

Project No. 151297
VIA E-MAIL AND ENVIROSTOR UPLOAD

August 10, 2023

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

RE: Data Submittal for Groundwater Monitoring and Groundwater Extraction and Treatment System Pilot Testing, Second Quarter 2023, 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 second quarter of 2023 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, 2011b, and 2017). Groundwater treatment pilot testing continued throughout the second quarter of 2023 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 second quarter of 2023 groundwater monitoring and pilot GETS operation from March through May 2023 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 accessible wells and piezometers, and groundwater samples were collected from extraction wells and select monitor wells in May 2023 in general accordance with the GMWPSAP and Addendum No. 1 (H+A, 2003 and 2011a) (Table 1).

Water Level Measurement and Groundwater Sample Collection

Quarterly groundwater levels were measured in all accessible wells on May 15, 2023 (Figures 2 and 3; Table 2; Appendix A). During the second quarter monitoring event, wells MW-36 and MW-39 were not accessible for groundwater monitoring. Both wells are located on Orange County Flood Control District (OCFCD) property and access could not be coordinated at the time of gauging and sampling.

Quarterly groundwater samples were collected from May 16 through May 17, 2023 (Appendix A). Additional monthly groundwater monitoring was conducted at extraction wells EW-02 and MW-29 as part of routine operation and monitoring of the pilot GETS. Analytical results are summarized in Table 3 and provided in Appendix B. A summary of the pilot GETS operation and monitoring is provided below. The next annual report will present a full discussion of groundwater monitoring results.

Original and field duplicate groundwater samples were analyzed by Eurofins Calscience, Tustin, California (Eurofins) (Appendix B). Laboratory split groundwater samples were analyzed by Advanced Technology Laboratories, Inc., Signal Hill, California (ATL) (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).

Additional Groundwater Monitoring Activity

As mentioned in the 2022/2023 Annual Report and in accordance with the technical memorandum for per- and polyfluoralkyl substances (PFAS) screening (EA, 2023a), Phase 1 and Phase 2 PFAS sampling events were completed on January 24th, 2023, and April 24 – 26, 2023, respectively. A separate report summarizing results was submitted to the DTSC and California Regional Water Quality Control Board, Santa Ana Region on July 28th, 2023 (EA, 2023b).

Quality Assurance /Quality Control

QA/QC samples collected in May 2023 consisted of trip blanks, field duplicates, equipment rinsate blanks, and laboratory split samples. Trip blanks were provided by Eurofins. Field duplicate samples and laboratory split samples were collected for analysis of VOCs and 1,4-dioxane from monitoring wells MW-31 and MW-41 in May 2023 (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. 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-31 05/17/2023	1,1-DCE	39	40	2.5	41	5	
	TCE	4.2	4.2	0	4	4.9	
	1,4-dioxane	<0.38	3	155	2.4	145	E
MW-41 05/17/2023	1,1-DCE	6.6	6.5	1.5	6.8	3.0	
	TCE	<0.50	<0.50	NA	<0.50	NA	
	1,4-dioxane	<0.38	<0.37	NA	1.3	109	E

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, as provided in the Quality Assurance Project Plan (QAPP) (H+A, 2003, Appendix B).

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

The RPDs between the results of groundwater samples collected from MW-41 and MW-31 were within quality control criteria for 1,1-DCE and TCE. “Estimated” (E) qualifiers were assigned to 1,4-dioxane samples from MW-31 and MW-41 due to elevated RPDs between samples.

There were no detections of 1,4-dioxane in the equipment rinsate blank or method blanks analyzed with groundwater samples collected during the May 2023 groundwater monitoring event (Table 3; Appendix B). Additionally, there were no detections of VOCs in the trip blanks, equipment rinsate blank or method blanks analyzed with groundwater samples collected during the May 2023 groundwater sampling event.

Results were qualified as E or “Unusable” (U) based on holding times, lab control sample limits, and historical trends. These qualifiers were assigned in the following cases:

- Samples lab qualified with holding time exceedances (H) were additionally qualified with E.
- Samples lab qualified with lab control sample or lab control sample duplicates outside of acceptance limits (*- or *+) were additionally qualified with E.

- Samples lab qualified with lab control sample or lab control sample duplicates outside of control limits (*1) were additionally qualified with E.
- Samples lab qualified with matrix spike or matrix spike duplicates outside of control limits (F1 or F2) were additionally qualified with E.
- Samples lab qualified with improper chemical preservation (Q3) were additionally qualified with E.
- The Toluene detection of 4.6 ug/l at MW-32B was additionally qualified with U since the well/analyte pair was historically non-detect to low detect with a historic range of <0.50 to 0.14 J (Table 3).

All other 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 March through May 2023. 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), with 30 gpm extraction from EW-02 and 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.

During the second quarter of 2023, the pilot GETS was operational at approximately 94 percent of the available runtime, and approximately 5.0 million gallons of groundwater were treated and discharged to the sanitary sewer (Table 4). The average operational monthly discharge flow rate to the sanitary sewer from March to May 2023 was approximately 43.2 gpm. Since startup of the pilot GETS, approximately 253 million gallons of groundwater have been treated at an average operational flow rate of 39.9 gpm through the end of May 2023 (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). Samples collected during these activities were transported to Eurofins 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 second quarter of 2023. The samples collected from the effluent of the UV Ox treatment unit (Post-UV-Ox), carbon

breakthrough, and carbon effluent were analyzed for VOCs and 1,4-dioxane, and sample results throughout the quarter were non-detect (Table 6; Appendix B).

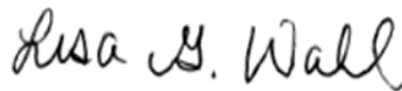
The pilot GETS continues to remove VOCs and 1,4-dioxane from extracted groundwater. During the second quarter of 2023, the pilot GETS removed approximately 2 pounds of VOCs and 1.36 pounds of 1,4-dioxane from extracted groundwater. Since the startup of the pilot GETS in July 2008, approximately 204 pounds of VOCs and 60 pounds of 1,4-dioxane have been removed from groundwater through May 2023. 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 858-221-0264.

Respectfully Submitted,
Engineering Analytics, Inc.



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Cc:

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Mr. Paul Rodolf, Hydraflow
Mr. Robinson Sioson, Hydraflow
Mr. Steve Netto, Hargis + Associates

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REFERENCES

- California Environmental Protection Agency, Department of Toxic Substances Control (DTSC), 2003. Letter from A. Plaza to P. Brewer, Raytheon Systems Company, re: Review of Additional Groundwater Assessment Workplan and Groundwater Monitoring Workplan and Sampling and Analysis Plan. May 20, 2003.
- California Environmental Protection Agency, Department of Toxic Substances Control (DTSC), 2011. Email from W. Jeffers to C. Ross, S. Netto, P. Brewer, G. Taylor, re: Conditional Approval of Addendum No. 1 to the Ground Water Monitoring Work Plan, Raytheon Fullerton. June 7, 2011.
- California Environmental Protection Agency, Department of Toxic Substances Control (DTSC), 2013. Email from W. Jeffers to C. Ross and S. Netto, re: Groundwater Extraction and Treatment System Pilot Testing Corrective Measures Study Workplan, Addendum #6. April 16, 2013.
- Engineering Analytics, Inc., 2023a. Technical Memorandum to S. Rounds, DTSC, re: Per- and Polyfluoroalkyl Substances (PFAS) Screening, Raytheon Company (Former Hughes Aircraft Company) Site, Fullerton, California. January 13, 2023.
- Engineering Analytics, Inc., 2023b. Technical Memorandum to S. Rounds, DTSC, re: Per- and Polyfluoroalkyl Substances (PFAS) Screening Results, Raytheon Company (Former Hughes Aircraft Company) Site, Fullerton, California. July 28, 2023.
- 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.
- Hargis + Associates, Inc. (H+A), 2011a. Letter from C. Ross and S. Netto 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.
- Hargis + Associates, Inc. (H+A), 2011b. Letter from S. Netto and K. Simon 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.

Hargis + Associates, Inc. (H+A), 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.

Hargis + Associates, Inc. (H+A), 2017. Letter from S. Netto and T. Evans to S. Rounds, DTSC, re: Addendum No. 2 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. October 6, 2017.

TABLES

Table 1. Groundwater Monitoring Program

Well Identifier	Hydrogeologic Zone	SAMPLING FREQUENCY			
		Quarterly	Semiannual	Annual	Biannual
		February, May, August, November	February, August	February	February (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	VOCs; 1,4-Dioxane			
EW-02*	B	VOCs; 1,4-Dioxane			
MW-16	B		VOCs; 1,4-Dioxane		
MW-26C	B	VOCs; 1,4-Dioxane			
MW-27	B			VOCs; 1,4-Dioxane	
MW-28	B	VOCs; 1,4-Dioxane			
MW-29*	B	VOCs; 1,4-Dioxane			
MW-30A	B	VOCs; 1,4-Dioxane			
MW-31	B	VOCs; 1,4-Dioxane			
MW-32B	B	VOCs; 1,4-Dioxane			
MW-33	B	VOCs; 1,4-Dioxane			
MW-34B	B	VOCs; 1,4-Dioxane			
MW-35C	B	VOCs; 1,4-Dioxane			
MW-36	B	VOCs; 1,4-Dioxane			
MW-39	B	VOCs; 1,4-Dioxane			
MW-40	B	VOCs; 1,4-Dioxane			
MW-41	B	VOCs; 1,4-Dioxane			
MW-42	B	VOCs; 1,4-Dioxane			
MW-43	B	VOCs; 1,4-Dioxane			
MW-21	BC	VOCs; 1,4-Dioxane			
MW-08	BC	VOCs; 1,4-Dioxane			
MW-30B	BC	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		Piezometer - Water Level Measurement Only		
MW-37	D			VOCs; 1,4-Dioxane	

FOOTNOTES:

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

Table 2. Groundwater Levels

Well Identifier	Date Measured	Reference Point Elevation (feet msl)	Depth to Water (feet btoc)	Water Level Elevation (feet msl)	Remediation System On
Regional Groundwater System Monitor and Extraction Wells					
EW-01	5/15/2023	141.07	110.42	30.65	
EW-02	3/7/2023	132.97	112.26	20.71	Pilot GETS
EW-02	4/6/2023	132.97	109.94	23.03	Pilot GETS
EW-02	5/11/2023	132.97	109.87	23.10	Pilot GETS
EW-02	6/1/2023	132.97	108.84	24.13	Pilot GETS
MW-06	5/15/2023	184.7	147.61	37.09	
MW-08	5/15/2023	155.91	124.96	30.95	
MW-09	5/15/2023	180.1	145.05	35.05	
MW-13	5/15/2023	141.84	114.44	27.40	
MW-15	5/15/2023	144.95	123.41	21.54	
MW-16	5/15/2023	142.4	112.2	30.20	
MW-17	5/15/2023	142.7	114.35	28.35	
MW-18	5/15/2023	142.32	114.72	27.60	
MW-19	5/15/2023	142.06	114.3	27.76	
MW-20	5/15/2023	184.19	142.68	41.51	
MW-21	5/15/2023	141.18	109	32.18	
MW-22	5/15/2023	138.65	111.06	27.59	
MW-23	5/15/2023	137.33	111.28	26.05	
MW-24	5/15/2023	142.83	107.54	35.29	
MW-25	5/15/2023	142.64	110.07	32.57	
MW-26A	5/15/2023	137.04	113.31	23.73	
MW-26B	5/15/2023	137.05	116.1	20.95	
MW-26C	5/15/2023	137.22	107.54	29.68	
MW-27	5/15/2023	137.16	107.04	30.12	
MW-28	5/15/2023	140.77	111.47	29.30	
MW-29	3/7/2023	139.81	171.31	-31.50	Pilot GETS
MW-29	4/6/2023	139.81	177.91	-38.10	Pilot GETS
MW-29	5/11/2023	139.81	171.3	-31.49	Pilot GETS
MW-29	6/1/2023	139.81	168.44	-28.63	Pilot GETS
MW-30A	5/15/2023	129.44	100.69	28.75	
MW-30B	5/15/2023	129.39	99.2	30.19	
MW-31	5/15/2023	119.6	89.36	30.24	
MW-32A	5/15/2023	92.88	63.84	29.04	
MW-32B	5/15/2023	92.89	63.66	29.23	
MW-32C	5/15/2023	92.88	53.78	39.10	
MW-33	5/15/2023	83.19	55.21	27.98	
MW-34A	5/15/2023	153.25	132.73	20.52	
MW-34B	5/15/2023	153.11	125.21	27.90	
MW-34C	5/15/2023	153.29	124.9	28.39	
MW-35A	5/15/2023	93.57	77.49	16.08	
MW-35B	5/15/2023	93.56	70.71	22.85	
MW-35C	5/15/2023	93.55	64.24	29.31	
MW-36	5/15/2023	86.65	59.68	26.97	
MW-37	5/15/2023	155.6	124.1	31.50	
MW-38	5/15/2023	154.9	137.95	16.95	
MW-39	5/15/2023	84.25	57.7	26.55	
MW-40	5/15/2023	123.4	91.3	32.10	

Table 2. Groundwater Levels

Well Identifier	Date Measured	Reference Point Elevation (feet msl)	Depth to Water (feet btoc)	Water Level Elevation (feet msl)	Remediation System On
MW-41	5/15/2023	155.6	128.59	27.01	
MW-42	5/15/2023	82.8	55.94	26.86	
MW-43	5/15/2023	76.64	50.35	26.29	
Perched Zone Wells					
P-07	5/15/2023	142.31	110.57	31.74	
P-09	5/15/2023	183.86	120.89	62.97	

FOOTNOTES:

¹ 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 4. Pilot Groundwater Extraction and Treatment System Operational Summary

OPERATIONAL PERIOD ¹	WELLFIELD PRODUCTION ² (gallons)	AVERAGE DISCHARGE RATE ³ (gpm)	AVERAGE OPERATIONAL DISCHARGE RATE ⁴ (gpm)	OPERATIONAL HOURS DURING OPERATIONAL PERIOD	HOURS IN OPERATIONAL PERIOD	% OPERATIONAL
2008 ⁵	3,659,562	13.8	18.2	3,358	4,416	76%
2009 ⁶	5,787,848	11.0	18.1	5,319	8,760	61%
2010 ⁶	14,295,261	27.2	46.4	5,131	8,760	59%
2011 ⁶	20,456,899	38.9	45.8	7,442	8,760	85%
2012 ⁷	19,378,122	40.2	47.2	6,850	8,040	85%
2013	21,148,029	40.2	45.7	7,713	8,760	88%
2014	7,690,471	14.6	46.8	2,740	8,760	31%
2015	18,019,312	34.3	47.9	6,275	8,760	72%
2016	21,977,404	41.9	44.2	8,284	8,736	95%
2017	18,364,603	34.6	39.8	7,684	8,835	87%
2018	18,144,835	34.5	38.3	7,889	8,760	90%
2019	18,725,398	35.8	40.3	7,737	8,710	89%
2020	19,500,449	36.9	38.1	8,521	8,807	97%
2021	18,500,784	35.3	36.3	8,508	8,739	97%
2022	17,619,396	33.6	35.6	8,239	8,734	94%
Q1 2023	4,613,768	33.4	37.1	2,070	2,304	90%
March 2023	1,541,709	35.6	42.0	612	721	85%
April 2023	2,246,639	44.6	44.7	838	840	100%
May 2023	1,257,607	41.6	42.1	498	504	99%
Total Q2 2023	5,045,955	40.7	43.2	1,948	2,065	94%
Total Since Startup	252,928,096	32.3	39.9	105,708	130,706	81%

Notes and Abbreviations:

¹ Calendar year from December 1st of prior year to November 30 of current year unless otherwise noted

² 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

³ Total volume of water treated during the operational period divided by the total number of minutes in that operational period.

⁴ Total volume of water treated during the operational period divided by the minutes of operation in that operational period.

⁵ Pilot groundwater extraction and treatment system began operation in July 2008, calendar year from July 1st through December 31st

⁶ Calendar year from January 1st to December 31th

⁷ Calendar year from January 1st to November 30th

% = Percent

CEFF = Carbon effluent

gpm = gallons per minute

Q1 = Quarter 1

Q2 = Quarter 2

Table 5. Pilot Groundwater Extraction and Treatment System Sampling Schedule

				SAMPLE FREQUENCY AND LOCATION																		Number of Annual Samples (Year 1)				
				Daily Samples ¹ : Days 1-5					Weekly Samples ¹ : Weeks 1-4					Monthly Samples: Week 5+					Quarterly Samples: Week 1+							
				System Influent (INF)	Post-Filter (PF)	Post-Oxidation (POX)	Carbon Breakthrough (CBT) ³	Post-Carbon (CEFF)	System Influent (INF)	Post-Filter (PF)	Post-Oxidation (POX)	Carbon Breakthrough (CBT) ³	Post-Carbon (CEFF)	Extraction Wells (Well ID) ²	System Influent (INF)	Post-Filter (PF)	Post-Oxidation (POX)	Carbon Breakthrough (CBT) ³	Post-Carbon (CEFF)	Extraction Wells (Well ID) ²	System Influent (INF)		Post-Oxidation (POX)	Post-Carbon (CEFF)		
Compounds/Constituent	Analytical Method	Sample Container	Reporting Detection Limits (milligrams per liter)	Compounds/Constituents Normally Required as Part Of NPDS 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								99	
1,4-Dioxane	EPA 8270 Modified	1 L Amber	0.002	X					X						X	X									33	
1,4-Dioxane	EPA 8270 SIM	1 L Amber	0.0002			X					X					X	X	X							44	
Total Suspended Solids	SM2540D	1 L Poly	10													X									11	
Total Dissolved Solids	SM2540C	1 L Poly	10																X	X	X	X			16	
Selected Metals																										
Dissolved Metals (Iron, Manganese, Calcium, Sodium, Magnesium)	EPA 6010B	250 mL poly	QAPP ⁴	(a)															X	X					9	
Selenium	EPA 6010B	250 mL poly	QAPP ⁴																X	X					8	
Selected Inorganic Constituents																										
Hydroxide Alkalinity	SM2320B	1 L Poly	2.0	(a)												X	X			X	X				37	
Bicarbonate Alkalinity	SM2320B	1 L Poly	2.0	(a)												X	X			X	X				37	
Carbonate Alkalinity	SM2320B	1 L Poly	2.0	(a)												X	X			X	X				37	
Total Alkalinity	SM2320B	1 L Poly	2.0	(a)												X	X			X	X				37	
Bromate Evaluation																										
Bromate	EPA 317.0	125 mL Poly	0.0005			X					X				X		X								33	
Bromide	EPA 300.0	125 mL Poly	0.05	(a)					(a)						X	X									33	
Other Constituents/Compounds																										
Total Organic Carbon	SM5310B	2 - 40 mL VOA, H2SO4	3.0	(a)												X	X			X	X				37	
Anions (Chloride, Sulfate, Nitrate, Nitrite, and Phosphate)	EPA 300.0	1 L Poly	Varies	(a)															X	X	X				13	
Chemical Oxygen Demand	EPA 410.4	125 mL Amber, H2SO4	5.0	(a)															X	X	X				19	
UV Absorption (UVA) @254nm	EPA 415.3	125 mL Amber/ 8 oz Jar	N/A		(a)											X			X	X	X				30	

				SAMPLE FREQUENCY AND LOCATION																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																													
				Daily Samples ¹ : Days 1-5					Weekly Samples ¹ : Weeks 1-4					Monthly Samples: Week 5+					Quarterly Samples: Week 1+																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																														
				System Influent (INF)	Post-Filter (PF)	Post-Oxidation (POX)	Carbon Breakthrough (CBT) ³	Post-Carbon (CEFF)	System Influent (INF)	Post-Filter (PF)	Post-Oxidation (POX)	Carbon Breakthrough (CBT) ³	Post-Carbon (CEFF)	Extraction Wells (Well ID) ²	System Influent (INF)	Post-Filter (PF)	Post-Oxidation (POX)	Carbon Breakthrough (CBT) ³	Post-Carbon (CEFF)	Extraction Wells (Well ID) ²	System Influent (INF)	Post-Oxidation (POX)	Post-Carbon (CEFF)																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																										
Compounds/Constituent	Analytical Method	Sample Container	Reporting Detection Limits (milligrams per liter)																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																														

FOOTNOTES:

- 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 Quality Assurance Project Plan (QAPP), Appendix B of Additional Groundwater Assessment Workplan, Hargis + Associates, Inc., April 25, 2003.
- (a) Only one sample to be collected during sampling period.

CRWQCB = California Regional Water Quality Control Board, Santa Ana Region 8 nm = Nanometers
NPDES = National Pollutant Discharge Elimination System EPA = U.S. Environmental Protection Agency
WDR = Waste Discharge Requirement SIM = Selected ion monitoring
N/A = Not applicable SM = Standard Method
mL = Milliliter L = Liter
VOA = Volatile organic analysis poly = High density polyethylene bottle
HCl = Hydrochloric acid Amber = Amber glass bottle
H₂SO₄ = Sulfuric acid

Table 6. Select Compounds Monitored in Pilot Groundwater Extraction and Treatment System Samples

Compound	Date	Units	MW-29	EW-02	INF	PF	POX	CBT	CEFF
1,1,2-Trichloroethane	03/07/23	ug/l	< 1.0	< 0.50	< 0.50	--	< 0.50	< 0.50	< 0.50
1,1,2-Trichloroethane	04/06/23	ug/l	< 0.50	< 0.50	< 0.50	--	< 0.50	< 0.50	< 0.50
1,1,2-Trichloroethane	05/11/23	ug/l	< 0.50	< 0.50	< 0.50	--	< 0.50	< 0.50	< 0.50
1,1-Dichloroethane	03/07/23	ug/l	1.1	< 0.50	< 0.50	--	< 0.50	< 0.50	< 0.50
1,1-Dichloroethane	04/06/23	ug/l	0.99	< 0.50	< 0.50	--	< 0.50	< 0.50	< 0.50
1,1-Dichloroethane	05/11/23	ug/l	0.8	< 0.50	< 0.50	--	< 0.50	< 0.50	< 0.50
1,1-Dichloroethene	03/07/23	ug/l	110	7.7	34	--	< 0.50	< 0.50	< 0.50
1,1-Dichloroethene	04/06/23	ug/l	99	9.4	32	--	< 0.50	< 0.50	< 0.50
1,1-Dichloroethene	05/11/23	ug/l	94	7.8	29	--	< 0.50	< 0.50	< 0.50
1,2-Dichloroethane	03/07/23	ug/l	< 1.0	< 0.50	< 0.50	--	< 0.50	< 0.50	< 0.50
1,2-Dichloroethane	04/06/23	ug/l	< 0.50	< 0.50	< 0.50	--	< 0.50	< 0.50	< 0.50
1,2-Dichloroethane	05/11/23	ug/l	< 0.50	< 0.50	< 0.50	--	< 0.50	< 0.50	< 0.50
1,4-Dioxane	03/07/23	ug/l	94 H, E	4.4 H, E	24 H, E	--	< 0.50	< 0.50	< 0.50
1,4-Dioxane	04/06/23	ug/l	71	4.6	26	--	< 0.37	< 0.37	< 0.37
1,4-Dioxane	05/11/23	ug/l	51	3.4	16	--	< 0.37	< 0.38	< 0.37
Bromate	03/07/23	ug/l	--	--	< 50	--	< 50	--	--
Bromate	04/06/23	ug/l	--	--	< 50	--	< 50	--	--
Bromate	05/11/23	ug/l	--	--	< 50	--	< 50	--	--
Bromide	03/07/23	mg/l	0.32	0.18	0.22	--	--	--	--
Bromide	04/06/23	mg/l	0.3	0.17	0.2	--	--	--	--
Bromide	05/11/23	mg/l	0.26	0.18	0.21	--	--	--	--
cis-1,2-Dichloroethene	03/07/23	ug/l	< 1.0	< 0.50	< 0.50	--	< 0.50	< 0.50	< 0.50
cis-1,2-Dichloroethene	04/06/23	ug/l	< 0.50	< 0.50	< 0.50	--	< 0.50	< 0.50	< 0.50
cis-1,2-Dichloroethene	05/11/23	ug/l	< 0.50	< 0.50	< 0.50	--	< 0.50	< 0.50	< 0.50
Tetrachloroethene	03/07/23	ug/l	< 1.0	< 0.50	< 0.50	--	< 0.50	< 0.50	< 0.50
Tetrachloroethene	04/06/23	ug/l	< 0.50	< 0.50	< 0.50	--	< 0.50	< 0.50	< 0.50
Tetrachloroethene	05/11/23	ug/l	< 0.50	< 0.50	< 0.50	--	< 0.50	< 0.50	< 0.50
Total Dissolved Solids	03/07/23	mg/l	765	602	645	--	651	--	645
Total Suspended Solids	03/07/23	mg/l	--	--	--	< 1.0	--	--	--
Total Suspended Solids	04/06/23	mg/l	--	--	--	< 1.0	--	--	--
Total Suspended Solids	05/11/23	mg/l	--	--	--	1.2	--	--	--
Trichloroethene	03/07/23	ug/l	1.3	< 0.50	< 0.50	--	< 0.50	< 0.50	< 0.50
Trichloroethene	04/06/23	ug/l	1.4	< 0.50	< 0.50	--	< 0.50	< 0.50	< 0.50
Trichloroethene	05/11/23	ug/l	1.1	< 0.50	< 0.50	--	< 0.50	< 0.50	< 0.50

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

FOOTNOTES:

MCL = Drinking Water Maximum Contaminant Level

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; combined flow from active extraction wells

PF = Post Particulate Filter

POX = Post Advanced Oxidation

CBT = Carbon Breakthrough

CEFF = Carbon Effluent

*- = LCS and/or LCSD is outside acceptance limits, low bias

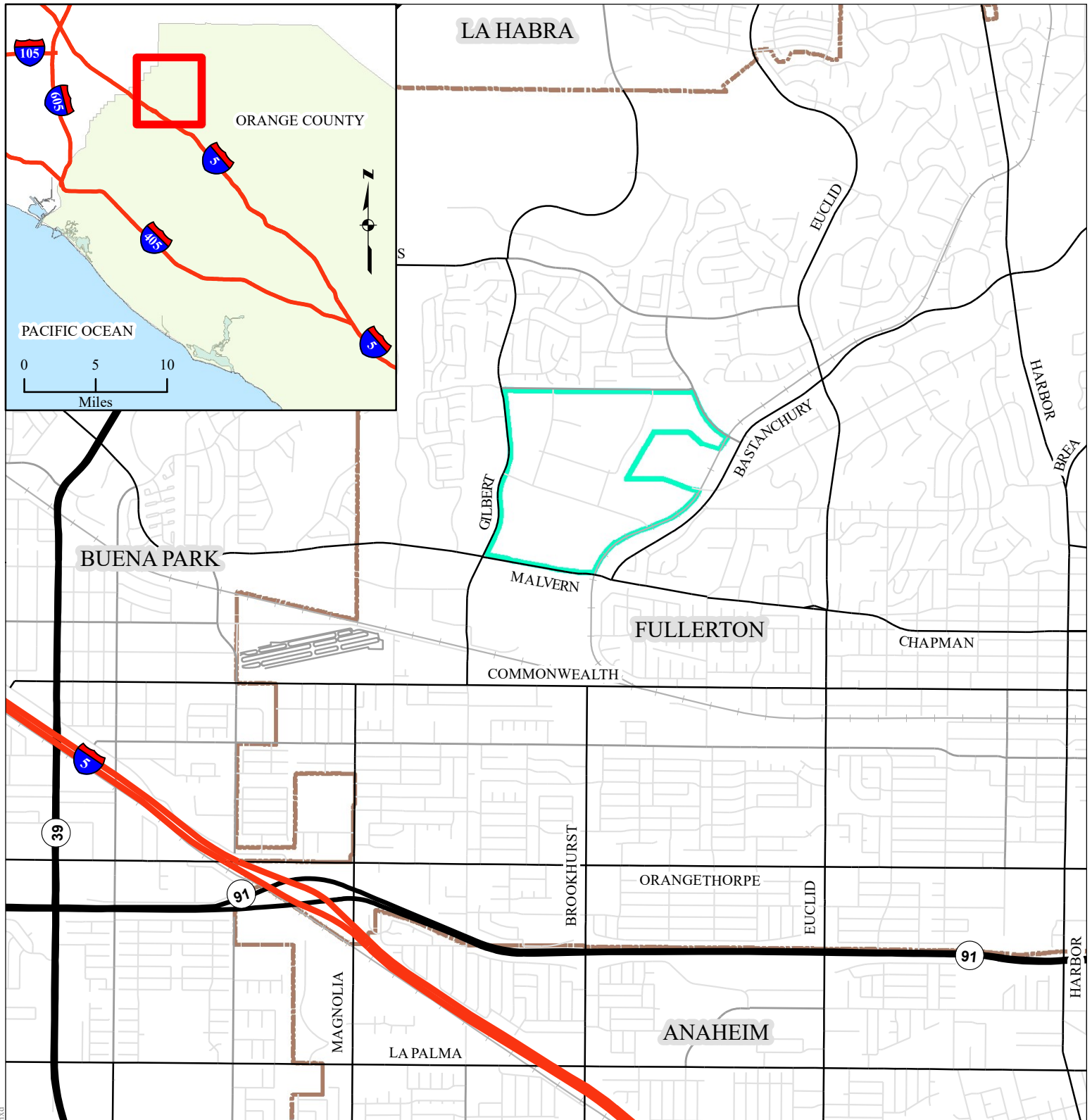
D10 = Sample required dilution due to dark sample

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

H = Sample was prepped or analyzed beyond the specified holding time

J = Estimated Value; analyte detected at less than the Reporting Limit and greater than or equal to the Method Detection Limit

FIGURES



EXPLANATION



City Boundaries



Former Hughes Aircraft Facility

GETS = Groundwater Extraction and Treatment System

GWM = Groundwater Monitoring

Q4 = Quarter 4

0 2,500 5,000

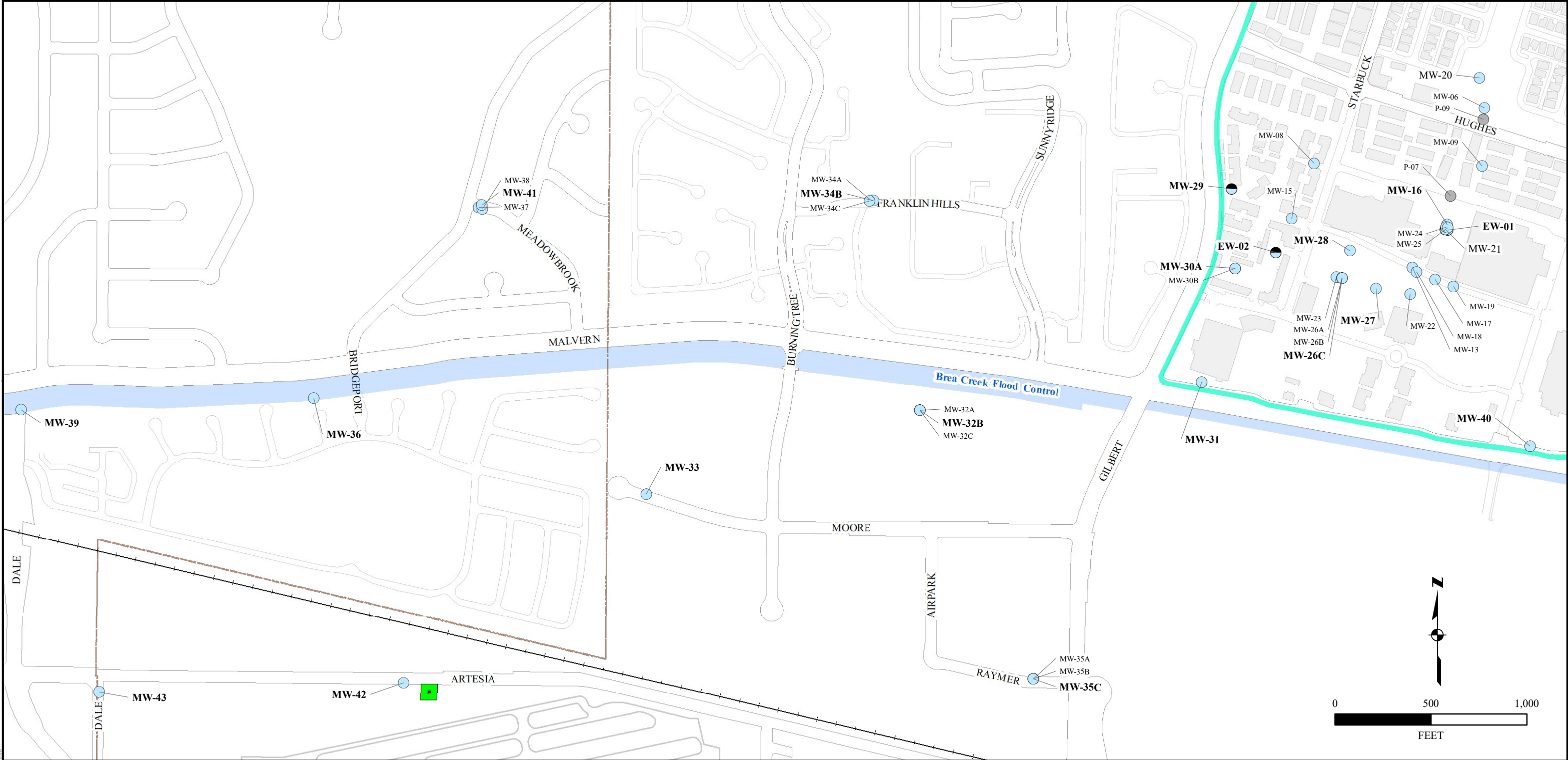
FEET

FIGURE 1: SITE LOCATION

DATA SUBMITTAL FOR GWM AND
GETS PILOT TESTING Q2 2023

FORMER HUGHES AIRCRAFT COMPANY
1901 WEST MALVERN AVE, FULLERTON, CA





- | | | | |
|--|-------------------------------|--|---|
| | Groundwater Monitor Well | | City Boundaries |
| | Groundwater Extraction Well | | Former Hughes Aircraft Company Property |
| | Perched Piezometer | | Airport |
| | Fullerton Airport Well 9 | | Railroads |
| | Flood Control Channel Parcels | | |
| | On Property Current Buildings | | |

NOTES:

Light colored streets are private.
Bold well IDs completed in Unit B
Small well IDs completed in units other than B

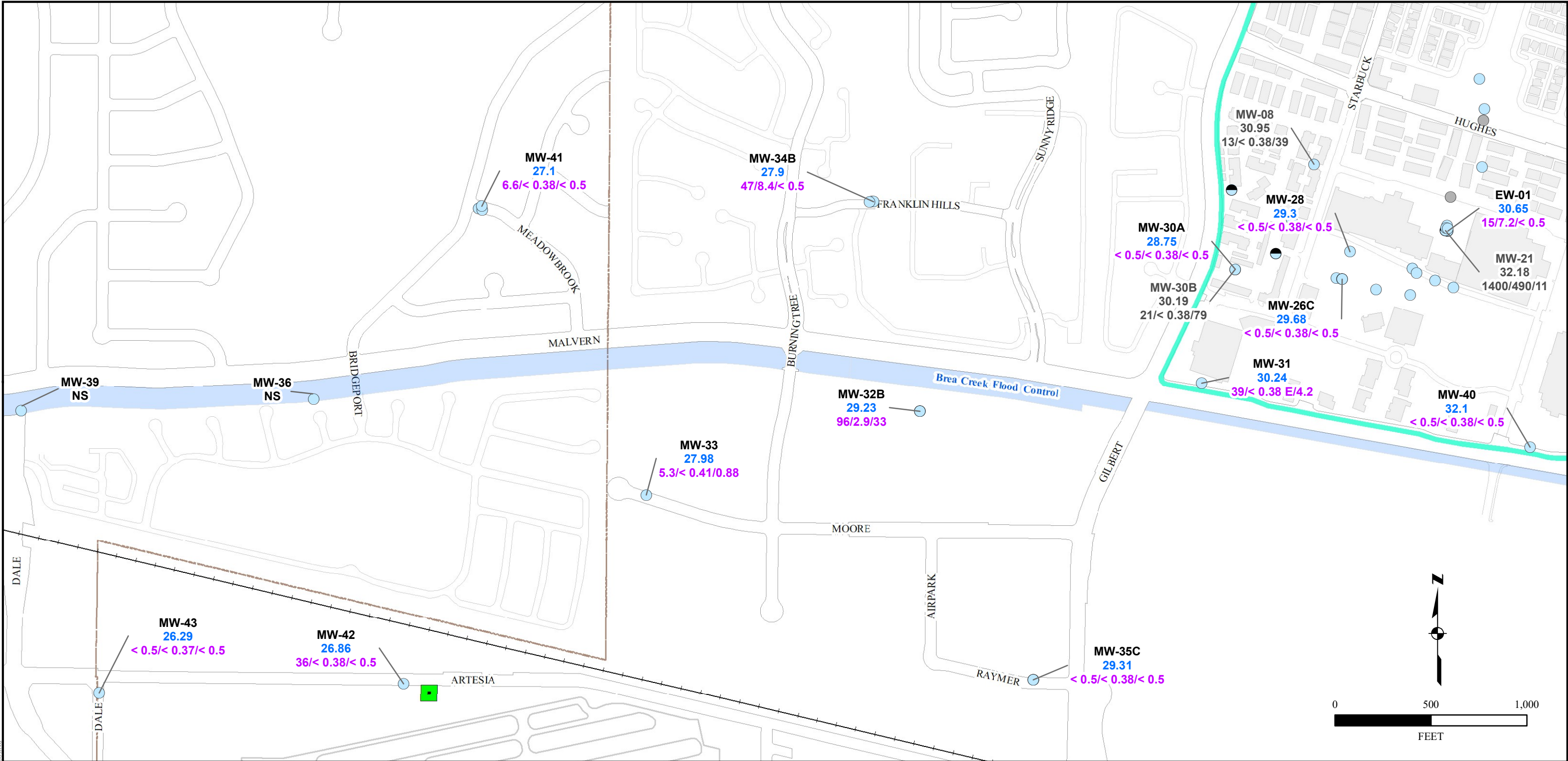
GETS = Groundwater Extraction and Treatment System
GWM = Groundwater Monitoring
Q2 = Quarter 2

FIGURE 2: WELL AND PIEZOMETER LOCATIONS

DATA SUBMITTAL FOR GWM AND
GETS PILOT TESTING Q2 2023

FORMER HUGHES AIRCRAFT COMPANY
1901 WEST MALVERN AVE, FULLERTON, CA





APPENDIX A
GROUNDWATER SAMPLING FIELD FORMS

MAY 2023

**QUARTERLY GROUNDWATER MONITORING
FIELD NOTEBOOK
LARGE VOLUME MONITOR WELLS**

RAYTHEON COMPANY

532.30

**1901 MALVERN AVE.
FULLERTON, CALIFORNIA**



HARGIS + ASSOCIATES, INC.
HYDROGEOLOGY • ENGINEERING

STATIC WATER LEVEL DATA SHEET

MONTH/YEAR: May 2023

 METHOD OF MEASUREMENT/SOUNDER IDENTIFIER: FLAT TAPE ELECTRIC SOUNDER # 7096

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)	FEB 2023 PREVIOUS DEPTH TO WATER (ft)	CHANGE IN WATER LEVEL (+ ft)	COMMENTS	INITIALS
P-07	05/ /23				142.31		110.80			
P-09	05/ /23				183.86		120.92			
MW-06	05/ /23				184.70		149.40			
MW-08	05/ 15 /23	1111	TOC	124.96	155.91	30.95	129.45	+4.49		ANW/AMK
MW-09	05/ /23				180.10		148.94			
MW-13	05/ /23				141.84		115.25			
MW-15	05/ 15 /23	1105	TOC	123.41	144.95	21.54	129.05	+5.64		ANW/AMK
MW-16	05/ /23				142.40		117.06			
MW-17	05/ /23				142.70		115.25			
MW-18	05/ /23				142.32		115.64			
MW-19	05/ /23				142.06		115.29			
MW-20	05/ /23				184.19		146.77			
MW-21	05/ /23				141.18		113.54		Totalizer:	Pumping?
MW-22	05/ /23				138.65		111.95			
MW-23	05/ /23				137.33		111.96			
MW-24	05/ /23				142.83		111.52			
MW-25	05/ /23				142.64		114.50			
MW-26A	05/ 15 /23	0744	TOST	63.84	137.04		117.40			
MW-26B	05/ 15 /23	0744	TOST	63.66	137.05		121.00			
MW-26C	05/ 15 /23	0745	TOST		137.22		111.99			

 msl = Mean sea level
 ft = feet

STATIC WATER LEVEL DATA SHEET

MONTH/YEAR: May 2023

METHOD OF MEASUREMENT/SOUNDER IDENTIFIER: FLAT TAPE ELECTRIC SOUNDER # 7096

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)	FEB 2023 PREVIOUS DEPTH TO WATER (ft)	CHANGE IN WATER LEVEL (+ ft)	COMMENTS	INITIALS
MW-27	05/ /23				137.16		111.50			
MW-28	05/ /23				140.77		116.20			
MW-29	05/15 /23	1045	TOST	171.72	139.81	-31.91	183.90	+12.18	Totalizer: 90719.1 (pumping) Q= 10.4	ANW/AMK
MW-30A	05/15 /23	1020	TOST	100.69	129.44	28.75	104.90	+4.21		
MW-30B	05/15 /23	1028	TOST	99.20	129.39	30.19	102.91	29.31 23.31 (ANW)		
MW-31	05/15 /23	1002	TOST	89.36	119.60	30.24	92.92	+3.56		
MW-32A	05/15 /23	0745	TOST	63.84	92.88	29.04	67.18	+3.34		
MW-32B	05/15 /23	0744	TOST	63.66	92.89	29.23	67.19	+3.53		
→ MW-32C	05/15 /23	0745	TOST	53.78	92.88	39.10	62.61	+8.83		
MW-33	05/15 /23	0941	TOST	55.21	83.19	27.98	58.35	+3.32		
MW-34A	05/ /23				153.25		133.11			
MW-34B	05/ /23				153.11		129.78			
MW-34C	05/ /23				153.29		128.60			
MW-35A	05/15 /23	1553	TOST	77.49	93.57	16.08	75.75	-1.74		ANW/AMK
MW-35B	05/15 /23	1555	TOST	70.71	93.56	22.85	71.51	+0.80		
MW-35C	05/15 /23	1556	TOST	64.24	93.55	29.31	67.35	+3.11		
MW-36	05/ /23				86.65		76.26 (Nov 2022)			
MW-37	05/ /23				155.60		127.90			
MW-38	05/ /23				154.90		137.97			
MW-39	05/ /23				84.25		73.65 (Nov 2022)			

msl = Mean sea level

ft = feet

STATIC WATER LEVEL DATA SHEET

MONTH/YEAR: May 2023

METHOD OF MEASUREMENT/SOUNDER IDENTIFIER: FLAT TAPE ELECTRIC SOUNDER # **7096**

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)	FEB 2023 PREVIOUS DEPTH TO WATER (ft)	CHANGE IN WATER LEVEL (± ft)	COMMENTS	INITIALS
MW-40	05/15/23	1234	TOST	91.30	123.40	32.10	95.02			ANW/AMK
MW-41	05/ /23				155.60		132.51			
MW-42	05/15/23	0922	TOST	55.94	82.80	26.86	58.81			ANW/AMK
MW-43	05/15/23	0903	TOST	50.35	76.64	26.29	53.12			ANW/AMK
EW-01	05/ /23				141.07		115.28		SOUNDING TUBE TO 172.65 Totalizer: Pumping?	
EW-02	05/15/23	1207 1045 ANW	TOST	108.84 171.72 ANW	132.97	24.13	124.32		Totalizer: 40719 (ANW) Q= 104 (Pumping) 247830 (pumping) 31.75	ANW/AMK

msl = Mean sea level
ft = feet

HARGIS + ASSOCIATES, INC.

