82 - 108	3.70	20	
Bromodichloromethane	17.2400	0.50	0.14	20.0000		86.2	80 - 120	2.29	20	
Bromoform	19.0000	0.50	0.20	20.0000		95.0	70 - 123	6.24	20	
Bromomethane	14.9300	0.50	0.40	20.0000		74.6	44 - 151	4.66	20	
Carbon tetrachloride	14.4600	0.50	0.09	20.0000		72.3	62 - 140	24.4	20	R
Chlorobenzene	16.5100	0.50	0.13	20.0000		82.6	80 - 112	7.91	20	
Chloroethane	13.3300	0.50	0.15	20.0000		66.6	42 - 167	15.1	20	
Chloroform	17.1700	0.50	0.11	20.0000		85.8	77 - 122	1.27	20	
Chloromethane	16.1700	0.50	0.12	20.0000		80.8	33 - 153	11.3	20	
cis-1,2-Dichloroethene	16.8900	0.50	0.14	20.0000		84.4	75 - 121	4.12	20	

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

Project Number : Raytheon Main GETS Mid Month Sample
Report To : Steve Netto
Reported : 11/30/2020

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

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B0K0370 - MSVOA_LL_W (continued)										
LCS Dup (B0K0370-BSD1) - Continued					Prepared: 11/23/2020 Analyzed: 11/23/2020					
cis-1,3-Dichloropropene	18.2800	0.50	0.13	20.0000		91.4	73 - 127	1.71	20	
Dibromochloromethane	18.2000	0.50	0.16	20.0000		91.0	77 - 122	4.26	20	
Dibromomethane	18.8100	0.50	0.19	20.0000		94.0	75 - 121	5.46	20	
Dichlorodifluoromethane	9.20000	0.50	0.18	20.0000		46.0	0 - 171	40.8	20	R
Ethylbenzene	15.4500	0.50	0.13	20.0000		77.2	82 - 119	19.4	20	L3
Hexachlorobutadiene	14.5100	0.50	0.15	20.0000		72.6	71 - 131	29.3	20	R
Isopropylbenzene	14.9700	0.50	0.10	20.0000		74.8	75 - 126	23.0	20	L3, R
m,p-Xylene	32.8500	1.0	0.19	40.0000		82.1	86 - 119	16.0	20	L3
Methylene chloride	17.1600	1.0	0.71	20.0000		85.8	76 - 125	4.47	20	
n-Butylbenzene	15.7100	0.50	0.11	20.0000		78.6	81 - 125	26.8	20	L3, R
n-Propylbenzene	14.7800	0.50	0.10	20.0000		73.9	78 - 130	24.9	20	L3, R
Naphthalene	16.8400	0.50	0.41	20.0000		84.2	47 - 128	2.71	20	