**MAY 2023 GROUNDWATER SAMPLE PLAN
TEAM 1**

QA/QC	Total VOC's µg/L	1,4-Dioxane µg/L	APROX. GALLONS	ESTIMATE D TIME (minutes)	WELL IDENTIFIER	HYDROGEOLOGIC ZONE	MAY 2023 SAMPLING SCHEDULE	SAMPLE METHOD
	101	13	980	76	MW-36 ★	Deep; D	VOCs; 1,4-Dioxane	Ded.240V
	87	ND	830	63	MW-32B	Deep; B	VOCs; 1,4-Dioxane	Ded.240V
MS/MSD	37	ND	900	58	MW-42	Deep; B	VOCs; 1,4-Dioxane	Ded.240V
	7.6	ND	850	40	MW-33	Deep; B	VOCs; 1,4-Dioxane	Ded.240V
	ND	ND	867	46	MW-39 ★	Deep; B	VOCs; 1,4-Dioxane	Ded.240V
MS/MSD	ND	ND	937	47	MW-35C	Deep; B	VOCs; 1,4-Dioxane	Ded.240V
MS/MSD	ND	ND	917	39	MW-43	Deep; B	VOCs; 1,4-Dioxane	Ded.240V

NOTES

Collect 10% split lab and field duplicate (**SPT/FD**) samples

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

A **MS** and **MSD** (3x40ml VOA and 3x125mL amber jar) should be collected every day.

Wells with dedicated pumps should follow concentration order when possible.

★ No samples collected at MW-36 and MW-39 during sampling event. Coordinating access to Brea Creek flood channel with Orange County Flood Control District (OCFCD).

HARGIS + ASSOCIATES, INC.

**MAY 2023 GROUNDWATER SAMPLE PLAN
TEAM 2**

QA/QC	Total VOC's µg/L	1,4-Dioxane µg/L	APROX. GALLONS	ESTIMATE D TIME (minutes)	WELL IDENTIFIER	HYDROGEOLOGIC ZONE	MAY 2023 SAMPLING SCHEDULE	SAMPLE METHOD
	1354	1200	275	15	MW-21	Water Table; BC	VOCs; 1,4-Dioxane (8270 MOD)	Dedicated
	9	5	170	15	EW-01	Deep; B	VOCs; 1,4-Dioxane (8270 MOD)	Dedicated
	ND	ND	226	27	MW-40	Deep; B	VOCs; 1,4-Dioxane	Ded.240V
	ND	ND	58	10	MW-30A	Deep; B	VOCs; 1,4-Dioxane	Ded.240V
	ND	ND	97	15	MW-28	Deep; B	VOCs; 1,4-Dioxane	Ded.240V
FD/SPT	1	ND	140	20	MW-41	Deep; B	VOCs; 1,4-Dioxane (8270 MOD)	Ded.240V
	28	8.5	143	13	MW-34B	Deep; B	VOCs; 1,4-Dioxane (8270 MOD)	Ded 240V
FD/SPT	41	ND	258	31	MW-31	Deep; B	VOCs; 1,4-Dioxane	Ded.240V
	92	ND	130	31	MW-30B	Deep; BC	VOCs; 1,4-Dioxane	Ded.240V
RB	ND	ND	155	62	MW-26C	Deep; B	VOCs; 1,4-Dioxane	Redi-flo
	31	ND	20	20	MW-08	Water Table; BC	VOCs; 1,4-Dioxane	Redi-flo

NOTES

Collect 10% split lab and field duplicate (**SPT/FD**) samples

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

A **MS** and **MSD** (3x40ml VOA and 3x125mL amber jar) should be collected every day.

Wells with dedicated pumps should follow concentration order when possible.

GROUNDWATER SAMPLING INFORMATION

DATE: 05/16/23TASK: 532.30WELL ID: MW-35C

Time <u>0843</u> Static DTW (ft below reference point)	<u>64.05</u>	Screen Volume (SV) (gallons) <u>288</u>	3 SV (gallons) <u>864</u>	Weather Conditions		Initials: <u>ANW/AMK</u>
Casing Total Depth (ft below reference point)	<u>1040</u>	Purging Device <u>ded pump</u>	Sampling Device <u>ND pipestand</u>	Time <u>0840</u>	Temp. <u>63°F</u>	Begin Purge <u>0907</u> End Purge <u>1018</u>
Water Column (Pump Set Depth to Screen) (feet)	<u>480</u>	Pump Depth (ft brp) <u>560</u>	Type <u>grundfos</u> Voltage <u>240</u> HP <u>-</u>	Skies <u>overcast</u>		Gallons Purged <u>892</u> SVs Purged <u>3.1</u>
Casing Capacity (Diameter <u>4"</u>) (gallons per foot)	<u>0.60</u>	Monitor Well Recharge Rate: Slow Fast <u>X</u>		Wind (mph) <u>-</u>	From <u>-</u>	DTW (ft brp) <u>69.03</u> Time <u>1017</u>

Time	Depth to Water	Volume Purged (Gallons)	Casing Volumes Purged	FIELD PARAMETERS						Pump Frequency Hz	COMMENTS
				Temp. (°C)	pH	EC (µS/cm)	O.R.P. (mV)	D.O. (mg/L)	Turbidity (NTU)		
0907	64.05	0	0			BEGIN	PURGE				
0920	68.74	148	0.5	20.5	7.55	750	-74.8	1.77	0.61	0.61 ^(ANW)	Q ≈ 12 GPM
0932	68.74	296	1.0	20.6	7.53	779	-65.5	2.57	2.45	-	
0942	68.84	444	1.5	20.7	7.55	798	-81.0 ^{-44.6}	2.80	5.52	-	
0955	69.03	592	2.0	20.6	7.61	791	-39.5	2.76	1.81	-	
1006	69.03	740	2.5	20.6	7.56	779	-52.5	2.82	0.72	-	
1017	69.03	887	3.0	20.6	7.56	775	-41.2	2.72	1.79	-	COLLECT SAMPLE
1018	NM	892	3.1			END	PURGE				

SAMPLE COLLECTION SAMPLE TIME <u>1017</u>	
ANALYSIS	QUANTITY TYPE
8260B VOCs	<u>3+6</u> 40 ml VOA <u>X</u>
8270C 1,4 dioxane	<u>1+2</u> 125mL Amber <u>X</u>
8270 SIM 1,4 dioxane	1 L Amber
8270 MOD 1,4 dioxane	1 L Amber
DUPLICATES / SPLITS / BLANKS?	Y <u>0</u>
If yes, complete appropriate forms.	

AIR MONITORING PID/FID ppm: VAULT NA BKGD NA BREATHING ZONE NA DISCHARGE WATER NA

NOTES (Color, odor, sand and silt content, factors possibly affecting samples, condition of vault, wellhead, sampling apparatus, etc.)

MS/MCO collected

GROUNDWATER SAMPLING INFORMATION

DATE: 05/15/23TASK: 532.30WELL ID: MW-32B

Time <u>1209</u> Static DTW (ft below reference point)	<u>63.71</u>	Screen Volume (SV) (gallons) <u>263</u> 3 SV (gallons) <u>790</u>	Weather Conditions	Initials: <u>ANW/AMK</u>
Casing Total Depth (ft below reference point)	<u>999</u>	Purging Device <u>ded. pump</u> Sampling Device <u>ded. sample port, 10-100</u>	Time <u>1209</u> Temp. <u>73°F</u>	Begin Purge <u>1220</u> End Purge <u>1343</u>
Water Column (Pump Set Depth to Screen) (feet)	<u>439</u>	Pump: Depth (ft brp) <u>560</u> Type <u>grundfos</u> Voltage <u>240</u> HP <u>-</u>	Skies <u>Clear</u>	Gallons Purged <u>818</u> SVs Purged <u>3.1</u>
Casing Capacity (Diameter <u>4"</u>) (gallons per foot)	<u>0.60</u>	Monitor Well Recharge Rate: Slow _____ Fast <u>X</u>	Wind (mph) <u>-</u> From <u>-</u>	DTW (ft brp) <u>85.72</u> Time <u>1341</u>

Time	Depth to Water	Volume Purged (Gallons)	Casing Volumes Purged	... FIELD PARAMETERS ...						Pump Frequency Hz	COMMENTS
				Temp. (°C)	pH	EC (µS/cm)	O.R.P. (mV)	D.O. (mg/L)	Turbidity (NTU)		
1220	63.71	0	0	----- BEGIN PURGE -----							
1235	84.08	132	0.5	22.8	7.65	907	-76.1	0.40	2.27	-	Q≈10 GPM
1247	84.40	263	1.0	23.3	7.76	835	-61.9	0.08	0.79	-	
1301	84.92	394	1.5	22.1	7.77	901	-68.1	0.10	1.20	-	
1317	85.30	526	2.0	23.0	7.75	888	-77.7	0.02	2.74	-	
1329	85.30	658	2.5	23.4	7.75	961	-68.7	0.12	0.35	-	
1341	85.72	790	3.0	22.8	7.73	944	-79.9	0.14	0.90	-	COLLECT SAMPLE
1343	NM	818	3.1	----- END PURGE -----							

SAMPLE COLLECTION SAMPLE TIME <u>1342</u>		AIR MONITORING PID/FID ppm: VAULT NA BKGD NA BREATHING ZONE NA DISCHARGE WATER NA	
ANALYSIS	QUANTITY	NOTES (Color, odor, sand and silt content, factors possibly affecting samples, condition of vault, wellhead, sampling apparatus, etc.)	
8260B VOCs	<u>3</u>		
8270C 1,4 dioxane	<u>1</u>		
8270 SIM 1,4 dioxane			
8270 MOD 1,4 dioxane			
40 ml VOA	<u>X</u>		
125ml Amber	<u>X</u>		
1 L Amber			
1 L Amber			
DUPLICATES / SPLITS / BLANKS?	<u>Y</u>		
If yes, complete appropriate forms.			



HARGIS + ASSOCIATES, INC.

GROUNDWATER SAMPLING INFORMATION

DATE: 05/15/23

TASK: 532.30

WELL ID: MW-33

Time 1444 Static DTW (ft below reference point)	55.17	Screen Volume (SV) (gallons) 276	3 SV (gallons) 828	Weather Conditions	Initials: ANW/AMK
Casing Total Depth (ft below reference point)	1020	Purging Device ded pump	Sampling Device 0-10 pipestand	Time 1445 Temp. 78°F	Begin Purge 1449 End Purge 1611
Water Column (Pump Set Depth to Screen) (feet)	460	Pump: Depth (ft brp) 560 Type groundpos	Voltage 240 HP -	Skies partly cloudy	Gallons Purged 837 SVs Purged 3.0
Casing Capacity (Diameter 4") (gallons per foot)	0.60	Monitor Well Recharge Rate: Slow	Fast ☒	Wind (mph) - From -	DTW (ft brp) 56.65 Time 1608

Time	Depth to Water	Volume Purged (Gallons)	Casing Volumes Purged	FIELD PARAMETERS						Pump Frequency Hz	COMMENTS
				Temp. (°C)	pH	EC (µS/cm)	O.R.P. (mV)	D.O. (mg/L)	Turbidity (NTU)		
1449	55.17	0	0	BEGIN PURGE						-	
1502	56.66	138	0.5	20.9	7.61	703	-15.5	0.30	0.51	-	Q ≈ 10 GPM
1515	56.49	276	1.0	21.7	7.66	697	-16.9	0.08	0.47	-	
1530	56.91	414	1.5	21.2	7.62	701	-9.8	0.19	0.55	-	
1544	56.70	552	2.0	21.3	7.64	700	-2.0	0.17	0.51	-	
1557	56.72	690	2.5	21.1	7.60	702	-5.0	0.16	0.05	-	
1608	56.65	828	3.0	21.7	7.61	703	-6.5	0.18	0.31	-	
1611	NM	837	3.03	END PURGE						-	

SAMPLE COLLECTION	SAMPLE TIME	1610
ANALYSIS	QUANTITY	TYPE
8260B VOCs	3+3	40 ml VOA X
8270C 1,4 dioxane	1+1	125mL Amber X
8270 SIM 1,4 dioxane		1 L Amber
8270 MOD 1,4 dioxane		1 L Amber
DUPLICATES / SPLITS / BLANKS?	(Y)	N

AIR MONITORING PID/FID ppm: VAULT NA BKGD NA BREATHING ZONE NA DISCHARGE WATER NA
 NOTES (Color, odor, sand and silt content, factors possibly affecting samples, condition of vault, wellhead, sampling apparatus, etc.)

Collected field duplicate MW-3300-20230515 @ 1620

GROUNDWATER SAMPLING INFORMATION

DATE: 05/17/23

TASK: 532.30

WELL ID: MW-43

Time <u>0824</u> Static DTW (ft below reference point)	<u>50.27</u>	Screen Volume (SV) (gallons) <u>291.6</u> 3 SV (gallons) <u>875</u>	Weather Conditions	Initials: <u>ANW/AMK</u>
Casing Total Depth (ft below reference point)	<u>1046</u>	Purging Device <u>ded pump</u> Sampling Device <u>ND Pipestand</u>	Time <u>0824</u> Temp. <u>61°F</u>	Begin Purge <u>0832</u> End Purge <u>0927</u>
Water Column (Pump Set Depth to Screen) (feet)	<u>486</u>	Pump: Depth (ft brp) <u>560</u> Type <u>grundfos</u> Voltage <u>240</u> HP	Skies <u>overcast</u>	Gallons Purged <u>952</u> SVs Purged <u>3.3</u>
Casing Capacity (Diameter <u>4</u> ") (gallons per foot)	<u>0.60</u>	Monitor Well Recharge Rate: Slow Fast ☒	Wind (mph) <u>-</u> From <u>-</u>	DTW (ft brp) <u>0921</u> Time <u>55:44</u>

Time	Depth to Water	Volume Purged (Gallons)	Casing Volumes Purged	FIELD PARAMETERS						Pump Frequency Hz	COMMENTS
				Temp. (°C)	pH	EC (µS/cm)	O.R.P. (mV)	D.O. (mg/L)	Turbidity (NTU)		
0832	50.27	0	0			BEGIN	PURGE				
0841	55.31	146	0.5	20.7	9.48	55.3 ⁵³²	-178.5	0.10	1.32 ⁶⁴	-	Q ≈ 20 GPM ; turbidimeter malfunction
0847	55.49	291	1.0	21.3	8.16	488.3	-165.8	0.05	3.25	-	
0856	55.54	437	1.5	21.5	8.00	486.3	-148.2	0.16	0.84	-	
0904	55.63	583	2.0	21.6	8.07	485.8	-126.2	0.08	0.12	-	
0912	55.91	728	2.5	21.6	7.99	486.2	-130.1	0.11	0.26	-	
0921	55.99	875	3.0	21.6	7.98	486.3	-130.0	0.12	0.08	-	
0927	NM	952	3.3			END	PURGE				

SAMPLE COLLECTION SAMPLE TIME <u>0925</u>	
ANALYSIS	QUANTITY TYPE
8260B VOCs	<u>4</u> 40 ml VOA
8270C 1,4 dioxane	<u>3</u> 125ml Amber
8270 SIM 1,4 dioxane	<u>1</u> L Amber
8270 MOD 1,4 dioxane	<u>1</u> 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.)			
<u>MS/MSD collected</u>			

GROUNDWATER SAMPLING INFORMATION
DATE: 05/17/23
TASK: 532.30
WELL ID: MW-42

Time <u>1052</u> Static DTW (ft below reference point)	56.05	Screen Volume (SV) (gallons) <u>295</u> 3 SV (gallons) <u>885</u>	Weather Conditions Time <u>1055</u> Temp. <u>68°F</u>	Initials: <u>ANW/AMK</u>
Casing Total Depth (ft below reference point)	<u>1052</u>	Purging Device <u>dcd pump</u> Sampling Device <u>10-100 pipe-stem</u>	Skies <u>partly cloudy</u>	Begin Purge <u>1058</u> End Purge <u>1204</u>
Water Column (Pump Set Depth to Screen) (feet)	<u>492</u>	Pump: Depth (ft brp) <u>560</u> Type <u>grunfos</u> Voltage <u>240</u> HP <u>-</u>	Wind (mph) <u>-</u> From <u>-</u>	Gallons Purged <u>892</u> SVs Purged <u>80</u>
Casing Capacity (Diameter <u>4"</u>) (gallons per foot)	<u>0.60</u>	Monitor Well Recharge Rate: Slow <u>-</u> Fast <u>✓</u>	DTW (ft brp) <u>63.01</u> Time <u>1202</u>	

Time	Depth to Water	Volume Purged (Gallons)	Casing Volumes Purged	... FIELD PARAMETERS ...						Pump Frequency Hz	COMMENTS
				Temp. (°C)	pH	EC (µS/cm)	O.R.P. (mV)	D.O. (mg/L)	Turbidity (NTU)		
1058	56.05	0	0			BEGIN PURGE					
1109	62.69	147.5	0.5	21.1	8.02	644	-95.8	0.80	1.08	-	Q ≈ 14 GPM
1120	62.75	295	1.0	21.5	8.02	643	-128.2 <u>-71.2</u> <u>ANW</u>	0.10	0.57	-	
1130	62.94	442.5	1.5	21.5	8.01	636	-129.9	0.01	0.47	-	
1141	63.10	590	2.0	21.7	8.02	632	-137.0	0.03	0.51	-	
1152	63.01	737.5	2.5	21.6	8.00	629	-136.1	0.09	0.54	-	
1202	63.01	886	3.0	22.0	8.01	616	-145.1	0.08	0.43	-	COLLECT SAMPLE
1204	NM	892	3.02			END PURGE					

SAMPLE COLLECTION SAMPLE TIME <u>1202</u> ANALYSIS QUANTITY TYPE 8260B VOCs <u>3</u> 40 ml VOA <u>X</u> 8270C 1,4 dioxane <u>1</u> 125mL Amber <u>X</u> 8270 SIM 1,4 dioxane <u> </u> 1 L Amber <u> </u> 8270 MOD 1,4 dioxane <u> </u> 1 L Amber <u> </u> DUPLICATES / SPLITS / BLANKS? Y <u>(N)</u> If yes, complete appropriate forms.	AIR MONITORING PID/FID ppm: VAULT NA BKGD NA BREATHING ZONE NA DISCHARGE WATER NA NOTES (Color, odor, sand and silt content, factors possibly affecting samples, condition of vault, wellhead, sampling apparatus, etc.)
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DATE: 03/17/23

TASK: 532.30

WELL ID: MW-36

Time _____ Static DTW (ft below reference point)	Screen Volume (SV) (gallons) _____ 3 SV (gallons)	 Weather Conditions Time _____ Temp. _____ Skies _____ Wind (mph) _____ From _____ 	Initials: ANW
Casing Total Depth (ft below reference point)	Purging Device _____ Sampling Device _____		Begin Purge _____ End Purge _____
Water Column (Pump Set Depth to Screen) (feet)	Pump: Depth (ft brp) _____ Type _____ Voltage _____ HP _____		Gallons Purged _____ SVs Purged _____
Casing Capacity (Diameter *) (gallons per foot)	Monitor Well Recharge Rate: Slow _____ Fast _____		DTW (ft brp) _____ Time _____

[illegible]

SAMPLE COLLECTION		SAMPLE TIME
ANALYSIS	QUANTITY	TYPE
8260B VOCs		40 ml VOA
8270C 1,4 dioxane		125ml Amber
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.)



DATE: 05/17/23

TASK: 532.30

WELL ID: MW-39

Time _____ Static DTW (ft below reference point)	Screen Volume (SV) (gallons) _____ 3 SV (gallons) _____	 Weather Conditions Time _____ Temp. _____ Skies _____ Wind (mph) _____ From _____ 	Initials: <u>ANW</u>
Casing Total Depth (ft below reference point)	Purging Device _____ Sampling Device _____		Begin Purge _____ End Purge _____
Water Column (Pump Set Depth to Screen) (feet)	Pump: Depth (ft brp) _____ Type _____ Voltage _____ HP _____		Gallons Purged _____ SVs Purged _____
Casing Capacity (Diameter *) (gallons per foot)	Monitor Well Recharge Rate: Slow _____ Fast _____		DTW (ft brp) _____ Time _____

[illegible]

SAMPLE COLLECTION			SAMPLE TIME		AIR MONITORING PID/FID ppm: VAULT NA				BKGD NA				BREATHING ZONE NA				DISCHARGE WATER NA			
ANALYSIS		QUANTITY	TYPE		NOTES (Color, odor, sand and silt content, factors possibly affecting samples, condition of vault, wellhead, sampling apparatus, etc.)															
8260B VOCs		40 ml	VOA																	
8270C 1,4 dioxane		125mL	Amber																	
8270 SIM 1,4 dioxane		1 L	Amber																	
8270 MOD 1,4 dioxane		1 L	Amber																	
DUPLICATES / SPLITS / BLANKS?			Y	N																
If yes, complete appropriate forms.																				



PROJECT NUMBER:532.30

[illegible]



Calibrated at Geotech's California South service center

155 East Liberty Ave, Suite A
Anaheim, CA 92801

Fax: (714) 998-7382

YSI Pro DSS Calibration Certificate

Unit Number: 6317

Calibration Date 5/12/2023

Serial Number: 18F100142

Technician: Chapin Osbon

Installed Probes

- ☒ Conductivity
- ☒ PH/ORP
- ☒ DO
- ☒ TURB

- ☒ Display is clear, and free of damage
- ☒ Cable and accessories are free of damage
- ☒ Firmware version is up to date.

Display Battery 100 % **Pass**
Cable Flex Test: **Pass**

Cable Length 10M
Cable Lot # 18F103420
Cond Probe Lot # 18E102736
pH/ORP Serial # 20F000901
DO Probe Serial # 18F100269
Turb Probe Serial # 18E105362
Bath Temp 19.9 °C
Meter Temp 19.9 °C
Variance 0.00 **Pass**

Cond

<u>Calibration</u>	<u>Reading</u>		<u>Buffer Lot #</u>	<u>Exp. Date</u>	
1.413 mS	1.413 mS	Pass	3GA1014	1/24	Pass

pH

<u>Point Test</u>	<u>Calibration</u>	<u>Reading</u>	<u>mV</u>	<u>Slope</u>		<u>Buffer Lot #</u>	<u>Exp. Date</u>	
2 Point	pH 7.00	pH 7.00	-17.3 mV			3GA1018	1/25	Pass
	pH 10.01	pH 10.01	-189.3 mV	172	Pass	3GA802	1/25	Pass

ORP

<u>Calibration</u>	<u>Reading</u>		<u>Buffer Lot #</u>	<u>Exp. Date</u>	
220 mV	220 mV	Pass	3GC861	12/23	Pass

Turbidity

<u>Zero</u>	<u>Reading</u>	<u>Variance</u>		<u>Cal</u>	<u>Reading</u>	<u>Variance</u>		<u>Buffer Lot #</u>	<u>Exp. Date</u>	
0 ntu	0 ntu	0 ntu	Pass	124 ntu	124 ntu	0.0%	Pass	22K22460171	11/23	Pass

DO

<u>Barometer</u>	<u>Calibration</u>	<u>Reading</u>	<u>Variance</u>		<u>Test Fluid</u>
754.8 mmHg	99.3 %	99.3 %	0.0%	Pass	Water Saturated Air
Time: <u>Min.</u>	<u>Sec.</u>	<u>Reading</u>			<u>Nitrogen Lot #</u>
3	31	1.0 %	Pass		166-402721632-1

Geotech Environmental Equipment, Inc. takes pride in ensuring this instrument is tested to function as specified by the manufacturer and was calibrated in accordance to manufacturer specifications. All calibration standards used are NIST traceable. With the provided lot numbers we can provide NIST documents on request. Call us at (800) 833-7958 and we will be glad to help.

MAY 2023

**QUARTERLY GROUNDWATER MONITORING
FIELD NOTEBOOK
LOW VOLUME MONITOR WELLS**

RAYTHEON COMPANY

532.30

**1901 MALVERN AVE.
FULLERTON, CALIFORNIA**



HARGIS + ASSOCIATES, INC.
HYDROGEOLOGY • ENGINEERING

STATIC WATER LEVEL DATA SHEET

MONTH/YEAR: May 2023

METHOD OF MEASUREMENT/SOUNDER IDENTIFIER: FLAT TAPE ELECTRIC SOUNDER # 7094

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)	FEB 2023 PREVIOUS DEPTH TO WATER (ft)	CHANGE IN WATER LEVEL ($\pm$ ft)	COMMENTS	INITIALS
P-07	05/15/23	1338	TOC	110.57	142.31	31.74	110.80	+0.23		AMD
P-09	05/15/23	1306	TOC	120.89	183.86	62.97	120.92	+0.03		↓
MW-06	05/15/23	1310	TOC	147.61	184.70	37.09	149.40	+1.79		↓
MW-08	05/ /23				155.91		129.45			
MW-09	05/15/23	1300	TOC	145.05	180.10	35.05	148.94	+3.89		AMD
MW-13	05/15/23	0823	TOC	114.44	141.84	27.40	115.25	+0.81		↓
MW-15	05/ /23				144.95		129.05			
MW-16	05/15/23	1325	TOC	112.20	142.40	30.20	117.06	+4.86		AMD
MW-17	05/15/23	0831	TOC	114.35	142.70	28.35	115.25	+0.90		↓
MW-18	05/15/23	0826	TOC	114.72	142.32	27.60	115.64	+0.92		↓
MW-19	05/15/23	0836	TOST	114.30	142.06	27.76	115.29	+0.99		↓
MW-20	05/15/23	1313	TOC	142.68	184.19	41.51	146.77	+4.09		↓
MW-21	05/15/23	1335	TOST	109.00	141.18	32.18	113.54	+4.54	Totalizer: N/A Pumping? N	↓
MW-22	05/15/23	0839	TOST	111.06	138.65	27.59	111.95	+0.89		↓
MW-23	05/15/23	1048	TOST	111.28	137.33	26.05	111.96	+0.68		↓
MW-24	05/15/23	1328	TOST	107.54	142.83	35.29	111.52	+3.98		↓
MW-25	05/15/23	1330	TOC	110.07	142.64	32.57	114.50	+4.43		↓
MW-26A	05/15/23	1045	TOC	113.31	137.04	23.73	117.40	+4.09		↓
MW-26B	05/15/23	1047	TOC	116.10	137.05	20.95	121.00	+4.90		↓
MW-26C	05/15/23	1042	TOC	107.54	137.22	29.68	111.99	+4.45		↓

msl = Mean sea level

ft = feet

STATIC WATER LEVEL DATA SHEET

MONTH/YEAR: May 2023

METHOD OF MEASUREMENT/SOUNDER IDENTIFIER: FLAT TAPE ELECTRIC SOUNDER # 7094

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)	FEB 2023 PREVIOUS DEPTH TO WATER (ft)	CHANGE IN WATER LEVEL ($\pm$ ft)	COMMENTS	INITIALS
MW-27	05/15/23	1108	TOST	107.04	137.16	30.12	111.50	+4.46		AMD
MW-28	05/15/23	0720	TOST	111.47	140.77	29.30	116.20	+4.73		↓
MW-29	05/ /23				139.81		183.90		Totalizer: Q=	
MW-30A	05/ /23				129.44		104.90			
MW-30B	05/ /23				129.39		102.91			
MW-31	05/ /23				119.60		92.92			
MW-32A	05/ /23				92.88		67.18			
MW-32B	05/ /23				92.89		67.19			
MW-32C	05/ /23				92.88		62.61			
MW-33	05/ /23				83.19		58.35			
MW-34A	05/15/23	1214	TOST	132.73	153.25	20.52	133.11	+0.38		AMD
MW-34B	05/15/23	1230	TOST	125.21	153.11	27.90	129.78	+4.57		↓
MW-34C	05/15/23	1208	TOST	124.90	153.29	28.39	128.60	+3.70		↓
MW-35A	05/ /23				93.57		75.75			
MW-35B	05/ /23				93.56		71.51			
MW-35C	05/ /23				93.55		67.35			
MW-36	05/15/23	0954	TOST	59.68	86.65	26.97	76.26 (Nov 2022)	N/A		AMD
MW-37	05/15/23	1015	TOST	124.10	155.60	31.50	127.90	+3.80		↓
MW-38	05/15/23	1020	TOST	137.95	154.90	16.95	137.97	+0.02		↓
MW-39	05/15/23	0935	TOST	57.70	84.25	26.55	73.65 (Nov 2022)	N/A		↓

msl = Mean sea level
ft = feet

STATIC WATER LEVEL DATA SHEET

MONTH/YEAR: May 2023

 METHOD OF MEASUREMENT/SOUNDER IDENTIFIER: FLAT TAPE ELECTRIC SOUNDER # **7094**

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)	FEB 2023 PREVIOUS DEPTH TO WATER (ft)	CHANGE IN WATER LEVEL (+ ft)	COMMENTS	INITIALS
MW-40	05/ /23				123.40		95.02			
MW-41	05/15/23	1035	TOST	128.59	155.60	27.01	132.51	+3.92		AMD
MW-42	05/ /23				82.80		58.81			
MW-43	05/ /23				76.64		53.12			
EW-01	05/15/23	1327	TOST	110.42	141.07	30.65	115.28	+4.86	SOUNDING TUBE TO 172.65 Totalizer: N/A Pumping? N	AMD
EW-02	05/ /23				132.97		124.32		Totalizer: Q=	

 msl = Mean sea level
 ft = feet

HARGIS + ASSOCIATES, INC.

**MAY 2023 GROUNDWATER SAMPLE PLAN
TEAM 1**

QA/QC	Total VOC's µg/L	1,4-Dioxane µg/L	APROX. GALLONS	ESTIMATE D TIME (minutes)	WELL IDENTIFIER	HYDROGEOLOGIC ZONE	MAY 2023 SAMPLING SCHEDULE	SAMPLE METHOD
	101	13	980	76	MW-36 ★	Deep; D	VOCs; 1,4-Dioxane	Ded.240V
	87	ND	830	63	MW-32B	Deep; B	VOCs; 1,4-Dioxane	Ded.240V
MS/MSD	37	ND	900	58	MW-42	Deep; B	VOCs; 1,4-Dioxane	Ded.240V
	7.6	ND	850	40	MW-33	Deep; B	VOCs; 1,4-Dioxane	Ded.240V
	ND	ND	867	46	MW-39 ★	Deep; B	VOCs; 1,4-Dioxane	Ded.240V
MS/MSD	ND	ND	937	47	MW-35C	Deep; B	VOCs; 1,4-Dioxane	Ded.240V
MS/MSD	ND	ND	917	39	MW-43	Deep; B	VOCs; 1,4-Dioxane	Ded.240V

NOTES

Collect 10% split lab and field duplicate (**SPT/FD**) samples

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

A **MS** and **MSD** (3x40ml VOA and 3x125mL amber jar) should be collected every day.

Wells with dedicated pumps should follow concentration order when possible.

★ No samples collected at MW-36 and MW-39 during sampling event. Coordinating access to Brea Creek flood channel with Orange County Flood Control District (OCFCD).

HARGIS + ASSOCIATES, INC.

**MAY 2023 GROUNDWATER SAMPLE PLAN
TEAM 2**

QA/QC	Total VOC's µg/L	1,4-Dioxane µg/L	APROX. GALLONS	ESTIMATE D TIME (minutes)	WELL IDENTIFIER	HYDROGEOLOGIC ZONE	MAY 2023 SAMPLING SCHEDULE	SAMPLE METHOD
	1354	1200	275	15	MW-21	Water Table; BC	VOCs; 1,4-Dioxane (8270 MOD)	Dedicated
	9	5	170	15	EW-01	Deep; B	VOCs; 1,4-Dioxane (8270 MOD)	Dedicated
	ND	ND	226	27	MW-40	Deep; B	VOCs; 1,4-Dioxane	Ded.240V
	ND	ND	58	10	MW-30A	Deep; B	VOCs; 1,4-Dioxane	Ded.240V
	ND	ND	97	15	MW-28	Deep; B	VOCs; 1,4-Dioxane	Ded.240V
FD/SPT	1	ND	140	20	MW-41	Deep; B	VOCs; 1,4-Dioxane (8270 MOD)	Ded.240V
	28	8.5	143	13	MW-34B	Deep; B	VOCs; 1,4-Dioxane (8270 MOD)	Ded 240V
FD/SPT	41	ND	258	31	MW-31	Deep; B	VOCs; 1,4-Dioxane	Ded.240V
	92	ND	130	31	MW-30B	Deep; BC	VOCs; 1,4-Dioxane	Ded.240V
RB	ND	ND	155	62	MW-26C	Deep; B	VOCs; 1,4-Dioxane	Redi-flo
	31	ND	20	20	MW-08	Water Table; BC	VOCs; 1,4-Dioxane	Redi-flo

NOTES

Collect 10% split lab and field duplicate (**SPT/FD**) samples

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

A **MS** and **MSD** (3x40ml VOA and 3x125mL amber jar) should be collected every day.

Wells with dedicated pumps should follow concentration order when possible.

GROUNDWATER SAMPLING INFORMATION

DATE: 5/16/23TASK: 532.30WELL ID: MW-08

Time <u>1225</u> Static DTW (ft below reference point) <u>124.87</u>	Casing Volume (CV) (gallons) <u>6.7</u> 3 CV (gallons) <u>20</u>	Weather Conditions	Initials: <u>AMP</u>
Casing Total Depth (ft below reference point) <u>166.1</u>	Purging Device <u>grundfas</u> Sampling Device <u>ded. tubing</u>	Time <u>1215</u> Temp. <u>65</u>	Begin Purge <u>1231</u> End Purge <u>1251</u>
Water Column (feet) <u>47.23</u>	Pump: Depth (ft brp) <u>163</u> Type <u>rediflo2</u> Voltage <u>115</u> HP <u>0.5</u>	Skies <u>clear/sunny</u>	Gallons Purged <u>22</u> CVs Purged <u>3.3</u>
Casing Capacity (Diameter <u>2"</u>) (gallons per foot) <u>0.163</u>	Monitor Well Recharge Rate: Slow Fast <u>X</u>	Wind (mph) <u>-</u> From <u>-</u>	DTW (ft brp) <u>126.60</u> Time <u>1251</u>

Time	Depth to Water	Volume Purged (Gallons)	Casing Volumes Purged	...FIELD PARAMETERS...						Pump Frequency Hz	COMMENTS
				Temp. (°C)	pH	EC (mS/cm)	O.R.P. (mV)	D.O. (mg/L)	Turbidity (NTU)		
1231	124.87	0	0	— BEGIN PURGE —							
1235	126.55	3.5	0.5	23.5	7.27	1.572	70.9	2.02	15.98	280	Q = 1gpm
1238	126.60	7.0	1.0	23.3	7.16	1.693	73.1	2.61	4.09	280	
1241	126.60	10.5	1.5	23.3	7.15	1.687	69.0	2.52	2.87	280	
1244	126.60	14	2.0	23.3	7.15	1.684	70.4	2.81	2.13	280	
1246	126.60	17	2.5	23.3	7.15	1.683	75.0	3.33	1.53	280	
1249	126.60	20	3.0	23.3	7.15	1.681	75.3	2.83	1.06	280	COLLECT SAMPLES
1251	NM	22	3.3	— END PURGE —							

SAMPLE COLLECTION	SAMPLE TIME <u>1249</u>
ANALYSIS	QUANTITY
8260B VOCs	<u>3</u>
8270C 1,4 dioxane	<u>1</u>
8270 SIM 1,4 dioxane	
8270 MOD 1,4 dioxane	
40 ml VOA	
125 mL Amber	
1 L Amber	
1 L Amber	
DUPLICATES / SPLITS / BLANKS?	Y <u>(N)</u>
If yes, complete appropriate forms.	

AIR MONITORING PID/FID ppm: VAULT NA BKGD NA BREATHING ZONE NA DISCHARGE WATER NA

NOTES (Color, odor, sand and silt content, factors possibly affecting samples, condition of vault, wellhead, sampling apparatus, etc.)

GROUNDWATER SAMPLING INFORMATION

DATE: 5/17/23TASK: 532.30WELL ID: MW-21

Time <u>1323</u> Static DTW (ft below reference point) <u>108.80</u>	Casing Volume (CV) (gallons) <u>74.0</u> 3 CV (gallons) <u>222</u>	Weather Conditions	Initials: <u>AMP/ANW</u>
Casing Total Depth (ft below reference point) <u>232.1</u>	Purging Device <u>ded. pump</u> Sampling Device <u>ded sample port</u>	Time <u>1326</u> Temp. <u>75°F</u>	Begin Purge <u>1326</u> End Purge <u>1339</u>
Water Column (feet) <u>123.30</u>	Pump: Depth (ft brp) <u>-</u> Type <u>-</u> Voltage <u>-</u> HP <u>-</u>	Skies <u>clear</u>	Gallons Purged <u>240</u> CVs Purged <u>3.2</u>
Casing Capacity (Diameter <u>4"</u>) (gallons per foot) <u>0.60</u>	Monitor Well Recharge Rate: Slow <u>-</u> Fast <u>X</u>	Wind (mph) <u>-</u> From <u>-</u>	DTW (ft brp) <u>130.09</u> Time <u>1336</u>

Time	Depth to Water	Volume Purged (Gallons)	Casing Volumes Purged	... FIELD PARAMETERS ...						Pump Frequency Hz	COMMENTS
				Temp. (°C)	pH	EC (mS/cm)	O.R.P. (mV)	D.O. (mg/L)	Turbidity (NTU)		
1326	108.80	0	0	----- BEGIN PURGE -----							
1328	127.80	37	0.5	25.1	7.30	2.160	-109.0	1.37	62.45	-	Q ≈ 20 GPM
1331	128.70	74	1.0	23.6	7.27	2.239	-55.1	3.77	9.82	-	
1333	129.51	111	1.5	23.2	7.20	2.199	4.1	4.87	7.45	-	
1334	129.90	148	2.0	23.0	6.19	2.191	-0.9	5.47	8.92	-	
1336	130.09	185	2.5	22.5	6.60	2.181	6.9	5.83	5.62	-	
1337	NM	222	3.0	22.3	6.76	2.104	10.6	5.55	4.11	-	COLLECT SAMPLE
1339	NM	240	3.2	----- END PURGE -----							

SAMPLE COLLECTION SAMPLE TIME <u>1337</u>	
ANALYSIS	QUANTITY TYPE
8260B VOCs	<u>3</u> 40 ml VOA <u>X</u>
8270C 1,4 dioxane	<u>1</u> 125 mL Amber <u>X</u>
8270 SIM 1,4 dioxane	1 L Amber
8270 MOD 1,4 dioxane	1 L Amber
DUPLICATES / SPLITS / BLANKS?	Y <u>(N)</u>
If yes, complete appropriate forms.	

AIR MONITORING PID/FID ppm: VAULT NA BKGD NA BREATHING ZONE NA DISCHARGE WATER NA

NOTES (Color, odor, sand and silt content, factors possibly affecting samples, condition of vault, wellhead, sampling apparatus, etc.)

GROUNDWATER SAMPLING INFORMATION
DATE: 05/17/23
TASK: 532.30
WELL ID: EW-01

Time <u>1346</u> Static DTW (ft below reference point) <u>110.10</u>	Casing Volume (CV) (gallons) <u>43</u> 3 CV (gallons) <u>129</u>	Weather Conditions	Initials: <u>AMD/ANW</u>
Casing Total Depth (ft below reference point) <u>181</u>	Purging Device <u>ded. pump</u> Sampling Device <u>ded. sample port</u>	Time <u>1345</u> Temp. <u>76°F</u>	Begin Purge <u>1346</u> End Purge <u>1402</u>
Water Column (feet) <u>70.9</u>	Pump: Depth (ft brp) <u>-</u> Type <u>-</u> Voltage <u>-</u> HP <u>-</u>	Skies <u>clear</u>	Gallons Purged <u>159</u> CVs Purged <u>3.7</u>
Casing Capacity (Diameter <u>4"</u>) (gallons per foot) <u>0.60</u>	Monitor Well Recharge Rate: Slow <u>-</u> Fast <u>X</u>	Wind (mph) <u>-</u> From <u>-</u>	DTW (ft brp) <u>110.71</u> Time <u>1359</u>

Time	Depth to Water	Volume Purged (Gallons)	Casing Volumes Purged	...FIELD PARAMETERS...						Pump Frequency Hz	COMMENTS
				Temp. (°C)	pH	EC (µS/cm)	O.R.P. (mV)	D.O. (mg/L)	Turbidity (NTU)		
1346	110.10	0	0			BEGIN PURGE					
1348	110.66	21.5	0.5	24.4	7.22	1591	65.1	6.38	5.28	-	QZ 10 GPM
1350	110.70	43 21.5	1.0	23.0	7.26	1548	67.5	6.76	1.88	-	
1352	110.70	64.5	1.5	23.6	7.24	1527	78.4	6.67	2.52	-	
1354	110.71	86	2.0	22.5	7.24	1521	83.2	6.61	1.64	-	
1356	110.71	107.5	2.5	22.5	7.26	1515	76.0	6.60	1.35	-	
1359	110.71	129	3.0	22.1	7.27	1508	78.2	6.97	1.79	-	COLLECT SAMPLE
1402	NM	159	3.7			END PURGE					

SAMPLE COLLECTION SAMPLE TIME <u>1400</u>	
ANALYSIS	QUANTITY TYPE
8260B VOCs	<u>3</u> 40 ml VOA <u>X</u>
8270C 1,4 dioxane	<u>1</u> 125 mL Amber <u>X</u>
8270 SIM 1,4 dioxane	1 L Amber
8270 MOD 1,4 dioxane	1 L Amber
DUPLICATES / SPLITS / BLANKS?	Y <u>(N)</u>
If yes, complete appropriate forms.	

AIR MONITORING PID/FID ppm: VAULT NA BKGD NA BREATHING ZONE NA DISCHARGE WATER NA

NOTES (Color, odor, sand and silt content, factors possibly affecting samples, condition of vault, wellhead, sampling apparatus, etc.)

GROUNDWATER SAMPLING INFORMATION
DATE: 5/16/23
TASK: 532.30
WELL ID: MW-28

Time <u>0825</u> Static DTW (ft below reference point)	<u>111.48</u>	Screen Volume (SV) (gallons) <u>27</u> 3 SV (gallons) <u>81</u>	Weather Conditions	Initials: <u>AMD</u>
Casing Total Depth (ft below reference point)	<u>375</u>	Purging Device <u>ded. pump</u> Sampling Device <u>0-10 pipestand</u>	Time <u>0820</u> Temp. <u>60</u>	Begin Purge <u>0833</u> End Purge <u>0845</u>
Water Column (Pump Set Depth to Screen) (feet)	<u>45</u>	Pump: Depth (ft brp) <u>330</u> Type <u>grundfos</u> Voltage <u>240</u> HP <u>-</u>	Skies <u>overcast</u>	Gallons Purged <u>89</u> SVs Purged <u>3.3</u>
Casing Capacity (Diameter <u>4"</u>) (gallons per foot)	<u>0.60</u>	Monitor Well Recharge Rate: Slow _____ Fast <u>X</u>	Wind (mph) <u>-</u> From <u>-</u>	DTW (ft brp) <u>119.60</u> Time <u>0844</u>

Time	Depth to Water	Volume Purged (Gallons)	Casing Volumes Purged	FIELD PARAMETERS						Pump Frequency Hz	COMMENTS
				Temp. (°C)	pH	EC (µS/cm)	O.R.P. (mV)	D.O. (mg/L)	Turbidity (NTU)		
0833	111.48	0	0								BEGIN PURGE
0835	119.19	13.5	0.5	20.7	7.40	0.910	233.7	4.26	12.0	-	Q ≈ 7 gpm
0837	119.58	27	1.0	21.7	7.40	0.933	228.8	4.46	6.36	-	
0839	119.59	40.5	1.5	20.9	7.41	0.932	220.3	4.48	2.68	-	
0840	119.60	54	2.0	20.8	7.43	0.930	219.6	4.53	1.43	-	
0842	119.60	67.5	2.5	20.8	7.44	0.931	218.4	4.60	1.18	-	
0844	119.60	81	3.0	20.8	7.44	0.931	218.0	4.58	1.13	-	COLLECT SAMPLES
0845	NM	89	3.3								END PURGE

SAMPLE COLLECTION SAMPLE TIME <u>0844</u>	
ANALYSIS	QUANTITY TYPE
8260B VOCs	<u>3</u> 40 ml VOA
8270C 1,4 dioxane	<u>1</u> 125mL Amber
8270 SIM 1,4 dioxane	<u> </u> 1 L Amber
8270 MOD 1,4 dioxane	<u> </u> 1 L Amber
DUPLICATES / SPLITS / BLANKS? <u>Y</u> <u>(N)</u> If yes, complete appropriate forms.	

AIR MONITORING PID/FID ppm: VAULT NA BKGD NA BREATHING ZONE NA DISCHARGE WATER NA
 NOTES (Color, odor, sand and silt content, factors possibly affecting samples, condition of vault, wellhead, sampling apparatus, etc.)