o-Xylene	16.5500	0.50	0.13	20.0000		82.8	85 - 119	13.4	20	L3
sec-Butylbenzene	15.0800	0.50	0.09	20.0000		75.4	78 - 130	26.6	20	L3, R
Styrene	15.7900	0.50	0.13	20.0000		79.0	62 - 148	8.37	20	
tert-Butylbenzene	14.9000	0.50	0.09	20.0000		74.5	77 - 125	24.1	20	L3, R
Tetrachloroethene	14.7600	0.50	0.10	20.0000		73.8	73 - 120	21.7	20	R
Toluene	17.2300	0.50	0.12	20.0000		86.2	79 - 119	3.81	20	
trans-1,2-Dichloroethene	15.3200	0.50	0.09	20.0000		76.6	70 - 129	12.5	20	
Trichloroethene	15.9700	0.50	0.10	20.0000		79.8	73 - 117	14.9	20	
Trichlorofluoromethane	12.2900	0.50	0.23	20.0000		61.4	59 - 135	33.8	20	R
Vinyl chloride	12.7400	0.50	0.13	20.0000		63.7	58 - 132	26.6	20	R
Surrogate: 1,2-Dichloroethane-d4	*23.94*			*25.0000*		*95.8*	*64 - 155*			
Surrogate: 4-Bromofluorobenzene	*25.31*			*25.0000*		*101*	*73 - 124*			
Surrogate: Dibromofluoromethan	*24.40*			*25.0000*		*97.6*	*78 - 129*			
Surrogate: Toluene-d8	*25.04*			*25.0000*		*100*	*84 - 117*			
Matrix Spike (B0K0370-MS1)			**Source: 2002568-13**		Prepared: 11/23/2020 Analyzed: 11/23/2020					
1,1,1,2-Tetrachloroethane	20.6800	0.50	0.11	20.0000	ND	103	81 - 133			
1,1,1-Trichloroethane	21.1700	0.50	0.21	20.0000	ND	106	93 - 149			
1,1,2,2-Tetrachloroethane	19.4300	0.50	0.36	20.0000	ND	97.2	69 - 151			
1,1,2-Trichloroethane	19.4700	0.50	0.25	20.0000	ND	97.4	78 - 130			
1,1-Dichloroethane	20.1000	0.50	0.09	20.0000	ND	100	68 - 135			
1,1-Dichloroethene	21.7500	0.50	0.13	20.0000	ND	109	77 - 134			
1,1-Dichloropropene	22.7900	0.50	0.13	20.0000	ND	114	91 - 138			
1,2,3-Trichloropropane	19.6700	0.50	0.39	20.0000	ND	98.4	77 - 136			
1,2,3-Trichlorobenzene	23.6100	0.50	0.18	20.0000	ND	118	72 - 129			
1,2,4-Trichlorobenzene	22.3200	0.50	0.16	20.0000	ND	112	64 - 135			
1,2,4-Trimethylbenzene	21.1700	0.50	0.14	20.0000	1.72000	97.2	10 - 179			
1,2-Dibromo-3-chloropropane	21.2400	0.50	0.41	20.0000	ND	106	62 - 153			

Certificate of Analysis

Hargis & Associates, Inc.	Project Number : Raytheon Main GETS Mid Month Sample
9171 Towne Centre Drive, Suite 375	Report To : Steve Netto
San Diego , CA 92122	Reported : 11/30/2020

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

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B0K0370 - MSVOA_LL_W (continued)										
Matrix Spike (B0K0370-MS1) - Continued			**Source: 2002568-13**		Prepared: 11/23/2020 Analyzed: 11/23/2020					
1,2-Dibromoethane	21.1500	0.50	0.24	20.0000	ND	106	80 - 132			
1,2-Dichlorobenzene	20.6500	0.50	0.20	20.0000	ND	103	81 - 131			
1,2-Dichloroethane	19.8700	0.50	0.20	20.0000	ND	99.4	68 - 146			
1,2-Dichloropropane	20.4000	0.50	0.15	20.0000	ND	102	74 - 136			
1,3,5-Trimethylbenzene	20.8400	0.50	0.13	20.0000	1.07000	98.8	66 - 149			
1,3-Dichlorobenzene	20.6600	0.50	0.16	20.0000	ND	103	79 - 128			
1,3-Dichloropropane	20.9400	0.50	0.21	20.0000	ND	105	80 - 129			
1,4-Dichlorobenzene	20.3500	0.50	0.17	20.0000	ND	102	84 - 121			
2,2-Dichloropropane	23.3500	0.50	0.38	20.0000	ND	117	63 - 179			
2-Chlorotoluene	21.1200	0.50	0.11	20.0000	ND	106	76 - 142			
4-Chlorotoluene	21.6100	0.50	0.12	20.0000	ND	108	72 - 152			
4-Isopropyltoluene	21.1100	0.50	0.11	20.0000	ND	106	84 - 141			
Benzene	21.2300	0.50	0.13	20.0000	ND	106	79 - 131			
Bromobenzene	20.9500	0.50	0.21	20.0000	ND	105	82 - 121			
Bromodichloromethane	19.0100	0.50	0.14	20.0000	ND	95.0	86 - 138			
Bromoform	20.6300	0.50	0.20	20.0000	ND	103	80 - 136			
Bromomethane	18.4000	0.50	0.40	20.0000	ND	92.0	35 - 194			
Carbon tetrachloride	21.9900	0.50	0.09	20.0000	ND	110	73 - 176			
Chlorobenzene	21.0800	0.50	0.13	20.0000	ND	105	81 - 124			
Chloroethane	18.4600	0.50	0.15	20.0000	ND	92.3	0 - 257			
Chloroform	19.6600	0.50	0.11	20.0000	ND	98.3	76 - 139			
Chloromethane	23.3900	0.50	0.12	20.0000	ND	117	27 - 144			
cis-1,2-Dichloroethene	20.5100	0.50	0.14	20.0000	ND	103	69 - 139			
cis-1,3-Dichloropropene	21.6800	0.50	0.13	20.0000	ND	108	67 - 149			
Dibromochloromethane	19.5000	0.50	0.16	20.0000	ND	97.5	91 - 131			
Dibromomethane	21.2100	0.50	0.19	20.0000	ND	106	70 - 134			
Dichlorodifluoromethane	20.2400	0.50	0.18	20.0000	ND	101	0 - 161			
Ethylbenzene	22.4800	0.50	0.13	20.0000	ND	112	89 - 134			
Hexachlorobutadiene	18.8100	0.50	0.15	20.0000	ND	94.0	73 - 137			
Isopropylbenzene	22.8600	0.50	0.10	20.0000	ND	114	72 - 152			
m,p-Xylene	45.0200	1.0	0.19	40.0000	ND	113	82 - 141			
Methylene chloride	18.1700	1.0	0.71	20.0000	ND	90.8	74 - 133			
n-Butylbenzene	23.9900	0.50	0.11	20.0000	ND	120	65 - 164			
n-Propylbenzene	22.2900	0.50	0.10	20.0000	ND	111	73 - 161			
Naphthalene	22.8400	0.50	0.41	20.0000	ND	114	59 - 105			M2
o-Xylene	22.6200	0.50	0.13	20.0000	ND	113	90 - 134			
sec-Butylbenzene	23.7700	0.50	0.09	20.0000	ND	119	80 - 157			
Styrene	20.4400	0.50	0.13	20.0000	ND	102	0 - 222			
tert-Butylbenzene	22.6100	0.50	0.09	20.0000	ND	113	88 - 141			
Tetrachloroethene	22.1400	0.50	0.10	20.0000	ND	111	75 - 136			

Certificate of Analysis

Hargis & Associates, Inc.	Project Number : Raytheon Main GETS Mid Month Sample
9171 Towne Centre Drive, Suite 375	Report To : Steve Netto
San Diego , CA 92122	Reported : 11/30/2020