GROUNDWATER SAMPLING INFORMATION

DATE: 5/16/23TASK: 532.30WELL ID: MW-26C

Time <u>0921</u> Static DTW (ft below reference point) <u>107.42</u>	Screen Volume (SV) (gallons) <u>49</u> 3 SV (gallons) <u>147</u>	Weather Conditions	Initials: <u>AMD</u>
Casing Total Depth (ft below reference point) <u>499</u>	Purging Device <u>submers pump</u> Sampling Device <u>ded. tubing</u>	Time <u>0930</u> Temp. <u>65</u>	Begin Purge <u>0925</u> End Purge <u>1027</u>
Water Column (Pump Set Depth to Screen) (feet) <u>299</u>	Pump: Depth (ft brp) <u>200</u> Type <u>rediflo2</u> Voltage <u>120</u> HP <u>0.5</u>	Skies <u>overcast</u>	Gallons Purged <u>155</u> SVs Purged <u>3.1</u>
Casing Capacity (Diameter <u>2"</u>) (gallons per foot) <u>0.163</u>	Monitor Well Recharge Rate: Slow _____ Fast <u>X</u>	Wind (mph) <u>1</u> From <u>S</u>	DTW (ft brp) <u>108.61</u> Time <u>1025</u>

Time	Depth to Water	Volume Purged (Gallons)	Casing Volumes Purged	... FIELD PARAMETERS ...						Pump Frequency Hz	COMMENTS
				Temp. (°C)	pH	EC (µS/cm)	O.R.P. (mV)	D.O. (mg/L)	Turbidity (NTU)		
0925	107.42	0	0			BEGIN PURGE					
0935	108.59	25	0.5	21.8	9.16	0.416	-128.7	2.02	1.43	370	Q ² 2.5 gpm
0945	108.61	50	1.0	22.2	7.94	0.795	-117.5	2.02	0.74	370	
0955	108.61	75	1.5	22.4	7.79	0.826	-123.4	2.01	0.51	370	
1005	108.61	100	2.0	22.4	7.75	0.835	-127.7	1.84	0.36	370	
1015	108.61	125	2.5	22.2	7.72	0.821	-128.1	1.86	0.25	370	
1025	108.61	147	3.0	22.2	7.76	0.821	-128.3	1.87	0.23	370	COLLECT SAMPLE
1027	NM	155	3.1			END PURGE					

SAMPLE COLLECTION SAMPLE TIME <u>1025</u>	
ANALYSIS	QUANTITY TYPE
8260B VOCs	<u>3+3</u> 40 ml VOA
8270C 1,4 dioxane	<u>1+1</u> 125mL Amber
8270 SIM 1,4 dioxane	1 L Amber
8270 MOD 1,4 dioxane	1 L Amber
DUPLICATES / SPLITS / <u>BLANKS?</u>	<u>(Y)</u> 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.)

Collected rinsate blank RB-20230516 @ 1050

GROUNDWATER SAMPLING INFORMATION

DATE: 5/16/23TASK: 532.30WELL ID: MW-30A

Time <u>1315</u> Static DTW (ft below reference point) <u>100.50</u>	Screen Volume (SV) (gallons) <u>17.2</u> 3 SV (gallons) <u>51.5</u>	Weather Conditions Time <u>1315</u> Temp. <u>70</u>	Initials: <u>AMP</u>
Casing Total Depth (ft below reference point) <u>564</u>	Purging Device <u>ded. pump</u> Sampling Device <u>ND pipestand</u>	Skies <u>sunny</u>	Begin Purge <u>1320</u> End Purge <u>1331</u>
Water Column (Pump Set Depth to Screen) (feet) <u>44</u>	Pump: Depth (ft brp) <u>520</u> Type <u>grundfos</u> Voltage <u>240</u> HP <u>-</u>	Wind (mph) <u>3</u> From <u>W</u>	Gallons Purged <u>60</u> SVs Purged <u>3.5</u>
Casing Capacity (Diameter <u>3"</u>) (gallons per foot) <u>0.39</u>	Monitor Well Recharge Rate: Slow _____ Fast <u>X</u>		DTW (ft brp) <u>102.44</u> Time <u>1330</u>

Time	Depth to Water	Volume Purged (Gallons)	Casing Volumes Purged	FIELD PARAMETERS						Pump Frequency Hz	COMMENTS
				Temp. (°C)	pH	EC (mS/cm)	O.R.P. (mV)	D.O. (mg/L)	Turbidity (NTU)		
1320	100.50	0	0			BEGIN PURGE					
1322	102.41	8.5	0.5	22.6	7.73	0.804	68.6	2.70	1.83	-	Q = 6 gpm
1324	102.43	17.2	1.0	21.8	7.68	0.755	73.4	2.73	3.00	-	
1325	102.44	25.5	1.5	21.8	7.64	0.753	74.3	2.36	2.22	-	
1327	102.44	34.0	2.0	21.9	7.59	0.755	73.3	2.61	2.92	-	
1329	102.44	42.5	2.5	21.8	7.59	0.754	70.2	2.70	2.01	-	
1330	102.44	51.5	3.0	21.8	7.59	0.753	70.8	2.65	1.39	-	COLLECT SAMPLES
1331	NM	60	3.5			END PURGE					

SAMPLE COLLECTION	SAMPLE TIME	<u>1330</u>
ANALYSIS	QUANTITY	TYPE
8260B VOCs	<u>3</u>	40 ml VOA
8270C 1,4 dioxane	<u>1</u>	125mL Amber
8270 SIM 1,4 dioxane		1 L Amber
8270 MOD 1,4 dioxane		1 L Amber
DUPLICATES / SPLITS / BLANKS?	Y	<u>(N)</u>
If yes, complete appropriate forms.		

AIR MONITORING PID/FID ppm: VAULT NA BKGD NA BREATHING ZONE NA DISCHARGE WATER NA
 NOTES (Color, odor, sand and silt content, factors possibly affecting samples, condition of vault, wellhead, sampling apparatus, etc.)

GROUNDWATER SAMPLING INFORMATION

DATE: 5/16/23TASK: 532.30WELL ID: MW-30B

Time <u>1338</u> Static DTW (ft below reference point) <u>99.05</u>	Screen Volume (SV) (gallons) <u>37.4</u> 3 SV (gallons) <u>112.3</u>	Weather Conditions	Initials: <u>AMD</u>
Casing Total Depth (ft below reference point) <u>616</u>	Purging Device <u>ded. pump</u> Sampling Device <u>10-100 pipestand</u>	Time <u>1340</u> Temp. <u>70</u>	Begin Purge <u>1342</u> End Purge <u>1405</u>
Water Column (Pump Set Depth to Screen) (feet) <u>96</u>	Pump: Depth (ft brp) <u>520</u> Type <u>grundfos</u> Voltage <u>240</u> HP <u>-</u>	Skies <u>sunny</u>	Gallons Purged <u>125</u> SVs Purged <u>3.3</u>
Casing Capacity (Diameter <u>3"</u>) (gallons per foot) <u>0.39</u>	Monitor Well Recharge Rate: Slow Fast <u>X</u>	Wind (mph) <u>3</u> From <u>W</u>	DTW (ft brp) <u>128.05</u> Time <u>1403</u>

Time	Depth to Water	Volume Purged (Gallons)	Casing Volumes Purged	...FIELD PARAMETERS...						Pump Frequency Hz	COMMENTS
				Temp. (°C)	pH	EC (µS/cm)	O.R.P. (mV)	D.O. (mg/L)	Turbidity (NTU)		
1342	99.05	0	0			BEGIN PURGE					
1346	125.01	19	0.5	23.6	7.72	0.857	-250.5	1.40	18.96	-	Q = 9 gpm
1349	125.33	38	1.0	22.7	7.38	0.999	-242.3	1.70	10.45	-	
1352	126.77	57	1.5	22.1	7.33	1.251	-209.3	1.73	7.61	-	
1356	127.13	76	2.0	22.1	7.33	1.293	-187.3	1.76	7.33	-	
1359	127.83 128.05 <u>128.05</u> (AMD)	94	2.5	22.3	7.34	1.308	-171.6	1.79	2.63	-	
1403	128.05 NM <u>125</u> (AMD)	112	3.0	22.3	7.36	1.304	-168.3	1.81	2.55	-	COLLECT SAMPLES
1405	NM	125 NM <u>125</u> (AMD)	3.3			END PURGE					

SAMPLE COLLECTION SAMPLE TIME <u>1403</u>	
ANALYSIS	QUANTITY TYPE
8260B VOCs	<u>3</u> 40 ml VOA
8270C 1,4 dioxane	<u>1</u> 125mL Amber
8270 SIM 1,4 dioxane	<u>1</u> L Amber
8270 MOD 1,4 dioxane	<u>1</u> L Amber
DUPLICATES / SPLITS / BLANKS?	Y <u>N</u>
If yes, complete appropriate forms.	

AIR MONITORING PID/FID ppm: VAULT NA BKGD NA BREATHING ZONE NA DISCHARGE WATER NA

NOTES (Color, odor, sand and silt content, factors possibly affecting samples, condition of vault, wellhead, sampling apparatus, etc.)

GROUNDWATER SAMPLING INFORMATION

DATE: 5/16/23TASK: 532.30WELL ID: MW-34B

Time <u>1423</u> Static DTW (ft below reference point) <u>125.11</u>	Screen Volume (SV) (gallons) <u>46</u> 3 SV (gallons) <u>138</u>	Weather Conditions	Initials: <u>AMD</u>
Casing Total Depth (ft below reference point) <u>536</u>	Purging Device <u>ded pump</u> Sampling Device <u>10-100 pipestand</u>	Time <u>1422</u> Temp. <u>75</u>	Begin Purge <u>1431</u> End Purge <u>1450</u>
Water Column (Pump Set Depth to Screen) (feet) <u>76</u>	Pump: Depth (ft brp) <u>460</u> Type <u>grundfos</u> Voltage <u>240</u> HP <u>-</u>	Skies <u>sunny</u>	Gallons Purged <u>153</u> SVs Purged <u>3.3</u>
Casing Capacity (Diameter <u>4"</u>) (gallons per foot) <u>0.60</u>	Monitor Well Recharge Rate: Slow _____ Fast <u>X</u>	Wind (mph) <u>-</u> From <u>-</u>	DTW (ft brp) <u>126.17</u> Time <u>1456</u>

Time	Depth to Water	Volume Purged (Gallons)	Casing Volumes Purged	FIELD PARAMETERS						Pump Frequency Hz	COMMENTS
				Temp. (°C)	pH	EC (mS/cm)	O.R.P. (mV)	D.O. (mg/L)	Turbidity (NTU)		
<u>1231</u> ⁴ <u>AMD</u>	<u>125.11</u>	<u>0</u>	<u>0</u>	<u>BEGIN PURGE</u>							
<u>1234</u> ⁴ <u>AMD</u>	<u>126.14</u>	<u>23</u>	<u>0.5</u>	<u>23.6</u>	<u>7.78</u>	<u>0.870</u>	<u>-38.5</u>	<u>4.51</u>	<u>5.58</u>	<u>-</u>	<u>Q ≈ 8 gpm</u>
<u>1237</u> ⁴ <u>AMD</u>	<u>126.16</u>	<u>46</u>	<u>1.0</u>	<u>22.4</u>	<u>7.63</u>	<u>0.832</u>	<u>-58.4</u>	<u>3.87</u>	<u>6.83</u>	<u>-</u>	
<u>1239</u> ⁴ <u>AMD</u>	<u>126.17</u>	<u>69</u>	<u>1.5</u>	<u>22.6</u>	<u>7.59</u>	<u>0.835</u>	<u>-53.2</u>	<u>3.50</u>	<u>5.59</u>	<u>-</u>	
<u>1442</u>	<u>126.17</u>	<u>92</u>	<u>2.0</u>	<u>22.6</u>	<u>7.60</u>	<u>0.840</u>	<u>-55.7</u>	<u>4.03</u>	<u>1.37</u>	<u>-</u>	
<u>1445</u>	<u>126.17</u>	<u>115</u>	<u>2.5</u>	<u>22.6</u>	<u>7.55</u>	<u>0.845</u>	<u>-54.3</u>	<u>4.01</u>	<u>1.51</u>	<u>-</u>	
<u>1448</u>	<u>126.17</u>	<u>138</u>	<u>3.0</u>	<u>22.6</u>	<u>7.55</u>	<u>0.846</u>	<u>-54.2</u>	<u>4.11</u>	<u>0.88</u>	<u>-</u>	<u>COLLECT SAMPLES</u>
<u>1450</u>	<u>NM</u>	<u>153</u>	<u>3.3</u>	<u>END PURGE</u>							

SAMPLE COLLECTION SAMPLE TIME <u>1448</u>			AIR MONITORING PID/FID ppm: VAULT NA BKGD NA BREATHING ZONE NA DISCHARGE WATER NA			
ANALYSIS	QUANTITY	TYPE	NOTES (Color, odor, sand and silt content, factors possibly affecting samples, condition of vault, wellhead, sampling apparatus, etc.)			
8260B VOCs	<u>3</u>	40 ml VOA				
8270C 1,4 dioxane	<u>1</u>	125mL Amber				
8270 SIM 1,4 dioxane		1 L Amber				
8270 MOD 1,4 dioxane		1 L Amber				
DUPLICATES / SPLITS / BLANKS? <u>Y</u> <u>(N)</u> If yes, complete appropriate forms.						

GROUNDWATER SAMPLING INFORMATION
DATE: 5/17/23
TASK: 532.30
WELL ID: MW-40

Time <u>0903</u> Static DTW (ft below reference point)	<u>91.21</u>	Screen Volume (SV) (gallons) <u>67.1</u> 3 SV (gallons) <u>202</u>	Weather Conditions	Initials: <u>AMD</u>
Casing Total Depth (ft below reference point)	<u>970</u>	Purging Device <u>ded pump</u> Sampling Device <u>ND pipestand</u>	Time <u>0905</u> Temp. <u>70</u>	Begin Purge <u>0908</u> End Purge <u>0933</u>
Water Column (Pump Set Depth to Screen) (feet)	<u>50</u>	Pump: Depth (ft brp) <u>920</u> Type <u>grundfos</u> Voltage <u>240</u> HP <u>-</u>	Skies <u>overcast</u>	Gallons Purged <u>228</u> SVs Purged <u>3.4</u>
Casing Capacity (Diameter <u>6"</u>) (gallons per foot)	<u>1.35</u>	Monitor Well Recharge Rate: Slow _____ Fast <u>X</u>	Wind (mph) <u>-</u> From <u>-</u>	DTW (ft brp) <u>92.07</u> Time <u>0932</u>

Time	Depth to Water	Volume Purged (Gallons)	Casing Volumes Purged	...FIELD PARAMETERS...						Pump Frequency Hz	COMMENTS
				Temp. (°C)	pH	EC (mS/cm)	O.R.P. (mV)	D.O. (mg/L)	Turbidity (NTU)		
0908	91.21	0	0								
0911	92.00	33.5	0.5	20.2	7.74	0.776	+96.4	3.38	2.29	-	Q = 8 gpm
0915	92.07	67.5	1.0	20.8	7.66	0.788	-81.3	2.95	0.95	-	
0920	92.07	101.3	1.5	20.9	7.67	0.803	-90.3	2.76	0.28	-	
0924	92.07	135	2.0	21.0	7.62	0.803	-78.4	2.75	0.21	-	
0928	92.07	168.8	2.5	21.1	7.61	0.804	-79.7	2.69	0.21	-	
0932	92.07	202.5	3.0	21.1	7.63	0.806	-81.2	2.68	0.16	-	COLLECT SAMPLE
0933	NM	228	3.4								

SAMPLE COLLECTION SAMPLE TIME <u>0932</u>		
ANALYSIS	QUANTITY	TYPE
8260B VOCs	<u>3</u>	40 ml VOA
8270C 1,4 dioxane	<u>1</u>	125mL Amber
8270 SIM 1,4 dioxane		1 L Amber
8270 MOD 1,4 dioxane		1 L Amber
DUPLICATES / SPLITS / BLANKS? <u>Y</u>		<u>(N)</u>

AIR MONITORING PID/FID ppm: VAULT NA BKGD NA BREATHING ZONE NA DISCHARGE WATER NA

NOTES (Color, odor, sand and silt content, factors possibly affecting samples, condition of vault, wellhead, sampling apparatus, etc.)

GROUNDWATER SAMPLING INFORMATION
DATE: 5/17/23
TASK: 532.30
WELL ID: MW-41

Time <u>1018</u> Static DTW (ft below reference point)	128.25	Screen Volume (SV) (gallons) <u>39</u> 3 SV (gallons) <u>117</u>	Weather Conditions	Initials: <u>AMD</u>
Casing Total Depth (ft below reference point)	425	Purging Device <u>ded pump</u> Sampling Device <u>0+0 pipe stand</u>	Time <u>1027</u> Temp. <u>70</u>	Begin Purge <u>1025</u> End Purge <u>1048</u>
Water Column (Pump Set Depth to Screen) (feet)	65	Pump: Depth (ft brp) <u>360</u> Type <u>grundfos</u> Voltage <u>240</u> HP <u>-</u>	Skies <u>overcast</u>	Gallons Purged <u>140</u> SVs Purged <u>3.6</u>
Casing Capacity (Diameter <u>4"</u>) (gallons per foot)	0.60	Monitor Well Recharge Rate: Slow _____ Fast <u>X</u>	Wind (mph) <u>-</u> From <u>-</u>	DTW (ft brp) <u>135.33</u> Time <u>1045</u>

Time	Depth to Water	Volume Purged (Gallons)	Casing Volumes Purged	FIELD PARAMETERS						Pump Frequency Hz	COMMENTS
				Temp. (°C)	pH	EC (µS/cm)	O.R.P. (mV)	D.O. (mg/L)	Turbidity (NTU)		
1025	128.25	0	0								
											BEGIN PURGE
1028	130.99	19.5	0.5	21.8	7.34	2.027	89.7	8.01	4.19	-	Q = 3 gpm
1034	131.02	39	1.0	22.0	7.08	2.091	77.7	4.77	96.3	-	
1039	135.25	58.5	1.5	22.4	7.02	2.086	74.4	3.74	83.6	-	1Q to 8.5 gpm
1041	135.30	78.0	2.0	22.2	7.02	2.084	75.5	3.79	20.6	-	
1043	135.32	97.5	2.5	22.0	7.03	2.082	82.3	4.15	8.61	-	
1045	135.33	117	3.0	22.1	7.05	2.084	84.1	3.93	6.11	-	COLLECT SAMPLE
1048	NM	146	3.6								
											END PURGE

SAMPLE COLLECTION SAMPLE TIME <u>1045</u> ANALYSIS <u>QUANTITY</u> <u>TYPE</u> 8260B VOCs <u>3+3+3</u> 40 ml VOA 8270C 1,4 dioxane <u>1+1</u> 125mL Amber 8270 SIM 1,4 dioxane <u>1</u> 1 L Amber 8270 MOD 1,4 dioxane _____ 1 L Amber DUPLICATES / SPLITS / BLANKS? <u>(Y)</u> 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.) <u>Collected field duplicate MW-4100-20230517 @ 1050</u> <u>Collected split sample MW-41-20230517 @ 1055</u>
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GROUNDWATER SAMPLING INFORMATION
DATE: 5/17/23 89.28 **TASK:** 532.30 **WELL ID:** MW-31

Time <u>1209</u> Static DTW (ft below reference point) <u>89.28</u>	Screen Volume (SV) (gallons) <u>81</u> 3 SV (gallons) <u>243</u>	Weather Conditions	Initials: <u>AMD</u>
Casing Total Depth (ft below reference point) <u>996</u>	Purging Device <u>ded pump</u> Sampling Device <u>10-100 pipestand</u>	Time <u>1215</u> Temp. <u>75</u>	Begin Purge <u>1214</u> End Purge <u>1246</u>
Water Column (Pump Set Depth to Screen) (feet) <u>54</u>	Pump: Depth (ft brp) <u>942</u> Type <u>grundfos</u> Voltage <u>240</u> HP <u>-</u>	Skies <u>Sunny</u>	Gallons Purged <u>260</u> SVs Purged <u>3.2</u>
Casing Capacity (Diameter <u>6"</u>) (gallons per foot) <u>1.5</u>	Monitor Well Recharge Rate: Slow Fast <u>X</u>	Wind (mph) <u>-</u> From <u>-</u>	DTW (ft brp) <u>93.30</u> Time <u>1243</u>

Time	Depth to Water	Volume Purged (Gallons)	Casing Volumes Purged	FIELD PARAMETERS						Pump Frequency Hz	COMMENTS
				Temp. (°C)	pH	EC (mS/cm)	O.R.P. (mV)	D.O. (mg/L)	Turbidity (NTU)		
1214	89.28	0	0			BEGIN	PURGE				
1219	93.25	40.5	0.5	21.8	10.66	0.937	-149.6	3.11	5.37	-	Q = 8.5 gpm
1224	93.29	81	1.0	21.9	7.84	1.489	-93.8	2.33	23.4	-	
1228	93.30	121.5	1.5	21.8	7.64	1.343	-59.5	2.46	10.61	-	
1333	93.30	162	2.0	21.9	7.53	1.319	-38.1	2.33	5.63	-	
1238	93.30	202.5	2.5	22.1	7.53	1.173	-46.4	2.44	4.66	-	
1243	93.30	243	3.0	21.8	7.54	1.168	-33.3	2.50	3.79	-	COLLECT SAMPLES
1246	NM	260	3.2			END	PURGE				

SAMPLE COLLECTION SAMPLE TIME 1243
ANALYSIS **QUANTITY** **TYPE**

8260B VOCs	<u>3+3+3</u>	40 ml VOA
8270C 1,4 dioxane	<u>1+1</u>	125mL Amber
8270 SIM 1,4 dioxane	<u>1</u>	1 L Amber
8270 MOD 1,4 dioxane		1 L Amber

DUPLICATES SPLITS/ BLANKS? Y **N**
 If yes, complete appropriate forms.

AIR MONITORING PID/FID ppm: VAULT NA **BKGD NA** **BREATHING ZONE NA** **DISCHARGE WATER NA**
NOTES (Color, odor, sand and silt content, factors possibly affecting samples, condition of vault, wellhead, sampling apparatus, etc.)

Collected field duplicate MW-3100_20230517 @ 1245
 Collected split lab sample MW-31_20230517 @ 1250



PROJECT NUMBER:532.30

[illegible]



Calibrated at Geotech's California South service center

155 East Liberty Ave, Suite A
Anaheim, CA 92801

Fax: (714) 998-7382

YSI Pro DSS Calibration Certificate

Unit Number: 6549

Calibration Date 5/12/2023

Serial Number: 18H108483

Technician: Chapin Osbon

Installed Probes

- ☒ Conductivity
- ☒ PH/ORP
- ☒ DO
- ☒ TURB

- ☒ Display is clear, and free of damage
- ☒ Cable and accessories are free of damage
- ☒ Firmware version is up to date.

Display Battery 100 % **Pass**
Cable Flex Test: **Pass**

Cable Length	10M	pH/ORP Serial #	19B104682
Cable Lot #	19C103242	DO Probe Serial #	22J101614
Cond Probe Lot #	19B103649	Turb Probe Serial #	19B102903
Bath Temp	19.5 °C		
Meter Temp	19.5 °C		
Variance	0.00	Pass	

Cond

<u>Calibration</u>	<u>Reading</u>		<u>Buffer Lot #</u>	<u>Exp. Date</u>	
1.413 mS	1.413 mS	Pass	3GA1014	1/24	Pass

pH

<u>Point Test</u>	<u>Calibration</u>	<u>Reading</u>	<u>mV</u>	<u>Slope</u>		<u>Buffer Lot #</u>	<u>Exp. Date</u>	
2 Point	pH 7.00	pH 7.00	-13.4 mV			3GA1018	1/25	Pass
	pH 10.01	pH 10.01	-183.1 mV	169.7	Pass	3GA802	1/25	Pass

ORP

<u>Calibration</u>	<u>Reading</u>		<u>Buffer Lot #</u>	<u>Exp. Date</u>	
220 mV	220 mV	Pass	3GC861	12/23	Pass

Turbidity

<u>Zero</u>	<u>Reading</u>	<u>Variance</u>		<u>Cal</u>	<u>Reading</u>	<u>Variance</u>		<u>Buffer Lot #</u>	<u>Exp. Date</u>	
0 ntu	0 ntu	0 ntu	Pass	124 ntu	124 ntu	0.0%	Pass	22K22460171	11/23	Pass

DO

<u>Barometer</u>	<u>Calibration</u>	<u>Reading</u>	<u>Variance</u>		<u>Test Fluid</u>
756.4 mmHg	99.5 %	99.6 %	0.1%	Pass	Water Saturated Air
Time: <u>Min.</u>	<u>Sec.</u>	<u>Reading</u>			<u>Nitrogen Lot #</u>
4	21	1.0 %	Pass		166-402721632-1

Geotech Environmental Equipment, Inc. takes pride in ensuring this instrument is tested to function as specified by the manufacturer and was calibrated in accordance to manufacturer specifications. All calibration standards used are NIST traceable. With the provided lot numbers we can provide NIST documents on request. Call us at (800) 833-7958 and we will be glad to help.

APPENDIX B

LABORATORY ANALYTICAL REPORTS

June 05, 2023

Steve Netto
Hargis & Associates, Inc.
3131 Camino De Rio North Suite 355
San Diego, CA 92108
Tel: (619) 249-3166
Fax: (858) 455-6533

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

Re: ATL Work Order Number : 2300871

Client Reference : Raytheon Main, 532.30

Enclosed are the results for sample(s) received on May 17, 2023 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 Project.Management@atlglobal.com.

Sincerely,



Lena Davidkov, Client Services
lena.davidkov@atlglobal.com

Authorized to Release on 06/05/23 08:23 on Behalf of



Amy Leung
Laboratory Director

The test results in this report relate exclusively to the samples as received by the laboratory, and meet the requirements of the methodology under which they were reported; any exceptions are noted within the report and/ or case narrative.

The cover letter/ signature page and the case narrative are integral parts of this analytical report; the absence of any portion of the report renders the report invalid. This report shall not be reproduced except in full, and shall have the express written approval of the laboratory, and the original client firm to do so

The electronic signature on this report is signed by an authorized signatory of Advanced Technology Laboratories, and is intended to be legally binding as the equivalent of a handwritten signature.



Certificate of Analysis

Hargis & Associates, Inc.

3131 Camino De Rio North Suite 355

San Diego , CA 92108

Project Number : Raytheon Main, 532.30

Report To : Steve Netto

Reported : 06/05/2023

SUMMARY OF SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
TB-20230517	2300871-01	Water	5/17/23 8:00	5/17/23 17:35
MW-41_20230517	2300871-02	Water	5/17/23 10:55	5/17/23 17:35
MW-31_20230517	2300871-03	Water	5/17/23 12:50	5/17/23 17:35



Certificate of Analysis

Hargis & Associates, Inc.

3131 Camino De Rio North Suite 355

San Diego , CA 92108

Project Number : Raytheon Main, 532.30

Report To : Steve Netto

Reported : 06/05/2023

Notes and Definitions

R	RPD value outside acceptance criteria. Calculation is based on raw values.
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.
E12	Internal standard was added before extract, hence, result in low recovery.
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.



Certificate of Analysis

Hargis & Associates, Inc.

3131 Camino De Rio North Suite 355

San Diego , CA 92108

Project Number : Raytheon Main, 532.30

Report To : Steve Netto

Reported : 06/05/2023

Client Sample ID: TB-20230517

Lab ID: 2300871-01

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	B3E0863	05/18/2023	05/18/23 13:07	
1,1,1-Trichloroethane	ND	0.50	0.21	1	B3E0863	05/18/2023	05/18/23 13:07	
1,1,2,2-Tetrachloroethane	ND	0.50	0.36	1	B3E0863	05/18/2023	05/18/23 13:07	
1,1,2-Trichloroethane	ND	0.50	0.25	1	B3E0863	05/18/2023	05/18/23 13:07	
1,1-Dichloroethane	ND	0.50	0.09	1	B3E0863	05/18/2023	05/18/23 13:07	
1,1-Dichloroethene	ND	0.50	0.13	1	B3E0863	05/18/2023	05/18/23 13:07	
1,1-Dichloropropene	ND	0.50	0.13	1	B3E0863	05/18/2023	05/18/23 13:07	
1,2,3-Trichloropropane	ND	0.50	0.39	1	B3E0863	05/18/2023	05/18/23 13:07	
1,2,3-Trichlorobenzene	ND	0.50	0.18	1	B3E0863	05/18/2023	05/18/23 13:07	
1,2,4-Trichlorobenzene	ND	0.50	0.16	1	B3E0863	05/18/2023	05/18/23 13:07	
1,2,4-Trimethylbenzene	ND	0.50	0.14	1	B3E0863	05/18/2023	05/18/23 13:07	
1,2-Dibromo-3-chloropropane	ND	0.50	0.41	1	B3E0863	05/18/2023	05/18/23 13:07	
1,2-Dibromoethane	ND	0.50	0.24	1	B3E0863	05/18/2023	05/18/23 13:07	
1,2-Dichlorobenzene	ND	0.50	0.20	1	B3E0863	05/18/2023	05/18/23 13:07	
1,2-Dichloroethane	ND	0.50	0.20	1	B3E0863	05/18/2023	05/18/23 13:07	
1,2-Dichloropropane	ND	0.50	0.15	1	B3E0863	05/18/2023	05/18/23 13:07	
1,3,5-Trimethylbenzene	ND	0.50	0.13	1	B3E0863	05/18/2023	05/18/23 13:07	
1,3-Dichlorobenzene	ND	0.50	0.16	1	B3E0863	05/18/2023	05/18/23 13:07	
1,3-Dichloropropane	ND	0.50	0.21	1	B3E0863	05/18/2023	05/18/23 13:07	
1,4-Dichlorobenzene	ND	0.50	0.17	1	B3E0863	05/18/2023	05/18/23 13:07	
2,2-Dichloropropane	ND	0.50	0.38	1	B3E0863	05/18/2023	05/18/23 13:07	
2-Chlorotoluene	ND	0.50	0.11	1	B3E0863	05/18/2023	05/18/23 13:07	
4-Chlorotoluene	ND	0.50	0.12	1	B3E0863	05/18/2023	05/18/23 13:07	
4-Isopropyltoluene	ND	0.50	0.11	1	B3E0863	05/18/2023	05/18/23 13:07	
Benzene	ND	0.50	0.13	1	B3E0863	05/18/2023	05/18/23 13:07	
Bromobenzene	ND	0.50	0.21	1	B3E0863	05/18/2023	05/18/23 13:07	
Bromodichloromethane	ND	0.50	0.14	1	B3E0863	05/18/2023	05/18/23 13:07	
Bromoform	ND	0.50	0.20	1	B3E0863	05/18/2023	05/18/23 13:07	
Bromomethane	ND	0.50	0.40	1	B3E0863	05/18/2023	05/18/23 13:07	
Carbon tetrachloride	ND	0.50	0.09	1	B3E0863	05/18/2023	05/18/23 13:07	
Chlorobenzene	ND	0.50	0.13	1	B3E0863	05/18/2023	05/18/23 13:07	
Chloroethane	ND	0.50	0.15	1	B3E0863	05/18/2023	05/18/23 13:07	
Chloroform	ND	0.50	0.11	1	B3E0863	05/18/2023	05/18/23 13:07	
Chloromethane	ND	0.50	0.12	1	B3E0863	05/18/2023	05/18/23 13:07	
cis-1,2-Dichloroethene	ND	0.50	0.14	1	B3E0863	05/18/2023	05/18/23 13:07	
cis-1,3-Dichloropropene	ND	0.50	0.13	1	B3E0863	05/18/2023	05/18/23 13:07	
Dibromochloromethane	ND	0.50	0.16	1	B3E0863	05/18/2023	05/18/23 13:07	
Dibromomethane	ND	0.50	0.19	1	B3E0863	05/18/2023	05/18/23 13:07	
Dichlorodifluoromethane	ND	0.50	0.18	1	B3E0863	05/18/2023	05/18/23 13:07	
Ethylbenzene	ND	0.50	0.13	1	B3E0863	05/18/2023	05/18/23 13:07	



Certificate of Analysis

Hargis & Associates, Inc.

3131 Camino De Rio North Suite 355

San Diego , CA 92108

Project Number : Raytheon Main, 532.30

Report To : Steve Netto

Reported : 06/05/2023

Client Sample ID: TB-20230517

Lab ID: 2300871-01

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
Hexachlorobutadiene	ND	0.50	0.15	1	B3E0863	05/18/2023	05/18/23 13:07	
Isopropylbenzene	ND	0.50	0.10	1	B3E0863	05/18/2023	05/18/23 13:07	
m,p-Xylene	ND	1.0	0.19	1	B3E0863	05/18/2023	05/18/23 13:07	
Methylene chloride	ND	1.0	0.71	1	B3E0863	05/18/2023	05/18/23 13:07	
n-Butylbenzene	ND	0.50	0.11	1	B3E0863	05/18/2023	05/18/23 13:07	
n-Propylbenzene	ND	0.50	0.10	1	B3E0863	05/18/2023	05/18/23 13:07	
Naphthalene	ND	0.50	0.41	1	B3E0863	05/18/2023	05/18/23 13:07	
o-Xylene	ND	0.50	0.13	1	B3E0863	05/18/2023	05/18/23 13:07	
sec-Butylbenzene	ND	0.50	0.09	1	B3E0863	05/18/2023	05/18/23 13:07	
Styrene	ND	0.50	0.13	1	B3E0863	05/18/2023	05/18/23 13:07	
tert-Butylbenzene	ND	0.50	0.09	1	B3E0863	05/18/2023	05/18/23 13:07	
Tetrachloroethene	ND	0.50	0.10	1	B3E0863	05/18/2023	05/18/23 13:07	
Toluene	ND	0.50	0.12	1	B3E0863	05/18/2023	05/18/23 13:07	
trans-1,2-Dichloroethene	ND	0.50	0.09	1	B3E0863	05/18/2023	05/18/23 13:07	
Trichloroethene	ND	0.50	0.10	1	B3E0863	05/18/2023	05/18/23 13:07	
Trichlorofluoromethane	ND	0.50	0.23	1	B3E0863	05/18/2023	05/18/23 13:07	
Vinyl chloride	ND	0.50	0.13	1	B3E0863	05/18/2023	05/18/23 13:07	
Surrogate: 1,2-Dichloroethane-d4	98.8 %	64 - 155			B3E0863	05/18/2023	05/18/23 13:07	
Surrogate: 4-Bromofluorobenzene	93.2 %	73 - 124			B3E0863	05/18/2023	05/18/23 13:07	
Surrogate: Dibromofluoromethane	103 %	78 - 129			B3E0863	05/18/2023	05/18/23 13:07	
Surrogate: Toluene-d8	102 %	84 - 117			B3E0863	05/18/2023	05/18/23 13:07	



Certificate of Analysis

Hargis & Associates, Inc.

3131 Camino De Rio North Suite 355

San Diego , CA 92108

Project Number : Raytheon Main, 532.30

Report To : Steve Netto

Reported : 06/05/2023

Client Sample ID: MW-41_20230517

Lab ID: 2300871-02

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	B3E0863	05/18/2023	05/18/23 13:30	
1,1,1-Trichloroethane	ND	0.50	0.21	1	B3E0863	05/18/2023	05/18/23 13:30	
1,1,2,2-Tetrachloroethane	ND	0.50	0.36	1	B3E0863	05/18/2023	05/18/23 13:30	
1,1,2-Trichloroethane	ND	0.50	0.25	1	B3E0863	05/18/2023	05/18/23 13:30	
1,1-Dichloroethane	ND	0.50	0.09	1	B3E0863	05/18/2023	05/18/23 13:30	
1,1-Dichloroethene	6.8	0.50	0.13	1	B3E0863	05/18/2023	05/18/23 13:30	
1,1-Dichloropropene	ND	0.50	0.13	1	B3E0863	05/18/2023	05/18/23 13:30	
1,2,3-Trichloropropane	ND	0.50	0.39	1	B3E0863	05/18/2023	05/18/23 13:30	
1,2,3-Trichlorobenzene	ND	0.50	0.18	1	B3E0863	05/18/2023	05/18/23 13:30	
1,2,4-Trichlorobenzene	ND	0.50	0.16	1	B3E0863	05/18/2023	05/18/23 13:30	
1,2,4-Trimethylbenzene	ND	0.50	0.14	1	B3E0863	05/18/2023	05/18/23 13:30	
1,2-Dibromo-3-chloropropane	ND	0.50	0.41	1	B3E0863	05/18/2023	05/18/23 13:30	
1,2-Dibromoethane	ND	0.50	0.24	1	B3E0863	05/18/2023	05/18/23 13:30	
1,2-Dichlorobenzene	ND	0.50	0.20	1	B3E0863	05/18/2023	05/18/23 13:30	
1,2-Dichloroethane	ND	0.50	0.20	1	B3E0863	05/18/2023	05/18/23 13:30	
1,2-Dichloropropane	ND	0.50	0.15	1	B3E0863	05/18/2023	05/18/23 13:30	
1,3,5-Trimethylbenzene	ND	0.50	0.13	1	B3E0863	05/18/2023	05/18/23 13:30	
1,3-Dichlorobenzene	ND	0.50	0.16	1	B3E0863	05/18/2023	05/18/23 13:30	
1,3-Dichloropropane	ND	0.50	0.21	1	B3E0863	05/18/2023	05/18/23 13:30	
1,4-Dichlorobenzene	ND	0.50	0.17	1	B3E0863	05/18/2023	05/18/23 13:30	
2,2-Dichloropropane	ND	0.50	0.38	1	B3E0863	05/18/2023	05/18/23 13:30	
2-Chlorotoluene	ND	0.50	0.11	1	B3E0863	05/18/2023	05/18/23 13:30	
4-Chlorotoluene	ND	0.50	0.12	1	B3E0863	05/18/2023	05/18/23 13:30	
4-Isopropyltoluene	ND	0.50	0.11	1	B3E0863	05/18/2023	05/18/23 13:30	
Benzene	ND	0.50	0.13	1	B3E0863	05/18/2023	05/18/23 13:30	
Bromobenzene	ND	0.50	0.21	1	B3E0863	05/18/2023	05/18/23 13:30	
Bromodichloromethane	ND	0.50	0.14	1	B3E0863	05/18/2023	05/18/23 13:30	
Bromoform	ND	0.50	0.20	1	B3E0863	05/18/2023	05/18/23 13:30	
Bromomethane	ND	0.50	0.40	1	B3E0863	05/18/2023	05/18/23 13:30	
Carbon tetrachloride	ND	0.50	0.09	1	B3E0863	05/18/2023	05/18/23 13:30	
Chlorobenzene	ND	0.50	0.13	1	B3E0863	05/18/2023	05/18/23 13:30	
Chloroethane	ND	0.50	0.15	1	B3E0863	05/18/2023	05/18/23 13:30	
Chloroform	0.57	0.50	0.11	1	B3E0863	05/18/2023	05/18/23 13:30	
Chloromethane	ND	0.50	0.12	1	B3E0863	05/18/2023	05/18/23 13:30	
cis-1,2-Dichloroethene	ND	0.50	0.14	1	B3E0863	05/18/2023	05/18/23 13:30	
cis-1,3-Dichloropropene	ND	0.50	0.13	1	B3E0863	05/18/2023	05/18/23 13:30	
Dibromochloromethane	ND	0.50	0.16	1	B3E0863	05/18/2023	05/18/23 13:30	
Dibromomethane	ND	0.50	0.19	1	B3E0863	05/18/2023	05/18/23 13:30	
Dichlorodifluoromethane	ND	0.50	0.18	1	B3E0863	05/18/2023	05/18/23 13:30	
Ethylbenzene	ND	0.50	0.13	1	B3E0863	05/18/2023	05/18/23 13:30	



Certificate of Analysis

Hargis & Associates, Inc.

3131 Camino De Rio North Suite 355

San Diego , CA 92108

Project Number : Raytheon Main, 532.30

Report To : Steve Netto

Reported : 06/05/2023

Client Sample ID: MW-41_20230517

Lab ID: 2300871-02

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
Hexachlorobutadiene	ND	0.50	0.15	1	B3E0863	05/18/2023	05/18/23 13:30	
Isopropylbenzene	ND	0.50	0.10	1	B3E0863	05/18/2023	05/18/23 13:30	
m,p-Xylene	ND	1.0	0.19	1	B3E0863	05/18/2023	05/18/23 13:30	
Methylene chloride	ND	1.0	0.71	1	B3E0863	05/18/2023	05/18/23 13:30	
n-Butylbenzene	ND	0.50	0.11	1	B3E0863	05/18/2023	05/18/23 13:30	
n-Propylbenzene	ND	0.50	0.10	1	B3E0863	05/18/2023	05/18/23 13:30	
Naphthalene	ND	0.50	0.41	1	B3E0863	05/18/2023	05/18/23 13:30	
o-Xylene	ND	0.50	0.13	1	B3E0863	05/18/2023	05/18/23 13:30	
sec-Butylbenzene	ND	0.50	0.09	1	B3E0863	05/18/2023	05/18/23 13:30	
Styrene	ND	0.50	0.13	1	B3E0863	05/18/2023	05/18/23 13:30	
tert-Butylbenzene	ND	0.50	0.09	1	B3E0863	05/18/2023	05/18/23 13:30	
Tetrachloroethene	ND	0.50	0.10	1	B3E0863	05/18/2023	05/18/23 13:30	
Toluene	ND	0.50	0.12	1	B3E0863	05/18/2023	05/18/23 13:30	
trans-1,2-Dichloroethene	ND	0.50	0.09	1	B3E0863	05/18/2023	05/18/23 13:30	
Trichloroethene	ND	0.50	0.10	1	B3E0863	05/18/2023	05/18/23 13:30	
Trichlorofluoromethane	ND	0.50	0.23	1	B3E0863	05/18/2023	05/18/23 13:30	
Vinyl chloride	ND	0.50	0.13	1	B3E0863	05/18/2023	05/18/23 13:30	
Surrogate: 1,2-Dichloroethane-d4	102 %	64 - 155			B3E0863	05/18/2023	05/18/23 13:30	
Surrogate: 4-Bromofluorobenzene	94.6 %	73 - 124			B3E0863	05/18/2023	05/18/23 13:30	
Surrogate: Dibromofluoromethane	108 %	78 - 129			B3E0863	05/18/2023	05/18/23 13:30	
Surrogate: Toluene-d8	99.6 %	84 - 117			B3E0863	05/18/2023	05/18/23 13:30	

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

Analyst: EB

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,4-Dioxane	1.3	0.20	0.05	1	B3E0861	05/18/2023	05/18/23 15:22	
Surrogate: 1,2-Dichlorobenzene-d4	95.7 %	13 - 99			B3E0861	05/18/2023	05/18/23 15:22	
Surrogate: 2-Fluorobiphenyl	103 %	8 - 111			B3E0861	05/18/2023	05/18/23 15:22	
Surrogate: 4-Terphenyl-d14	76.2 %	12 - 113			B3E0861	05/18/2023	05/18/23 15:22	
Surrogate: Nitrobenzene-d5	76.5 %	15 - 121			B3E0861	05/18/2023	05/18/23 15:22	



Certificate of Analysis

Hargis & Associates, Inc.

3131 Camino De Rio North Suite 355

San Diego , CA 92108

Project Number : Raytheon Main, 532.30

Report To : Steve Netto

Reported : 06/05/2023

Client Sample ID: MW-31_20230517

Lab ID: 2300871-03

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	B3E0863	05/18/2023	05/18/23 13:54	
1,1,1-Trichloroethane	ND	0.50	0.21	1	B3E0863	05/18/2023	05/18/23 13:54	
1,1,2,2-Tetrachloroethane	ND	0.50	0.36	1	B3E0863	05/18/2023	05/18/23 13:54	
1,1,2-Trichloroethane	ND	0.50	0.25	1	B3E0863	05/18/2023	05/18/23 13:54	
1,1-Dichloroethane	ND	0.50	0.09	1	B3E0863	05/18/2023	05/18/23 13:54	
1,1-Dichloroethene	41	0.50	0.13	1	B3E0863	05/18/2023	05/18/23 13:54	
1,1-Dichloropropene	ND	0.50	0.13	1	B3E0863	05/18/2023	05/18/23 13:54	
1,2,3-Trichloropropane	ND	0.50	0.39	1	B3E0863	05/18/2023	05/18/23 13:54	
1,2,3-Trichlorobenzene	ND	0.50	0.18	1	B3E0863	05/18/2023	05/18/23 13:54	
1,2,4-Trichlorobenzene	ND	0.50	0.16	1	B3E0863	05/18/2023	05/18/23 13:54	
1,2,4-Trimethylbenzene	ND	0.50	0.14	1	B3E0863	05/18/2023	05/18/23 13:54	
1,2-Dibromo-3-chloropropane	ND	0.50	0.41	1	B3E0863	05/18/2023	05/18/23 13:54	
1,2-Dibromoethane	ND	0.50	0.24	1	B3E0863	05/18/2023	05/18/23 13:54	
1,2-Dichlorobenzene	ND	0.50	0.20	1	B3E0863	05/18/2023	05/18/23 13:54	
1,2-Dichloroethane	ND	0.50	0.20	1	B3E0863	05/18/2023	05/18/23 13:54	
1,2-Dichloropropane	ND	0.50	0.15	1	B3E0863	05/18/2023	05/18/23 13:54	
1,3,5-Trimethylbenzene	ND	0.50	0.13	1	B3E0863	05/18/2023	05/18/23 13:54	
1,3-Dichlorobenzene	ND	0.50	0.16	1	B3E0863	05/18/2023	05/18/23 13:54	
1,3-Dichloropropane	ND	0.50	0.21	1	B3E0863	05/18/2023	05/18/23 13:54	
1,4-Dichlorobenzene	ND	0.50	0.17	1	B3E0863	05/18/2023	05/18/23 13:54	
2,2-Dichloropropane	ND	0.50	0.38	1	B3E0863	05/18/2023	05/18/23 13:54	
2-Chlorotoluene	ND	0.50	0.11	1	B3E0863	05/18/2023	05/18/23 13:54	
4-Chlorotoluene	ND	0.50	0.12	1	B3E0863	05/18/2023	05/18/23 13:54	
4-Isopropyltoluene	ND	0.50	0.11	1	B3E0863	05/18/2023	05/18/23 13:54	
Benzene	ND	0.50	0.13	1	B3E0863	05/18/2023	05/18/23 13:54	
Bromobenzene	ND	0.50	0.21	1	B3E0863	05/18/2023	05/18/23 13:54	
Bromodichloromethane	ND	0.50	0.14	1	B3E0863	05/18/2023	05/18/23 13:54	
Bromoform	ND	0.50	0.20	1	B3E0863	05/18/2023	05/18/23 13:54	
Bromomethane	ND	0.50	0.40	1	B3E0863	05/18/2023	05/18/23 13:54	
Carbon tetrachloride	ND	0.50	0.09	1	B3E0863	05/18/2023	05/18/23 13:54	
Chlorobenzene	ND	0.50	0.13	1	B3E0863	05/18/2023	05/18/23 13:54	
Chloroethane	ND	0.50	0.15	1	B3E0863	05/18/2023	05/18/23 13:54	
Chloroform	ND	0.50	0.11	1	B3E0863	05/18/2023	05/18/23 13:54	
Chloromethane	ND	0.50	0.12	1	B3E0863	05/18/2023	05/18/23 13:54	
cis-1,2-Dichloroethene	ND	0.50	0.14	1	B3E0863	05/18/2023	05/18/23 13:54	
cis-1,3-Dichloropropene	ND	0.50	0.13	1	B3E0863	05/18/2023	05/18/23 13:54	
Dibromochloromethane	ND	0.50	0.16	1	B3E0863	05/18/2023	05/18/23 13:54	
Dibromomethane	ND	0.50	0.19	1	B3E0863	05/18/2023	05/18/23 13:54	
Dichlorodifluoromethane	ND	0.50	0.18	1	B3E0863	05/18/2023	05/18/23 13:54	
Ethylbenzene	ND	0.50	0.13	1	B3E0863	05/18/2023	05/18/23 13:54	



Certificate of Analysis

Hargis & Associates, Inc.

3131 Camino De Rio North Suite 355

San Diego , CA 92108

Project Number : Raytheon Main, 532.30

Report To : Steve Netto

Reported : 06/05/2023

Client Sample ID: MW-31_20230517

Lab ID: 2300871-03

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
Hexachlorobutadiene	ND	0.50	0.15	1	B3E0863	05/18/2023	05/18/23 13:54	
Isopropylbenzene	ND	0.50	0.10	1	B3E0863	05/18/2023	05/18/23 13:54	
m,p-Xylene	ND	1.0	0.19	1	B3E0863	05/18/2023	05/18/23 13:54	
Methylene chloride	ND	1.0	0.71	1	B3E0863	05/18/2023	05/18/23 13:54	
n-Butylbenzene	ND	0.50	0.11	1	B3E0863	05/18/2023	05/18/23 13:54	
n-Propylbenzene	ND	0.50	0.10	1	B3E0863	05/18/2023	05/18/23 13:54	
Naphthalene	ND	0.50	0.41	1	B3E0863	05/18/2023	05/18/23 13:54	
o-Xylene	ND	0.50	0.13	1	B3E0863	05/18/2023	05/18/23 13:54	
sec-Butylbenzene	ND	0.50	0.09	1	B3E0863	05/18/2023	05/18/23 13:54	
Styrene	ND	0.50	0.13	1	B3E0863	05/18/2023	05/18/23 13:54	
tert-Butylbenzene	ND	0.50	0.09	1	B3E0863	05/18/2023	05/18/23 13:54	
Tetrachloroethene	ND	0.50	0.10	1	B3E0863	05/18/2023	05/18/23 13:54	
Toluene	0.19	0.50	0.12	1	B3E0863	05/18/2023	05/18/23 13:54	J
trans-1,2-Dichloroethene	ND	0.50	0.09	1	B3E0863	05/18/2023	05/18/23 13:54	
Trichloroethene	4.0	0.50	0.10	1	B3E0863	05/18/2023	05/18/23 13:54	
Trichlorofluoromethane	ND	0.50	0.23	1	B3E0863	05/18/2023	05/18/23 13:54	
Vinyl chloride	ND	0.50	0.13	1	B3E0863	05/18/2023	05/18/23 13:54	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>103 %</i>	<i>64 - 155</i>			B3E0863	05/18/2023	<i>05/18/23 13:54</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>95.6 %</i>	<i>73 - 124</i>			B3E0863	05/18/2023	<i>05/18/23 13:54</i>	
<i>Surrogate: Dibromofluoromethane</i>	<i>113 %</i>	<i>78 - 129</i>			B3E0863	05/18/2023	<i>05/18/23 13:54</i>	
<i>Surrogate: Toluene-d8</i>	<i>99.1 %</i>	<i>84 - 117</i>			B3E0863	05/18/2023	<i>05/18/23 13:54</i>	

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

Analyst: EB

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,4-Dioxane	2.4	0.20	0.05	1	B3E0861	05/18/2023	05/18/23 15:48	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	<i>95.9 %</i>	<i>13 - 99</i>			B3E0861	05/18/2023	<i>05/18/23 15:48</i>	
<i>Surrogate: 2-Fluorobiphenyl</i>	<i>96.3 %</i>	<i>8 - 111</i>			B3E0861	05/18/2023	<i>05/18/23 15:48</i>	
<i>Surrogate: 4-Terphenyl-d14</i>	<i>79.0 %</i>	<i>12 - 113</i>			B3E0861	05/18/2023	<i>05/18/23 15:48</i>	
<i>Surrogate: Nitrobenzene-d5</i>	<i>82.3 %</i>	<i>15 - 121</i>			B3E0861	05/18/2023	<i>05/18/23 15:48</i>	



Certificate of Analysis

Hargis & Associates, Inc.

3131 Camino De Rio North Suite 355

San Diego , CA 92108

Project Number : Raytheon Main, 532.30

Report To : Steve Netto

Reported : 06/05/2023

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
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Batch B3E0863 - MSVOA_LL_W

Blank (B3E0863-BLK1)

Prepared: 5/18/2023 Analyzed: 5/18/2023

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
Isopropylbenzene	ND	0.50	0.10



Certificate of Analysis

Hargis & Associates, Inc.

3131 Camino De Rio North Suite 355

San Diego , CA 92108

Project Number : Raytheon Main, 532.30

Report To : Steve Netto

Reported : 06/05/2023

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
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Batch B3E0863 - MSVOA_LL_W (continued)

Blank (B3E0863-BLK1) - Continued

Prepared: 5/18/2023 Analyzed: 5/18/2023

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	25.46		25.0000	102	64 - 155
Surrogate: 4-Bromofluorobenzene	23.67		25.0000	94.7	73 - 124
Surrogate: Dibromofluoromethane	27.93		25.0000	112	78 - 129
Surrogate: Toluene-d8	24.56		25.0000	98.2	84 - 117

LCS (B3E0863-BS1)

Prepared: 5/18/2023 Analyzed: 5/18/2023

1,1,1,2-Tetrachloroethane	19.3900	0.50	0.11	20.0000	97.0	79 - 116
1,1,1-Trichloroethane	19.0200	0.50	0.21	20.0000	95.1	73 - 130
1,1,2,2-Tetrachloroethane	17.7800	0.50	0.36	20.0000	88.9	71 - 122
1,1,2-Trichloroethane	19.1300	0.50	0.25	20.0000	95.6	70 - 124
1,1-Dichloroethane	18.8800	0.50	0.09	20.0000	94.4	69 - 128
1,1-Dichloroethene	18.7700	0.50	0.13	20.0000	93.8	65 - 137
1,1-Dichloropropene	19.2300	0.50	0.13	20.0000	96.2	74 - 129
1,2,3-Trichloropropane	21.7200	0.50	0.39	20.0000	109	74 - 123
1,2,3-Trichlorobenzene	16.2000	0.50	0.18	20.0000	81.0	59 - 130
1,2,4-Trichlorobenzene	17.8400	0.50	0.16	20.0000	89.2	65 - 125
1,2,4-Trimethylbenzene	20.0500	0.50	0.14	20.0000	100	88 - 124
1,2-Dibromo-3-chloropropane	18.6300	0.50	0.41	20.0000	93.2	61 - 127
1,2-Dibromoethane	19.8300	0.50	0.24	20.0000	99.2	72 - 125
1,2-Dichlorobenzene	20.2100	0.50	0.20	20.0000	101	84 - 113
1,2-Dichloroethane	19.0500	0.50	0.20	20.0000	95.2	68 - 130
1,2-Dichloropropane	19.0000	0.50	0.15	20.0000	95.0	77 - 121
1,3,5-Trimethylbenzene	19.7600	0.50	0.13	20.0000	98.8	83 - 124
1,3-Dichlorobenzene	19.1900	0.50	0.16	20.0000	96.0	83 - 112
1,3-Dichloropropane	19.9100	0.50	0.21	20.0000	99.6	77 - 119
1,4-Dichlorobenzene	20.1100	0.50	0.17	20.0000	101	79 - 115
2,2-Dichloropropane	18.8100	0.50	0.38	20.0000	94.0	67 - 149
2-Chlorotoluene	22.1700	0.50	0.11	20.0000	111	81 - 119
4-Chlorotoluene	18.0200	0.50	0.12	20.0000	90.1	86 - 117
4-Isopropyltoluene	21.2900	0.50	0.11	20.0000	106	82 - 131



Certificate of Analysis

Hargis & Associates, Inc.

3131 Camino De Rio North Suite 355

San Diego , CA 92108

Project Number : Raytheon Main, 532.30

Report To : Steve Netto

Reported : 06/05/2023

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 Limits	% Rec Limits	RPD	Limit	Notes
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Batch B3E0863 - MSVOA_LL_W (continued)

LCS (B3E0863-BS1) - Continued

Prepared: 5/18/2023 Analyzed: 5/18/2023

Benzene	19.3800	0.50	0.13	20.0000		96.9	75 - 124			
Bromobenzene	21.0200	0.50	0.21	20.0000		105	82 - 108			
Bromodichloromethane	19.8800	0.50	0.14	20.0000		99.4	80 - 120			
Bromoform	19.5600	0.50	0.20	20.0000		97.8	70 - 123			
Bromomethane	13.6200	0.50	0.40	20.0000		68.1	44 - 151			
Carbon tetrachloride	18.5400	0.50	0.09	20.0000		92.7	62 - 140			
Chlorobenzene	20.1500	0.50	0.13	20.0000		101	80 - 112			
Chloroethane	18.1300	0.50	0.15	20.0000		90.6	42 - 167			
Chloroform	20.0600	0.50	0.11	20.0000		100	77 - 122			
Chloromethane	14.0300	0.50	0.12	20.0000		70.2	33 - 153			
cis-1,2-Dichloroethene	19.2900	0.50	0.14	20.0000		96.4	75 - 121			
cis-1,3-Dichloropropene	20.2000	0.50	0.13	20.0000		101	73 - 127			
Dibromochloromethane	20.2100	0.50	0.16	20.0000		101	77 - 122			
Dibromomethane	18.3500	0.50	0.19	20.0000		91.8	75 - 121			
Dichlorodifluoromethane	12.4800	0.50	0.18	20.0000		62.4	0 - 171			
Ethylbenzene	20.1700	0.50	0.13	20.0000		101	82 - 119			
Hexachlorobutadiene	21.4300	0.50	0.15	20.0000		107	71 - 131			
Isopropylbenzene	21.2800	0.50	0.10	20.0000		106	75 - 126			
m,p-Xylene	38.4900	1.0	0.19	40.0000		96.2	86 - 119			
Methylene chloride	20.7100	1.0	0.71	20.0000		104	76 - 125			
n-Butylbenzene	19.9500	0.50	0.11	20.0000		99.8	81 - 125			
n-Propylbenzene	18.6400	0.50	0.10	20.0000		93.2	78 - 130			
Naphthalene	15.0900	0.50	0.41	20.0000		75.4	47 - 128			
o-Xylene	19.9600	0.50	0.13	20.0000		99.8	85 - 119			
sec-Butylbenzene	20.0900	0.50	0.09	20.0000		100	78 - 130			
Styrene	20.5400	0.50	0.13	20.0000		103	62 - 148			
tert-Butylbenzene	19.3400	0.50	0.09	20.0000		96.7	77 - 125			
Tetrachloroethene	19.0100	0.50	0.10	20.0000		95.0	73 - 120			
Toluene	19.2400	0.50	0.12	20.0000		96.2	79 - 119			
trans-1,2-Dichloroethene	18.7800	0.50	0.09	20.0000		93.9	70 - 129			
Trichloroethene	19.0300	0.50	0.10	20.0000		95.2	73 - 117			
Trichlorofluoromethane	16.9800	0.50	0.23	20.0000		84.9	59 - 135			
Vinyl chloride	15.5200	0.50	0.13	20.0000		77.6	58 - 132			

Surrogate: 1,2-Dichloroethane-d4	25.10			25.0000		100	64 - 155			
Surrogate: 4-Bromofluorobenzene	25.07			25.0000		100	73 - 124			
Surrogate: Dibromofluoromethane	24.86			25.0000		99.4	78 - 129			
Surrogate: Toluene-d8	24.76			25.0000		99.0	84 - 117			

LCS Dup (B3E0863-BS1)

Prepared: 5/18/2023 Analyzed: 5/18/2023

1,1,1,2-Tetrachloroethane	18.4100	0.50	0.11	20.0000		92.0	79 - 116	5.19	20	
1,1,1-Trichloroethane	17.4100	0.50	0.21	20.0000		87.0	73 - 130	8.84	20	
1,1,2,2-Tetrachloroethane	16.5500	0.50	0.36	20.0000		82.8	71 - 122	7.17	20	
1,1,2-Trichloroethane	17.9600	0.50	0.25	20.0000		89.8	70 - 124	6.31	20	
1,1-Dichloroethane	18.1900	0.50	0.09	20.0000		91.0	69 - 128	3.72	20	
1,1-Dichloroethene	17.5400	0.50	0.13	20.0000		87.7	65 - 137	6.77	20	



Certificate of Analysis

Hargis & Associates, Inc.

3131 Camino De Rio North Suite 355

San Diego , CA 92108

Project Number : Raytheon Main, 532.30

Report To : Steve Netto

Reported : 06/05/2023

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 Limits	RPD	Limit	Notes
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Batch B3E0863 - MSVOA_LL_W (continued)

LCS Dup (B3E0863-BSD1) - Continued

Prepared: 5/18/2023 Analyzed: 5/18/2023

1,1-Dichloropropene	17.3200	0.50	0.13	20.0000	86.6	74 - 129	10.5	20	
1,2,3-Trichloropropane	20.5200	0.50	0.39	20.0000	103	74 - 123	5.68	20	
1,2,3-Trichlorobenzene	14.7600	0.50	0.18	20.0000	73.8	59 - 130	9.30	20	
1,2,4-Trichlorobenzene	16.6600	0.50	0.16	20.0000	83.3	65 - 125	6.84	20	
1,2,4-Trimethylbenzene	18.0700	0.50	0.14	20.0000	90.4	88 - 124	10.4	20	
1,2-Dibromo-3-chloropropane	16.0500	0.50	0.41	20.0000	80.2	61 - 127	14.9	20	
1,2-Dibromoethane	18.2200	0.50	0.24	20.0000	91.1	72 - 125	8.46	20	
1,2-Dichlorobenzene	17.8100	0.50	0.20	20.0000	89.0	84 - 113	12.6	20	
1,2-Dichloroethane	17.9600	0.50	0.20	20.0000	89.8	68 - 130	5.89	20	
1,2-Dichloropropane	18.3600	0.50	0.15	20.0000	91.8	77 - 121	3.43	20	
1,3,5-Trimethylbenzene	17.3000	0.50	0.13	20.0000	86.5	83 - 124	13.3	20	
1,3-Dichlorobenzene	17.7300	0.50	0.16	20.0000	88.6	83 - 112	7.91	20	
1,3-Dichloropropane	19.1600	0.50	0.21	20.0000	95.8	77 - 119	3.84	20	
1,4-Dichlorobenzene	18.0000	0.50	0.17	20.0000	90.0	79 - 115	11.1	20	
2,2-Dichloropropane	17.2900	0.50	0.38	20.0000	86.4	67 - 149	8.42	20	
2-Chlorotoluene	18.7400	0.50	0.11	20.0000	93.7	81 - 119	16.8	20	
4-Chlorotoluene	16.3000	0.50	0.12	20.0000	81.5	86 - 117	10.0	20	L3
4-Isopropyltoluene	18.3500	0.50	0.11	20.0000	91.8	82 - 131	14.8	20	
Benzene	17.5800	0.50	0.13	20.0000	87.9	75 - 124	9.74	20	
Bromobenzene	18.6500	0.50	0.21	20.0000	93.2	82 - 108	11.9	20	
Bromodichloromethane	18.2700	0.50	0.14	20.0000	91.4	80 - 120	8.44	20	
Bromoform	18.2500	0.50	0.20	20.0000	91.2	70 - 123	6.93	20	
Bromomethane	12.9500	0.50	0.40	20.0000	64.8	44 - 151	5.04	20	
Carbon tetrachloride	16.8900	0.50	0.09	20.0000	84.4	62 - 140	9.31	20	
Chlorobenzene	17.9400	0.50	0.13	20.0000	89.7	80 - 112	11.6	20	
Chloroethane	16.9900	0.50	0.15	20.0000	85.0	42 - 167	6.49	20	
Chloroform	18.5700	0.50	0.11	20.0000	92.8	77 - 122	7.71	20	
Chloromethane	12.7500	0.50	0.12	20.0000	63.8	33 - 153	9.56	20	
cis-1,2-Dichloroethene	18.9400	0.50	0.14	20.0000	94.7	75 - 121	1.83	20	
cis-1,3-Dichloropropene	18.8300	0.50	0.13	20.0000	94.2	73 - 127	7.02	20	
Dibromochloromethane	19.0100	0.50	0.16	20.0000	95.0	77 - 122	6.12	20	
Dibromomethane	18.1500	0.50	0.19	20.0000	90.8	75 - 121	1.10	20	
Dichlorodifluoromethane	11.4100	0.50	0.18	20.0000	57.0	0 - 171	8.96	20	
Ethylbenzene	18.0600	0.50	0.13	20.0000	90.3	82 - 119	11.0	20	
Hexachlorobutadiene	19.2900	0.50	0.15	20.0000	96.4	71 - 131	10.5	20	
Isopropylbenzene	18.5500	0.50	0.10	20.0000	92.8	75 - 126	13.7	20	
m,p-Xylene	34.7400	1.0	0.19	40.0000	86.8	86 - 119	10.2	20	
Methylene chloride	20.0900	1.0	0.71	20.0000	100	76 - 125	3.04	20	
n-Butylbenzene	17.6700	0.50	0.11	20.0000	88.4	81 - 125	12.1	20	
n-Propylbenzene	16.4200	0.50	0.10	20.0000	82.1	78 - 130	12.7	20	
Naphthalene	14.6800	0.50	0.41	20.0000	73.4	47 - 128	2.75	20	
o-Xylene	17.6700	0.50	0.13	20.0000	88.4	85 - 119	12.2	20	
sec-Butylbenzene	18.0400	0.50	0.09	20.0000	90.2	78 - 130	10.8	20	
Styrene	18.6000	0.50	0.13	20.0000	93.0	62 - 148	9.91	20	
tert-Butylbenzene	17.0400	0.50	0.09	20.0000	85.2	77 - 125	12.6	20	



Certificate of Analysis

Hargis & Associates, Inc.

3131 Camino De Rio North Suite 355

San Diego , CA 92108

Project Number : Raytheon Main, 532.30

Report To : Steve Netto

Reported : 06/05/2023

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
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Batch B3E0863 - MSVOA_LL_W (continued)

LCS Dup (B3E0863-BSD1) - Continued

Prepared: 5/18/2023 Analyzed: 5/18/2023

Tetrachloroethene	17.1500	0.50	0.10	20.0000		85.8	73 - 120	10.3	20	
Toluene	17.3700	0.50	0.12	20.0000		86.8	79 - 119	10.2	20	
trans-1,2-Dichloroethene	17.1600	0.50	0.09	20.0000		85.8	70 - 129	9.02	20	
Trichloroethene	17.2900	0.50	0.10	20.0000		86.4	73 - 117	9.58	20	
Trichlorofluoromethane	15.9700	0.50	0.23	20.0000		79.8	59 - 135	6.13	20	
Vinyl chloride	14.9100	0.50	0.13	20.0000		74.6	58 - 132	4.01	20	
Surrogate: 1,2-Dichloroethane-d4	24.70			25.0000		98.8	64 - 155			
Surrogate: 4-Bromofluorobenzene	24.90			25.0000		99.6	73 - 124			
Surrogate: Dibromofluoromethane	26.52			25.0000		106	78 - 129			
Surrogate: Toluene-d8	24.85			25.0000		99.4	84 - 117			



Certificate of Analysis

Hargis & Associates, Inc.

3131 Camino De Rio North Suite 355

San Diego , CA 92108

Project Number : Raytheon Main, 532.30

Report To : Steve Netto

Reported : 06/05/2023

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 Limits	RPD	Limit	Notes
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Batch B3E0861 - MSSEMI_W

Blank (B3E0861-BLK1)

Prepared: 5/18/2023 Analyzed: 5/18/2023

1,4-Dioxane ND 0.20 0.05

Surrogate: 1,2-Dichlorobenzene-d4	0.9313		1.00000	93.1	13 - 99
Surrogate: 2-Fluorobiphenyl	1.030		1.00000	103	8 - 111
Surrogate: 4-Terphenyl-d14	0.7801		1.00000	78.0	12 - 113
Surrogate: Nitrobenzene-d5	0.9084		1.00000	90.8	15 - 121

LCS (B3E0861-BS1)

Prepared: 5/18/2023 Analyzed: 5/18/2023

1,4-Dioxane 1.07483 0.20 0.05 1.00000 107 75 - 155

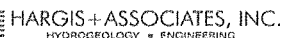
Surrogate: 1,2-Dichlorobenzene-d4	0.9509		1.00000	95.1	13 - 99
Surrogate: 2-Fluorobiphenyl	1.005		1.00000	100	8 - 111
Surrogate: 4-Terphenyl-d14	0.7849		1.00000	78.5	12 - 113
Surrogate: Nitrobenzene-d5	0.7970		1.00000	79.7	15 - 121

LCS Dup (B3E0861-BSD1)

Prepared: 5/18/2023 Analyzed: 5/18/2023

1,4-Dioxane 1.35104 0.20 0.05 1.00000 135 75 - 155 22.8 20 R

Surrogate: 1,2-Dichlorobenzene-d4	0.9602		1.00000	96.0	13 - 99
Surrogate: 2-Fluorobiphenyl	0.9788		1.00000	97.9	8 - 111
Surrogate: 4-Terphenyl-d14	1.070		1.00000	107	12 - 113
Surrogate: Nitrobenzene-d5	0.8051		1.00000	80.5	15 - 121



Date: 5/17/23

Page 1 of 1

PROJECT: Raytheon Main

TASK NO.: 532.30

Project Manager Steve Netto

QA Manager Amber Warden-Plum

Phone 858.455.6500

Fax 858.455.6533

[illegible]

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
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.

Temperature on receipt

Send Results to:

Steve Netto

3131 Camino del Rio N

Suite 355

San Diego, CA 92108

Ph: 858.455.5400

snetto@hargis.com

snetto@hargis.com

ANALYTICAL REPORT

PREPARED FOR

Attn: Steve Netto
Hargis + Associates, Inc.
3131 Camino del Rio N
Suite 355
San Diego, California 92108

Generated 3/14/2023 1:21:54 PM

JOB DESCRIPTION

Raytheon Main GETS OCSD/532.15

JOB NUMBER

570-130102-1

Eurofins Calscience

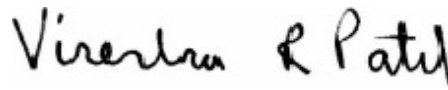
Job Notes

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The data in the report relate to the field sample(s) as received by the laboratory and associated QC. All results have been reviewed and have been found to be compliant with laboratory and accreditation requirements, with the exception of the noted deviation(s). For questions, please contact the Project Manager.

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Calscience Project Manager.

Authorization



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Definitions/Glossary

Client: Hargis + Associates, Inc.
Project/Site: Raytheon Main GETS OCSD/532.15

Job ID: 570-130102-1

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
*-	LCS and/or LCSD is outside acceptance limits, low biased.
F2	MS/MSD RPD exceeds control limits
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
me	LCS Recovery is within Marginal Exceedance (ME) control limit range (± 4 SD from the mean).

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	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 Main GETS OCSD/532.15

Job ID: 570-130102-1

Job ID: 570-130102-1

Laboratory: Eurofins Calscience

Narrative

Job Narrative 570-130102-1

Comments

No additional comments.

Receipt

The samples were received on 3/7/2023 12:57 PM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 3.5° C.

Receipt Exceptions

The Field Sampler was not listed on the Chain of Custody.

GC/MS VOA

Method 8260B: The following analyte(s) recovered outside control limits for the LCSD associated with analytical batch 570-309682: 2,2-Dichloropropane. This is not indicative of a systematic control problem because this was random marginal exceedances. Qualified results have been reported.

Method 8260B: The following sample(s) were collected in properly preserved vials for analysis of volatile organic compounds (VOCs). However, the pH was outside the required criteria when verified by the laboratory, and corrective action was not possible: TB-030723 (570-130102-1).

Method 8260B: The matrix spike / matrix spike duplicate (MS/MSD) precision for analytical batch 570-309682 was outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample / laboratory control sample duplicate (LCS/LCSD) precision was within acceptance limits.

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

Method 3510C: The laboratory control sample (LCS) was performed in duplicate (LCSD) to provide precision data for this batch. Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with preparation batch 570-309664.

Method: 8270_Sim_MS_ID.

No additional analytical or quality issues were noted, other than those described above or 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 Main GETS OCSD/532.15

Job ID: 570-130102-1

Client Sample ID: TB-030723

Lab Sample ID: 570-130102-1

No Detections.

Client Sample ID: CEFF

Lab Sample ID: 570-130102-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,1,2-Trichloro-1,2,2-trifluoroethane	0.34	J	0.50	0.25	ug/L	1		8260B	Total/NA

This Detection Summary does not include radiochemical test results.

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Client Sample Results

Client: Hargis + Associates, Inc.
Project/Site: Raytheon Main GETS OCSD/532.15

Job ID: 570-130102-1

Method: SW846 8260B - Volatile Organic Compounds (GC/MS)

Client Sample ID: TB-030723
Date Collected: 03/07/23 08:00
Date Received: 03/07/23 12:57

Lab Sample ID: 570-130102-1
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		0.50	0.20	ug/L			03/07/23 18:37	1
1,1,1-Trichloroethane	ND		0.50	0.20	ug/L			03/07/23 18:37	1
1,1,2,2-Tetrachloroethane	ND		0.50	0.14	ug/L			03/07/23 18:37	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.50	0.25	ug/L			03/07/23 18:37	1
1,1,2-Trichloroethane	ND		0.50	0.18	ug/L			03/07/23 18:37	1
1,1-Dichloroethane	ND		0.50	0.21	ug/L			03/07/23 18:37	1
1,1-Dichloroethene	ND		0.50	0.21	ug/L			03/07/23 18:37	1
1,1-Dichloropropene	ND		0.50	0.16	ug/L			03/07/23 18:37	1
1,2,3-Trichlorobenzene	ND		0.50	0.26	ug/L			03/07/23 18:37	1
1,2,3-Trichloropropane	ND		0.50	0.31	ug/L			03/07/23 18:37	1
1,2,4-Trichlorobenzene	ND		0.50	0.26	ug/L			03/07/23 18:37	1
1,2,4-Trimethylbenzene	ND		0.50	0.22	ug/L			03/07/23 18:37	1
1,2-Dibromo-3-Chloropropane	ND		1.0	0.84	ug/L			03/07/23 18:37	1
1,2-Dibromoethane	ND		0.50	0.27	ug/L			03/07/23 18:37	1
1,2-Dichlorobenzene	ND		0.50	0.14	ug/L			03/07/23 18:37	1
1,2-Dichloroethane	ND		0.50	0.14	ug/L			03/07/23 18:37	1
1,2-Dichloropropane	ND		0.50	0.14	ug/L			03/07/23 18:37	1
1,3,5-Trimethylbenzene	ND		0.50	0.19	ug/L			03/07/23 18:37	1
1,3-Dichlorobenzene	ND		0.50	0.16	ug/L			03/07/23 18:37	1
1,3-Dichloropropane	ND		0.50	0.19	ug/L			03/07/23 18:37	1
1,4-Dichlorobenzene	ND		0.50	0.11	ug/L			03/07/23 18:37	1
2,2-Dichloropropane	ND	*	0.50	0.26	ug/L			03/07/23 18:37	1
2-Butanone	ND		5.0	2.9	ug/L			03/07/23 18:37	1
2-Chlorotoluene	ND		0.50	0.23	ug/L			03/07/23 18:37	1
2-Hexanone	ND		6.0	2.0	ug/L			03/07/23 18:37	1
4-Chlorotoluene	ND		0.50	0.24	ug/L			03/07/23 18:37	1
4-Methyl-2-pentanone	ND		5.0	1.6	ug/L			03/07/23 18:37	1
Acetone	ND		8.0	3.6	ug/L			03/07/23 18:37	1
Benzene	ND		0.50	0.14	ug/L			03/07/23 18:37	1
Bromobenzene	ND		0.50	0.14	ug/L			03/07/23 18:37	1
Bromochloromethane	ND		1.0	0.27	ug/L			03/07/23 18:37	1
Bromodichloromethane	ND		0.50	0.15	ug/L			03/07/23 18:37	1
Bromoform	ND		0.50	0.28	ug/L			03/07/23 18:37	1
Bromomethane	ND		2.0	1.9	ug/L			03/07/23 18:37	1
cis-1,2-Dichloroethene	ND		0.50	0.16	ug/L			03/07/23 18:37	1
cis-1,3-Dichloropropene	ND		0.50	0.15	ug/L			03/07/23 18:37	1
Carbon disulfide	ND		1.0	0.32	ug/L			03/07/23 18:37	1
Carbon tetrachloride	ND		0.50	0.27	ug/L			03/07/23 18:37	1
Chlorobenzene	ND		0.50	0.12	ug/L			03/07/23 18:37	1
Chloroethane	ND		0.50	0.38	ug/L			03/07/23 18:37	1
Chloroform	ND		0.50	0.17	ug/L			03/07/23 18:37	1
Chloromethane	ND		1.0	0.65	ug/L			03/07/23 18:37	1
Dibromochloromethane	ND		0.50	0.21	ug/L			03/07/23 18:37	1
Dibromomethane	ND		0.50	0.16	ug/L			03/07/23 18:37	1
Dichlorodifluoromethane	ND		1.0	0.51	ug/L			03/07/23 18:37	1
Ethylbenzene	ND		0.50	0.16	ug/L			03/07/23 18:37	1
Isopropylbenzene	ND		0.50	0.21	ug/L			03/07/23 18:37	1
Methylene Chloride	ND		1.0	0.40	ug/L			03/07/23 18:37	1
Methyl-t-Butyl Ether (MTBE)	ND		0.50	0.14	ug/L			03/07/23 18:37	1

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Client Sample Results

Client: Hargis + Associates, Inc.
Project/Site: Raytheon Main GETS OCSD/532.15

Job ID: 570-130102-1

Method: SW846 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: TB-030723
Date Collected: 03/07/23 08:00
Date Received: 03/07/23 12:57

Lab Sample ID: 570-130102-1
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	ND		1.0	0.55	ug/L			03/07/23 18:37	1
n-Butylbenzene	ND		0.50	0.24	ug/L			03/07/23 18:37	1
N-Propylbenzene	ND		0.50	0.18	ug/L			03/07/23 18:37	1
o-Xylene	ND		0.50	0.18	ug/L			03/07/23 18:37	1
m,p-Xylene	ND		1.0	0.39	ug/L			03/07/23 18:37	1
p-Isopropyltoluene	ND		0.50	0.20	ug/L			03/07/23 18:37	1
sec-Butylbenzene	ND		0.50	0.20	ug/L			03/07/23 18:37	1
Styrene	ND		0.50	0.27	ug/L			03/07/23 18:37	1
trans-1,2-Dichloroethene	ND		0.50	0.22	ug/L			03/07/23 18:37	1
trans-1,3-Dichloropropene	ND		0.50	0.21	ug/L			03/07/23 18:37	1
tert-Butylbenzene	ND		0.50	0.21	ug/L			03/07/23 18:37	1
Tetrachloroethene	ND		0.50	0.16	ug/L			03/07/23 18:37	1
Toluene	ND		0.50	0.14	ug/L			03/07/23 18:37	1
Trichloroethene	ND		0.50	0.15	ug/L			03/07/23 18:37	1
Trichlorofluoromethane	ND		0.50	0.26	ug/L			03/07/23 18:37	1
Vinyl acetate	ND		5.0	3.2	ug/L			03/07/23 18:37	1
Vinyl chloride	ND		0.50	0.23	ug/L			03/07/23 18:37	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	104		64 - 132		03/07/23 18:37	1
4-Bromofluorobenzene (Surr)	109		76 - 120		03/07/23 18:37	1
Dibromofluoromethane	101		80 - 120		03/07/23 18:37	1
Toluene-d8 (Surr)	96		80 - 120		03/07/23 18:37	1

Client Sample ID: CEFF
Date Collected: 03/07/23 08:45
Date Received: 03/07/23 12:57

Lab Sample ID: 570-130102-2
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		0.50	0.20	ug/L			03/07/23 20:28	1
1,1,1-Trichloroethane	ND		0.50	0.20	ug/L			03/07/23 20:28	1
1,1,2,2-Tetrachloroethane	ND		0.50	0.14	ug/L			03/07/23 20:28	1
1,1,2-Trichloro-1,2,2-trifluoroethane	0.34	J	0.50	0.25	ug/L			03/07/23 20:28	1
1,1,2-Trichloroethane	ND		0.50	0.18	ug/L			03/07/23 20:28	1
1,1-Dichloroethane	ND		0.50	0.21	ug/L			03/07/23 20:28	1
1,1-Dichloroethene	ND		0.50	0.21	ug/L			03/07/23 20:28	1
1,1-Dichloropropene	ND		0.50	0.16	ug/L			03/07/23 20:28	1
1,2,3-Trichlorobenzene	ND		0.50	0.26	ug/L			03/07/23 20:28	1
1,2,3-Trichloropropane	ND		0.50	0.31	ug/L			03/07/23 20:28	1
1,2,4-Trichlorobenzene	ND		0.50	0.26	ug/L			03/07/23 20:28	1
1,2,4-Trimethylbenzene	ND		0.50	0.22	ug/L			03/07/23 20:28	1
1,2-Dibromo-3-Chloropropane	ND		1.0	0.84	ug/L			03/07/23 20:28	1
1,2-Dibromoethane	ND		0.50	0.27	ug/L			03/07/23 20:28	1
1,2-Dichlorobenzene	ND		0.50	0.14	ug/L			03/07/23 20:28	1
1,2-Dichloroethane	ND		0.50	0.14	ug/L			03/07/23 20:28	1
1,2-Dichloropropane	ND		0.50	0.14	ug/L			03/07/23 20:28	1
1,3,5-Trimethylbenzene	ND		0.50	0.19	ug/L			03/07/23 20:28	1
1,3-Dichlorobenzene	ND		0.50	0.16	ug/L			03/07/23 20:28	1
1,3-Dichloropropane	ND		0.50	0.19	ug/L			03/07/23 20:28	1
1,4-Dichlorobenzene	ND		0.50	0.11	ug/L			03/07/23 20:28	1

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Client Sample Results

Client: Hargis + Associates, Inc.
Project/Site: Raytheon Main GETS OCSD/532.15

Job ID: 570-130102-1

Method: SW846 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: CEFF
Date Collected: 03/07/23 08:45
Date Received: 03/07/23 12:57

Lab Sample ID: 570-130102-2
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,2-Dichloropropane	ND	*-	0.50	0.26	ug/L			03/07/23 20:28	1
2-Butanone	ND		5.0	2.9	ug/L			03/07/23 20:28	1
2-Chlorotoluene	ND		0.50	0.23	ug/L			03/07/23 20:28	1
2-Hexanone	ND		6.0	2.0	ug/L			03/07/23 20:28	1
4-Chlorotoluene	ND		0.50	0.24	ug/L			03/07/23 20:28	1
4-Methyl-2-pentanone	ND		5.0	1.6	ug/L			03/07/23 20:28	1
Acetone	ND		8.0	3.6	ug/L			03/07/23 20:28	1
Benzene	ND		0.50	0.14	ug/L			03/07/23 20:28	1
Bromobenzene	ND		0.50	0.14	ug/L			03/07/23 20:28	1
Bromochloromethane	ND		1.0	0.27	ug/L			03/07/23 20:28	1
Bromodichloromethane	ND		0.50	0.15	ug/L			03/07/23 20:28	1
Bromoform	ND		0.50	0.28	ug/L			03/07/23 20:28	1
Bromomethane	ND		2.0	1.9	ug/L			03/07/23 20:28	1
cis-1,2-Dichloroethene	ND		0.50	0.16	ug/L			03/07/23 20:28	1
cis-1,3-Dichloropropene	ND		0.50	0.15	ug/L			03/07/23 20:28	1
Carbon disulfide	ND		1.0	0.32	ug/L			03/07/23 20:28	1
Carbon tetrachloride	ND		0.50	0.27	ug/L			03/07/23 20:28	1
Chlorobenzene	ND		0.50	0.12	ug/L			03/07/23 20:28	1
Chloroethane	ND		0.50	0.38	ug/L			03/07/23 20:28	1
Chloroform	ND		0.50	0.17	ug/L			03/07/23 20:28	1
Chloromethane	ND		1.0	0.65	ug/L			03/07/23 20:28	1
Dibromochloromethane	ND		0.50	0.21	ug/L			03/07/23 20:28	1
Dibromomethane	ND		0.50	0.16	ug/L			03/07/23 20:28	1
Dichlorodifluoromethane	ND		1.0	0.51	ug/L			03/07/23 20:28	1
Ethylbenzene	ND		0.50	0.16	ug/L			03/07/23 20:28	1
Isopropylbenzene	ND		0.50	0.21	ug/L			03/07/23 20:28	1
Methylene Chloride	ND		1.0	0.40	ug/L			03/07/23 20:28	1
Methyl-t-Butyl Ether (MTBE)	ND		0.50	0.14	ug/L			03/07/23 20:28	1
Naphthalene	ND		1.0	0.55	ug/L			03/07/23 20:28	1
n-Butylbenzene	ND		0.50	0.24	ug/L			03/07/23 20:28	1
N-Propylbenzene	ND		0.50	0.18	ug/L			03/07/23 20:28	1
o-Xylene	ND		0.50	0.18	ug/L			03/07/23 20:28	1
m,p-Xylene	ND		1.0	0.39	ug/L			03/07/23 20:28	1
p-Isopropyltoluene	ND		0.50	0.20	ug/L			03/07/23 20:28	1
sec-Butylbenzene	ND		0.50	0.20	ug/L			03/07/23 20:28	1
Styrene	ND		0.50	0.27	ug/L			03/07/23 20:28	1
trans-1,2-Dichloroethene	ND		0.50	0.22	ug/L			03/07/23 20:28	1
trans-1,3-Dichloropropene	ND		0.50	0.21	ug/L			03/07/23 20:28	1
tert-Butylbenzene	ND		0.50	0.21	ug/L			03/07/23 20:28	1
Tetrachloroethene	ND		0.50	0.16	ug/L			03/07/23 20:28	1
Toluene	ND		0.50	0.14	ug/L			03/07/23 20:28	1
Trichloroethene	ND		0.50	0.15	ug/L			03/07/23 20:28	1
Trichlorofluoromethane	ND		0.50	0.26	ug/L			03/07/23 20:28	1
Vinyl acetate	ND		5.0	3.2	ug/L			03/07/23 20:28	1
Vinyl chloride	ND		0.50	0.23	ug/L			03/07/23 20:28	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	99		64 - 132		03/07/23 20:28	1
4-Bromofluorobenzene (Surr)	113		76 - 120		03/07/23 20:28	1
Dibromofluoromethane	102		80 - 120		03/07/23 20:28	1

Eurofins Calscience

Client Sample Results

Client: Hargis + Associates, Inc.
Project/Site: Raytheon Main GETS OCSD/532.15

Job ID: 570-130102-1

Method: SW846 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: CEFF
Date Collected: 03/07/23 08:45
Date Received: 03/07/23 12:57

Lab Sample ID: 570-130102-2
Matrix: Water

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	97		80 - 120		03/07/23 20:28	1

Client Sample Results

Client: Hargis + Associates, Inc.
Project/Site: Raytheon Main GETS OCSD/532.15

Job ID: 570-130102-1

Method: SW846 8270C SIM ID - Semivolatile Organic Compounds (GC/MS SIM / Isotope Dilution)

Client Sample ID: CEFF
Date Collected: 03/07/23 08:45
Date Received: 03/07/23 12:57

Lab Sample ID: 570-130102-2
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	ND		0.50	0.34	ug/L		03/08/23 15:00	03/07/23 21:59	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,4-Dioxane-d8	31		21 - 120				03/08/23 15:00	03/07/23 21:59	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Nitrobenzene-d5	70		58 - 135				03/08/23 15:00	03/07/23 21:59	1

Surrogate Summary

Client: Hargis + Associates, Inc.
Project/Site: Raytheon Main GETS OCSD/532.15

Job ID: 570-130102-1

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

Matrix: Water

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	DCA (64-132)	BFB (76-120)	DBFM (80-120)	TOL (80-120)
570-130009-B-4 MS	Matrix Spike	108	98	113	102
570-130009-B-4 MSD	Matrix Spike Duplicate	114	95	110	100
570-130102-1	TB-030723	104	109	101	96
570-130102-2	CEFF	99	113	102	97
LCS 570-309682/3	Lab Control Sample	113	97	106	99
LCSD 570-309682/4	Lab Control Sample Dup	111	96	104	101
MB 570-309682/6	Method Blank	102	110	103	97

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)

Lab Sample ID	Client Sample ID	NBZ (58-135)
570-130102-2	CEFF	70
LCS 570-309664/2-A	Lab Control Sample	70
LCSD 570-309664/3-A	Lab Control Sample Dup	77
MB 570-309664/1-A	Method Blank	71

Surrogate Legend

NBZ = Nitrobenzene-d5

Isotope Dilution Summary

Client: Hargis + Associates, Inc.
Project/Site: Raytheon Main GETS OCSD/532.15

Job ID: 570-130102-1

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 (21-120)
570-130102-2	CEFF	31
LCS 570-309664/2-A	Lab Control Sample	21
LCSD 570-309664/3-A	Lab Control Sample Dup	22
MB 570-309664/1-A	Method Blank	23