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

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B0K0370 - MSVOA_LL_W (continued)										
Matrix Spike (B0K0370-MS1) - Continued			**Source: 2002568-13**		Prepared: 11/23/2020 Analyzed: 11/23/2020					
Toluene	21.1300	0.50	0.12	20.0000	0.180000	105	82 - 132			
trans-1,2-Dichloroethene	21.2500	0.50	0.09	20.0000	ND	106	65 - 135			
Trichloroethene	21.6100	0.50	0.10	20.0000	ND	108	75 - 128			
Trichlorofluoromethane	20.9300	0.50	0.23	20.0000	ND	105	89 - 143			
Vinyl chloride	20.9400	0.50	0.13	20.0000	ND	105	50 - 148			
Surrogate: 1,2-Dichloroethane-d4	*22.94*			*25.0000*		*91.8*	*64 - 155*			
Surrogate: 4-Bromofluorobenzene	*26.29*			*25.0000*		*105*	*73 - 124*			
Surrogate: Dibromofluoromethan	*23.06*			*25.0000*		*92.2*	*78 - 129*			
Surrogate: Toluene-d8	*24.67*			*25.0000*		*98.7*	*84 - 117*			
Matrix Spike Dup (B0K0370-MSD1)			**Source: 2002568-13**		Prepared: 11/23/2020 Analyzed: 11/23/2020					
1,1,1,2-Tetrachloroethane	20.6800	0.50	0.11	20.0000	ND	103	81 - 133	0.00	20	
1,1,1-Trichloroethane	21.3700	0.50	0.21	20.0000	ND	107	93 - 149	0.940	20	
1,1,2,2-Tetrachloroethane	19.0800	0.50	0.36	20.0000	ND	95.4	69 - 151	1.82	20	
1,1,2-Trichloroethane	20.6000	0.50	0.25	20.0000	ND	103	78 - 130	5.64	20	
1,1-Dichloroethane	20.4800	0.50	0.09	20.0000	ND	102	68 - 135	1.87	20	
1,1-Dichloroethene	21.4000	0.50	0.13	20.0000	ND	107	77 - 134	1.62	20	
1,1-Dichloropropene	23.0600	0.50	0.13	20.0000	ND	115	91 - 138	1.18	20	
1,2,3-Trichloropropane	21.0500	0.50	0.39	20.0000	ND	105	77 - 136	6.78	20	
1,2,3-Trichlorobenzene	23.0500	0.50	0.18	20.0000	ND	115	72 - 129	2.40	20	
1,2,4-Trichlorobenzene	22.6300	0.50	0.16	20.0000	ND	113	64 - 135	1.38	20	
1,2,4-Trimethylbenzene	21.2300	0.50	0.14	20.0000	1.72000	97.6	10 - 179	0.283	20	
1,2-Dibromo-3-chloropropane	21.5100	0.50	0.41	20.0000	ND	108	62 - 153	1.26	20	
1,2-Dibromoethane	21.4500	0.50	0.24	20.0000	ND	107	80 - 132	1.41	20	
1,2-Dichlorobenzene	21.1300	0.50	0.20	20.0000	ND	106	81 - 131	2.30	20	
1,2-Dichloroethane	19.9500	0.50	0.20	20.0000	ND	99.8	68 - 146	0.402	20	
1,2-Dichloropropane	20.6900	0.50	0.15	20.0000	ND	103	74 - 136	1.41	20	
1,3,5-Trimethylbenzene	20.9400	0.50	0.13	20.0000	1.07000	99.4	66 - 149	0.479	20	
1,3-Dichlorobenzene	20.9000	0.50	0.16	20.0000	ND	104	79 - 128	1.15	20	
1,3-Dichloropropane	21.0600	0.50	0.21	20.0000	ND	105	80 - 129	0.571	20	
1,4-Dichlorobenzene	20.6400	0.50	0.17	20.0000	ND	103	84 - 121	1.41	20	
2,2-Dichloropropane	23.5700	0.50	0.38	20.0000	ND	118	63 - 179	0.938	20	
2-Chlorotoluene	21.2300	0.50	0.11	20.0000	ND	106	76 - 142	0.519	20	
4-Chlorotoluene	22.1500	0.50	0.12	20.0000	ND	111	72 - 152	2.47	20	
4-Isopropyltoluene	21.4700	0.50	0.11	20.0000	ND	107	84 - 141	1.69	20	
Benzene	20.8400	0.50	0.13	20.0000	ND	104	79 - 131	1.85	20	
Bromobenzene	21.4000	0.50	0.21	20.0000	ND	107	82 - 121	2.13	20	
Bromodichloromethane	19.8200	0.50	0.14	20.0000	ND	99.1	86 - 138	4.17	20	
Bromoform	20.6200	0.50	0.20	20.0000	ND	103	80 - 136	0.0485	20	
Bromomethane	19.3800	0.50	0.40	20.0000	ND	96.9	35 - 194	5.19	20	

Certificate of Analysis

Hargis & Associates, Inc.	Project Number : Raytheon Main GETS Mid Month Sample
9171 Towne Centre Drive, Suite 375	Report To : Steve Netto
San Diego , CA 92122	Reported : 11/30/2020