Surrogate Legend

DXE = 1,4-Dioxane-d8

QC Sample Results

Client: Hargis + Associates, Inc.
Project/Site: Raytheon Main GETS OCSD/532.15

Job ID: 570-130102-1

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

Lab Sample ID: MB 570-309682/6

Matrix: Water

Analysis Batch: 309682

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	0.20	ug/L			03/07/23 18:15	1
1,1,1-Trichloroethane	ND		0.50	0.20	ug/L			03/07/23 18:15	1
1,1,2,2-Tetrachloroethane	ND		0.50	0.14	ug/L			03/07/23 18:15	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.50	0.25	ug/L			03/07/23 18:15	1
1,1,2-Trichloroethane	ND		0.50	0.18	ug/L			03/07/23 18:15	1
1,1-Dichloroethane	ND		0.50	0.21	ug/L			03/07/23 18:15	1
1,1-Dichloroethene	ND		0.50	0.21	ug/L			03/07/23 18:15	1
1,1-Dichloropropene	ND		0.50	0.16	ug/L			03/07/23 18:15	1
1,2,3-Trichlorobenzene	ND		0.50	0.26	ug/L			03/07/23 18:15	1
1,2,3-Trichloropropane	ND		0.50	0.31	ug/L			03/07/23 18:15	1
1,2,4-Trichlorobenzene	ND		0.50	0.26	ug/L			03/07/23 18:15	1
1,2,4-Trimethylbenzene	ND		0.50	0.22	ug/L			03/07/23 18:15	1
1,2-Dibromo-3-Chloropropane	ND		1.0	0.84	ug/L			03/07/23 18:15	1
1,2-Dibromoethane	ND		0.50	0.27	ug/L			03/07/23 18:15	1
1,2-Dichlorobenzene	ND		0.50	0.14	ug/L			03/07/23 18:15	1
1,2-Dichloroethane	ND		0.50	0.14	ug/L			03/07/23 18:15	1
1,2-Dichloropropane	ND		0.50	0.14	ug/L			03/07/23 18:15	1
1,3,5-Trimethylbenzene	ND		0.50	0.19	ug/L			03/07/23 18:15	1
1,3-Dichlorobenzene	ND		0.50	0.16	ug/L			03/07/23 18:15	1
1,3-Dichloropropane	ND		0.50	0.19	ug/L			03/07/23 18:15	1
1,4-Dichlorobenzene	ND		0.50	0.11	ug/L			03/07/23 18:15	1
2,2-Dichloropropane	ND		0.50	0.26	ug/L			03/07/23 18:15	1
2-Butanone	ND		5.0	2.9	ug/L			03/07/23 18:15	1
2-Chlorotoluene	ND		0.50	0.23	ug/L			03/07/23 18:15	1
2-Hexanone	ND		6.0	2.0	ug/L			03/07/23 18:15	1
4-Chlorotoluene	ND		0.50	0.24	ug/L			03/07/23 18:15	1
4-Methyl-2-pentanone	ND		5.0	1.6	ug/L			03/07/23 18:15	1
Acetone	ND		8.0	3.6	ug/L			03/07/23 18:15	1
Benzene	ND		0.50	0.14	ug/L			03/07/23 18:15	1
Bromobenzene	ND		0.50	0.14	ug/L			03/07/23 18:15	1
Bromochloromethane	ND		1.0	0.27	ug/L			03/07/23 18:15	1
Bromodichloromethane	ND		0.50	0.15	ug/L			03/07/23 18:15	1
Bromoform	ND		0.50	0.28	ug/L			03/07/23 18:15	1
Bromomethane	ND		2.0	1.9	ug/L			03/07/23 18:15	1
cis-1,2-Dichloroethene	ND		0.50	0.16	ug/L			03/07/23 18:15	1
cis-1,3-Dichloropropene	ND		0.50	0.15	ug/L			03/07/23 18:15	1
Carbon disulfide	ND		1.0	0.32	ug/L			03/07/23 18:15	1
Carbon tetrachloride	ND		0.50	0.27	ug/L			03/07/23 18:15	1
Chlorobenzene	ND		0.50	0.12	ug/L			03/07/23 18:15	1
Chloroethane	ND		0.50	0.38	ug/L			03/07/23 18:15	1
Chloroform	ND		0.50	0.17	ug/L			03/07/23 18:15	1
Chloromethane	ND		1.0	0.65	ug/L			03/07/23 18:15	1
Dibromochloromethane	ND		0.50	0.21	ug/L			03/07/23 18:15	1
Dibromomethane	ND		0.50	0.16	ug/L			03/07/23 18:15	1
Dichlorodifluoromethane	ND		1.0	0.51	ug/L			03/07/23 18:15	1
Ethylbenzene	ND		0.50	0.16	ug/L			03/07/23 18:15	1
Isopropylbenzene	ND		0.50	0.21	ug/L			03/07/23 18:15	1
Methylene Chloride	ND		1.0	0.40	ug/L			03/07/23 18:15	1

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QC Sample Results

Client: Hargis + Associates, Inc.
Project/Site: Raytheon Main GETS OCSD/532.15

Job ID: 570-130102-1

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

Lab Sample ID: MB 570-309682/6

Matrix: Water

Analysis Batch: 309682

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	0.14	ug/L			03/07/23 18:15	1
Naphthalene	ND		1.0	0.55	ug/L			03/07/23 18:15	1
n-Butylbenzene	ND		0.50	0.24	ug/L			03/07/23 18:15	1
N-Propylbenzene	ND		0.50	0.18	ug/L			03/07/23 18:15	1
o-Xylene	ND		0.50	0.18	ug/L			03/07/23 18:15	1
m,p-Xylene	ND		1.0	0.39	ug/L			03/07/23 18:15	1
p-Isopropyltoluene	ND		0.50	0.20	ug/L			03/07/23 18:15	1
sec-Butylbenzene	ND		0.50	0.20	ug/L			03/07/23 18:15	1
Styrene	ND		0.50	0.27	ug/L			03/07/23 18:15	1
trans-1,2-Dichloroethene	ND		0.50	0.22	ug/L			03/07/23 18:15	1
trans-1,3-Dichloropropene	ND		0.50	0.21	ug/L			03/07/23 18:15	1
tert-Butylbenzene	ND		0.50	0.21	ug/L			03/07/23 18:15	1
Tetrachloroethene	ND		0.50	0.16	ug/L			03/07/23 18:15	1
Toluene	ND		0.50	0.14	ug/L			03/07/23 18:15	1
Trichloroethene	ND		0.50	0.15	ug/L			03/07/23 18:15	1
Trichlorofluoromethane	ND		0.50	0.26	ug/L			03/07/23 18:15	1
Vinyl acetate	ND		5.0	3.2	ug/L			03/07/23 18:15	1
Vinyl chloride	ND		0.50	0.23	ug/L			03/07/23 18:15	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	102		64 - 132		03/07/23 18:15	1
4-Bromofluorobenzene (Surr)	110		76 - 120		03/07/23 18:15	1
Dibromofluoromethane	103		80 - 120		03/07/23 18:15	1
Toluene-d8 (Surr)	97		80 - 120		03/07/23 18:15	1

Lab Sample ID: LCS 570-309682/3

Matrix: Water

Analysis Batch: 309682

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	9.137		ug/L		91	80 - 125
1,1,1-Trichloroethane	10.0	9.600		ug/L		96	75 - 121
1,1,2,2-Tetrachloroethane	10.0	10.66		ug/L		107	80 - 120
1,1,2-Trichloro-1,2,2-trifluoroethane	10.0	9.901		ug/L		99	56 - 132
1,1,2-Trichloroethane	10.0	10.56		ug/L		106	80 - 121
1,1-Dichloroethane	10.0	10.81		ug/L		108	80 - 120
1,1-Dichloroethene	10.0	11.07		ug/L		111	80 - 126
1,1-Dichloropropene	10.0	10.34		ug/L		103	72 - 122
1,2,3-Trichlorobenzene	10.0	11.62		ug/L		116	80 - 125
1,2,3-Trichloropropane	10.0	9.228		ug/L		92	75 - 127
1,2,4-Trichlorobenzene	10.0	11.43		ug/L		114	80 - 124
1,2,4-Trimethylbenzene	10.0	10.25		ug/L		102	80 - 128
1,2-Dibromo-3-Chloropropane	10.0	7.272		ug/L		73	63 - 123
1,2-Dibromoethane	10.0	10.35		ug/L		103	80 - 125
1,2-Dichlorobenzene	10.0	10.55		ug/L		106	80 - 120
1,2-Dichloroethane	10.0	10.69		ug/L		107	76 - 130
1,2-Dichloropropane	10.0	10.49		ug/L		105	74 - 124
1,3,5-Trimethylbenzene	10.0	10.27		ug/L		103	80 - 122

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QC Sample Results

Client: Hargis + Associates, Inc.
Project/Site: Raytheon Main GETS OCSD/532.15

Job ID: 570-130102-1

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

Lab Sample ID: LCS 570-309682/3

Matrix: Water

Analysis Batch: 309682

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	10.31		ug/L		103	80 - 120
1,3-Dichloropropane	10.0	10.79		ug/L		108	80 - 121
1,4-Dichlorobenzene	10.0	10.09		ug/L		101	80 - 120
2,2-Dichloropropane	10.0	8.038		ug/L		80	79 - 131
2-Butanone	10.0	7.532		ug/L		75	48 - 145
2-Chlorotoluene	10.0	9.969		ug/L		100	80 - 120
2-Hexanone	10.0	8.373		ug/L		84	50 - 149
4-Chlorotoluene	10.0	10.05		ug/L		100	80 - 120
4-Methyl-2-pentanone	10.0	9.672		ug/L		97	63 - 120
Acetone	10.0	11.20		ug/L		112	45 - 139
Benzene	10.0	10.33		ug/L		103	80 - 120
Bromobenzene	10.0	10.30		ug/L		103	80 - 125
Bromochloromethane	10.0	10.96		ug/L		110	80 - 120
Bromodichloromethane	10.0	10.43		ug/L		104	73 - 131
Bromoform	10.0	9.089		ug/L		91	76 - 124
Bromomethane	10.0	12.28		ug/L		123	26 - 180
cis-1,2-Dichloroethene	10.0	10.76		ug/L		108	80 - 120
cis-1,3-Dichloropropene	10.0	9.144		ug/L		91	76 - 123
Carbon disulfide	10.0	10.42		ug/L		104	75 - 123
Carbon tetrachloride	10.0	8.316		ug/L		83	61 - 139
Chlorobenzene	10.0	10.29		ug/L		103	80 - 120
Chloroethane	10.0	11.46		ug/L		115	54 - 150
Chloroform	10.0	10.47		ug/L		105	80 - 120
Chloromethane	10.0	11.10		ug/L		111	28 - 151
Dibromochloromethane	10.0	9.825		ug/L		98	74 - 136
Dibromomethane	10.0	11.14		ug/L		111	80 - 122
Dichlorodifluoromethane	10.0	12.70		ug/L		127	27 - 154
Ethylbenzene	10.0	10.33		ug/L		103	80 - 126
Isopropylbenzene	10.0	11.10		ug/L		111	80 - 120
Methylene Chloride	10.0	10.34		ug/L		103	80 - 120
Methyl-t-Butyl Ether (MTBE)	10.0	10.79		ug/L		108	69 - 128
Naphthalene	10.0	11.08		ug/L		111	70 - 130
n-Butylbenzene	10.0	10.84		ug/L		108	78 - 127
N-Propylbenzene	10.0	10.39		ug/L		104	80 - 121
o-Xylene	10.0	9.828		ug/L		98	80 - 124
m,p-Xylene	20.0	19.98		ug/L		100	80 - 123
p-Isopropyltoluene	10.0	10.29		ug/L		103	80 - 128
sec-Butylbenzene	10.0	10.72		ug/L		107	80 - 125
Styrene	10.0	10.15		ug/L		102	80 - 121
trans-1,2-Dichloroethene	10.0	10.48		ug/L		105	79 - 120
trans-1,3-Dichloropropene	10.0	8.838		ug/L		88	80 - 126
tert-Butylbenzene	10.0	10.36		ug/L		104	80 - 121
Tetrachloroethene	10.0	10.12		ug/L		101	80 - 125
Toluene	10.0	10.22		ug/L		102	80 - 120
Trichloroethene	10.0	10.09		ug/L		101	77 - 124
Trichlorofluoromethane	10.0	12.02		ug/L		120	41 - 163
Vinyl acetate	10.0	9.324		ug/L		93	61 - 126
Vinyl chloride	10.0	11.20		ug/L		112	50 - 160

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QC Sample Results

Client: Hargis + Associates, Inc.
Project/Site: Raytheon Main GETS OCSD/532.15

Job ID: 570-130102-1

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

Lab Sample ID: LCS 570-309682/3

Matrix: Water

Analysis Batch: 309682

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

	LCS	LCS	
Surrogate	%Recovery	Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	113		64 - 132
4-Bromofluorobenzene (Surr)	97		76 - 120
Dibromofluoromethane	106		80 - 120
Toluene-d8 (Surr)	99		80 - 120

Lab Sample ID: LCSD 570-309682/4

Matrix: Water

Analysis Batch: 309682

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	9.017		ug/L		90	80 - 125	1	20
1,1,1-Trichloroethane	10.0	9.119		ug/L		91	75 - 121	5	20
1,1,2,2-Tetrachloroethane	10.0	10.64		ug/L		106	80 - 120	0	20
1,1,2-Trichloro-1,2,2-trifluoroethane	10.0	9.268		ug/L		93	56 - 132	7	22
1,1,2-Trichloroethane	10.0	10.47		ug/L		105	80 - 121	1	20
1,1-Dichloroethane	10.0	10.61		ug/L		106	80 - 120	2	20
1,1-Dichloroethene	10.0	10.60		ug/L		106	80 - 126	4	21
1,1-Dichloropropene	10.0	9.561		ug/L		96	72 - 122	8	20
1,2,3-Trichlorobenzene	10.0	11.50		ug/L		115	80 - 125	1	20
1,2,3-Trichloropropane	10.0	9.316		ug/L		93	75 - 127	1	20
1,2,4-Trichlorobenzene	10.0	11.29		ug/L		113	80 - 124	1	20
1,2,4-Trimethylbenzene	10.0	10.18		ug/L		102	80 - 128	1	20
1,2-Dibromo-3-Chloropropane	10.0	7.926		ug/L		79	63 - 123	9	20
1,2-Dibromoethane	10.0	10.14		ug/L		101	80 - 125	2	20
1,2-Dichlorobenzene	10.0	10.56		ug/L		106	80 - 120	0	20
1,2-Dichloroethane	10.0	10.62		ug/L		106	76 - 130	1	20
1,2-Dichloropropane	10.0	10.21		ug/L		102	74 - 124	3	20
1,3,5-Trimethylbenzene	10.0	10.06		ug/L		101	80 - 122	2	20
1,3-Dichlorobenzene	10.0	10.24		ug/L		102	80 - 120	1	20
1,3-Dichloropropane	10.0	11.14		ug/L		111	80 - 121	3	20
1,4-Dichlorobenzene	10.0	10.00		ug/L		100	80 - 120	1	20
2,2-Dichloropropane	10.0	7.794	*- me	ug/L		78	79 - 131	3	20
2-Butanone	10.0	8.441		ug/L		84	48 - 145	11	30
2-Chlorotoluene	10.0	9.924		ug/L		99	80 - 120	0	20
2-Hexanone	10.0	10.05		ug/L		100	50 - 149	18	29
4-Chlorotoluene	10.0	9.845		ug/L		98	80 - 120	2	20
4-Methyl-2-pentanone	10.0	8.467		ug/L		85	63 - 120	13	20
Acetone	10.0	12.36		ug/L		124	45 - 139	10	30
Benzene	10.0	9.939		ug/L		99	80 - 120	4	20
Bromobenzene	10.0	10.29		ug/L		103	80 - 125	0	20
Bromochloromethane	10.0	10.61		ug/L		106	80 - 120	3	20
Bromodichloromethane	10.0	10.35		ug/L		104	73 - 131	1	20
Bromoform	10.0	9.328		ug/L		93	76 - 124	3	20
Bromomethane	10.0	11.64		ug/L		116	26 - 180	5	20
cis-1,2-Dichloroethene	10.0	10.40		ug/L		104	80 - 120	3	20
cis-1,3-Dichloropropene	10.0	9.110		ug/L		91	76 - 123	0	20
Carbon disulfide	10.0	9.959		ug/L		100	75 - 123	5	20
Carbon tetrachloride	10.0	7.946		ug/L		79	61 - 139	5	20

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QC Sample Results

Client: Hargis + Associates, Inc.
Project/Site: Raytheon Main GETS OCSD/532.15

Job ID: 570-130102-1

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

Lab Sample ID: LCSD 570-309682/4

Matrix: Water

Analysis Batch: 309682

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	10.06		ug/L		101	80 - 120	2	20
Chloroethane	10.0	10.90		ug/L		109	54 - 150	5	25
Chloroform	10.0	10.18		ug/L		102	80 - 120	3	20
Chloromethane	10.0	10.64		ug/L		106	28 - 151	4	20
Dibromochloromethane	10.0	10.19		ug/L		102	74 - 136	4	20
Dibromomethane	10.0	10.50		ug/L		105	80 - 122	6	20
Dichlorodifluoromethane	10.0	11.79		ug/L		118	27 - 154	7	21
Ethylbenzene	10.0	10.34		ug/L		103	80 - 126	0	20
Isopropylbenzene	10.0	10.68		ug/L		107	80 - 120	4	20
Methylene Chloride	10.0	10.15		ug/L		102	80 - 120	2	20
Methyl-t-Butyl Ether (MTBE)	10.0	10.78		ug/L		108	69 - 128	0	20
Naphthalene	10.0	11.24		ug/L		112	70 - 130	1	20
n-Butylbenzene	10.0	10.60		ug/L		106	78 - 127	2	20
N-Propylbenzene	10.0	10.21		ug/L		102	80 - 121	2	20
o-Xylene	10.0	9.696		ug/L		97	80 - 124	1	20
m,p-Xylene	20.0	20.37		ug/L		102	80 - 123	2	20
p-Isopropyltoluene	10.0	10.20		ug/L		102	80 - 128	1	20
sec-Butylbenzene	10.0	10.54		ug/L		105	80 - 125	2	20
Styrene	10.0	10.14		ug/L		101	80 - 121	0	20
trans-1,2-Dichloroethene	10.0	10.15		ug/L		101	79 - 120	3	20
trans-1,3-Dichloropropene	10.0	8.870		ug/L		89	80 - 126	0	20
tert-Butylbenzene	10.0	10.10		ug/L		101	80 - 121	3	20
Tetrachloroethene	10.0	9.951		ug/L		100	80 - 125	2	20
Toluene	10.0	9.955		ug/L		100	80 - 120	3	20
Trichloroethene	10.0	9.712		ug/L		97	77 - 124	4	20
Trichlorofluoromethane	10.0	11.22		ug/L		112	41 - 163	7	21
Vinyl acetate	10.0	8.474		ug/L		85	61 - 126	10	24
Vinyl chloride	10.0	10.50		ug/L		105	50 - 160	7	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	111		64 - 132
4-Bromofluorobenzene (Surr)	96		76 - 120
Dibromofluoromethane	104		80 - 120
Toluene-d8 (Surr)	101		80 - 120

Lab Sample ID: 570-130009-B-4 MS

Matrix: Water

Analysis Batch: 309682

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
1,1,1,2-Tetrachloroethane	ND		10.0	8.613		ug/L		86	61 - 142
1,1,1-Trichloroethane	ND		10.0	11.07		ug/L		111	68 - 138
1,1,2,2-Tetrachloroethane	ND		10.0	10.74		ug/L		107	71 - 133
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		10.0	11.44		ug/L		114	51 - 132
1,1,2-Trichloroethane	ND		10.0	9.956		ug/L		100	70 - 132
1,1-Dichloroethane	ND		10.0	12.98		ug/L		130	70 - 132
1,1-Dichloroethene	ND		10.0	14.03		ug/L		140	57 - 148
1,1-Dichloropropene	ND		10.0	11.58		ug/L		116	74 - 132

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QC Sample Results

Client: Hargis + Associates, Inc.
Project/Site: Raytheon Main GETS OCSD/532.15

Job ID: 570-130102-1

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

Lab Sample ID: 570-130009-B-4 MS

Matrix: Water

Analysis Batch: 309682

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
1,2,3-Trichlorobenzene	ND		10.0	10.98		ug/L		110	66 - 135
1,2,3-Trichloropropane	ND		10.0	8.973		ug/L		90	61 - 130
1,2,4-Trichlorobenzene	ND		10.0	11.00		ug/L		110	66 - 131
1,2,4-Trimethylbenzene	ND		10.0	10.62		ug/L		106	65 - 132
1,2-Dibromo-3-Chloropropane	ND		10.0	6.417		ug/L		64	48 - 132
1,2-Dibromoethane	ND		10.0	10.20		ug/L		102	74 - 128
1,2-Dichlorobenzene	ND		10.0	10.58		ug/L		106	74 - 126
1,2-Dichloroethane	ND		10.0	11.47		ug/L		115	65 - 140
1,2-Dichloropropane	ND		10.0	10.56		ug/L		106	75 - 127
1,3,5-Trimethylbenzene	ND		10.0	11.68		ug/L		117	64 - 144
1,3-Dichlorobenzene	ND		10.0	10.46		ug/L		105	73 - 125
1,3-Dichloropropane	ND		10.0	10.68		ug/L		107	71 - 131
1,4-Dichlorobenzene	ND		10.0	10.19		ug/L		102	73 - 125
2,2-Dichloropropane	ND	*	10.0	7.810		ug/L		78	39 - 138
2-Butanone	ND	F2	10.0	11.92		ug/L		119	44 - 140
2-Chlorotoluene	ND		10.0	11.19		ug/L		112	71 - 130
2-Hexanone	ND		10.0	8.065		ug/L		81	52 - 136
4-Chlorotoluene	ND		10.0	10.21		ug/L		102	69 - 127
4-Methyl-2-pentanone	ND		10.0	8.516		ug/L		85	44 - 139
Acetone	ND		10.0	9.971		ug/L		100	20 - 174
Benzene	ND		10.0	11.06		ug/L		111	75 - 125
Bromobenzene	ND		10.0	10.82		ug/L		108	75 - 132
Bromochloromethane	ND		10.0	12.31		ug/L		123	75 - 125
Bromodichloromethane	ND		10.0	10.26		ug/L		103	70 - 137
Bromoform	ND		10.0	7.887		ug/L		79	51 - 142
Bromomethane	ND		10.0	13.29		ug/L		133	46 - 164
cis-1,2-Dichloroethene	ND		10.0	12.27		ug/L		123	62 - 138
cis-1,3-Dichloropropene	ND		10.0	7.993		ug/L		80	67 - 125
Carbon disulfide	ND		10.0	12.98		ug/L		130	70 - 132
Carbon tetrachloride	ND		10.0	9.381		ug/L		94	50 - 159
Chlorobenzene	ND		10.0	10.80		ug/L		108	75 - 128
Chloroethane	ND		10.0	11.74		ug/L		117	62 - 161
Chloroform	ND		10.0	11.75		ug/L		118	73 - 130
Chloromethane	ND		10.0	11.02		ug/L		110	45 - 157
Dibromochloromethane	ND		10.0	9.396		ug/L		94	63 - 145
Dibromomethane	ND		10.0	11.88		ug/L		119	75 - 127
Dichlorodifluoromethane	ND		10.0	10.24		ug/L		102	31 - 132
Ethylbenzene	ND		10.0	11.51		ug/L		115	73 - 135
Isopropylbenzene	ND		10.0	12.82		ug/L		128	69 - 141
Methylene Chloride	ND		10.0	11.87		ug/L		119	65 - 127
Methyl-t-Butyl Ether (MTBE)	ND		10.0	9.444		ug/L		94	59 - 131
Naphthalene	ND		10.0	10.01		ug/L		100	51 - 133
n-Butylbenzene	ND		10.0	11.57		ug/L		116	66 - 128
N-Propylbenzene	ND		10.0	12.20		ug/L		122	73 - 136
o-Xylene	ND		10.0	10.94		ug/L		109	69 - 138
m,p-Xylene	ND		20.0	22.88		ug/L		114	73 - 138
p-Isopropyltoluene	ND		10.0	11.28		ug/L		113	69 - 134
sec-Butylbenzene	ND		10.0	11.78		ug/L		118	70 - 130
Styrene	ND		10.0	11.01		ug/L		110	45 - 144

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QC Sample Results

Client: Hargis + Associates, Inc.
Project/Site: Raytheon Main GETS OCSD/532.15

Job ID: 570-130102-1

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

Lab Sample ID: 570-130009-B-4 MS

Matrix: Water

Analysis Batch: 309682

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
trans-1,2-Dichloroethene	ND		10.0	12.63		ug/L		126	61 - 138
trans-1,3-Dichloropropene	ND		10.0	6.957		ug/L		70	61 - 131
tert-Butylbenzene	ND		10.0	10.94		ug/L		109	71 - 131
Tetrachloroethene	ND		10.0	11.89		ug/L		119	64 - 150
Toluene	ND		10.0	11.20		ug/L		112	75 - 127
Trichloroethene	0.65		10.0	10.73		ug/L		101	34 - 159
Trichlorofluoromethane	ND		10.0	10.84		ug/L		108	69 - 142
Vinyl acetate	ND		10.0	8.159		ug/L		82	35 - 132
Vinyl chloride	ND		10.0	10.84		ug/L		108	51 - 168

Surrogate	MS %Recovery	MS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	108		64 - 132
4-Bromofluorobenzene (Surr)	98		76 - 120
Dibromofluoromethane	113		80 - 120
Toluene-d8 (Surr)	102		80 - 120

Lab Sample ID: 570-130009-B-4 MSD

Matrix: Water

Analysis Batch: 309682

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
1,1,1,2-Tetrachloroethane	ND		10.0	9.194		ug/L		92	61 - 142	7	20
1,1,1-Trichloroethane	ND		10.0	10.96		ug/L		110	68 - 138	1	20
1,1,2,2-Tetrachloroethane	ND		10.0	11.35		ug/L		113	71 - 133	6	20
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		10.0	10.67		ug/L		107	51 - 132	7	21
1,1,2-Trichloroethane	ND		10.0	10.37		ug/L		104	70 - 132	4	20
1,1-Dichloroethane	ND		10.0	12.57		ug/L		126	70 - 132	3	20
1,1-Dichloroethene	ND		10.0	13.23		ug/L		132	57 - 148	6	20
1,1-Dichloropropene	ND		10.0	11.75		ug/L		118	74 - 132	1	20
1,2,3-Trichlorobenzene	ND		10.0	11.44		ug/L		114	66 - 135	4	22
1,2,3-Trichloropropane	ND		10.0	9.118		ug/L		91	61 - 130	2	20
1,2,4-Trichlorobenzene	ND		10.0	11.49		ug/L		115	66 - 131	4	24
1,2,4-Trimethylbenzene	ND		10.0	10.94		ug/L		109	65 - 132	3	22
1,2-Dibromo-3-Chloropropane	ND		10.0	6.950		ug/L		70	48 - 132	8	20
1,2-Dibromoethane	ND		10.0	9.985		ug/L		100	74 - 128	2	20
1,2-Dichlorobenzene	ND		10.0	11.11		ug/L		111	74 - 126	5	20
1,2-Dichloroethane	ND		10.0	10.98		ug/L		110	65 - 140	4	20
1,2-Dichloropropane	ND		10.0	10.37		ug/L		104	75 - 127	2	20
1,3,5-Trimethylbenzene	ND		10.0	11.56		ug/L		116	64 - 144	1	22
1,3-Dichlorobenzene	ND		10.0	10.79		ug/L		108	73 - 125	3	21
1,3-Dichloropropane	ND		10.0	10.94		ug/L		109	71 - 131	2	20
1,4-Dichlorobenzene	ND		10.0	10.68		ug/L		107	73 - 125	5	20
2,2-Dichloropropane	ND	*-	10.0	8.022		ug/L		80	39 - 138	3	20
2-Butanone	ND	F2	10.0	6.660	F2	ug/L		67	44 - 140	57	34
2-Chlorotoluene	ND		10.0	10.80		ug/L		108	71 - 130	4	20
2-Hexanone	ND		10.0	8.153		ug/L		82	52 - 136	1	37
4-Chlorotoluene	ND		10.0	10.28		ug/L		103	69 - 127	1	20
4-Methyl-2-pentanone	ND		10.0	8.538		ug/L		85	44 - 139	0	21

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QC Sample Results

Client: Hargis + Associates, Inc.
Project/Site: Raytheon Main GETS OCSD/532.15

Job ID: 570-130102-1

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

Lab Sample ID: 570-130009-B-4 MSD

Matrix: Water

Analysis Batch: 309682

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Acetone	ND		10.0	9.596		ug/L		96	20 - 174	4	35
Benzene	ND		10.0	10.92		ug/L		109	75 - 125	1	20
Bromobenzene	ND		10.0	10.70		ug/L		107	75 - 132	1	20
Bromochloromethane	ND		10.0	11.97		ug/L		120	75 - 125	3	20
Bromodichloromethane	ND		10.0	10.52		ug/L		105	70 - 137	3	20
Bromoform	ND		10.0	8.373		ug/L		84	51 - 142	6	20
Bromomethane	ND		10.0	13.20		ug/L		132	46 - 164	1	25
cis-1,2-Dichloroethene	ND		10.0	11.91		ug/L		119	62 - 138	3	20
cis-1,3-Dichloropropene	ND		10.0	8.397		ug/L		84	67 - 125	5	20
Carbon disulfide	ND		10.0	12.72		ug/L		127	70 - 132	2	20
Carbon tetrachloride	ND		10.0	9.674		ug/L		97	50 - 159	3	20
Chlorobenzene	ND		10.0	10.88		ug/L		109	75 - 128	1	20
Chloroethane	ND		10.0	12.77		ug/L		128	62 - 161	8	20
Chloroform	ND		10.0	11.55		ug/L		115	73 - 130	2	20
Chloromethane	ND		10.0	12.26		ug/L		123	45 - 157	11	21
Dibromochloromethane	ND		10.0	9.533		ug/L		95	63 - 145	1	20
Dibromomethane	ND		10.0	11.10		ug/L		111	75 - 127	7	20
Dichlorodifluoromethane	ND		10.0	11.47		ug/L		115	31 - 132	11	21
Ethylbenzene	ND		10.0	11.53		ug/L		115	73 - 135	0	20
Isopropylbenzene	ND		10.0	12.55		ug/L		125	69 - 141	2	22
Methylene Chloride	ND		10.0	11.46		ug/L		115	65 - 127	3	20
Methyl-t-Butyl Ether (MTBE)	ND		10.0	10.09		ug/L		101	59 - 131	7	20
Naphthalene	ND		10.0	10.75		ug/L		107	51 - 133	7	25
n-Butylbenzene	ND		10.0	12.16		ug/L		122	66 - 128	5	24
N-Propylbenzene	ND		10.0	11.82		ug/L		118	73 - 136	3	22
o-Xylene	ND		10.0	10.55		ug/L		105	69 - 138	4	20
m,p-Xylene	ND		20.0	22.51		ug/L		113	73 - 138	2	21
p-Isopropyltoluene	ND		10.0	11.66		ug/L		117	69 - 134	3	23
sec-Butylbenzene	ND		10.0	11.92		ug/L		119	70 - 130	1	22
Styrene	ND		10.0	10.81		ug/L		108	45 - 144	2	32
trans-1,2-Dichloroethene	ND		10.0	12.13		ug/L		121	61 - 138	4	21
trans-1,3-Dichloropropene	ND		10.0	7.995		ug/L		80	61 - 131	14	20
tert-Butylbenzene	ND		10.0	11.41		ug/L		114	71 - 131	4	23
Tetrachloroethene	ND		10.0	11.64		ug/L		116	64 - 150	2	23
Toluene	ND		10.0	10.93		ug/L		109	75 - 127	2	20
Trichloroethene	0.65		10.0	10.86		ug/L		102	34 - 159	1	23
Trichlorofluoromethane	ND		10.0	11.89		ug/L		119	69 - 142	9	20
Vinyl acetate	ND		10.0	9.113		ug/L		91	35 - 132	11	29
Vinyl chloride	ND		10.0	12.23		ug/L		122	51 - 168	12	20

Surrogate	MSD %Recovery	MSD Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	114		64 - 132
4-Bromofluorobenzene (Surr)	95		76 - 120
Dibromofluoromethane	110		80 - 120
Toluene-d8 (Surr)	100		80 - 120

QC Sample Results

Client: Hargis + Associates, Inc.
Project/Site: Raytheon Main GETS OCSD/532.15

Job ID: 570-130102-1

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

Lab Sample ID: MB 570-309664/1-A

Matrix: Water

Analysis Batch: 310074

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 309664

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	ND		0.50	0.34	ug/L		03/08/23 15:00	03/09/23 04:21	1
Isotope Dilution	%Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,4-Dioxane-d8	23		21 - 120				03/08/23 15:00	03/09/23 04:21	1
Surrogate	%Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
Nitrobenzene-d5	71		58 - 135				03/08/23 15:00	03/09/23 04:21	1

Lab Sample ID: LCS 570-309664/2-A

Matrix: Water

Analysis Batch: 310074

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 309664

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits	
1,4-Dioxane	20.0	19.51		ug/L		98	63 - 144	
Isotope Dilution	%Recovery	LCS Qualifier	Limits					
1,4-Dioxane-d8	21		21 - 120					
Surrogate	%Recovery	LCS Qualifier	Limits					
Nitrobenzene-d5	70		58 - 135					

Lab Sample ID: LCSD 570-309664/3-A

Matrix: Water

Analysis Batch: 310074

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 309664

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
1,4-Dioxane	20.0	18.46		ug/L		92	63 - 144	6	20
Isotope Dilution	%Recovery	LCSD Qualifier	Limits						
1,4-Dioxane-d8	22		21 - 120						
Surrogate	%Recovery	LCSD Qualifier	Limits						
Nitrobenzene-d5	77		58 - 135						

Marginal Exceedance (ME) Summary

Client: Hargis + Associates, Inc.
Project/Site: Raytheon Main GETS OCSD/532.15

Job ID: 570-130102-1

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

Lab Sample ID: LCSD 570-309682/4

Matrix: Water

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	%Rec	%Rec. Limits	ME %Rec. Limits	Marginal Exceedance Status
1,1,1,2-Tetrachloroethane	10.0	9.017		ug/L	90	80 - 125	73 - 133	
1,1,1-Trichloroethane	10.0	9.119		ug/L	91	75 - 121	67 - 129	
1,1,2,2-Tetrachloroethane	10.0	10.64		ug/L	106	80 - 120	73 - 127	
1,1,2-Trichloro-1,2,2-trifluoroethane	10.0	9.268		ug/L	93	56 - 132	43 - 145	
1,1,2-Trichloroethane	10.0	10.47		ug/L	105	80 - 121	73 - 128	
1,1-Dichloroethane	10.0	10.61		ug/L	106	80 - 120	73 - 127	
1,1-Dichloroethene	10.0	10.60		ug/L	106	80 - 126	72 - 134	
1,1-Dichloropropene	10.0	9.561		ug/L	96	72 - 122	64 - 130	
1,2,3-Trichlorobenzene	10.0	11.50		ug/L	115	80 - 125	73 - 133	
1,2,3-Trichloropropane	10.0	9.316		ug/L	93	75 - 127	66 - 136	
1,2,4-Trichlorobenzene	10.0	11.29		ug/L	113	80 - 124	73 - 131	
1,2,4-Trimethylbenzene	10.0	10.18		ug/L	102	80 - 128	72 - 136	
1,2-Dibromo-3-Chloropropane	10.0	7.926		ug/L	79	63 - 123	53 - 133	
1,2-Dibromoethane	10.0	10.14		ug/L	101	80 - 125	73 - 133	
1,2-Dichlorobenzene	10.0	10.56		ug/L	106	80 - 120	73 - 127	
1,2-Dichloroethane	10.0	10.62		ug/L	106	76 - 130	67 - 139	
1,2-Dichloropropane	10.0	10.21		ug/L	102	74 - 124	66 - 132	
1,3,5-Trimethylbenzene	10.0	10.06		ug/L	101	80 - 122	73 - 129	
1,3-Dichlorobenzene	10.0	10.24		ug/L	102	80 - 120	73 - 127	
1,3-Dichloropropane	10.0	11.14		ug/L	111	80 - 121	73 - 128	
1,4-Dichlorobenzene	10.0	10.00		ug/L	100	80 - 120	73 - 127	
2,2-Dichloropropane	10.0	7.794	*- me	ug/L	78	79 - 131	70 - 140	ME
2-Butanone	10.0	8.441		ug/L	84	48 - 145	32 - 161	
2-Chlorotoluene	10.0	9.924		ug/L	99	80 - 120	73 - 127	
2-Hexanone	10.0	10.05		ug/L	100	50 - 149	34 - 166	
4-Chlorotoluene	10.0	9.845		ug/L	98	80 - 120	73 - 127	
4-Methyl-2-pentanone	10.0	8.467		ug/L	85	63 - 120	54 - 130	
Acetone	10.0	12.36		ug/L	124	45 - 139	29 - 155	
Benzene	10.0	9.939		ug/L	99	80 - 120	73 - 127	
Bromobenzene	10.0	10.29		ug/L	103	80 - 125	73 - 133	
Bromochloromethane	10.0	10.61		ug/L	106	80 - 120	73 - 127	
Bromodichloromethane	10.0	10.35		ug/L	104	73 - 131	63 - 141	
Bromoform	10.0	9.328		ug/L	93	76 - 124	68 - 132	
Bromomethane	10.0	11.64		ug/L	116	26 - 180	1 - 206	
cis-1,2-Dichloroethene	10.0	10.40		ug/L	104	80 - 120	73 - 127	
cis-1,3-Dichloropropene	10.0	9.110		ug/L	91	76 - 123	68 - 131	
Carbon disulfide	10.0	9.959		ug/L	100	75 - 123	67 - 131	
Carbon tetrachloride	10.0	7.946		ug/L	79	61 - 139	48 - 152	
Chlorobenzene	10.0	10.06		ug/L	101	80 - 120	73 - 127	
Chloroethane	10.0	10.90		ug/L	109	54 - 150	38 - 166	
Chloroform	10.0	10.18		ug/L	102	80 - 120	73 - 127	
Chloromethane	10.0	10.64		ug/L	106	28 - 151	8 - 172	
Dibromochloromethane	10.0	10.19		ug/L	102	74 - 136	64 - 146	
Dibromomethane	10.0	10.50		ug/L	105	80 - 122	73 - 129	
Dichlorodifluoromethane	10.0	11.79		ug/L	118	27 - 154	6 - 175	
Ethylbenzene	10.0	10.34		ug/L	103	80 - 126	72 - 134	
Isopropylbenzene	10.0	10.68		ug/L	107	80 - 120	73 - 127	
Methylene Chloride	10.0	10.15		ug/L	102	80 - 120	73 - 127	
Methyl-t-Butyl Ether (MTBE)	10.0	10.78		ug/L	108	69 - 128	59 - 138	

Eurofins Calscience

Marginal Exceedance (ME) Summary

Client: Hargis + Associates, Inc.
Project/Site: Raytheon Main GETS OCSD/532.15

Job ID: 570-130102-1

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

Lab Sample ID: LCSD 570-309682/4
Matrix: Water

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

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	%Rec	%Rec. Limits	ME %Rec. Limits	Marginal Exceedance Status
Naphthalene	10.0	11.24		ug/L	112	70 - 130	60 - 140	
n-Butylbenzene	10.0	10.60		ug/L	106	78 - 127	70 - 135	
N-Propylbenzene	10.0	10.21		ug/L	102	80 - 121	73 - 128	
o-Xylene	10.0	9.696		ug/L	97	80 - 124	73 - 131	
m,p-Xylene	20.0	20.37		ug/L	102	80 - 123	73 - 130	
p-Isopropyltoluene	10.0	10.20		ug/L	102	80 - 128	72 - 136	
sec-Butylbenzene	10.0	10.54		ug/L	105	80 - 125	73 - 133	
Styrene	10.0	10.14		ug/L	101	80 - 121	73 - 128	
trans-1,2-Dichloroethene	10.0	10.15		ug/L	101	79 - 120	72 - 127	
trans-1,3-Dichloropropene	10.0	8.870		ug/L	89	80 - 126	72 - 134	
tert-Butylbenzene	10.0	10.10		ug/L	101	80 - 121	73 - 128	
Tetrachloroethene	10.0	9.951		ug/L	100	80 - 125	73 - 133	
Toluene	10.0	9.955		ug/L	100	80 - 120	73 - 127	
Trichloroethene	10.0	9.712		ug/L	97	77 - 124	69 - 132	
Trichlorofluoromethane	10.0	11.22		ug/L	112	41 - 163	21 - 183	
Vinyl acetate	10.0	8.474		ug/L	85	61 - 126	50 - 137	
Vinyl chloride	10.0	10.50		ug/L	105	50 - 160	32 - 178	

Summary

Number of Analytes Reported	Number of Marginal Exceedances Allowed	Number of Marginal Exceedances Found
66	3	1

ME = Marginal Exceedance

QC Association Summary

Client: Hargis + Associates, Inc.
Project/Site: Raytheon Main GETS OCSD/532.15

Job ID: 570-130102-1

GC/MS VOA

Analysis Batch: 309682

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-130102-1	TB-030723	Total/NA	Water	8260B	
570-130102-2	CEFF	Total/NA	Water	8260B	
MB 570-309682/6	Method Blank	Total/NA	Water	8260B	
LCS 570-309682/3	Lab Control Sample	Total/NA	Water	8260B	
LCSD 570-309682/4	Lab Control Sample Dup	Total/NA	Water	8260B	
570-130009-B-4 MS	Matrix Spike	Total/NA	Water	8260B	
570-130009-B-4 MSD	Matrix Spike Duplicate	Total/NA	Water	8260B	

GC/MS Semi VOA

Analysis Batch: 309326

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-130102-2	CEFF	Total/NA	Water	8270C SIM ID	309664

Prep Batch: 309664

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-130102-2	CEFF	Total/NA	Water	3510C	
MB 570-309664/1-A	Method Blank	Total/NA	Water	3510C	
LCS 570-309664/2-A	Lab Control Sample	Total/NA	Water	3510C	
LCSD 570-309664/3-A	Lab Control Sample Dup	Total/NA	Water	3510C	

Analysis Batch: 310074

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 570-309664/1-A	Method Blank	Total/NA	Water	8270C SIM ID	309664
LCS 570-309664/2-A	Lab Control Sample	Total/NA	Water	8270C SIM ID	309664
LCSD 570-309664/3-A	Lab Control Sample Dup	Total/NA	Water	8270C SIM ID	309664

Lab Chronicle

Client: Hargis + Associates, Inc.
Project/Site: Raytheon Main GETS OCSD/532.15

Job ID: 570-130102-1

Client Sample ID: TB-030723

Lab Sample ID: 570-130102-1

Date Collected: 03/07/23 08:00

Matrix: Water

Date Received: 03/07/23 12:57

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	309682	03/07/23 18:37	N1A	EET CAL 4
Instrument ID: GCMSWW										

Client Sample ID: CEFF

Lab Sample ID: 570-130102-2

Date Collected: 03/07/23 08:45

Matrix: Water

Date Received: 03/07/23 12:57

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	309682	03/07/23 20:28	N1A	EET CAL 4
Instrument ID: GCMSWW										
Total/NA	Analysis	8270C SIM ID		1	1 mL	1 mL	309326	03/07/23 21:59	UFLE	EET CAL 4
Instrument ID: GCMSDDD										
Total/NA	Prep	3510C			100 mL	10 mL	309664	03/08/23 15:00	RY4P	EET CAL 4

Laboratory References:

EET CAL 4 = Eurofins Calscience Tustin, 2841 Dow Avenue, Tustin, CA 92780, TEL (714)895-5494

Accreditation/Certification Summary

Client: Hargis + Associates, Inc.
Project/Site: Raytheon Main GETS OCSD/532.15

Job ID: 570-130102-1

Laboratory: Eurofins Calscience

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Oregon	NELAP	4175	02-02-24

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14
- 15
- 16

Method Summary

Client: Hargis + Associates, Inc.
Project/Site: Raytheon Main GETS OCSD/532.15

Job ID: 570-130102-1

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	EET CAL 4
8270C SIM ID	Semivolatile Organic Compounds (GC/MS SIM / Isotope Dilution)	SW846	EET CAL 4
3510C	Liquid-Liquid Extraction (Separatory Funnel)	SW846	EET CAL 4
5030C	Purge and Trap	SW846	EET CAL 4

Protocol References:

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

Laboratory References:

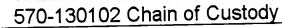
EET CAL 4 = Eurofins Calscience Tustin, 2841 Dow Avenue, Tustin, CA 92780, TEL (714)895-5494

Sample Summary

Client: Hargis + Associates, Inc.
Project/Site: Raytheon Main GETS OCSD/532.15

Job ID: 570-130102-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
570-130102-1	TB-030723	Water	03/07/23 08:00	03/07/23 12:57
570-130102-2	CEFF	Water	03/07/23 08:45	03/07/23 12:57



3/14/2023

Login Sample Receipt Checklist

Client: Hargis + Associates, Inc.

Job Number: 570-130102-1

Login Number: 130102

List Number: 1

Creator: Vitente, Precy

List Source: Eurofins Calscience

Question	Answer	Comment
Radioactivity wasn't checked or is $\leq$ 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?	False	Refer to Job Narrative for details.
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 $<6\text{mm}$ (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

ANALYTICAL REPORT

PREPARED FOR

Attn: Steve Netto
Hargis + Associates, Inc.
3131 Camino del Rio N
Suite 355
San Diego, California 92108

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JOB DESCRIPTION

Raytheon Main GETS Quarterly Sample/ 532.15

JOB NUMBER

570-130126-1

Eurofins Calscience

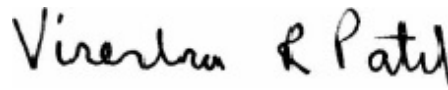
Job Notes

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The data in the report relate to the field sample(s) as received by the laboratory and associated QC. All results have been reviewed and have been found to be compliant with laboratory and accreditation requirements, with the exception of the noted deviation(s). For questions, please contact the Project Manager.

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Calscience Project Manager.

Authorization



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Authorized for release by
Virendra Patel, Project Manager I
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(714)895-5494

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Definitions/Glossary

Client: Hargis + Associates, Inc.

Job ID: 570-130126-1

Project/Site: Raytheon Main GETS Quarterly Sample/ 532.15

Qualifiers

HPLC/IC

Qualifier	Qualifier Description
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
E	Result exceeded calibration range.
F1	MS and/or MSD recovery exceeds control limits.

Metals

Qualifier	Qualifier Description
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
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.
α	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 Main GETS Quarterly Sample/ 532.15

Job ID: 570-130126-1

Job ID: 570-130126-1

Laboratory: Eurofins Calscience

Narrative

Job Narrative 570-130126-1

Comments

No additional comments.

Receipt

The samples were received on 3/7/2023 12:57 PM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 2.6° C.

HPLC/IC

Method 300.0: The native sample, matrix spike, and matrix spike duplicate (MS/MSD) associated with analytical batch 570-309785 were performed at the same dilution. Due to the additional level of analyte present in the spiked samples, the concentration of Chloride and Sulfate in the MS/MSD was above the instrument calibration range. The data have been reported and qualified.

Method 300.0: Due to the high concentration of Chloride and Sulfate, the matrix spike / matrix spike duplicate (MS/MSD) for analytical batch 570-309785 could not be evaluated for accuracy and precision. The associated laboratory control sample (LCS) met acceptance criteria.

Method 300.0: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for Orthophosphate as P for analytical batch 570-309784 were outside control limits. Sample matrix interference is suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

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

Metals

Method Filtration: The following samples were not filtered within 15 minutes of sample collection as required by the method: CEFF (570-130126-1), POX (570-130126-2), INF (570-130126-3), EW-02 (570-130126-4) and MW-29 (570-130126-5). The sample(s) was filtered prior to analysis at the laboratory, and the results have been reported.

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

General Chemistry

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 Main GETS Quarterly Sample/ 532.15

Job ID: 570-130126-1

Client Sample ID: CEFF

Lab Sample ID: 570-130126-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Calcium	88.7		2.00		mg/L	1		6010B	Dissolved
Magnesium	26.4		0.500		mg/L	1		6010B	Dissolved
Sodium	66.5		2.00		mg/L	1		6010B	Dissolved
Total Dissolved Solids	645		10.0		mg/L	1		SM 2540C	Total/NA

Client Sample ID: POX

Lab Sample ID: 570-130126-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Nitrate as N	3.7		0.10		mg/L	1		300.0	Total/NA
Chloride - DL	83		10		mg/L	10		300.0	Total/NA
Sulfate - DL	140		10		mg/L	10		300.0	Total/NA
Calcium	89.6		2.00		mg/L	1		6010B	Dissolved
Magnesium	26.7		0.500		mg/L	1		6010B	Dissolved
Sodium	66.9		2.00		mg/L	1		6010B	Dissolved
Total Dissolved Solids	651		10.0		mg/L	1		SM 2540C	Total/NA

Client Sample ID: INF

Lab Sample ID: 570-130126-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Nitrate as N	3.8		0.10		mg/L	1		300.0	Total/NA
Chloride - DL	85		10		mg/L	10		300.0	Total/NA
Sulfate - DL	140		10		mg/L	10		300.0	Total/NA
Calcium	89.3		2.00		mg/L	1		6010B	Dissolved
Magnesium	26.6		0.500		mg/L	1		6010B	Dissolved
Sodium	66.5		2.00		mg/L	1		6010B	Dissolved
Alkalinity, Total (As CaCO3)	204		5.00		mg/L	1		SM 2320B	Total/NA
Bicarbonate (as CaCO3)	204		5.00		mg/L	1		SM 2320B	Total/NA
Total Dissolved Solids	645		10.0		mg/L	1		SM 2540C	Total/NA

Client Sample ID: EW-02

Lab Sample ID: 570-130126-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	85		1.0		mg/L	1		300.0	Total/NA
Nitrate as N	3.1		0.10		mg/L	1		300.0	Total/NA
Sulfate - DL	150		10		mg/L	10		300.0	Total/NA
Calcium	84.2		2.00		mg/L	1		6010B	Dissolved
Magnesium	25.3		0.500		mg/L	1		6010B	Dissolved
Sodium	62.1		2.00		mg/L	1		6010B	Dissolved
Alkalinity, Total (As CaCO3)	198		5.00		mg/L	1		SM 2320B	Total/NA
Bicarbonate (as CaCO3)	198		5.00		mg/L	1		SM 2320B	Total/NA
Total Dissolved Solids	602		10.0		mg/L	1		SM 2540C	Total/NA

Client Sample ID: MW-29

Lab Sample ID: 570-130126-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Nitrate as N	5.6		0.10		mg/L	1		300.0	Total/NA
Chloride - DL	120		10		mg/L	10		300.0	Total/NA
Sulfate - DL	130		10		mg/L	10		300.0	Total/NA
Calcium	102		2.00		mg/L	1		6010B	Dissolved
Magnesium	29.7		0.500		mg/L	1		6010B	Dissolved
Sodium	80.1		2.00		mg/L	1		6010B	Dissolved
Alkalinity, Total (As CaCO3)	226		5.00		mg/L	1		SM 2320B	Total/NA
Bicarbonate (as CaCO3)	226		5.00		mg/L	1		SM 2320B	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Calscience

Detection Summary

Client: Hargis + Associates, Inc.

Job ID: 570-130126-1

Project/Site: Raytheon Main GETS Quarterly Sample/ 532.15

Client Sample ID: MW-29 (Continued)

Lab Sample ID: 570-130126-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Total Dissolved Solids	765		10.0		mg/L	1		SM 2540C	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Calscience

Client Sample Results

Client: Hargis + Associates, Inc.

Job ID: 570-130126-1

Project/Site: Raytheon Main GETS Quarterly Sample/ 532.15

Method: EPA 300.0 - Anions, Ion Chromatography

Client Sample ID: POX
Date Collected: 03/07/23 09:05
Date Received: 03/07/23 12:57

Lab Sample ID: 570-130126-2
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrite as N	ND		0.10		mg/L			03/08/23 06:41	1
Nitrate as N	3.7		0.10		mg/L			03/08/23 06:41	1
Orthophosphate as P	ND		0.10		mg/L			03/08/23 06:41	1

Client Sample ID: INF
Date Collected: 03/07/23 09:25
Date Received: 03/07/23 12:57

Lab Sample ID: 570-130126-3
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrite as N	ND		0.10		mg/L			03/08/23 06:58	1
Nitrate as N	3.8		0.10		mg/L			03/08/23 06:58	1
Orthophosphate as P	ND		0.10		mg/L			03/08/23 06:58	1

Client Sample ID: EW-02
Date Collected: 03/07/23 09:55
Date Received: 03/07/23 12:57

Lab Sample ID: 570-130126-4
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	85		1.0		mg/L			03/08/23 07:15	1
Nitrite as N	ND		0.10		mg/L			03/08/23 07:15	1
Nitrate as N	3.1		0.10		mg/L			03/08/23 07:15	1
Orthophosphate as P	ND		0.10		mg/L			03/08/23 07:15	1

Client Sample ID: MW-29
Date Collected: 03/07/23 10:30
Date Received: 03/07/23 12:57

Lab Sample ID: 570-130126-5
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrite as N	ND		0.10		mg/L			03/08/23 07:32	1
Nitrate as N	5.6		0.10		mg/L			03/08/23 07:32	1
Orthophosphate as P	ND		0.10		mg/L			03/08/23 07:32	1

Client Sample Results

Client: Hargis + Associates, Inc.

Job ID: 570-130126-1

Project/Site: Raytheon Main GETS Quarterly Sample/ 532.15

Method: EPA 300.0 - Anions, Ion Chromatography - DL

Client Sample ID: POX

Date Collected: 03/07/23 09:05

Date Received: 03/07/23 12:57

Lab Sample ID: 570-130126-2

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	83		10		mg/L			03/08/23 11:33	10
Sulfate	140		10		mg/L			03/08/23 11:33	10

Client Sample ID: INF

Date Collected: 03/07/23 09:25

Date Received: 03/07/23 12:57

Lab Sample ID: 570-130126-3

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	85		10		mg/L			03/08/23 11:50	10
Sulfate	140		10		mg/L			03/08/23 11:50	10

Client Sample ID: EW-02

Date Collected: 03/07/23 09:55

Date Received: 03/07/23 12:57

Lab Sample ID: 570-130126-4

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	150		10		mg/L			03/08/23 12:07	10

Client Sample ID: MW-29

Date Collected: 03/07/23 10:30

Date Received: 03/07/23 12:57

Lab Sample ID: 570-130126-5

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	120		10		mg/L			03/08/23 12:23	10
Sulfate	130		10		mg/L			03/08/23 12:23	10

Client Sample Results

Client: Hargis + Associates, Inc.

Job ID: 570-130126-1

Project/Site: Raytheon Main GETS Quarterly Sample/ 532.15

Method: SW846 6010B - Metals (ICP) - Total Recoverable

Client Sample ID: INF

Date Collected: 03/07/23 09:25

Date Received: 03/07/23 12:57

Lab Sample ID: 570-130126-3

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Selenium	ND		0.0500		mg/L		03/09/23 07:13	03/09/23 15:10	1

Client Sample ID: EW-02

Date Collected: 03/07/23 09:55

Date Received: 03/07/23 12:57

Lab Sample ID: 570-130126-4

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Selenium	ND		0.0500		mg/L		03/09/23 07:13	03/09/23 15:12	1

Client Sample ID: MW-29

Date Collected: 03/07/23 10:30

Date Received: 03/07/23 12:57

Lab Sample ID: 570-130126-5

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Selenium	ND		0.0500		mg/L		03/09/23 07:13	03/09/23 15:14	1

Client Sample Results

Client: Hargis + Associates, Inc.

Job ID: 570-130126-1

Project/Site: Raytheon Main GETS Quarterly Sample/ 532.15

Method: SW846 6010B - Metals (ICP) - Dissolved

Client Sample ID: CEFF

Date Collected: 03/07/23 08:50

Date Received: 03/07/23 12:57

Lab Sample ID: 570-130126-1

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	88.7		2.00		mg/L			03/09/23 00:51	1
Iron	ND		0.500		mg/L			03/09/23 00:51	1
Magnesium	26.4		0.500		mg/L			03/09/23 00:51	1
Manganese	ND		0.0500		mg/L			03/09/23 00:51	1
Selenium	ND		0.0500		mg/L			03/09/23 00:51	1
Sodium	66.5		2.00		mg/L			03/09/23 00:51	1

Client Sample ID: POX

Date Collected: 03/07/23 09:05

Date Received: 03/07/23 12:57

Lab Sample ID: 570-130126-2

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	89.6		2.00		mg/L			03/09/23 00:53	1
Iron	ND		0.500		mg/L			03/09/23 00:53	1
Magnesium	26.7		0.500		mg/L			03/09/23 00:53	1
Manganese	ND		0.0500		mg/L			03/09/23 00:53	1
Selenium	ND		0.0500		mg/L			03/09/23 00:53	1
Sodium	66.9		2.00		mg/L			03/09/23 00:53	1

Client Sample ID: INF

Date Collected: 03/07/23 09:25

Date Received: 03/07/23 12:57

Lab Sample ID: 570-130126-3

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	89.3		2.00		mg/L			03/09/23 00:55	1
Iron	ND		0.500		mg/L			03/09/23 00:55	1
Magnesium	26.6		0.500		mg/L			03/09/23 00:55	1
Manganese	ND		0.0500		mg/L			03/09/23 00:55	1
Selenium	ND		0.0500		mg/L			03/09/23 00:55	1
Sodium	66.5		2.00		mg/L			03/09/23 00:55	1

Client Sample ID: EW-02

Date Collected: 03/07/23 09:55

Date Received: 03/07/23 12:57

Lab Sample ID: 570-130126-4

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	84.2		2.00		mg/L			03/09/23 00:58	1
Iron	ND		0.500		mg/L			03/09/23 00:58	1
Magnesium	25.3		0.500		mg/L			03/09/23 00:58	1
Manganese	ND		0.0500		mg/L			03/09/23 00:58	1
Selenium	ND		0.0500		mg/L			03/09/23 00:58	1
Sodium	62.1		2.00		mg/L			03/09/23 00:58	1

Client Sample ID: MW-29

Date Collected: 03/07/23 10:30

Date Received: 03/07/23 12:57

Lab Sample ID: 570-130126-5

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	102		2.00		mg/L			03/09/23 01:00	1
Iron	ND		0.500		mg/L			03/09/23 01:00	1
Magnesium	29.7		0.500		mg/L			03/09/23 01:00	1
Manganese	ND		0.0500		mg/L			03/09/23 01:00	1
Selenium	ND		0.0500		mg/L			03/09/23 01:00	1
Sodium	80.1		2.00		mg/L			03/09/23 01:00	1

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Client Sample Results

Client: Hargis + Associates, Inc.
Project/Site: Raytheon Main GETS Quarterly Sample/ 532.15

Job ID: 570-130126-1

General Chemistry

Client Sample ID: CEFF
Date Collected: 03/07/23 08:50
Date Received: 03/07/23 12:57

Lab Sample ID: 570-130126-1
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	645		10.0		mg/L			03/10/23 18:35	1

Client Sample ID: POX
Date Collected: 03/07/23 09:05
Date Received: 03/07/23 12:57

Lab Sample ID: 570-130126-2
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chemical Oxygen Demand (EPA 410.4)	ND		100		mg/L		03/13/23 13:13	03/13/23 16:56	1
Total Dissolved Solids (SM 2540C)	651		10.0		mg/L			03/10/23 18:35	1

Client Sample ID: INF
Date Collected: 03/07/23 09:25
Date Received: 03/07/23 12:57

Lab Sample ID: 570-130126-3
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chemical Oxygen Demand (EPA 410.4)	ND		100		mg/L		03/13/23 13:13	03/13/23 16:56	1
Alkalinity, Total (As CaCO3) (SM 2320B)	204		5.00		mg/L			03/17/23 01:24	1
Bicarbonate (as CaCO3) (SM 2320B)	204		5.00		mg/L			03/17/23 01:24	1
Carbonate (as CaCO3) (SM 2320B)	ND		5.00		mg/L			03/17/23 01:24	1
Hydroxide (as CaCO3) (SM 2320B)	ND		5.00		mg/L			03/17/23 01:24	1
Total Dissolved Solids (SM 2540C)	645		10.0		mg/L			03/10/23 18:35	1

Client Sample ID: EW-02
Date Collected: 03/07/23 09:55
Date Received: 03/07/23 12:57

Lab Sample ID: 570-130126-4
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chemical Oxygen Demand (EPA 410.4)	ND		100		mg/L		03/13/23 13:13	03/13/23 16:56	1
Alkalinity, Total (As CaCO3) (SM 2320B)	198		5.00		mg/L			03/17/23 01:31	1
Bicarbonate (as CaCO3) (SM 2320B)	198		5.00		mg/L			03/17/23 01:31	1
Carbonate (as CaCO3) (SM 2320B)	ND		5.00		mg/L			03/17/23 01:31	1
Hydroxide (as CaCO3) (SM 2320B)	ND		5.00		mg/L			03/17/23 01:31	1
Total Dissolved Solids (SM 2540C)	602		10.0		mg/L			03/10/23 18:35	1

Client Sample ID: MW-29
Date Collected: 03/07/23 10:30
Date Received: 03/07/23 12:57

Lab Sample ID: 570-130126-5
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chemical Oxygen Demand (EPA 410.4)	ND		100		mg/L		03/13/23 13:13	03/13/23 16:56	1
Alkalinity, Total (As CaCO3) (SM 2320B)	226		5.00		mg/L			03/17/23 01:38	1
Bicarbonate (as CaCO3) (SM 2320B)	226		5.00		mg/L			03/17/23 01:38	1
Carbonate (as CaCO3) (SM 2320B)	ND		5.00		mg/L			03/17/23 01:38	1
Hydroxide (as CaCO3) (SM 2320B)	ND		5.00		mg/L			03/17/23 01:38	1
Total Dissolved Solids (SM 2540C)	765		10.0		mg/L			03/10/23 18:35	1

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QC Sample Results

Client: Hargis + Associates, Inc.
Project/Site: Raytheon Main GETS Quarterly Sample/ 532.15

Job ID: 570-130126-1

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 570-309784/6

Matrix: Water

Analysis Batch: 309784

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrite as N	ND		0.10		mg/L			03/08/23 03:48	1
Nitrate as N	ND		0.10		mg/L			03/08/23 03:48	1
Orthophosphate as P	ND		0.10		mg/L			03/08/23 03:48	1

Lab Sample ID: LCS 570-309784/7

Matrix: Water

Analysis Batch: 309784

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Nitrite as N	2.50	2.653		mg/L		106	90 - 110
Nitrate as N	5.00	5.045		mg/L		101	90 - 110
Orthophosphate as P	2.50	2.350		mg/L		94	90 - 110

Lab Sample ID: LCSD 570-309784/8

Matrix: Water

Analysis Batch: 309784

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
Nitrite as N	2.50	2.547		mg/L		102	90 - 110	4	15
Nitrate as N	5.00	4.952		mg/L		99	90 - 110	2	15
Orthophosphate as P	2.50	2.304		mg/L		92	90 - 110	2	15

Lab Sample ID: 570-130169-A-2 MS

Matrix: Water

Analysis Batch: 309784

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Nitrite as N	ND		2.50	2.883		mg/L		115	80 - 120
Nitrate as N	2.8		5.00	8.104		mg/L		107	80 - 120
Orthophosphate as P	ND	F1	2.50	3.090	F1	mg/L		124	80 - 120

Lab Sample ID: 570-130169-A-2 MSD

Matrix: Water

Analysis Batch: 309784

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Nitrite as N	ND		2.50	2.810		mg/L		112	80 - 120	3	20
Nitrate as N	2.8		5.00	8.094		mg/L		107	80 - 120	0	20
Orthophosphate as P	ND	F1	2.50	3.386	F1	mg/L		135	80 - 120	9	20

Lab Sample ID: MB 570-309785/6

Matrix: Water

Analysis Batch: 309785

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		1.0		mg/L			03/08/23 03:48	1
Sulfate	ND		1.0		mg/L			03/08/23 03:48	1

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QC Sample Results

Client: Hargis + Associates, Inc.
Project/Site: Raytheon Main GETS Quarterly Sample/ 532.15

Job ID: 570-130126-1

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCS 570-309785/7

Matrix: Water

Analysis Batch: 309785

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	50.0	48.76		mg/L		98	90 - 110
Sulfate	50.0	49.74		mg/L		99	90 - 110

Lab Sample ID: LCSD 570-309785/8

Matrix: Water

Analysis Batch: 309785

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
Chloride	50.0	48.01		mg/L		96	90 - 110	2	15
Sulfate	50.0	48.85		mg/L		98	90 - 110	2	15

Lab Sample ID: 570-130169-A-2 MS

Matrix: Water

Analysis Batch: 309785

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	280	E	50.0	337.9	E 4	mg/L		113	80 - 120
Sulfate	1300	E	50.0	1377	E 4	mg/L		76	80 - 120

Lab Sample ID: 570-130169-A-2 MSD

Matrix: Water

Analysis Batch: 309785

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	280	E	50.0	337.7	E 4	mg/L		112	80 - 120	0	20
Sulfate	1300	E	50.0	1376	E 4	mg/L		74	80 - 120	0	20

Method: 6010B - Metals (ICP)

Lab Sample ID: MB 570-310163/1-A

Matrix: Water

Analysis Batch: 310332

Client Sample ID: Method Blank

Prep Type: Total Recoverable

Prep Batch: 310163

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Selenium	ND		0.0500		mg/L		03/09/23 07:13	03/09/23 13:16	1

Lab Sample ID: LCS 570-310163/2-A

Matrix: Water

Analysis Batch: 310332

Client Sample ID: Lab Control Sample

Prep Type: Total Recoverable

Prep Batch: 310163

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Selenium	0.500	0.4649		mg/L		93	80 - 120

Lab Sample ID: LCSD 570-310163/3-A

Matrix: Water

Analysis Batch: 310332

Client Sample ID: Lab Control Sample Dup

Prep Type: Total Recoverable

Prep Batch: 310163

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Selenium	0.500	0.4654		mg/L		93	80 - 120	0	20

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QC Sample Results

Client: Hargis + Associates, Inc.
Project/Site: Raytheon Main GETS Quarterly Sample/ 532.15

Job ID: 570-130126-1

Method: 6010B - Metals (ICP) (Continued)

Lab Sample ID: 570-130255-I-1-B MS

Matrix: Water

Analysis Batch: 310332

Client Sample ID: Matrix Spike

Prep Type: Total Recoverable

Prep Batch: 310163

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Selenium	ND		0.500	0.4879		mg/L		98	79 - 127

Lab Sample ID: 570-130255-I-1-C MSD

Matrix: Water

Analysis Batch: 310332

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total Recoverable

Prep Batch: 310163

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Selenium	ND		0.500	0.4927		mg/L		99	79 - 127	1	9

Lab Sample ID: MB 570-309902/1-A

Matrix: Water

Analysis Batch: 310364

Client Sample ID: Method Blank

Prep Type: Dissolved

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	ND		2.00		mg/L			03/09/23 12:54	1
Iron	ND		0.500		mg/L			03/09/23 12:54	1
Magnesium	ND		0.500		mg/L			03/09/23 12:54	1
Manganese	ND		0.0500		mg/L			03/09/23 12:54	1
Selenium	ND		0.0500		mg/L			03/09/23 12:54	1
Sodium	ND		2.00		mg/L			03/09/23 12:54	1

Lab Sample ID: LCS 570-309902/2-A

Matrix: Water

Analysis Batch: 310364

Client Sample ID: Lab Control Sample

Prep Type: Dissolved

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Calcium	2.50	2.225		mg/L		89	80 - 120
Iron	0.500	0.4599	J	mg/L		92	80 - 120
Magnesium	2.50	2.199		mg/L		88	80 - 120
Manganese	0.500	0.4489		mg/L		90	80 - 120
Selenium	0.500	0.4123		mg/L		82	80 - 120
Sodium	5.00	4.402		mg/L		88	80 - 120

Lab Sample ID: LCSD 570-309902/3-A

Matrix: Water

Analysis Batch: 310364

Client Sample ID: Lab Control Sample Dup

Prep Type: Dissolved

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Calcium	2.50	2.316		mg/L		93	80 - 120	4	20
Iron	0.500	0.4838	J	mg/L		97	80 - 120	5	20
Magnesium	2.50	2.311		mg/L		92	80 - 120	5	20
Manganese	0.500	0.4678		mg/L		94	80 - 120	4	20
Selenium	0.500	0.4257		mg/L		85	80 - 120	3	20
Sodium	5.00	4.583		mg/L		92	80 - 120	4	20

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QC Sample Results

Client: Hargis + Associates, Inc.
Project/Site: Raytheon Main GETS Quarterly Sample/ 532.15

Job ID: 570-130126-1

Method: 6010B - Metals (ICP) (Continued)

Lab Sample ID: 570-129838-G-10-B MS

Matrix: Water

Analysis Batch: 310364

Client Sample ID: Matrix Spike

Prep Type: Dissolved

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Calcium	393		2.50	402.9	4	mg/L		396	77 - 113
Iron	ND		0.500	ND		mg/L		95	65 - 149
Magnesium	140		2.50	144.5	4	mg/L		200	56 - 140
Manganese	3.98		0.500	4.533	4	mg/L		111	86 - 116
Selenium	ND		0.500	0.4594		mg/L		92	79 - 127
Sodium	252		5.00	260.5	4	mg/L		168	73 - 127

Lab Sample ID: 570-129838-G-10-C MSD

Matrix: Water

Analysis Batch: 310364

Client Sample ID: Matrix Spike Duplicate

Prep Type: Dissolved

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Calcium	393		2.50	396.9	4	mg/L		156	77 - 113	2	11
Iron	ND		0.500	ND		mg/L		92	65 - 149	3	21
Magnesium	140		2.50	142.2	4	mg/L		108	56 - 140	2	11
Manganese	3.98		0.500	4.484	4	mg/L		101	86 - 116	1	7
Selenium	ND		0.500	0.4409		mg/L		88	79 - 127	4	9
Sodium	252		5.00	256.7	4	mg/L		92	73 - 127	1	9

Method: 410.4 - COD

Lab Sample ID: MB 570-311072/3-A

Matrix: Water

Analysis Batch: 311153

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 311072

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chemical Oxygen Demand	ND		100		mg/L		03/13/23 13:13	03/13/23 16:56	1

Lab Sample ID: LCS 570-311072/4-A

Matrix: Water

Analysis Batch: 311153

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 311072

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chemical Oxygen Demand	200	214.7		mg/L		107	90 - 110

Lab Sample ID: LCSD 570-311072/5-A

Matrix: Water

Analysis Batch: 311153

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 311072

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chemical Oxygen Demand	200	205.3		mg/L		103	90 - 110	4	20

Lab Sample ID: 570-130159-A-1-A MS

Matrix: Water

Analysis Batch: 311153

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 311072

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Chemical Oxygen Demand	ND		200	275.9		mg/L		91	90 - 110

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QC Sample Results

Client: Hargis + Associates, Inc.
Project/Site: Raytheon Main GETS Quarterly Sample/ 532.15

Job ID: 570-130126-1

Method: 410.4 - COD (Continued)

Lab Sample ID: 570-130159-A-1-B MSD

Matrix: Water

Analysis Batch: 311153

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Prep Batch: 311072

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chemical Oxygen Demand	ND		200	275.9		mg/L		91	90 - 110	0	20

Lab Sample ID: 570-130159-A-1-C DU

Matrix: Water

Analysis Batch: 311153

Client Sample ID: Duplicate

Prep Type: Total/NA

Prep Batch: 311072

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Chemical Oxygen Demand	ND		ND		mg/L		NC	20

Method: SM 2320B - Alkalinity

Lab Sample ID: MB 570-312588/42

Matrix: Water

Analysis Batch: 312588

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity, Total (As CaCO3)	ND		5.00		mg/L			03/16/23 23:45	1
Bicarbonate (as CaCO3)	ND		5.00		mg/L			03/16/23 23:45	1
Carbonate (as CaCO3)	ND		5.00		mg/L			03/16/23 23:45	1
Hydroxide (as CaCO3)	ND		5.00		mg/L			03/16/23 23:45	1

Lab Sample ID: MB 570-312588/9

Matrix: Water

Analysis Batch: 312588

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity, Total (As CaCO3)	ND		5.00		mg/L			03/16/23 20:27	1
Bicarbonate (as CaCO3)	ND		5.00		mg/L			03/16/23 20:27	1
Carbonate (as CaCO3)	ND		5.00		mg/L			03/16/23 20:27	1
Hydroxide (as CaCO3)	ND		5.00		mg/L			03/16/23 20:27	1

Lab Sample ID: LCS 570-312588/40

Matrix: Water

Analysis Batch: 312588

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Alkalinity, Total (As CaCO3)	106	97.25		mg/L		92	78 - 110

Lab Sample ID: LCSD 570-312588/41

Matrix: Water

Analysis Batch: 312588

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
Alkalinity, Total (As CaCO3)	106	97.79		mg/L		92	78 - 110	1	10

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QC Sample Results

Client: Hargis + Associates, Inc.
Project/Site: Raytheon Main GETS Quarterly Sample/ 532.15

Job ID: 570-130126-1

Method: SM 2320B - Alkalinity (Continued)

Lab Sample ID: 570-131129-C-1 DU

Matrix: Water

Analysis Batch: 312588

Client Sample ID: Duplicate

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Alkalinity, Total (As CaCO3)	112		111.9		mg/L		0.1	25
Bicarbonate (as CaCO3)	112		111.9		mg/L		0.1	25
Carbonate (as CaCO3)	ND		ND		mg/L		NC	25
Hydroxide (as CaCO3)	ND		ND		mg/L		NC	25

Method: SM 2540C - Solids, Total Dissolved (TDS)

Lab Sample ID: MB 570-310762/1

Matrix: Water

Analysis Batch: 310762

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	ND		10.0		mg/L			03/10/23 18:35	1

Lab Sample ID: LCS 570-310762/2

Matrix: Water

Analysis Batch: 310762

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Dissolved Solids	1000	960.0		mg/L		96	84 - 108

Lab Sample ID: LCSD 570-310762/3

Matrix: Water

Analysis Batch: 310762

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
Total Dissolved Solids	1000	986.0		mg/L		99	84 - 108	3	10

Lab Sample ID: 570-130332-E-1 DU

Matrix: Water

Analysis Batch: 310762

Client Sample ID: Duplicate

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Dissolved Solids	720		727.0		mg/L		1	10

QC Association Summary

Client: Hargis + Associates, Inc.
Project/Site: Raytheon Main GETS Quarterly Sample/ 532.15

Job ID: 570-130126-1

HPLC/IC

Analysis Batch: 309784

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-130126-2	POX	Total/NA	Water	300.0	
570-130126-3	INF	Total/NA	Water	300.0	
570-130126-4	EW-02	Total/NA	Water	300.0	
570-130126-5	MW-29	Total/NA	Water	300.0	
MB 570-309784/6	Method Blank	Total/NA	Water	300.0	
LCS 570-309784/7	Lab Control Sample	Total/NA	Water	300.0	
LCSD 570-309784/8	Lab Control Sample Dup	Total/NA	Water	300.0	
570-130169-A-2 MS	Matrix Spike	Total/NA	Water	300.0	
570-130169-A-2 MSD	Matrix Spike Duplicate	Total/NA	Water	300.0	

Analysis Batch: 309785

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-130126-2 - DL	POX	Total/NA	Water	300.0	
570-130126-3 - DL	INF	Total/NA	Water	300.0	
570-130126-4	EW-02	Total/NA	Water	300.0	
570-130126-4 - DL	EW-02	Total/NA	Water	300.0	
570-130126-5 - DL	MW-29	Total/NA	Water	300.0	
MB 570-309785/6	Method Blank	Total/NA	Water	300.0	
LCS 570-309785/7	Lab Control Sample	Total/NA	Water	300.0	
LCSD 570-309785/8	Lab Control Sample Dup	Total/NA	Water	300.0	
570-130169-A-2 MS	Matrix Spike	Total/NA	Water	300.0	
570-130169-A-2 MSD	Matrix Spike Duplicate	Total/NA	Water	300.0	

Metals

Filtration Batch: 309902

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-130126-1	CEFF	Dissolved	Water	Filtration	
570-130126-2	POX	Dissolved	Water	Filtration	
570-130126-3	INF	Dissolved	Water	Filtration	
570-130126-4	EW-02	Dissolved	Water	Filtration	
570-130126-5	MW-29	Dissolved	Water	Filtration	
MB 570-309902/1-A	Method Blank	Dissolved	Water	Filtration	
LCS 570-309902/2-A	Lab Control Sample	Dissolved	Water	Filtration	
LCSD 570-309902/3-A	Lab Control Sample Dup	Dissolved	Water	Filtration	
570-129838-G-10-B MS	Matrix Spike	Dissolved	Water	Filtration	
570-129838-G-10-C MSD	Matrix Spike Duplicate	Dissolved	Water	Filtration	

Prep Batch: 310163

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-130126-3	INF	Total Recoverable	Water	3005A	
570-130126-4	EW-02	Total Recoverable	Water	3005A	
570-130126-5	MW-29	Total Recoverable	Water	3005A	
MB 570-310163/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 570-310163/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
LCSD 570-310163/3-A	Lab Control Sample Dup	Total Recoverable	Water	3005A	
570-130255-I-1-B MS	Matrix Spike	Total Recoverable	Water	3005A	
570-130255-I-1-C MSD	Matrix Spike Duplicate	Total Recoverable	Water	3005A	

QC Association Summary

Client: Hargis + Associates, Inc.
Project/Site: Raytheon Main GETS Quarterly Sample/ 532.15

Job ID: 570-130126-1

Metals

Analysis Batch: 310164

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-130126-1	CEFF	Dissolved	Water	6010B	309902
570-130126-2	POX	Dissolved	Water	6010B	309902
570-130126-3	INF	Dissolved	Water	6010B	309902
570-130126-4	EW-02	Dissolved	Water	6010B	309902
570-130126-5	MW-29	Dissolved	Water	6010B	309902

Analysis Batch: 310332

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-130126-3	INF	Total Recoverable	Water	6010B	310163
570-130126-4	EW-02	Total Recoverable	Water	6010B	310163
570-130126-5	MW-29	Total Recoverable	Water	6010B	310163
MB 570-310163/1-A	Method Blank	Total Recoverable	Water	6010B	310163
LCS 570-310163/2-A	Lab Control Sample	Total Recoverable	Water	6010B	310163
LCSD 570-310163/3-A	Lab Control Sample Dup	Total Recoverable	Water	6010B	310163
570-130255-I-1-B MS	Matrix Spike	Total Recoverable	Water	6010B	310163
570-130255-I-1-C MSD	Matrix Spike Duplicate	Total Recoverable	Water	6010B	310163

Analysis Batch: 310364

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 570-309902/1-A	Method Blank	Dissolved	Water	6010B	309902
LCS 570-309902/2-A	Lab Control Sample	Dissolved	Water	6010B	309902
LCSD 570-309902/3-A	Lab Control Sample Dup	Dissolved	Water	6010B	309902
570-129838-G-10-B MS	Matrix Spike	Dissolved	Water	6010B	309902
570-129838-G-10-C MSD	Matrix Spike Duplicate	Dissolved	Water	6010B	309902

General Chemistry

Analysis Batch: 310762

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-130126-1	CEFF	Total/NA	Water	SM 2540C	
570-130126-2	POX	Total/NA	Water	SM 2540C	
570-130126-3	INF	Total/NA	Water	SM 2540C	
570-130126-4	EW-02	Total/NA	Water	SM 2540C	
570-130126-5	MW-29	Total/NA	Water	SM 2540C	
MB 570-310762/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 570-310762/2	Lab Control Sample	Total/NA	Water	SM 2540C	
LCSD 570-310762/3	Lab Control Sample Dup	Total/NA	Water	SM 2540C	
570-130332-E-1 DU	Duplicate	Total/NA	Water	SM 2540C	

Prep Batch: 311072

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-130126-2	POX	Total/NA	Water	410.4	
570-130126-3	INF	Total/NA	Water	410.4	
570-130126-4	EW-02	Total/NA	Water	410.4	
570-130126-5	MW-29	Total/NA	Water	410.4	
MB 570-311072/3-A	Method Blank	Total/NA	Water	410.4	
LCS 570-311072/4-A	Lab Control Sample	Total/NA	Water	410.4	
LCSD 570-311072/5-A	Lab Control Sample Dup	Total/NA	Water	410.4	
570-130159-A-1-A MS	Matrix Spike	Total/NA	Water	410.4	
570-130159-A-1-B MSD	Matrix Spike Duplicate	Total/NA	Water	410.4	
570-130159-A-1-C DU	Duplicate	Total/NA	Water	410.4	

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QC Association Summary

Client: Hargis + Associates, Inc.
Project/Site: Raytheon Main GETS Quarterly Sample/ 532.15

Job ID: 570-130126-1

General Chemistry

Analysis Batch: 311153

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-130126-2	POX	Total/NA	Water	410.4	311072
570-130126-3	INF	Total/NA	Water	410.4	311072
570-130126-4	EW-02	Total/NA	Water	410.4	311072
570-130126-5	MW-29	Total/NA	Water	410.4	311072
MB 570-311072/3-A	Method Blank	Total/NA	Water	410.4	311072
LCS 570-311072/4-A	Lab Control Sample	Total/NA	Water	410.4	311072
LCSD 570-311072/5-A	Lab Control Sample Dup	Total/NA	Water	410.4	311072
570-130159-A-1-A MS	Matrix Spike	Total/NA	Water	410.4	311072
570-130159-A-1-B MSD	Matrix Spike Duplicate	Total/NA	Water	410.4	311072
570-130159-A-1-C DU	Duplicate	Total/NA	Water	410.4	311072

Analysis Batch: 312588

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-130126-3	INF	Total/NA	Water	SM 2320B	
570-130126-4	EW-02	Total/NA	Water	SM 2320B	
570-130126-5	MW-29	Total/NA	Water	SM 2320B	
MB 570-312588/42	Method Blank	Total/NA	Water	SM 2320B	
MB 570-312588/9	Method Blank	Total/NA	Water	SM 2320B	
LCS 570-312588/40	Lab Control Sample	Total/NA	Water	SM 2320B	
LCSD 570-312588/41	Lab Control Sample Dup	Total/NA	Water	SM 2320B	
570-131129-C-1 DU	Duplicate	Total/NA	Water	SM 2320B	

Lab Chronicle

Client: Hargis + Associates, Inc.
Project/Site: Raytheon Main GETS Quarterly Sample/ 532.15

Job ID: 570-130126-1

Client Sample ID: CEFF

Lab Sample ID: 570-130126-1

Date Collected: 03/07/23 08:50

Matrix: Water

Date Received: 03/07/23 12:57

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Dissolved	Filtration	Filtration			50 mL	50 mL	309902	03/08/23 10:54	JP8N	EET CAL 4
Dissolved	Analysis	6010B		1			310164	03/09/23 00:51	K1UV	EET CAL 4
		Instrument ID: ICP11								
Total/NA	Analysis	SM 2540C		1	100 mL	1000 mL	310762	03/10/23 18:35	ZL7L	EET CAL 4
		Instrument ID: NOEQUIP								

Client Sample ID: POX

Lab Sample ID: 570-130126-2

Date Collected: 03/07/23 09:05

Matrix: Water

Date Received: 03/07/23 12:57

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	4 mL	4 mL	309784	03/08/23 06:41	PS	EET CAL 4
		Instrument ID: IC9								
Total/NA	Analysis	300.0	DL	10	4 mL	4 mL	309785	03/08/23 11:33	PS	EET CAL 4
		Instrument ID: IC9								
Dissolved	Filtration	Filtration			50 mL	50 mL	309902	03/08/23 10:54	JP8N	EET CAL 4
Dissolved	Analysis	6010B		1			310164	03/09/23 00:53	K1UV	EET CAL 4
		Instrument ID: ICP11								
Total/NA	Prep	410.4			2 mL	2 mL	311072	03/13/23 13:13	UAPD	EET CAL 4
Total/NA	Analysis	410.4		1	2 mL	2 mL	311153	03/13/23 16:56	UAPD	EET CAL 4
		Instrument ID: UV10								
Total/NA	Analysis	SM 2540C		1	100 mL	1000 mL	310762	03/10/23 18:35	ZL7L	EET CAL 4
		Instrument ID: NOEQUIP								

Client Sample ID: INF

Lab Sample ID: 570-130126-3

Date Collected: 03/07/23 09:25

Matrix: Water

Date Received: 03/07/23 12:57

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	4 mL	4 mL	309784	03/08/23 06:58	PS	EET CAL 4
		Instrument ID: IC9								
Total/NA	Analysis	300.0	DL	10	4 mL	4 mL	309785	03/08/23 11:50	PS	EET CAL 4
		Instrument ID: IC9								
Dissolved	Filtration	Filtration			50 mL	50 mL	309902	03/08/23 10:54	JP8N	EET CAL 4
Dissolved	Analysis	6010B		1			310164	03/09/23 00:55	K1UV	EET CAL 4
		Instrument ID: ICP11								
Total Recoverable	Prep	3005A			50 mL	50 mL	310163	03/09/23 07:13	JP8N	EET CAL 4
Total Recoverable	Analysis	6010B		1			310332	03/09/23 15:10	VZ0K	EET CAL 4
		Instrument ID: ICP11								
Total/NA	Prep	410.4			2 mL	2 mL	311072	03/13/23 13:13	UAPD	EET CAL 4
Total/NA	Analysis	410.4		1	2 mL	2 mL	311153	03/13/23 16:56	UAPD	EET CAL 4
		Instrument ID: UV10								
Total/NA	Analysis	SM 2320B		1	10 mL	10 mL	312588	03/17/23 01:24	BDH9	EET CAL 4
		Instrument ID: ManSciMantech								

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Lab Chronicle

Client: Hargis + Associates, Inc.
Project/Site: Raytheon Main GETS Quarterly Sample/ 532.15

Job ID: 570-130126-1

Client Sample ID: INF

Lab Sample ID: 570-130126-3

Date Collected: 03/07/23 09:25

Matrix: Water

Date Received: 03/07/23 12:57

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 2540C		1	100 mL	1000 mL	310762	03/10/23 18:35	ZL7L	EET CAL 4

Client Sample ID: EW-02

Lab Sample ID: 570-130126-4

Date Collected: 03/07/23 09:55

Matrix: Water

Date Received: 03/07/23 12:57

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	4 mL	4 mL	309784	03/08/23 07:15	PS	EET CAL 4
		Instrument ID: IC9								
Total/NA	Analysis	300.0		1	4 mL	4 mL	309785	03/08/23 07:15	PS	EET CAL 4
		Instrument ID: IC9								
Total/NA	Analysis	300.0	DL	10	4 mL	4 mL	309785	03/08/23 12:07	PS	EET CAL 4
		Instrument ID: IC9								
Dissolved	Filtration	Filtration			50 mL	50 mL	309902	03/08/23 10:54	JP8N	EET CAL 4
Dissolved	Analysis	6010B		1			310164	03/09/23 00:58	K1UV	EET CAL 4
		Instrument ID: ICP11								
Total Recoverable	Prep	3005A			50 mL	50 mL	310163	03/09/23 07:13	JP8N	EET CAL 4
Total Recoverable	Analysis	6010B		1			310332	03/09/23 15:12	VZ0K	EET CAL 4
		Instrument ID: ICP11								
Total/NA	Prep	410.4			2 mL	2 mL	311072	03/13/23 13:13	UAPD	EET CAL 4
Total/NA	Analysis	410.4		1	2 mL	2 mL	311153	03/13/23 16:56	UAPD	EET CAL 4
		Instrument ID: UV10								
Total/NA	Analysis	SM 2320B		1	10 mL	10 mL	312588	03/17/23 01:31	BDH9	EET CAL 4
		Instrument ID: ManSciMantech								
Total/NA	Analysis	SM 2540C		1	100 mL	1000 mL	310762	03/10/23 18:35	ZL7L	EET CAL 4
		Instrument ID: NOEQUIP								

Client Sample ID: MW-29

Lab Sample ID: 570-130126-5

Date Collected: 03/07/23 10:30

Matrix: Water

Date Received: 03/07/23 12:57

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	4 mL	4 mL	309784	03/08/23 07:32	PS	EET CAL 4
		Instrument ID: IC9								
Total/NA	Analysis	300.0	DL	10	4 mL	4 mL	309785	03/08/23 12:23	PS	EET CAL 4
		Instrument ID: IC9								
Dissolved	Filtration	Filtration			50 mL	50 mL	309902	03/08/23 10:54	JP8N	EET CAL 4
Dissolved	Analysis	6010B		1			310164	03/09/23 01:00	K1UV	EET CAL 4
		Instrument ID: ICP11								
Total Recoverable	Prep	3005A			50 mL	50 mL	310163	03/09/23 07:13	JP8N	EET CAL 4
Total Recoverable	Analysis	6010B		1			310332	03/09/23 15:14	VZ0K	EET CAL 4
		Instrument ID: ICP11								
Total/NA	Prep	410.4			2 mL	2 mL	311072	03/13/23 13:13	UAPD	EET CAL 4
Total/NA	Analysis	410.4		1	2 mL	2 mL	311153	03/13/23 16:56	UAPD	EET CAL 4
		Instrument ID: UV10								

Eurofins Calscience

Lab Chronicle

Client: Hargis + Associates, Inc.
Project/Site: Raytheon Main GETS Quarterly Sample/ 532.15

Job ID: 570-130126-1

Client Sample ID: MW-29
Date Collected: 03/07/23 10:30
Date Received: 03/07/23 12:57

Lab Sample ID: 570-130126-5
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 2320B		1	10 mL	10 mL	312588	03/17/23 01:38	BDH9	EET CAL 4
Total/NA	Analysis	SM 2540C		1	100 mL	1000 mL	310762	03/10/23 18:35	ZL7L	EET CAL 4
Instrument ID: NOEQUIP										

Laboratory References:
EET CAL 4 = Eurofins Calscience Tustin, 2841 Dow Avenue, Tustin, CA 92780, TEL (714)895-5494

Accreditation/Certification Summary

Client: Hargis + Associates, Inc.
Project/Site: Raytheon Main GETS Quarterly Sample/ 532.15

Job ID: 570-130126-1

Laboratory: Eurofins Calscience

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
Oregon	NELAP	4175	02-02-24

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
SM 2320B		Water	Bicarbonate (as CaCO3)
SM 2320B		Water	Carbonate (as CaCO3)
SM 2320B		Water	Hydroxide (as CaCO3)

Method Summary

Client: Hargis + Associates, Inc.