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

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B0K0370 - MSVOA_LL_W (continued)										
Matrix Spike Dup (B0K0370-MSD1) - Continued			**Source: 2002568-13**		Prepared: 11/23/2020 Analyzed: 11/23/2020					
Carbon tetrachloride	21.8200	0.50	0.09	20.0000	ND	109	73 - 176	0.776	20	
Chlorobenzene	20.8300	0.50	0.13	20.0000	ND	104	81 - 124	1.19	20	
Chloroethane	18.8900	0.50	0.15	20.0000	ND	94.4	0 - 257	2.30	20	
Chloroform	19.5400	0.50	0.11	20.0000	ND	97.7	76 - 139	0.612	20	
Chloromethane	22.1400	0.50	0.12	20.0000	ND	111	27 - 144	5.49	20	
cis-1,2-Dichloroethene	20.0300	0.50	0.14	20.0000	ND	100	69 - 139	2.37	20	
cis-1,3-Dichloropropene	22.0100	0.50	0.13	20.0000	ND	110	67 - 149	1.51	20	
Dibromochloromethane	20.1700	0.50	0.16	20.0000	ND	101	91 - 131	3.38	20	
Dibromomethane	21.7900	0.50	0.19	20.0000	ND	109	70 - 134	2.70	20	
Dichlorodifluoromethane	21.2000	0.50	0.18	20.0000	ND	106	0 - 161	4.63	20	
Ethylbenzene	22.4200	0.50	0.13	20.0000	ND	112	89 - 134	0.267	20	
Hexachlorobutadiene	18.5500	0.50	0.15	20.0000	ND	92.8	73 - 137	1.39	20	
Isopropylbenzene	22.6200	0.50	0.10	20.0000	ND	113	72 - 152	1.06	20	
m,p-Xylene	46.2400	1.0	0.19	40.0000	ND	116	82 - 141	2.67	20	
Methylene chloride	19.4800	1.0	0.71	20.0000	ND	97.4	74 - 133	6.96	20	
n-Butylbenzene	23.2600	0.50	0.11	20.0000	ND	116	65 - 164	3.09	20	
n-Propylbenzene	22.9800	0.50	0.10	20.0000	ND	115	73 - 161	3.05	20	
Naphthalene	22.4100	0.50	0.41	20.0000	ND	112	59 - 105	1.90	20	M2
o-Xylene	23.0300	0.50	0.13	20.0000	ND	115	90 - 134	1.80	20	
sec-Butylbenzene	23.9000	0.50	0.09	20.0000	ND	120	80 - 157	0.545	20	
Styrene	20.2500	0.50	0.13	20.0000	ND	101	0 - 222	0.934	20	
tert-Butylbenzene	22.5800	0.50	0.09	20.0000	ND	113	88 - 141	0.133	20	
Tetrachloroethene	22.6500	0.50	0.10	20.0000	ND	113	75 - 136	2.28	20	
Toluene	21.3500	0.50	0.12	20.0000	0.180000	106	82 - 132	1.04	20	
trans-1,2-Dichloroethene	21.6500	0.50	0.09	20.0000	ND	108	65 - 135	1.86	20	
Trichloroethene	21.6100	0.50	0.10	20.0000	ND	108	75 - 128	0.00	20	
Trichlorofluoromethane	21.9100	0.50	0.23	20.0000	ND	110	89 - 143	4.58	20	
Vinyl chloride	21.3500	0.50	0.13	20.0000	ND	107	50 - 148	1.94	20	
Surrogate: 1,2-Dichloroethane-d4	*23.17*			*25.0000*		*92.7*	*64 - 155*			
Surrogate: 4-Bromofluorobenzene	*26.34*			*25.0000*		*105*	*73 - 124*			
Surrogate: Dibromofluoromethan	*23.06*			*25.0000*		*92.2*	*78 - 129*			
Surrogate: Toluene-d8	*24.69*			*25.0000*		*98.8*	*84 - 117*			

Certificate of Analysis

Hargis & Associates, Inc.	Project Number : Raytheon Main GETS Mid Month Sample
9171 Towne Centre Drive, Suite 375	Report To : Steve Netto
San Diego , CA 92122	Reported : 11/30/2020