Job ID: 570-130126-1

Project/Site: Raytheon Main GETS Quarterly Sample/ 532.15

Method	Method Description	Protocol	Laboratory
300.0	Anions, Ion Chromatography	EPA	EET CAL 4
6010B	Metals (ICP)	SW846	EET CAL 4
410.4	COD	EPA	EET CAL 4
SM 2320B	Alkalinity	SM	EET CAL 4
SM 2540C	Solids, Total Dissolved (TDS)	SM	EET CAL 4
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	EET CAL 4
410.4	COD	EPA	EET CAL 4
Filtration	Sample Filtration	None	EET CAL 4

Protocol References:

EPA = US Environmental Protection Agency

None = None

SM = "Standard Methods For The Examination Of Water And Wastewater"

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

Laboratory References:

EET CAL 4 = Eurofins Calscience Tustin, 2841 Dow Avenue, Tustin, CA 92780, TEL (714)895-5494

Sample Summary

Client: Hargis + Associates, Inc.

Job ID: 570-130126-1

Project/Site: Raytheon Main GETS Quarterly Sample/ 532.15

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
570-130126-1	CEFF	Water	03/07/23 08:50	03/07/23 12:57
570-130126-2	POX	Water	03/07/23 09:05	03/07/23 12:57
570-130126-3	INF	Water	03/07/23 09:25	03/07/23 12:57
570-130126-4	EW-02	Water	03/07/23 09:55	03/07/23 12:57
570-130126-5	MW-29	Water	03/07/23 10:30	03/07/23 12:57



HARGIS & ASSOCIATES, INC.
HYDROGEOLOGY • ENGINEERING

PROJECT: Raytheon Main GETS Quarterly Sample

Fax 858.455.6533

Send Results to:
Steve Netto & Ruben Sanchez
 3131 Camino Del Rio North
 Suite 355
 San Diego, CA 92108
 Ph: 858.455 6500
snetto@hargis.com
rsanchez@hargis.com



570-130126 Chain of Custody

Loc: 570
130126

Date: 3/7/2023
Page 1 of 1

PROJECT: Raytheon Main GETS Quarterly Sample

TASK NO.: 532.15

Project Manager Steve Netto

QA Manager Ruben Sanchez

Phone 858.455.6500

Fax 858.455.6533

[illegible]

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.

2.7/2.6 SC12
Temperature on receipt

Send Results to:
Steve Netto & Ruben Sanchez
 3131 Camino Del Rio North
 Suite 355
 San Diego, CA 92108
 Ph: 858.455.6500
snetto@hargis.com
rsanchez@hargis.com

Login Sample Receipt Checklist

Client: Hargis + Associates, Inc.

Job Number: 570-130126-1

Login Number: 130126

List Number: 1

Creator: Vitente, Precy

List Source: Eurofins Calscience

Question	Answer	Comment
Radioactivity wasn't checked or is $\leq$ 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 $<6\text{mm}$ (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

ANALYTICAL REPORT

PREPARED FOR

Attn: Steve Netto
Hargis + Associates, Inc.
3131 Camino del Rio N
Suite 355
San Diego, California 92108

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JOB DESCRIPTION

Raytheon Main GETS Quarterly Sample/ 532.15

JOB NUMBER

570-130126-2

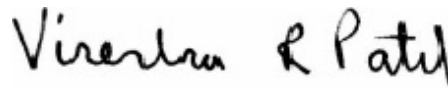
Job Notes

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The data in the report relate to the field sample(s) as received by the laboratory and associated QC. All results have been reviewed and have been found to be compliant with laboratory and accreditation requirements, with the exception of the noted deviation(s). For questions, please contact the Project Manager.

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Calscience Project Manager.

Authorization



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Authorized for release by
Virendra Patel, Project Manager I
Virendra.Patel@et.eurofinsus.com
(714)895-5494



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Definitions/Glossary

Client: Hargis + Associates, Inc.

Job ID: 570-130126-2

Project/Site: Raytheon Main GETS Quarterly Sample/ 532.15

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 Main GETS Quarterly Sample/ 532.15

Job ID: 570-130126-2

Job ID: 570-130126-2

Laboratory: Eurofins Calscience

Narrative

Job Narrative
570-130126-2

Comments

No additional comments.

Receipt

The samples were received on 3/7/2023 12:57 PM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 2.6° C.

Lab Admin

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

Subcontract Work

Method Specific Ultraviolet Absorption - 254nm: This method was subcontracted to Weck Laboratories, Inc.. The subcontract laboratory certification is different from that of the facility issuing the final report.

Method Summary

Client: Hargis + Associates, Inc.

Job ID: 570-130126-2

Project/Site: Raytheon Main GETS Quarterly Sample/ 532.15

Method	Method Description	Protocol	Laboratory
5910B	UV-254	SM	Weck Lab

Protocol References:

SM = "Standard Methods For The Examination Of Water And Wastewater"

Laboratory References:

Weck Lab = Weck Laboratories, Inc., 14859 E. Clark Avenue, City of Industry, CA 91745

Sample Summary

Client: Hargis + Associates, Inc.

Job ID: 570-130126-2

Project/Site: Raytheon Main GETS Quarterly Sample/ 532.15

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
570-130126-2	POX	Water	03/07/23 09:05	03/07/23 12:57
570-130126-3	INF	Water	03/07/23 09:25	03/07/23 12:57
570-130126-4	EW-02	Water	03/07/23 09:55	03/07/23 12:57
570-130126-5	MW-29	Water	03/07/23 10:30	03/07/23 12:57

Work Orders: 3C10094

Project: 570-130126-2

Attn: Virendra Patel

Client: Eurofins Calscience - Tustin
2841 Dow Avenue, Suite 100
Tustin, CA 92780

Report Date: 3/24/2023

Received Date: 3/10/2023

Turnaround Time: Normal

Phones: (949) 261-1022

Fax: (949) 260-3297

P.O. #:

Billing Code:

Dear Virendra Patel,

Enclosed are the results of analyses for samples received 3/10/23 with the Chain-of-Custody document. The samples were received in good condition, at 1.9 °C and on ice. All analyses met the method criteria except as noted in the case narrative or in the report with data qualifiers.

Case Narrative

Per Virendra Patel samples were okay to run past the 48hr holding time for method- TTF 3/10/23

Sample Results

Sample: POX (570-130126-2) Sampled: 03/07/23 9:05 by Client
3C10094-01 (Water)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Method: EPA 415.3			Instr: UVVIS04				
Batch ID: W3C1268	Preparation: _NONE (WETCHEM)		Prepared: 03/14/23 15:24			Analyst: heq	
UV 254	0.024		0.009	1/cm	1	03/14/23 16:47	O-09

Sample: INF (570-130126-3) Sampled: 03/07/23 9:25 by Client
3C10094-02 (Water)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Method: EPA 415.3			Instr: UVVIS04				
Batch ID: W3C1268	Preparation: _NONE (WETCHEM)		Prepared: 03/14/23 15:24				Analyst: heq
UV 254	0.022		0.009	1/cm	1	03/14/23 16:48	O-09

Sample: EW-02 (570-130126-4) Sampled: 03/07/23 9:55 by Client
3C10094-03 (Water)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Method: EPA 415.3			Instr: UVVIS04				
Batch ID: W3C1268	Preparation: _NONE (WETCHEM)		Prepared: 03/14/23 15:24			Analyst: heq	
UV 254	0.018		0.009	1/cm	1	03/14/23 16:52	O-09

Sample Results

(Continued)

Sample: MW-29 (570-130126-5) 3C10094-04 (Water) Sampled: 03/07/23 10:30 by Client

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Method: EPA 415.3			Instr: UVVIS04				
Batch ID: W3C1268	Preparation: _NONE (WETCHEM)		Prepared: 03/14/23 15:24				Analyst: heq
UV 254	0.023		0.009	1/cm	1	03/14/23 16:53	O-09

Quality Control Results

Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	Limit	Qualifier
Batch: W3C1268 - _NONE (WETCHEM)										
Blank (W3C1268-BLK1)				Prepared & Analyzed: 03/14/23						
UV 254	ND	0.009	1/cm							
LCS (W3C1268-BS1)				Prepared & Analyzed: 03/14/23						
UV 254	0.082	0.009	1/cm	0.0880		93	90-110			
Duplicate (W3C1268-DUP1)				Prepared & Analyzed: 03/14/23						
UV 254	0.030	0.009	1/cm		0.030			0	10	
Duplicate (W3C1268-DUP2)				Prepared & Analyzed: 03/14/23						
UV 254	0.024	0.009	1/cm		0.024			0	10	

Notes and Definitions

Item	Definition
O-09	This sample was received with the EPA recommended holding time expired.
%REC	Percent Recovery
Dil	Dilution
MRL	The minimum levels, concentrations, or quantities of a target variable (e.g., target analyte) that can be reported with a specified degree of confidence. The MRL is also known as Limit of Quantitation (LOQ)
ND	NOT DETECTED at or above the Method Reporting Limit (MRL). If Method Detection Limit (MDL) is reported, then ND means not detected at or above the MDL.
RPD	Relative Percent Difference
Source	Sample that was matrix spiked or duplicated.

Any remaining sample(s) will be disposed of one month from the final report date unless other arrangements are made in advance.

All results are expressed on wet weight basis unless otherwise specified.

All samples collected by Weck Laboratories have been sampled in accordance to laboratory SOP Number MIS002.

Analyses Accreditation Summary

Analyte	CAS #	Not By NELAP	ANAB ISO 17025
EPA 415.3 in Water UV 254		✓	

Reviewed by:



Rahul R. Nair
Project Manager



DoD-ELAP ANAB #ADE-2882 • DoD-ISO ANAB # • ELAP-CA #1132 • EPA-UCMR #CA00211 • ISO17025 ANAB #L2457.01 • LACSD
#10143

This is a complete final report. The information in this report applies to the samples analyzed in accordance with the chain-of-custody document. Weck Laboratories certifies that the test results meet all requirements of TNI unless noted by qualifiers or written in the Case Narrative. This analytical report must be reproduced in its entirety.

2841 Dow Avenue, Suite 100
Tustin, CA 92780
Phone: 714-895-5494

 3C100

Note: Since laboratory accreditations are subject to change, Eurofins Calscience places the ownership of method, analyte & accreditation compliance upon our subcontract laboratories. This sample shipment is forwarded under the maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins Calscience laboratory or other instructions will be provided. Any changes to accreditation immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins Calscience.

3x

ICOC No:
570-209843

Containers

<u>Count</u>	<u>Container Type</u>	<u>Preservative</u>
4	Amber Glass 250ml - unpreserved	None

Subcontract Method Instructions

Sample IDs	Method	Method Description	Method Comments
2, 3, 4, 5	SUBCONTRACT	SUB (Specific Ultraviolet Absorption - 254nm)	2 day hold time, 250 mL amber required 10 day TAT





HARGIS & ASSOCIATES, INC.
HYDROGEOLOGY • ENGINEERING

PROJECT: Raytheon Main GETS Quarterly Sample

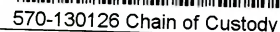
Fax 858.455.6533

Send Results to:
Steve Netto & Ruben Sanchez
 3131 Camino Del Rio North
 Suite 355
 San Diego, CA 92108
 Ph: 858.455 6500
snetto@hargis.com
rsanchez@hargis.com



Raytheon Main GETS Quarterly Sample

Fax 858.455.6533



130126

Page 1 of 1

[illegible]

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.

2.7/2.6 SC12
Temperature on receipt

Send Results to:
Steve Netto & Ruben Sanchez
 3131 Camino Del Rio North
 Suite 355
 San Diego, CA 92108
 Ph: 858.455.6500
snetto@hargis.com
rsanchez@hargis.com

Login Sample Receipt Checklist

Client: Hargis + Associates, Inc.

Job Number: 570-130126-2

Login Number: 130126

List Number: 1

Creator: Vitente, Precy

List Source: Eurofins Calscience

Question	Answer	Comment
Radioactivity wasn't checked or is $\leq$ 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 $<6\text{mm}$ (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

ANALYTICAL REPORT

PREPARED FOR

Attn: Steve Netto
Hargis + Associates, Inc.
3131 Camino del Rio N
Suite 355
San Diego, California 92108

Generated 3/23/2023 1:28:42 PM

JOB DESCRIPTION

Raytheon Main GETS Quarterly Sample/ 532.15

JOB NUMBER

570-130126-3

Eurofins Calscience

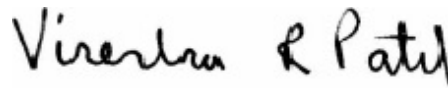
Job Notes

This report is issued solely for the use of the person or company to whom it is addressed. Any use, copying or disclosure other than by the intended recipient is unauthorized. If you have received this report in error, please notify the sender and destroy this report immediately. This report shall not be reproduced except in full, without prior express written approval by the laboratory.

The data in the report relate to the field sample(s) as received by the laboratory and associated QC. All results have been reviewed and have been found to be compliant with laboratory and accreditation requirements, with the exception of the noted deviation(s). For questions, please contact the Project Manager.

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Calscience Project Manager.

Authorization



Generated
3/23/2023 1:28:42 PM

Authorized for release by
Virendra Patel, Project Manager I
Virendra.Patel@et.eurofinsus.com
(714)895-5494

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Definitions/Glossary

Client: Hargis + Associates, Inc.

Job ID: 570-130126-3

Project/Site: Raytheon Main GETS Quarterly Sample/ 532.15

Qualifiers

General Chemistry

Qualifier	Qualifier Description
D	Sample results are obtained from a dilution; the surrogate or matrix spike recoveries reported are calculated from diluted samples.
Q3	Sample received with improper chemical preservation.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	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 Main GETS Quarterly Sample/ 532.15

Job ID: 570-130126-3

Job ID: 570-130126-3

Laboratory: Eurofins Calscience

Narrative

Job Narrative 570-130126-3

Comments

No additional comments.

Receipt

The samples were received on 3/7/2023 12:57 PM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 2.6° C.

General Chemistry

Method SM 5310B: The following samples were improperly preserved in the field with H2SO4: INF (570-130126-3), EW-02 (570-130126-4) and MW-29 (570-130126-5). The preservative used is not compatible with the analytes requested. A minimum 10X dilution of the sample was made into a 40 mL vial containing HCl and the samples were qualified with a Q3 flag.

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

Detection Summary

Client: Hargis + Associates, Inc.

Job ID: 570-130126-3

Project/Site: Raytheon Main GETS Quarterly Sample/ 532.15

Client Sample ID: INF

Lab Sample ID: 570-130126-3

☐ No Detections.

Client Sample ID: EW-02

Lab Sample ID: 570-130126-4

☐ No Detections.

Client Sample ID: MW-29

Lab Sample ID: 570-130126-5

☐ No Detections.

This Detection Summary does not include radiochemical test results.

Eurofins Calscience

Client Sample Results

Client: Hargis + Associates, Inc.
Project/Site: Raytheon Main GETS Quarterly Sample/ 532.15

Job ID: 570-130126-3

General Chemistry

Client Sample ID: INF
Date Collected: 03/07/23 09:25
Date Received: 03/07/23 12:57

Lab Sample ID: 570-130126-3
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon (SM 5310B)	ND	D Q3	5.00		mg/L			03/22/23 14:51	10
Total Organic Carbon - Duplicates (SM 5310B)	ND	D Q3	5.00		mg/L			03/22/23 14:51	10
Total Organic Carbon - Quad (SM 5310B)	ND	D Q3	5.00		mg/L			03/22/23 14:51	10

Client Sample ID: EW-02
Date Collected: 03/07/23 09:55
Date Received: 03/07/23 12:57

Lab Sample ID: 570-130126-4
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon (SM 5310B)	ND	D Q3	5.00		mg/L			03/22/23 15:04	10
Total Organic Carbon - Duplicates (SM 5310B)	ND	D Q3	5.00		mg/L			03/22/23 15:04	10
Total Organic Carbon - Quad (SM 5310B)	ND	D Q3	5.00		mg/L			03/22/23 15:04	10

Client Sample ID: MW-29
Date Collected: 03/07/23 10:30
Date Received: 03/07/23 12:57

Lab Sample ID: 570-130126-5
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon (SM 5310B)	ND	D Q3	5.00		mg/L			03/22/23 15:15	10
Total Organic Carbon - Duplicates (SM 5310B)	ND	D Q3	5.00		mg/L			03/22/23 15:15	10
Total Organic Carbon - Quad (SM 5310B)	ND	D Q3	5.00		mg/L			03/22/23 15:15	10

QC Sample Results

Client: Hargis + Associates, Inc.
Project/Site: Raytheon Main GETS Quarterly Sample/ 532.15

Job ID: 570-130126-3

Method: SM 5310B - Organic Carbon, Total (TOC)

Lab Sample ID: MB 550-296856/5

Matrix: Water

Analysis Batch: 296856

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon	ND		0.500		mg/L			03/22/23 13:05	1
Total Organic Carbon - Duplicates	ND		0.500		mg/L			03/22/23 13:05	1
Total Organic Carbon - Quad	ND		0.500		mg/L			03/22/23 13:05	1

Lab Sample ID: LCS 550-296856/6

Matrix: Water

Analysis Batch: 296856

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Organic Carbon	20.0	18.86		mg/L		94	90 - 110
Total Organic Carbon - Duplicates	20.0	18.86		mg/L		94	90 - 110
Total Organic Carbon - Quad	20.0	18.86		mg/L		94	90 - 110

Lab Sample ID: LCSD 550-296856/7

Matrix: Water

Analysis Batch: 296856

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
Total Organic Carbon	20.0	19.13		mg/L		96	90 - 110	1	20
Total Organic Carbon - Duplicates	20.0	19.13		mg/L		96	90 - 110	1	20
Total Organic Carbon - Quad	20.0	19.13		mg/L		96	90 - 110	1	20

QC Association Summary

Client: Hargis + Associates, Inc.

Job ID: 570-130126-3

Project/Site: Raytheon Main GETS Quarterly Sample/ 532.15

General Chemistry

Analysis Batch: 296856

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-130126-3	INF	Total/NA	Water	SM 5310B	
570-130126-4	EW-02	Total/NA	Water	SM 5310B	
570-130126-5	MW-29	Total/NA	Water	SM 5310B	
MB 550-296856/5	Method Blank	Total/NA	Water	SM 5310B	
LCS 550-296856/6	Lab Control Sample	Total/NA	Water	SM 5310B	
LCSD 550-296856/7	Lab Control Sample Dup	Total/NA	Water	SM 5310B	

Lab Chronicle

Client: Hargis + Associates, Inc.
Project/Site: Raytheon Main GETS Quarterly Sample/ 532.15

Job ID: 570-130126-3

Client Sample ID: INF

Lab Sample ID: 570-130126-3

Date Collected: 03/07/23 09:25

Matrix: Water

Date Received: 03/07/23 12:57

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 5310B		10	4 mL	40 mL	296856	03/22/23 14:51	RDC	EET PHX
Instrument ID: TOC 2										

Client Sample ID: EW-02

Lab Sample ID: 570-130126-4

Date Collected: 03/07/23 09:55

Matrix: Water

Date Received: 03/07/23 12:57

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 5310B		10	4 mL	40 mL	296856	03/22/23 15:04	RDC	EET PHX
Instrument ID: TOC 2										

Client Sample ID: MW-29

Lab Sample ID: 570-130126-5

Date Collected: 03/07/23 10:30

Matrix: Water

Date Received: 03/07/23 12:57

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 5310B		10	4 mL	40 mL	296856	03/22/23 15:15	RDC	EET PHX
Instrument ID: TOC 2										

Laboratory References:

EET PHX = Eurofins Phoenix, 4625 East Cotton Center Boulevard, Suite #189, Phoenix, AZ 85040, TEL (602)437-3340

Accreditation/Certification Summary

Client: Hargis + Associates, Inc.
Project/Site: Raytheon Main GETS Quarterly Sample/ 532.15

Job ID: 570-130126-3

Laboratory: Eurofins Phoenix

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Oregon	NELAP	AZ100001	03-09-24

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14

Method Summary

Client: Hargis + Associates, Inc.

Job ID: 570-130126-3

Project/Site: Raytheon Main GETS Quarterly Sample/ 532.15

Method	Method Description	Protocol	Laboratory
SM 5310B	Organic Carbon, Total (TOC)	SM	EET PHX

Protocol References:

SM = "Standard Methods For The Examination Of Water And Wastewater"

Laboratory References:

EET PHX = Eurofins Phoenix, 4625 East Cotton Center Boulevard, Suite #189, Phoenix, AZ 85040, TEL (602)437-3340

Sample Summary

Client: Hargis + Associates, Inc.

Job ID: 570-130126-3

Project/Site: Raytheon Main GETS Quarterly Sample/ 532.15

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
570-130126-3	INF	Water	03/07/23 09:25	03/07/23 12:57
570-130126-4	EW-02	Water	03/07/23 09:55	03/07/23 12:57
570-130126-5	MW-29	Water	03/07/23 10:30	03/07/23 12:57



HARGIS & ASSOCIATES, INC.
HYDROGEOLOGY • ENGINEERING

PROJECT: Raytheon Main GETS Quarterly Sample

Fax 858.455.6533

Send Results to:
Steve Netto & Ruben Sanchez
 3131 Camino Del Rio North
 Suite 355
 San Diego, CA 92108
 Ph: 858.455 6500
snetto@hargis.com
rsanchez@hargis.com



570-130126 Chain of Custody

Date: 3/7/2023
Page 1 of 1

PROJECT: Raytheon Main GETS Quarterly Sample

TASK NO.: 532.15

Project Manager Steve Netto

QA Manager Ruben Sanchez

Phone 858.455.6500

Fax 858.455.6533

[illegible]

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.

2.7/2.6 SC12
Temperature on receipt

Send Results to:
Steve Netto & Ruben Sanchez
 3131 Camino Del Rio North
 Suite 355
 San Diego, CA 92108
 Ph: 858.455.6500
snetto@hargis.com
rsanchez@hargis.com

2841 Dow Avenue, Suite 100
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Chain of Custody Record



eurofins

Environment Testing

3/23/2023

[illegible]

3.0, 3.2°C false

Ver: 06/08/2021

Environment Testing

3/23/2023

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Ver: 06/08/2021

Login Sample Receipt Checklist

Client: Hargis + Associates, Inc.

Job Number: 570-130126-3

Login Number: 130126

List Number: 1

Creator: Vitente, Precy

List Source: Eurofins Calscience

Question	Answer	Comment
Radioactivity wasn't checked or is $\leq$ 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 $<6\text{mm}$ (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: Hargis + Associates, Inc.

Job Number: 570-130126-3

Login Number: 130126

List Number: 2

Creator: Gravlin, Andrea

List Source: Eurofins Phoenix

List Creation: 03/21/23 04:02 PM

Question	Answer	Comment
Radioactivity wasn't checked or is $\leq$ background as measured by a survey meter.	True	
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?	False	Received project as a subcontract.
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 $<6\text{mm}$ (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	False	Check done at department level as required.

ANALYTICAL REPORT

PREPARED FOR

Attn: Steve Netto
Hargis + Associates, Inc.
3131 Camino del Rio N
Suite 355
San Diego, California 92108

Generated 3/21/2023 2:16:54 PM

JOB DESCRIPTION

Raytheon / 532.15

JOB NUMBER

570-130503-1

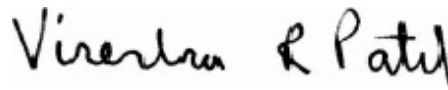
Job Notes

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The data in the report relate to the field sample(s) as received by the laboratory and associated QC. All results have been reviewed and have been found to be compliant with laboratory and accreditation requirements, with the exception of the noted deviation(s). For questions, please contact the Project Manager.

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Calscience Project Manager.

Authorization



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3/21/2023 2:16:54 PM

Authorized for release by
Virendra Patel, Project Manager I
Virendra.Patel@et.eurofinsus.com
(714)895-5494

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Definitions/Glossary

Client: Hargis + Associates, Inc.
Project/Site: Raytheon / 532.15

Job ID: 570-130503-1

Qualifiers

HPLC/IC

Qualifier	Qualifier Description
F1	MS and/or MSD recovery exceeds control limits.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	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 / 532.15

Job ID: 570-130503-1

Job ID: 570-130503-1

Laboratory: Eurofins Calscience

Narrative

Job Narrative 570-130503-1

Comments

No additional comments.

Receipt

The samples were received on 3/7/2023 12:58 PM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 2.8° C.

GC/MS VOA

Method 8260B: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with analytical batch 570-311121. The laboratory control sample (LCS) was performed in duplicate (LCSD) to provide precision data for this batch.

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.

HPLC/IC

Method 300.1: The following samples were diluted for the bromate analyte due to the abundance of non-target chloride analytes: POX (570-130503-4), INF (570-130503-6) and (570-130150-J-1). Elevated reporting limits (RLs) are provided.

Method 300.1: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for the following sample associated with analytical batch 570-310916 were outside control limits: (570-130150-J-1 MS) and (570-130150-J-1 MSD). The associated laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) recoveries met acceptance criteria.

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

General Chemistry

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 / 532.15

Job ID: 570-130503-1

Client Sample ID: TB-030723

Lab Sample ID: 570-130503-1

No Detections.

Client Sample ID: CEFF

Lab Sample ID: 570-130503-2

No Detections.

Client Sample ID: CBT

Lab Sample ID: 570-130503-3

No Detections.

Client Sample ID: POX

Lab Sample ID: 570-130503-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Alkalinity, Total (As CaCO ₃)	206		5.00		mg/L	1		SM 2320B	Total/NA
Bicarbonate (as CaCO ₃)	206		5.00		mg/L	1		SM 2320B	Total/NA

Client Sample ID: PF

Lab Sample ID: 570-130503-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Alkalinity, Total (As CaCO ₃)	206		5.00		mg/L	1		SM 2320B	Total/NA
Bicarbonate (as CaCO ₃)	206		5.00		mg/L	1		SM 2320B	Total/NA

Client Sample ID: INF

Lab Sample ID: 570-130503-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,1-Dichloroethene	34		0.50		ug/L	1		8260B	Total/NA
Bromide	0.22		0.10		mg/L	1		300.0	Total/NA

Client Sample ID: EW-02

Lab Sample ID: 570-130503-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,1-Dichloroethene	7.7		0.50		ug/L	1		8260B	Total/NA
Bromide	0.18		0.10		mg/L	1		300.0	Total/NA

Client Sample ID: MW-29

Lab Sample ID: 570-130503-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,1-Dichloroethane	1.1		1.0		ug/L	2		8260B	Total/NA
1,1-Dichloroethene	110		1.0		ug/L	2		8260B	Total/NA
Trichloroethene	1.3		1.0		ug/L	2		8260B	Total/NA
Bromide	0.32		0.10		mg/L	1		300.0	Total/NA

This Detection Summary does not include radiochemical test results.

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Client Sample Results

Client: Hargis + Associates, Inc.
Project/Site: Raytheon / 532.15

Job ID: 570-130503-1

Method: SW846 8260B - Volatile Organic Compounds (GC/MS)

Client Sample ID: TB-030723
Date Collected: 03/07/23 08:00
Date Received: 03/07/23 12:58

Lab Sample ID: 570-130503-1
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		0.50		ug/L			03/14/23 00:00	1
1,1,1-Trichloroethane	ND		0.50		ug/L			03/14/23 00:00	1
1,1,2,2-Tetrachloroethane	ND		0.50		ug/L			03/14/23 00:00	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.50		ug/L			03/14/23 00:00	1
1,1,2-Trichloroethane	ND		0.50		ug/L			03/14/23 00:00	1
1,1-Dichloroethane	ND		0.50		ug/L			03/14/23 00:00	1
1,1-Dichloroethene	ND		0.50		ug/L			03/14/23 00:00	1
1,1-Dichloropropene	ND		0.50		ug/L			03/14/23 00:00	1
1,2,3-Trichlorobenzene	ND		0.50		ug/L			03/14/23 00:00	1
1,2,3-Trichloropropane	ND		0.50		ug/L			03/14/23 00:00	1
1,2,4-Trichlorobenzene	ND		0.50		ug/L			03/14/23 00:00	1
1,2,4-Trimethylbenzene	ND		0.50		ug/L			03/14/23 00:00	1
1,2-Dibromo-3-Chloropropane	ND		1.0		ug/L			03/14/23 00:00	1
1,2-Dibromoethane	ND		0.50		ug/L			03/14/23 00:00	1
1,2-Dichlorobenzene	ND		0.50		ug/L			03/14/23 00:00	1
1,2-Dichloroethane	ND		0.50		ug/L			03/14/23 00:00	1
1,2-Dichloropropane	ND		0.50		ug/L			03/14/23 00:00	1
1,3,5-Trimethylbenzene	ND		0.50		ug/L			03/14/23 00:00	1
1,3-Dichlorobenzene	ND		0.50		ug/L			03/14/23 00:00	1
1,3-Dichloropropane	ND		0.50		ug/L			03/14/23 00:00	1
1,4-Dichlorobenzene	ND		0.50		ug/L			03/14/23 00:00	1
2,2-Dichloropropane	ND		0.50		ug/L			03/14/23 00:00	1
2-Butanone	ND		5.0		ug/L			03/14/23 00:00	1
2-Chlorotoluene	ND		0.50		ug/L			03/14/23 00:00	1
2-Hexanone	ND		6.0		ug/L			03/14/23 00:00	1
4-Chlorotoluene	ND		0.50		ug/L			03/14/23 00:00	1
4-Methyl-2-pentanone	ND		5.0		ug/L			03/14/23 00:00	1
Acetone	ND		8.0		ug/L			03/14/23 00:00	1
Benzene	ND		0.50		ug/L			03/14/23 00:00	1
Bromobenzene	ND		0.50		ug/L			03/14/23 00:00	1
Bromochloromethane	ND		1.0		ug/L			03/14/23 00:00	1
Bromodichloromethane	ND		0.50		ug/L			03/14/23 00:00	1
Bromoform	ND		0.50		ug/L			03/14/23 00:00	1
Bromomethane	ND		2.0		ug/L			03/14/23 00:00	1
cis-1,2-Dichloroethene	ND		0.50		ug/L			03/14/23 00:00	1
cis-1,3-Dichloropropene	ND		0.50		ug/L			03/14/23 00:00	1
Carbon disulfide	ND		1.0		ug/L			03/14/23 00:00	1
Carbon tetrachloride	ND		0.50		ug/L			03/14/23 00:00	1
Chlorobenzene	ND		0.50		ug/L			03/14/23 00:00	1
Chloroethane	ND		0.50		ug/L			03/14/23 00:00	1
Chloroform	ND		0.50		ug/L			03/14/23 00:00	1
Chloromethane	ND		1.0		ug/L			03/14/23 00:00	1
Dibromochloromethane	ND		0.50		ug/L			03/14/23 00:00	1
Dibromomethane	ND		0.50		ug/L			03/14/23 00:00	1
Dichlorodifluoromethane	ND		1.0		ug/L			03/14/23 00:00	1
Di-isopropyl ether (DIPE)	ND		0.50		ug/L			03/14/23 00:00	1
Ethanol	ND		50		ug/L			03/14/23 00:00	1
Ethylbenzene	ND		0.50		ug/L			03/14/23 00:00	1
Ethyl-t-butyl ether (ETBE)	ND		0.50		ug/L			03/14/23 00:00	1

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Client Sample Results

Client: Hargis + Associates, Inc.
Project/Site: Raytheon / 532.15

Job ID: 570-130503-1

Method: SW846 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: TB-030723
Date Collected: 03/07/23 08:00
Date Received: 03/07/23 12:58

Lab Sample ID: 570-130503-1
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Isopropylbenzene	ND		0.50		ug/L			03/14/23 00:00	1
Methylene Chloride	ND		1.0		ug/L			03/14/23 00:00	1
Methyl-t-Butyl Ether (MTBE)	ND		0.50		ug/L			03/14/23 00:00	1
Naphthalene	ND		1.0		ug/L			03/14/23 00:00	1
n-Butylbenzene	ND		0.50		ug/L			03/14/23 00:00	1
N-Propylbenzene	ND		0.50		ug/L			03/14/23 00:00	1
o-Xylene	ND		0.50		ug/L			03/14/23 00:00	1
m,p-Xylene	ND		1.0		ug/L			03/14/23 00:00	1
p-Isopropyltoluene	ND		0.50		ug/L			03/14/23 00:00	1
sec-Butylbenzene	ND		0.50		ug/L			03/14/23 00:00	1
Styrene	ND		0.50		ug/L			03/14/23 00:00	1
trans-1,2-Dichloroethene	ND		0.50		ug/L			03/14/23 00:00	1
trans-1,3-Dichloropropene	ND		0.50		ug/L			03/14/23 00:00	1
Tert-amyl-methyl ether (TAME)	ND		0.50		ug/L			03/14/23 00:00	1
tert-Butyl alcohol (TBA)	ND		5.0		ug/L			03/14/23 00:00	1
tert-Butylbenzene	ND		0.50		ug/L			03/14/23 00:00	1
Tetrachloroethene	ND		0.50		ug/L			03/14/23 00:00	1
Toluene	ND		0.50		ug/L			03/14/23 00:00	1
Trichloroethene	ND		0.50		ug/L			03/14/23 00:00	1
Trichlorofluoromethane	ND		0.50		ug/L			03/14/23 00:00	1
Vinyl acetate	ND		5.0		ug/L			03/14/23 00:00	1
Vinyl chloride	ND		0.50		ug/L			03/14/23 00:00	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	104		64 - 132		03/14/23 00:00	1
4-Bromofluorobenzene (Surr)	87		76 - 120		03/14/23 00:00	1
Dibromofluoromethane (Surr)	104		80 - 120		03/14/23 00:00	1
Toluene-d8 (Surr)	100		80 - 120		03/14/23 00:00	1

Client Sample ID: CEFF
Date Collected: 03/07/23 08:47
Date Received: 03/07/23 12:58

Lab Sample ID: 570-130503-2
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		0.50		ug/L			03/14/23 00:25	1
1,1,1-Trichloroethane	ND		0.50		ug/L			03/14/23 00:25	1
1,1,2,2-Tetrachloroethane	ND		0.50		ug/L			03/14/23 00:25	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.50		ug/L			03/14/23 00:25	1
1,1,2-Trichloroethane	ND		0.50		ug/L			03/14/23 00:25	1
1,1-Dichloroethane	ND		0.50		ug/L			03/14/23 00:25	1
1,1-Dichloroethene	ND		0.50		ug/L			03/14/23 00:25	1
1,1-Dichloropropene	ND		0.50		ug/L			03/14/23 00:25	1
1,2,3-Trichlorobenzene	ND		0.50		ug/L			03/14/23 00:25	1
1,2,3-Trichloropropane	ND		0.50		ug/L			03/14/23 00:25	1
1,2,4-Trichlorobenzene	ND		0.50		ug/L			03/14/23 00:25	1
1,2,4-Trimethylbenzene	ND		0.50		ug/L			03/14/23 00:25	1
1,2-Dibromo-3-Chloropropane	ND		1.0		ug/L			03/14/23 00:25	1
1,2-Dibromoethane	ND		0.50		ug/L			03/14/23 00:25	1
1,2-Dichlorobenzene	ND		0.50		ug/L			03/14/23 00:25	1
1,2-Dichloroethane	ND		0.50		ug/L			03/14/23 00:25	1
1,2-Dichloropropane	ND		0.50		ug/L			03/14/23 00:25	1

Eurofins Calscience

Client Sample Results

Client: Hargis + Associates, Inc.
Project/Site: Raytheon / 532.15

Job ID: 570-130503-1

Method: SW846 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: CEFF

Date Collected: 03/07/23 08:47

Date Received: 03/07/23 12:58

Lab Sample ID: 570-130503-2

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	ND		0.50		ug/L			03/14/23 00:25	1
1,3-Dichlorobenzene	ND		0.50		ug/L			03/14/23 00:25	1
1,3-Dichloropropane	ND		0.50		ug/L			03/14/23 00:25	1
1,4-Dichlorobenzene	ND		0.50		ug/L			03/14/23 00:25	1
2,2-Dichloropropane	ND		0.50		ug/L			03/14/23 00:25	1
2-Butanone	ND		5.0		ug/L			03/14/23 00:25	1
2-Chlorotoluene	ND		0.50		ug/L			03/14/23 00:25	1
2-Hexanone	ND		6.0		ug/L			03/14/23 00:25	1
4-Chlorotoluene	ND		0.50		ug/L			03/14/23 00:25	1
4-Methyl-2-pentanone	ND		5.0		ug/L			03/14/23 00:25	1
Acetone	ND		8.0		ug/L			03/14/23 00:25	1
Benzene	ND		0.50		ug/L			03/14/23 00:25	1
Bromobenzene	ND		0.50		ug/L			03/14/23 00:25	1
Bromochloromethane	ND		1.0		ug/L			03/14/23 00:25	1
Bromodichloromethane	ND		0.50		ug/L			03/14/23 00:25	1
Bromoform	ND		0.50		ug/L			03/14/23 00:25	1
Bromomethane	ND		2.0		ug/L			03/14/23 00:25	1
cis-1,2-Dichloroethene	ND		0.50		ug/L			03/14/23 00:25	1
cis-1,3-Dichloropropene	ND		0.50		ug/L			03/14/23 00:25	1
Carbon disulfide	ND		1.0		ug/L			03/14/23 00:25	1
Carbon tetrachloride	ND		0.50		ug/L			03/14/23 00:25	1
Chlorobenzene	ND		0.50		ug/L			03/14/23 00:25	1
Chloroethane	ND		0.50		ug/L			03/14/23 00:25	1
Chloroform	ND		0.50		ug/L			03/14/23 00:25	1
Chloromethane	ND		1.0		ug/L			03/14/23 00:25	1
Dibromochloromethane	ND		0.50		ug/L			03/14/23 00:25	1
Dibromomethane	ND		0.50		ug/L			03/14/23 00:25	1
Dichlorodifluoromethane	ND		1.0		ug/L			03/14/23 00:25	1
Di-isopropyl ether (DIPE)	ND		0.50		ug/L			03/14/23 00:25	1
Ethanol	ND		50		ug/L			03/14/23 00:25	1
Ethylbenzene	ND		0.50		ug/L			03/14/23 00:25	1
Ethyl-t-butyl ether (ETBE)	ND		0.50		ug/L			03/14/23 00:25	1
Isopropylbenzene	ND		0.50		ug/L			03/14/23 00:25	1
Methylene Chloride	ND		1.0		ug/L			03/14/23 00:25	1
Methyl-t-Butyl Ether (MTBE)	ND		0.50		ug/L			03/14/23 00:25	1
Naphthalene	ND		1.0		ug/L			03/14/23 00:25	1
n-Butylbenzene	ND		0.50		ug/L			03/14/23 00:25	1
N-Propylbenzene	ND		0.50		ug/L			03/14/23 00:25	1
o-Xylene	ND		0.50		ug/L			03/14/23 00:25	1
m,p-Xylene	ND		1.0		ug/L			03/14/23 00:25	1
p-Isopropyltoluene	ND		0.50		ug/L			03/14/23 00:25	1
sec-Butylbenzene	ND		0.50		ug/L			03/14/23 00:25	1
Styrene	ND		0.50		ug/L			03/14/23 00:25	1
trans-1,2-Dichloroethene	ND		0.50		ug/L			03/14/23 00:25	1
trans-1,3-Dichloropropene	ND		0.50		ug/L			03/14/23 00:25	1
Tert-amyl-methyl ether (TAME)	ND		0.50		ug/L			03/14/23 00:25	1
tert-Butyl alcohol (TBA)	ND		5.0		ug/L			03/14/23 00:25	1
tert-Butylbenzene	ND		0.50		ug/L			03/14/23 00:25	1
Tetrachloroethene	ND		0.50		ug/L			03/14/23 00:25	1

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Client Sample Results

Client: Hargis + Associates, Inc.
Project/Site: Raytheon / 532.15

Job ID: 570-130503-1

Method: SW846 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: CEFF

Date Collected: 03/07/23 08:47

Date Received: 03/07/23 12:58

Lab Sample ID: 570-130503-2

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Toluene	ND		0.50		ug/L			03/14/23 00:25	1
Trichloroethene	ND		0.50		ug/L			03/14/23 00:25	1
Trichlorofluoromethane	ND		0.50		ug/L			03/14/23 00:25	1
Vinyl acetate	ND		5.0		ug/L			03/14/23 00:25	1
Vinyl chloride	ND		0.50		ug/L			03/14/23 00:25	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	104		64 - 132		03/14/23 00:25	1
4-Bromofluorobenzene (Surr)	88		76 - 120		03/14/23 00:25	1
Dibromofluoromethane (Surr)	105		80 - 120		03/14/23 00:25	1
Toluene-d8 (Surr)	102		80 - 120		03/14/23 00:25	1

Client Sample ID: CBT

Date Collected: 03/07/23 09:00

Date Received: 03/07/23 12:58

Lab Sample ID: 570-130503-3

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		0.50		ug/L			03/14/23 00:50	1
1,1,1-Trichloroethane	ND		0.50		ug/L			03/14/23 00:50	1
1,1,2,2-Tetrachloroethane	ND		0.50		ug/L			03/14/23 00:50	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.50		ug/L			03/14/23 00:50	1
1,1,2-Trichloroethane	ND		0.50		ug/L			03/14/23 00:50	1
1,1-Dichloroethane	ND		0.50		ug/L			03/14/23 00:50	1
1,1-Dichloroethene	ND		0.50		ug/L			03/14/23 00:50	1
1,1-Dichloropropene	ND		0.50		ug/L			03/14/23 00:50	1
1,2,3-Trichlorobenzene	ND		0.50		ug/L			03/14/23 00:50	1
1,2,3-Trichloropropane	ND		0.50		ug/L			03/14/23 00:50	1
1,2,4-Trichlorobenzene	ND		0.50		ug/L			03/14/23 00:50	1
1,2,4-Trimethylbenzene	ND		0.50		ug/L			03/14/23 00:50	1
1,2-Dibromo-3-Chloropropane	ND		1.0		ug/L			03/14/23 00:50	1
1,2-Dibromoethane	ND		0.50		ug/L			03/14/23 00:50	1
1,2-Dichlorobenzene	ND		0.50		ug/L			03/14/23 00:50	1
1,2-Dichloroethane	ND		0.50		ug/L			03/14/23 00:50	1
1,2-Dichloropropane	ND		0.50		ug/L			03/14/23 00:50	1
1,3,5-Trimethylbenzene	ND		0.50		ug/L			03/14/23 00:50	1
1,3-Dichlorobenzene	ND		0.50		ug/L			03/14/23 00:50	1
1,3-Dichloropropane	ND		0.50		ug/L			03/14/23 00:50	1
1,4-Dichlorobenzene	ND		0.50		ug/L			03/14/23 00:50	1
2,2-Dichloropropane	ND		0.50		ug/L			03/14/23 00:50	1
2-Butanone	ND		5.0		ug/L			03/14/23 00:50	1
2-Chlorotoluene	ND		0.50		ug/L			03/14/23 00:50	1
2-Hexanone	ND		6.0		ug/L			03/14/23 00:50	1
4-Chlorotoluene	ND		0.50		ug/L			03/14/23 00:50	1
4-Methyl-2-pentanone	ND		5.0		ug/L			03/14/23 00:50	1
Acetone	ND		8.0		ug/L			03/14/23 00:50	1
Benzene	ND		0.50		ug/L			03/14/23 00:50	1
Bromobenzene	ND		0.50		ug/L			03/14/23 00:50	1
Bromochloromethane	ND		1.0		ug/L			03/14/23 00:50	1
Bromodichloromethane	ND		0.50		ug/L			03/14/23 00:50	1
Bromoform	ND		0.50		ug/L			03/14/23 00:50	1
Bromomethane	ND		2.0		ug/L			03/14/23 00:50	1