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

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B0K0356 - MSSEMI_W										
Blank (B0K0356-BLK1)					Prepared: 11/20/2020 Analyzed: 11/25/2020					
1,4-Dioxane	ND	2.0	0.84							
Surrogate: 1,2-Dichlorobenzene-d	*25.96*			*100.000*		*26.0*	*17 - 119*			
Surrogate: 2-Fluorobiphenyl	*29.61*			*100.000*		*29.6*	*10 - 133*			
Surrogate: 4-Terphenyl-d14	*27.65*			*100.000*		*27.6*	*5 - 139*			
Surrogate: Nitrobenzene-d5	*24.93*			*100.000*		*24.9*	*13 - 150*			
LCS (B0K0356-BS1)					Prepared: 11/20/2020 Analyzed: 11/25/2020					
1,4-Dioxane	104.800	2.0	0.84	100.000		105	75 - 155			
Surrogate: 1,2-Dichlorobenzene-d	*23.89*			*100.000*		*23.9*	*17 - 119*			
Surrogate: 2-Fluorobiphenyl	*30.28*			*100.000*		*30.3*	*10 - 133*			
Surrogate: 4-Terphenyl-d14	*32.55*			*100.000*		*32.6*	*5 - 139*			
Surrogate: Nitrobenzene-d5	*26.23*			*100.000*		*26.2*	*13 - 150*			
LCS Dup (B0K0356-BSD1)					Prepared: 11/20/2020 Analyzed: 11/25/2020					
1,4-Dioxane	104.470	2.0	0.84	100.000		104	75 - 155	0.315	20	
Surrogate: 1,2-Dichlorobenzene-d	*25.30*			*100.000*		*25.3*	*17 - 119*			
Surrogate: 2-Fluorobiphenyl	*30.25*			*100.000*		*30.2*	*10 - 133*			
Surrogate: 4-Terphenyl-d14	*33.72*			*100.000*		*33.7*	*5 - 139*			
Surrogate: Nitrobenzene-d5	*26.31*			*100.000*		*26.3*	*13 - 150*			

Certificate of Analysis

Hargis & Associates, Inc.	Project Number : Raytheon Main GETS Mid Month Sample
9171 Towne Centre Drive, Suite 375	Report To : Steve Netto
San Diego , CA 92122	Reported : 11/30/2020

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

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B0K0357 - MSSEMI_W										
Blank (B0K0357-BLK1)						Prepared: 11/20/2020 Analyzed: 11/24/2020				
1,4-Dioxane	ND	0.20	0.05							
Surrogate: 1,2-Dichlorobenzene-d	*0.9297*			*2.00000*		*46.5*	*13 - 99*			
Surrogate: 2-Fluorobiphenyl	*1.538*			*2.00000*		*76.9*	*8 - 111*			
Surrogate: 4-Terphenyl-d14	*1.284*			*2.00000*		*64.2*	*12 - 113*			
Surrogate: Nitrobenzene-d5	*1.021*			*2.00000*		*51.1*	*15 - 121*			
LCS (B0K0357-BS1)						Prepared: 11/20/2020 Analyzed: 11/24/2020				
1,4-Dioxane	0.862710	0.20	0.05	1.00000		86.3	75 - 155			
Surrogate: 1,2-Dichlorobenzene-d	*0.7360*			*2.00000*		*36.8*	*13 - 99*			
Surrogate: 2-Fluorobiphenyl	*1.166*			*2.00000*		*58.3*	*8 - 111*			
Surrogate: 4-Terphenyl-d14	*0.9669*			*2.00000*		*48.3*	*12 - 113*			
Surrogate: Nitrobenzene-d5	*0.8289*			*2.00000*		*41.4*	*15 - 121*			
LCS Dup (B0K0357-BSD1)						Prepared: 11/20/2020 Analyzed: 11/24/2020				
1,4-Dioxane	0.824180	0.20	0.05	1.00000		82.4	75 - 155	4.57	20	
Surrogate: 1,2-Dichlorobenzene-d	*0.7396*			*2.00000*		*37.0*	*13 - 99*			
Surrogate: 2-Fluorobiphenyl	*1.193*			*2.00000*		*59.6*	*8 - 111*			
Surrogate: 4-Terphenyl-d14	*0.9696*			*2.00000*		*48.5*	*12 - 113*			
Surrogate: Nitrobenzene-d5	*0.8241*			*2.00000*		*41.2*	*15 - 121*			

Certificate of Analysis

Hargis & Associates, Inc.	Project Number : Raytheon Main GETS Mid Month Sample
9171 Towne Centre Drive, Suite 375	Report To : Steve Netto
San Diego , CA 92122	Reported : 11/30/2020

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.
L3	Laboratory control sample outside in-house established limits but within method criteria.
ND	Analyte is not detected at or above the Practical Quantitation Limit (PQL). When client requests quantitation against MDL, analyte is not detected at or above the Method Detection Limit (MDL)
PQL	Practical Quantitation Limit
MDL	Method Detection Limit
NR	Not Reported
RPD	Relative Percent Difference
CA2	CA-ELAP (CDPH)
OR1	OR-NELAP (OSPHL)

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.
(3) Results are wet unless otherwise specified.

HARGIS+ASSOCIATES, INC.
HYDROGEOLOGY • ENGINEERING

2002562

Date: 11/19/2020
Page 1 of 1

PROJECT: Raytheon Main GETS Mid Month Sample

TASK NO.: 532.15

Project Manager Steve Netto
QA Manager Ross Horton
Phone 858.455.6500
Fax 858.455.6533

Sampled By: Ruben Sanchez

SAMPLE COLLECTION

LAB ID	SAMPLE ID	Date	Time	MATRIX: Groundwater	MATRIX: Lab prepared water	PRESERVATION: Hydrochloric Acid (HCl)	PRESERVATION: Nitric Acid (HNO_3)	PRESERVATION:	PRESERVATION: Sulfuric Acid (H_2SO_4)	PRESERVATION: Ice	CONTAINERS: 40-ml VOA	CONTAINERS: 125 mL Poly	CONTAINERS: 250 mL Poly	CONTAINERS: 250 mL Glass	CONTAINERS: 1 L Poly	CONTAINERS: 1L Amber	ANALYSIS REQUESTED: VOCs by EPA 8260B	Bromate by EPA 317	Bromide by EPA 300	Alkalinity by SM2320B	Total Organic Carbon by SM5310B	Total Suspended Solids by SM2540D	UV Absorption EPA 415.3 @254 nm	1,4-Dioxane by EPA 8270C MOD	1,4-Dioxane by EPA 8270C SIM	Expected Concentration Range (ppb) for VOAs: 0 - 10	10 - 100	100 - 1,000	>1,000		SPECIAL HANDLING: 24 hr TAT	48 Hour TAT	5 Day TAT	Level IV Data Validation Requested	MS/MSD Requested	REMARKS
1	TB-111920	11/19/2020	8:00		X	X				X	2					1	X									X							X			
2	CEFF	11/19/2020	10:00	X		X				X	3					1	X								X	X							X			
3	CBT	11/19/2020	10:05	X		X				X	3					1	X								X	X							X			
4	POX	11/19/2020	10:10	X		X				X	3					1	X								X	X							X			
5	INF	11/19/2020	10:15	X		X				X	3					1	X							X				X					X			
6	EW-02	11/19/2020	10:40	X		X				X	3					1	X							X			X						X			
7	MW-29	11/19/2020	11:00	X		X				X	3					1	X							X				X					X			
Total number of containers per analysis:											20					6																				Total No. of Containers: 26

Relinquished By: / Company:	Date / Time	Received By: / Company	Date / Time
H+A	11-19-20 1305	H+A	11-19-2020 13:05
H+A	11-19-2020 1547		11/19/2015:51

- ✓ No. of containers correct
- ✓ Received in good condition
- Custody seals secure
- ✓ Conforms to COC document

3.4 Temperature on receipt

Laboratory

Adcanced Technology Laboratories
Attn: Rachelle Arada
3275 Walnut Ave
Signal Hill, CA 90755
(562) 989-4045

Send Results to:
Steve Netto & Ross Horton
9171 Towne Centre Drive
Suite 375
San Diego, CA 92122
Ph: 858.455.6500
snetto@hargis.com
rhorton@hargis.com

Instructions

1. Fill out form completely and sign only after verified for completeness
2. Complete in ballpoint pen. Draw one line through error, initial and date correction
3. Indicate the number of sample containers in analytical request space; indicate choice with ✓ or ×
4. Note applicable preservatives, special instructions, and deviations from typical environmental samples.
5. Consult project QA documents for specific instructions.