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Client Sample Results

Client: Hargis + Associates, Inc.
Project/Site: Raytheon / 532.15

Job ID: 570-130503-1

Method: SW846 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: CBT
Date Collected: 03/07/23 09:00
Date Received: 03/07/23 12:58

Lab Sample ID: 570-130503-3
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	ND		0.50		ug/L			03/14/23 00:50	1
cis-1,3-Dichloropropene	ND		0.50		ug/L			03/14/23 00:50	1
Carbon disulfide	ND		1.0		ug/L			03/14/23 00:50	1
Carbon tetrachloride	ND		0.50		ug/L			03/14/23 00:50	1
Chlorobenzene	ND		0.50		ug/L			03/14/23 00:50	1
Chloroethane	ND		0.50		ug/L			03/14/23 00:50	1
Chloroform	ND		0.50		ug/L			03/14/23 00:50	1
Chloromethane	ND		1.0		ug/L			03/14/23 00:50	1
Dibromochloromethane	ND		0.50		ug/L			03/14/23 00:50	1
Dibromomethane	ND		0.50		ug/L			03/14/23 00:50	1
Dichlorodifluoromethane	ND		1.0		ug/L			03/14/23 00:50	1
Di-isopropyl ether (DIPE)	ND		0.50		ug/L			03/14/23 00:50	1
Ethanol	ND		50		ug/L			03/14/23 00:50	1
Ethylbenzene	ND		0.50		ug/L			03/14/23 00:50	1
Ethyl-t-butyl ether (ETBE)	ND		0.50		ug/L			03/14/23 00:50	1
Isopropylbenzene	ND		0.50		ug/L			03/14/23 00:50	1
Methylene Chloride	ND		1.0		ug/L			03/14/23 00:50	1
Methyl-t-Butyl Ether (MTBE)	ND		0.50		ug/L			03/14/23 00:50	1
Naphthalene	ND		1.0		ug/L			03/14/23 00:50	1
n-Butylbenzene	ND		0.50		ug/L			03/14/23 00:50	1
N-Propylbenzene	ND		0.50		ug/L			03/14/23 00:50	1
o-Xylene	ND		0.50		ug/L			03/14/23 00:50	1
m,p-Xylene	ND		1.0		ug/L			03/14/23 00:50	1
p-Isopropyltoluene	ND		0.50		ug/L			03/14/23 00:50	1
sec-Butylbenzene	ND		0.50		ug/L			03/14/23 00:50	1
Styrene	ND		0.50		ug/L			03/14/23 00:50	1
trans-1,2-Dichloroethene	ND		0.50		ug/L			03/14/23 00:50	1
trans-1,3-Dichloropropene	ND		0.50		ug/L			03/14/23 00:50	1
Tert-amyl-methyl ether (TAME)	ND		0.50		ug/L			03/14/23 00:50	1
tert-Butyl alcohol (TBA)	ND		5.0		ug/L			03/14/23 00:50	1
tert-Butylbenzene	ND		0.50		ug/L			03/14/23 00:50	1
Tetrachloroethene	ND		0.50		ug/L			03/14/23 00:50	1
Toluene	ND		0.50		ug/L			03/14/23 00:50	1
Trichloroethene	ND		0.50		ug/L			03/14/23 00:50	1
Trichlorofluoromethane	ND		0.50		ug/L			03/14/23 00:50	1
Vinyl acetate	ND		5.0		ug/L			03/14/23 00:50	1
Vinyl chloride	ND		0.50		ug/L			03/14/23 00:50	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	106		64 - 132		03/14/23 00:50	1
4-Bromofluorobenzene (Surr)	86		76 - 120		03/14/23 00:50	1
Dibromofluoromethane (Surr)	104		80 - 120		03/14/23 00:50	1
Toluene-d8 (Surr)	101		80 - 120		03/14/23 00:50	1

Client Sample ID: POX
Date Collected: 03/07/23 09:05
Date Received: 03/07/23 12:58

Lab Sample ID: 570-130503-4
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		0.50		ug/L			03/14/23 01:15	1
1,1,1-Trichloroethane	ND		0.50		ug/L			03/14/23 01:15	1

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Client Sample Results

Client: Hargis + Associates, Inc.
Project/Site: Raytheon / 532.15

Job ID: 570-130503-1

Method: SW846 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: POX
Date Collected: 03/07/23 09:05
Date Received: 03/07/23 12:58

Lab Sample ID: 570-130503-4
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane	ND		0.50		ug/L			03/14/23 01:15	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.50		ug/L			03/14/23 01:15	1
1,1,2-Trichloroethane	ND		0.50		ug/L			03/14/23 01:15	1
1,1-Dichloroethane	ND		0.50		ug/L			03/14/23 01:15	1
1,1-Dichloroethene	ND		0.50		ug/L			03/14/23 01:15	1
1,1-Dichloropropene	ND		0.50		ug/L			03/14/23 01:15	1
1,2,3-Trichlorobenzene	ND		0.50		ug/L			03/14/23 01:15	1
1,2,3-Trichloropropane	ND		0.50		ug/L			03/14/23 01:15	1
1,2,4-Trichlorobenzene	ND		0.50		ug/L			03/14/23 01:15	1
1,2,4-Trimethylbenzene	ND		0.50		ug/L			03/14/23 01:15	1
1,2-Dibromo-3-Chloropropane	ND		1.0		ug/L			03/14/23 01:15	1
1,2-Dibromoethane	ND		0.50		ug/L			03/14/23 01:15	1
1,2-Dichlorobenzene	ND		0.50		ug/L			03/14/23 01:15	1
1,2-Dichloroethane	ND		0.50		ug/L			03/14/23 01:15	1
1,2-Dichloropropane	ND		0.50		ug/L			03/14/23 01:15	1
1,3,5-Trimethylbenzene	ND		0.50		ug/L			03/14/23 01:15	1
1,3-Dichlorobenzene	ND		0.50		ug/L			03/14/23 01:15	1
1,3-Dichloropropane	ND		0.50		ug/L			03/14/23 01:15	1
1,4-Dichlorobenzene	ND		0.50		ug/L			03/14/23 01:15	1
2,2-Dichloropropane	ND		0.50		ug/L			03/14/23 01:15	1
2-Butanone	ND		5.0		ug/L			03/14/23 01:15	1
2-Chlorotoluene	ND		0.50		ug/L			03/14/23 01:15	1
2-Hexanone	ND		6.0		ug/L			03/14/23 01:15	1
4-Chlorotoluene	ND		0.50		ug/L			03/14/23 01:15	1
4-Methyl-2-pentanone	ND		5.0		ug/L			03/14/23 01:15	1
Acetone	ND		8.0		ug/L			03/14/23 01:15	1
Benzene	ND		0.50		ug/L			03/14/23 01:15	1
Bromobenzene	ND		0.50		ug/L			03/14/23 01:15	1
Bromochloromethane	ND		1.0		ug/L			03/14/23 01:15	1
Bromodichloromethane	ND		0.50		ug/L			03/14/23 01:15	1
Bromoform	ND		0.50		ug/L			03/14/23 01:15	1
Bromomethane	ND		2.0		ug/L			03/14/23 01:15	1
cis-1,2-Dichloroethene	ND		0.50		ug/L			03/14/23 01:15	1
cis-1,3-Dichloropropene	ND		0.50		ug/L			03/14/23 01:15	1
Carbon disulfide	ND		1.0		ug/L			03/14/23 01:15	1
Carbon tetrachloride	ND		0.50		ug/L			03/14/23 01:15	1
Chlorobenzene	ND		0.50		ug/L			03/14/23 01:15	1
Chloroethane	ND		0.50		ug/L			03/14/23 01:15	1
Chloroform	ND		0.50		ug/L			03/14/23 01:15	1
Chloromethane	ND		1.0		ug/L			03/14/23 01:15	1
Dibromochloromethane	ND		0.50		ug/L			03/14/23 01:15	1
Dibromomethane	ND		0.50		ug/L			03/14/23 01:15	1
Dichlorodifluoromethane	ND		1.0		ug/L			03/14/23 01:15	1
Di-isopropyl ether (DIPE)	ND		0.50		ug/L			03/14/23 01:15	1
Ethanol	ND		50		ug/L			03/14/23 01:15	1
Ethylbenzene	ND		0.50		ug/L			03/14/23 01:15	1
Ethyl-t-butyl ether (ETBE)	ND		0.50		ug/L			03/14/23 01:15	1
Isopropylbenzene	ND		0.50		ug/L			03/14/23 01:15	1
Methylene Chloride	ND		1.0		ug/L			03/14/23 01:15	1

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Client Sample Results

Client: Hargis + Associates, Inc.
Project/Site: Raytheon / 532.15

Job ID: 570-130503-1

Method: SW846 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: POX
Date Collected: 03/07/23 09:05
Date Received: 03/07/23 12:58

Lab Sample ID: 570-130503-4
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl-t-Butyl Ether (MTBE)	ND		0.50		ug/L			03/14/23 01:15	1
Naphthalene	ND		1.0		ug/L			03/14/23 01:15	1
n-Butylbenzene	ND		0.50		ug/L			03/14/23 01:15	1
N-Propylbenzene	ND		0.50		ug/L			03/14/23 01:15	1
o-Xylene	ND		0.50		ug/L			03/14/23 01:15	1
m,p-Xylene	ND		1.0		ug/L			03/14/23 01:15	1
p-Isopropyltoluene	ND		0.50		ug/L			03/14/23 01:15	1
sec-Butylbenzene	ND		0.50		ug/L			03/14/23 01:15	1
Styrene	ND		0.50		ug/L			03/14/23 01:15	1
trans-1,2-Dichloroethene	ND		0.50		ug/L			03/14/23 01:15	1
trans-1,3-Dichloropropene	ND		0.50		ug/L			03/14/23 01:15	1
Tert-amyl-methyl ether (TAME)	ND		0.50		ug/L			03/14/23 01:15	1
tert-Butyl alcohol (TBA)	ND		5.0		ug/L			03/14/23 01:15	1
tert-Butylbenzene	ND		0.50		ug/L			03/14/23 01:15	1
Tetrachloroethene	ND		0.50		ug/L			03/14/23 01:15	1
Toluene	ND		0.50		ug/L			03/14/23 01:15	1
Trichloroethene	ND		0.50		ug/L			03/14/23 01:15	1
Trichlorofluoromethane	ND		0.50		ug/L			03/14/23 01:15	1
Vinyl acetate	ND		5.0		ug/L			03/14/23 01:15	1
Vinyl chloride	ND		0.50		ug/L			03/14/23 01:15	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	106		64 - 132		03/14/23 01:15	1
4-Bromofluorobenzene (Surr)	87		76 - 120		03/14/23 01:15	1
Dibromofluoromethane (Surr)	104		80 - 120		03/14/23 01:15	1
Toluene-d8 (Surr)	101		80 - 120		03/14/23 01:15	1

Client Sample ID: INF
Date Collected: 03/07/23 09:20
Date Received: 03/07/23 12:58

Lab Sample ID: 570-130503-6
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		0.50		ug/L			03/14/23 02:04	1
1,1,1-Trichloroethane	ND		0.50		ug/L			03/14/23 02:04	1
1,1,2,2-Tetrachloroethane	ND		0.50		ug/L			03/14/23 02:04	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.50		ug/L			03/14/23 02:04	1
1,1,2-Trichloroethane	ND		0.50		ug/L			03/14/23 02:04	1
1,1-Dichloroethane	ND		0.50		ug/L			03/14/23 02:04	1
1,1-Dichloroethene	34		0.50		ug/L			03/14/23 02:04	1
1,1-Dichloropropene	ND		0.50		ug/L			03/14/23 02:04	1
1,2,3-Trichlorobenzene	ND		0.50		ug/L			03/14/23 02:04	1
1,2,3-Trichloropropane	ND		0.50		ug/L			03/14/23 02:04	1
1,2,4-Trichlorobenzene	ND		0.50		ug/L			03/14/23 02:04	1
1,2,4-Trimethylbenzene	ND		0.50		ug/L			03/14/23 02:04	1
1,2-Dibromo-3-Chloropropane	ND		1.0		ug/L			03/14/23 02:04	1
1,2-Dibromoethane	ND		0.50		ug/L			03/14/23 02:04	1
1,2-Dichlorobenzene	ND		0.50		ug/L			03/14/23 02:04	1
1,2-Dichloroethane	ND		0.50		ug/L			03/14/23 02:04	1
1,2-Dichloropropane	ND		0.50		ug/L			03/14/23 02:04	1
1,3,5-Trimethylbenzene	ND		0.50		ug/L			03/14/23 02:04	1
1,3-Dichlorobenzene	ND		0.50		ug/L			03/14/23 02:04	1

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Client Sample Results

Client: Hargis + Associates, Inc.
Project/Site: Raytheon / 532.15

Job ID: 570-130503-1

Method: SW846 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: INF

Date Collected: 03/07/23 09:20

Date Received: 03/07/23 12:58

Lab Sample ID: 570-130503-6

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3-Dichloropropane	ND		0.50		ug/L			03/14/23 02:04	1
1,4-Dichlorobenzene	ND		0.50		ug/L			03/14/23 02:04	1
2,2-Dichloropropane	ND		0.50		ug/L			03/14/23 02:04	1
2-Butanone	ND		5.0		ug/L			03/14/23 02:04	1
2-Chlorotoluene	ND		0.50		ug/L			03/14/23 02:04	1
2-Hexanone	ND		6.0		ug/L			03/14/23 02:04	1
4-Chlorotoluene	ND		0.50		ug/L			03/14/23 02:04	1
4-Methyl-2-pentanone	ND		5.0		ug/L			03/14/23 02:04	1
Acetone	ND		8.0		ug/L			03/14/23 02:04	1
Benzene	ND		0.50		ug/L			03/14/23 02:04	1
Bromobenzene	ND		0.50		ug/L			03/14/23 02:04	1
Bromochloromethane	ND		1.0		ug/L			03/14/23 02:04	1
Bromodichloromethane	ND		0.50		ug/L			03/14/23 02:04	1
Bromoform	ND		0.50		ug/L			03/14/23 02:04	1
Bromomethane	ND		2.0		ug/L			03/14/23 02:04	1
cis-1,2-Dichloroethene	ND		0.50		ug/L			03/14/23 02:04	1
cis-1,3-Dichloropropene	ND		0.50		ug/L			03/14/23 02:04	1
Carbon disulfide	ND		1.0		ug/L			03/14/23 02:04	1
Carbon tetrachloride	ND		0.50		ug/L			03/14/23 02:04	1
Chlorobenzene	ND		0.50		ug/L			03/14/23 02:04	1
Chloroethane	ND		0.50		ug/L			03/14/23 02:04	1
Chloroform	ND		0.50		ug/L			03/14/23 02:04	1
Chloromethane	ND		1.0		ug/L			03/14/23 02:04	1
Dibromochloromethane	ND		0.50		ug/L			03/14/23 02:04	1
Dibromomethane	ND		0.50		ug/L			03/14/23 02:04	1
Dichlorodifluoromethane	ND		1.0		ug/L			03/14/23 02:04	1
Di-isopropyl ether (DIPE)	ND		0.50		ug/L			03/14/23 02:04	1
Ethanol	ND		50		ug/L			03/14/23 02:04	1
Ethylbenzene	ND		0.50		ug/L			03/14/23 02:04	1
Ethyl-t-butyl ether (ETBE)	ND		0.50		ug/L			03/14/23 02:04	1
Isopropylbenzene	ND		0.50		ug/L			03/14/23 02:04	1
Methylene Chloride	ND		1.0		ug/L			03/14/23 02:04	1
Methyl-t-Butyl Ether (MTBE)	ND		0.50		ug/L			03/14/23 02:04	1
Naphthalene	ND		1.0		ug/L			03/14/23 02:04	1
n-Butylbenzene	ND		0.50		ug/L			03/14/23 02:04	1
N-Propylbenzene	ND		0.50		ug/L			03/14/23 02:04	1
o-Xylene	ND		0.50		ug/L			03/14/23 02:04	1
m,p-Xylene	ND		1.0		ug/L			03/14/23 02:04	1
p-Isopropyltoluene	ND		0.50		ug/L			03/14/23 02:04	1
sec-Butylbenzene	ND		0.50		ug/L			03/14/23 02:04	1
Styrene	ND		0.50		ug/L			03/14/23 02:04	1
trans-1,2-Dichloroethene	ND		0.50		ug/L			03/14/23 02:04	1
trans-1,3-Dichloropropene	ND		0.50		ug/L			03/14/23 02:04	1
Tert-amyl-methyl ether (TAME)	ND		0.50		ug/L			03/14/23 02:04	1
tert-Butyl alcohol (TBA)	ND		5.0		ug/L			03/14/23 02:04	1
tert-Butylbenzene	ND		0.50		ug/L			03/14/23 02:04	1
Tetrachloroethene	ND		0.50		ug/L			03/14/23 02:04	1
Toluene	ND		0.50		ug/L			03/14/23 02:04	1
Trichloroethene	ND		0.50		ug/L			03/14/23 02:04	1

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Client Sample Results

Client: Hargis + Associates, Inc.
Project/Site: Raytheon / 532.15

Job ID: 570-130503-1

Method: SW846 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: INF

Date Collected: 03/07/23 09:20

Date Received: 03/07/23 12:58

Lab Sample ID: 570-130503-6

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Trichlorofluoromethane	ND		0.50		ug/L			03/14/23 02:04	1
Vinyl acetate	ND		5.0		ug/L			03/14/23 02:04	1
Vinyl chloride	ND		0.50		ug/L			03/14/23 02:04	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	104		64 - 132					03/14/23 02:04	1
4-Bromofluorobenzene (Surr)	86		76 - 120					03/14/23 02:04	1
Dibromofluoromethane (Surr)	106		80 - 120					03/14/23 02:04	1
Toluene-d8 (Surr)	101		80 - 120					03/14/23 02:04	1

Client Sample ID: EW-02

Date Collected: 03/07/23 09:55

Date Received: 03/07/23 12:58

Lab Sample ID: 570-130503-7

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		0.50		ug/L			03/14/23 02:29	1
1,1,1-Trichloroethane	ND		0.50		ug/L			03/14/23 02:29	1
1,1,2,2-Tetrachloroethane	ND		0.50		ug/L			03/14/23 02:29	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.50		ug/L			03/14/23 02:29	1
1,1,2-Trichloroethane	ND		0.50		ug/L			03/14/23 02:29	1
1,1-Dichloroethane	ND		0.50		ug/L			03/14/23 02:29	1
1,1-Dichloroethene	7.7		0.50		ug/L			03/14/23 02:29	1
1,1-Dichloropropene	ND		0.50		ug/L			03/14/23 02:29	1
1,2,3-Trichlorobenzene	ND		0.50		ug/L			03/14/23 02:29	1
1,2,3-Trichloropropane	ND		0.50		ug/L			03/14/23 02:29	1
1,2,4-Trichlorobenzene	ND		0.50		ug/L			03/14/23 02:29	1
1,2,4-Trimethylbenzene	ND		0.50		ug/L			03/14/23 02:29	1
1,2-Dibromo-3-Chloropropane	ND		1.0		ug/L			03/14/23 02:29	1
1,2-Dibromoethane	ND		0.50		ug/L			03/14/23 02:29	1
1,2-Dichlorobenzene	ND		0.50		ug/L			03/14/23 02:29	1
1,2-Dichloroethane	ND		0.50		ug/L			03/14/23 02:29	1
1,2-Dichloropropane	ND		0.50		ug/L			03/14/23 02:29	1
1,3,5-Trimethylbenzene	ND		0.50		ug/L			03/14/23 02:29	1
1,3-Dichlorobenzene	ND		0.50		ug/L			03/14/23 02:29	1
1,3-Dichloropropane	ND		0.50		ug/L			03/14/23 02:29	1
1,4-Dichlorobenzene	ND		0.50		ug/L			03/14/23 02:29	1
2,2-Dichloropropane	ND		0.50		ug/L			03/14/23 02:29	1
2-Butanone	ND		5.0		ug/L			03/14/23 02:29	1
2-Chlorotoluene	ND		0.50		ug/L			03/14/23 02:29	1
2-Hexanone	ND		6.0		ug/L			03/14/23 02:29	1
4-Chlorotoluene	ND		0.50		ug/L			03/14/23 02:29	1
4-Methyl-2-pentanone	ND		5.0		ug/L			03/14/23 02:29	1
Acetone	ND		8.0		ug/L			03/14/23 02:29	1
Benzene	ND		0.50		ug/L			03/14/23 02:29	1
Bromobenzene	ND		0.50		ug/L			03/14/23 02:29	1
Bromochloromethane	ND		1.0		ug/L			03/14/23 02:29	1
Bromodichloromethane	ND		0.50		ug/L			03/14/23 02:29	1
Bromoform	ND		0.50		ug/L			03/14/23 02:29	1
Bromomethane	ND		2.0		ug/L			03/14/23 02:29	1
cis-1,2-Dichloroethene	ND		0.50		ug/L			03/14/23 02:29	1
cis-1,3-Dichloropropene	ND		0.50		ug/L			03/14/23 02:29	1

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Client Sample Results

Client: Hargis + Associates, Inc.
Project/Site: Raytheon / 532.15

Job ID: 570-130503-1

Method: SW846 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: EW-02
Date Collected: 03/07/23 09:55
Date Received: 03/07/23 12:58

Lab Sample ID: 570-130503-7
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon disulfide	ND		1.0		ug/L			03/14/23 02:29	1
Carbon tetrachloride	ND		0.50		ug/L			03/14/23 02:29	1
Chlorobenzene	ND		0.50		ug/L			03/14/23 02:29	1
Chloroethane	ND		0.50		ug/L			03/14/23 02:29	1
Chloroform	ND		0.50		ug/L			03/14/23 02:29	1
Chloromethane	ND		1.0		ug/L			03/14/23 02:29	1
Dibromochloromethane	ND		0.50		ug/L			03/14/23 02:29	1
Dibromomethane	ND		0.50		ug/L			03/14/23 02:29	1
Dichlorodifluoromethane	ND		1.0		ug/L			03/14/23 02:29	1
Di-isopropyl ether (DIPE)	ND		0.50		ug/L			03/14/23 02:29	1
Ethanol	ND		50		ug/L			03/14/23 02:29	1
Ethylbenzene	ND		0.50		ug/L			03/14/23 02:29	1
Ethyl-t-butyl ether (ETBE)	ND		0.50		ug/L			03/14/23 02:29	1
Isopropylbenzene	ND		0.50		ug/L			03/14/23 02:29	1
Methylene Chloride	ND		1.0		ug/L			03/14/23 02:29	1
Methyl-t-Butyl Ether (MTBE)	ND		0.50		ug/L			03/14/23 02:29	1
Naphthalene	ND		1.0		ug/L			03/14/23 02:29	1
n-Butylbenzene	ND		0.50		ug/L			03/14/23 02:29	1
N-Propylbenzene	ND		0.50		ug/L			03/14/23 02:29	1
o-Xylene	ND		0.50		ug/L			03/14/23 02:29	1
m,p-Xylene	ND		1.0		ug/L			03/14/23 02:29	1
p-Isopropyltoluene	ND		0.50		ug/L			03/14/23 02:29	1
sec-Butylbenzene	ND		0.50		ug/L			03/14/23 02:29	1
Styrene	ND		0.50		ug/L			03/14/23 02:29	1
trans-1,2-Dichloroethene	ND		0.50		ug/L			03/14/23 02:29	1
trans-1,3-Dichloropropene	ND		0.50		ug/L			03/14/23 02:29	1
Tert-amyl-methyl ether (TAME)	ND		0.50		ug/L			03/14/23 02:29	1
tert-Butyl alcohol (TBA)	ND		5.0		ug/L			03/14/23 02:29	1
tert-Butylbenzene	ND		0.50		ug/L			03/14/23 02:29	1
Tetrachloroethene	ND		0.50		ug/L			03/14/23 02:29	1
Toluene	ND		0.50		ug/L			03/14/23 02:29	1
Trichloroethene	ND		0.50		ug/L			03/14/23 02:29	1
Trichlorofluoromethane	ND		0.50		ug/L			03/14/23 02:29	1
Vinyl acetate	ND		5.0		ug/L			03/14/23 02:29	1
Vinyl chloride	ND		0.50		ug/L			03/14/23 02:29	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	105		64 - 132					03/14/23 02:29	1
4-Bromofluorobenzene (Surr)	86		76 - 120					03/14/23 02:29	1
Dibromofluoromethane (Surr)	103		80 - 120					03/14/23 02:29	1
Toluene-d8 (Surr)	100		80 - 120					03/14/23 02:29	1

Client Sample ID: MW-29
Date Collected: 03/07/23 10:30
Date Received: 03/07/23 12:58

Lab Sample ID: 570-130503-8
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0		ug/L			03/14/23 01:39	2
1,1,1-Trichloroethane	ND		1.0		ug/L			03/14/23 01:39	2
1,1,2,2-Tetrachloroethane	ND		1.0		ug/L			03/14/23 01:39	2
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.0		ug/L			03/14/23 01:39	2

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Client Sample Results

Client: Hargis + Associates, Inc.
Project/Site: Raytheon / 532.15

Job ID: 570-130503-1

Method: SW846 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: MW-29

Date Collected: 03/07/23 10:30

Date Received: 03/07/23 12:58

Lab Sample ID: 570-130503-8

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2-Trichloroethane	ND		1.0		ug/L			03/14/23 01:39	2
1,1-Dichloroethane	1.1		1.0		ug/L			03/14/23 01:39	2
1,1-Dichloroethene	110		1.0		ug/L			03/14/23 01:39	2
1,1-Dichloropropene	ND		1.0		ug/L			03/14/23 01:39	2
1,2,3-Trichlorobenzene	ND		1.0		ug/L			03/14/23 01:39	2
1,2,3-Trichloropropane	ND		1.0		ug/L			03/14/23 01:39	2
1,2,4-Trichlorobenzene	ND		1.0		ug/L			03/14/23 01:39	2
1,2,4-Trimethylbenzene	ND		1.0		ug/L			03/14/23 01:39	2
1,2-Dibromo-3-Chloropropane	ND		2.0		ug/L			03/14/23 01:39	2
1,2-Dibromoethane	ND		1.0		ug/L			03/14/23 01:39	2
1,2-Dichlorobenzene	ND		1.0		ug/L			03/14/23 01:39	2
1,2-Dichloroethane	ND		1.0		ug/L			03/14/23 01:39	2
1,2-Dichloropropane	ND		1.0		ug/L			03/14/23 01:39	2
1,3,5-Trimethylbenzene	ND		1.0		ug/L			03/14/23 01:39	2
1,3-Dichlorobenzene	ND		1.0		ug/L			03/14/23 01:39	2
1,3-Dichloropropane	ND		1.0		ug/L			03/14/23 01:39	2
1,4-Dichlorobenzene	ND		1.0		ug/L			03/14/23 01:39	2
2,2-Dichloropropane	ND		1.0		ug/L			03/14/23 01:39	2
2-Butanone	ND		10		ug/L			03/14/23 01:39	2
2-Chlorotoluene	ND		1.0		ug/L			03/14/23 01:39	2
2-Hexanone	ND		12		ug/L			03/14/23 01:39	2
4-Chlorotoluene	ND		1.0		ug/L			03/14/23 01:39	2
4-Methyl-2-pentanone	ND		10		ug/L			03/14/23 01:39	2
Acetone	ND		16		ug/L			03/14/23 01:39	2
Benzene	ND		1.0		ug/L			03/14/23 01:39	2
Bromobenzene	ND		1.0		ug/L			03/14/23 01:39	2
Bromochloromethane	ND		2.0		ug/L			03/14/23 01:39	2
Bromodichloromethane	ND		1.0		ug/L			03/14/23 01:39	2
Bromoform	ND		1.0		ug/L			03/14/23 01:39	2
Bromomethane	ND		4.0		ug/L			03/14/23 01:39	2
cis-1,2-Dichloroethene	ND		1.0		ug/L			03/14/23 01:39	2
cis-1,3-Dichloropropene	ND		1.0		ug/L			03/14/23 01:39	2
Carbon disulfide	ND		2.0		ug/L			03/14/23 01:39	2
Carbon tetrachloride	ND		1.0		ug/L			03/14/23 01:39	2
Chlorobenzene	ND		1.0		ug/L			03/14/23 01:39	2
Chloroethane	ND		1.0		ug/L			03/14/23 01:39	2
Chloroform	ND		1.0		ug/L			03/14/23 01:39	2
Chloromethane	ND		2.0		ug/L			03/14/23 01:39	2
Dibromochloromethane	ND		1.0		ug/L			03/14/23 01:39	2
Dibromomethane	ND		1.0		ug/L			03/14/23 01:39	2
Dichlorodifluoromethane	ND		2.0		ug/L			03/14/23 01:39	2
Di-isopropyl ether (DIPE)	ND		1.0		ug/L			03/14/23 01:39	2
Ethanol	ND		100		ug/L			03/14/23 01:39	2
Ethylbenzene	ND		1.0		ug/L			03/14/23 01:39	2
Ethyl-t-butyl ether (ETBE)	ND		1.0		ug/L			03/14/23 01:39	2
Isopropylbenzene	ND		1.0		ug/L			03/14/23 01:39	2
Methylene Chloride	ND		2.0		ug/L			03/14/23 01:39	2
Methyl-t-Butyl Ether (MTBE)	ND		1.0		ug/L			03/14/23 01:39	2
Naphthalene	ND		2.0		ug/L			03/14/23 01:39	2

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Client Sample Results

Client: Hargis + Associates, Inc.
Project/Site: Raytheon / 532.15

Job ID: 570-130503-1

Method: SW846 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: MW-29

Date Collected: 03/07/23 10:30

Date Received: 03/07/23 12:58

Lab Sample ID: 570-130503-8

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
n-Butylbenzene	ND		1.0		ug/L			03/14/23 01:39	2
N-Propylbenzene	ND		1.0		ug/L			03/14/23 01:39	2
o-Xylene	ND		1.0		ug/L			03/14/23 01:39	2
m,p-Xylene	ND		2.0		ug/L			03/14/23 01:39	2
p-Isopropyltoluene	ND		1.0		ug/L			03/14/23 01:39	2
sec-Butylbenzene	ND		1.0		ug/L			03/14/23 01:39	2
Styrene	ND		1.0		ug/L			03/14/23 01:39	2
trans-1,2-Dichloroethene	ND		1.0		ug/L			03/14/23 01:39	2
trans-1,3-Dichloropropene	ND		1.0		ug/L			03/14/23 01:39	2
Tert-amyl-methyl ether (TAME)	ND		1.0		ug/L			03/14/23 01:39	2
tert-Butyl alcohol (TBA)	ND		10		ug/L			03/14/23 01:39	2
tert-Butylbenzene	ND		1.0		ug/L			03/14/23 01:39	2
Tetrachloroethene	ND		1.0		ug/L			03/14/23 01:39	2
Toluene	ND		1.0		ug/L			03/14/23 01:39	2
Trichloroethene	1.3		1.0		ug/L			03/14/23 01:39	2
Trichlorofluoromethane	ND		1.0		ug/L			03/14/23 01:39	2
Vinyl acetate	ND		10		ug/L			03/14/23 01:39	2
Vinyl chloride	ND		1.0		ug/L			03/14/23 01:39	2

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	108		64 - 132		03/14/23 01:39	2
4-Bromofluorobenzene (Surr)	87		76 - 120		03/14/23 01:39	2
Dibromofluoromethane (Surr)	108		80 - 120		03/14/23 01:39	2
Toluene-d8 (Surr)	101		80 - 120		03/14/23 01:39	2

Client Sample Results

Client: Hargis + Associates, Inc.
Project/Site: Raytheon / 532.15

Job ID: 570-130503-1

Method: SW846 8270C SIM ID - Semivolatile Organic Compounds (GC/MS SIM / Isotope Dilution)

Client Sample ID: CEFF
Date Collected: 03/07/23 08:47
Date Received: 03/07/23 12:58

Lab Sample ID: 570-130503-2
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	ND		0.50		ug/L		03/14/23 10:00	03/14/23 20:32	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,4-Dioxane-d8	24		21 - 120				03/14/23 10:00	03/14/23 20:32	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Nitrobenzene-d5	64		58 - 135				03/14/23 10:00	03/14/23 20:32	1

Client Sample ID: CBT
Date Collected: 03/07/23 09:00
Date Received: 03/07/23 12:58

Lab Sample ID: 570-130503-3
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	ND		0.50		ug/L		03/14/23 10:00	03/14/23 20:47	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,4-Dioxane-d8	22		21 - 120				03/14/23 10:00	03/14/23 20:47	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Nitrobenzene-d5	75		58 - 135				03/14/23 10:00	03/14/23 20:47	1

Client Sample ID: POX
Date Collected: 03/07/23 09:05
Date Received: 03/07/23 12:58

Lab Sample ID: 570-130503-4
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	ND		0.50		ug/L		03/14/23 10:00	03/14/23 21:01	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,4-Dioxane-d8	22		21 - 120				03/14/23 10:00	03/14/23 21:01	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Nitrobenzene-d5	82		58 - 135				03/14/23 10:00	03/14/23 21:01	1

Client Sample Results

Client: Hargis + Associates, Inc.
Project/Site: Raytheon / 532.15

Job ID: 570-130503-1

Method: EPA 300.0 - Anions, Ion Chromatography

Client Sample ID: INF
Date Collected: 03/07/23 09:20
Date Received: 03/07/23 12:58

Lab Sample ID: 570-130503-6
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromide	0.22		0.10		mg/L			03/10/23 19:23	1

Client Sample ID: EW-02
Date Collected: 03/07/23 09:55
Date Received: 03/07/23 12:58

Lab Sample ID: 570-130503-7
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromide	0.18		0.10		mg/L			03/10/23 19:40	1

Client Sample ID: MW-29
Date Collected: 03/07/23 10:30
Date Received: 03/07/23 12:58

Lab Sample ID: 570-130503-8
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromide	0.32		0.10		mg/L			03/10/23 19:56	1

Client Sample Results

Client: Hargis + Associates, Inc.
Project/Site: Raytheon / 532.15

Job ID: 570-130503-1

Method: EPA 300.1 - Disinfection By-Products, (IC)

Client Sample ID: POX
Date Collected: 03/07/23 09:05
Date Received: 03/07/23 12:58

Lab Sample ID: 570-130503-4
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromate	ND		50		ug/L			03/13/23 10:41	10
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Dichloroacetate (Surr)	108		90 - 115					03/13/23 10:41	10

Client Sample ID: INF
Date Collected: 03/07/23 09:20
Date Received: 03/07/23 12:58

Lab Sample ID: 570-130503-6
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromate	ND		50		ug/L			03/13/23 11:15	10
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Dichloroacetate (Surr)	109		90 - 115					03/13/23 11:15	10

Client Sample Results

Client: Hargis + Associates, Inc.
Project/Site: Raytheon / 532.15

Job ID: 570-130503-1

General Chemistry

Client Sample ID: POX
Date Collected: 03/07/23 09:05
Date Received: 03/07/23 12:58

Lab Sample ID: 570-130503-4
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity, Total (As CaCO3) (SM 2320B)	206		5.00		mg/L			03/17/23 02:18	1
Bicarbonate (as CaCO3) (SM 2320B)	206		5.00		mg/L			03/17/23 02:18	1
Carbonate (as CaCO3) (SM 2320B)	ND		5.00		mg/L			03/17/23 02:18	1
Hydroxide (as CaCO3) (SM 2320B)	ND		5.00		mg/L			03/17/23 02:18	1
Carbon, Total Organic (SM 5310D)	ND		0.500		mg/L			03/18/23 14:40	1

Client Sample ID: PF
Date Collected: 03/07/23 09:15
Date Received: 03/07/23 12:58

Lab Sample ID: 570-130503-5
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity, Total (As CaCO3) (SM 2320B)	206		5.00		mg/L			03/17/23 02:24	1
Bicarbonate (as CaCO3) (SM 2320B)	206		5.00		mg/L			03/17/23 02:24	1
Carbonate (as CaCO3) (SM 2320B)	ND		5.00		mg/L			03/17/23 02:24	1
Hydroxide (as CaCO3) (SM 2320B)	ND		5.00		mg/L			03/17/23 02:24	1
Total Suspended Solids (SM 2540D)	ND		1.00		mg/L			03/10/23 16:40	1
Carbon, Total Organic (SM 5310D)	ND		0.500		mg/L			03/18/23 15:02	1

Surrogate Summary

Client: Hargis + Associates, Inc.
Project/Site: Raytheon / 532.15

Job ID: 570-130503-1

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

Matrix: Water

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	DCA (64-132)	BFB (76-120)	DBFM (80-120)	TOL (80-120)
570-130503-1	TB-030723	104	87	104	100
570-130503-2	CEFF	104	88	105	102
570-130503-3	CBT	106	86	104	101
570-130503-4	POX	106	87	104	101
570-130503-6	INF	104	86	106	101
570-130503-7	EW-02	105	86	103	100
570-130503-8	MW-29	108	87	108	101
LCS 570-311121/5	Lab Control Sample	89	91	97	100
LCSD 570-311121/6	Lab Control Sample Dup	94	93	98	101
MB 570-311121/8	Method Blank	102	90	102	102

Surrogate Legend

DCA = 1,2-Dichloroethane-d4 (Surr)

BFB = 4-Bromofluorobenzene (Surr)

DBFM = Dibromofluoromethane (Surr)

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)

Lab Sample ID	Client Sample ID	NBZ (58-135)
570-130503-2	CEFF	64
570-130503-3	CBT	75
570-130503-4	POX	82
LCS 570-311127/2-A	Lab Control Sample	66
LCSD 570-311127/3-A	Lab Control Sample Dup	67
MB 570-311127/1-A	Method Blank	68

Surrogate Legend

NBZ = Nitrobenzene-d5

Method: 300.1 - Disinfection By-Products, (IC)

Matrix: Water

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	DCAA (90-115)
570-130150-J-1 MS	Matrix Spike	106
570-130150-J-1 MSD	Matrix Spike Duplicate	113
570-130503-4	POX	108
570-130503-6	INF	109
LCS 570-310916/6	Lab Control Sample	106
LCSD 570-310916/7	Lab Control Sample Dup	106
MB 570-310916/5	Method Blank	106
MRL 570-310916/4	Lab Control Sample	108

Surrogate Legend

DCAA = Dichloroacetate (Surr)

Isotope Dilution Summary

Client: Hargis + Associates, Inc.
Project/Site: Raytheon / 532.15

Job ID: 570-130503-1

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 (21-120)
570-130503-2	CEFF	24
570-130503-3	CBT	22
570-130503-4	POX	22
LCS 570-311127/2-A	Lab Control Sample	21
LCSD 570-311127/3-A	Lab Control Sample Dup	21
MB 570-311127/1-A	Method Blank	23

Surrogate Legend

DXE = 1,4-Dioxane-d8

QC Sample Results

Client: Hargis + Associates, Inc.
Project/Site: Raytheon / 532.15

Job ID: 570-130503-1

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

Lab Sample ID: MB 570-311121/8

Matrix: Water

Analysis Batch: 311121

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		ug/L			03/13/23 21:13	1
1,1,1-Trichloroethane	ND		0.50		ug/L			03/13/23 21:13	1
1,1,2,2-Tetrachloroethane	ND		0.50		ug/L			03/13/23 21:13	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.50		ug/L			03/13/23 21:13	1
1,1,2-Trichloroethane	ND		0.50		ug/L			03/13/23 21:13	1
1,1-Dichloroethane	ND		0.50		ug/L			03/13/23 21:13	1
1,1-Dichloroethene	ND		0.50		ug/L			03/13/23 21:13	1
1,1-Dichloropropene	ND		0.50		ug/L			03/13/23 21:13	1
1,2,3-Trichlorobenzene	ND		0.50		ug/L			03/13/23 21:13	1
1,2,3-Trichloropropane	ND		0.50		ug/L			03/13/23 21:13	1
1,2,4-Trichlorobenzene	ND		0.50		ug/L			03/13/23 21:13	1
1,2,4-Trimethylbenzene	ND		0.50		ug/L			03/13/23 21:13	1
1,2-Dibromo-3-Chloropropane	ND		1.0		ug/L			03/13/23 21:13	1
1,2-Dibromoethane	ND		0.50		ug/L			03/13/23 21:13	1
1,2-Dichlorobenzene	ND		0.50		ug/L			03/13/23 21:13	1
1,2-Dichloroethane	ND		0.50		ug/L			03/13/23 21:13	1
1,2-Dichloropropane	ND		0.50		ug/L			03/13/23 21:13	1
1,3,5-Trimethylbenzene	ND		0.50		ug/L			03/13/23 21:13	1
1,3-Dichlorobenzene	ND		0.50		ug/L			03/13/23 21:13	1
1,3-Dichloropropane	ND		0.50		ug/L			03/13/23 21:13	1
1,4-Dichlorobenzene	ND		0.50		ug/L			03/13/23 21:13	1
2,2-Dichloropropane	ND		0.50		ug/L			03/13/23 21:13	1
2-Butanone	ND		5.0		ug/L			03/13/23 21:13	1
2-Chlorotoluene	ND		0.50		ug/L			03/13/23 21:13	1
2-Hexanone	ND		6.0		ug/L			03/13/23 21:13	1
4-Chlorotoluene	ND		0.50		ug/L			03/13/23 21:13	1
4-Methyl-2-pentanone	ND		5.0		ug/L			03/13/23 21:13	1
Acetone	ND		8.0		ug/L			03/13/23 21:13	1
Benzene	ND		0.50		ug/L			03/13/23 21:13	1
Bromobenzene	ND		0.50		ug/L			03/13/23 21:13	1
Bromochloromethane	ND		1.0		ug/L			03/13/23 21:13	1
Bromodichloromethane	ND		0.50		ug/L			03/13/23 21:13	1
Bromoform	ND		0.50		ug/L			03/13/23 21:13	1
Bromomethane	ND		2.0		ug/L			03/13/23 21:13	1
cis-1,2-Dichloroethene	ND		0.50		ug/L			03/13/23 21:13	1
cis-1,3-Dichloropropene	ND		0.50		ug/L			03/13/23 21:13	1
Carbon disulfide	ND		1.0		ug/L			03/13/23 21:13	1
Carbon tetrachloride	ND		0.50		ug/L			03/13/23 21:13	1
Chlorobenzene	ND		0.50		ug/L			03/13/23 21:13	1
Chloroethane	ND		0.50		ug/L			03/13/23 21:13	1
Chloroform	ND		0.50		ug/L			03/13/23 21:13	1
Chloromethane	ND		1.0		ug/L			03/13/23 21:13	1
Dibromochloromethane	ND		0.50		ug/L			03/13/23 21:13	1
Dibromomethane	ND		0.50		ug/L			03/13/23 21:13	1
Dichlorodifluoromethane	ND		1.0		ug/L			03/13/23 21:13	1
Di-isopropyl ether (DIPE)	ND		0.50		ug/L			03/13/23 21:13	1
Ethanol	ND		50		ug/L			03/13/23 21:13	1
Ethylbenzene	ND		0.50		ug/L			03/13/23 21:13	1

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QC Sample Results

Client: Hargis + Associates, Inc.
Project/Site: Raytheon / 532.15

Job ID: 570-130503-1

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

Lab Sample ID: MB 570-311121/8

Matrix: Water

Analysis Batch: 311121

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethyl-t-butyl ether (ETBE)	ND		0.50		ug/L			03/13/23 21:13	1
Isopropylbenzene	ND		0.50		ug/L			03/13/23 21:13	1
Methylene Chloride	ND		1.0		ug/L			03/13/23 21:13	1
Methyl-t-Butyl Ether (MTBE)	ND		0.50		ug/L			03/13/23 21:13	1
Naphthalene	ND		1.0		ug/L			03/13/23 21:13	1
n-Butylbenzene	ND		0.50		ug/L			03/13/23 21:13	1
N-Propylbenzene	ND		0.50		ug/L			03/13/23 21:13	1
o-Xylene	ND		0.50		ug/L			03/13/23 21:13	1
m,p-Xylene	ND		1.0		ug/L			03/13/23 21:13	1
p-Isopropyltoluene	ND		0.50		ug/L			03/13/23 21:13	1
sec-Butylbenzene	ND		0.50		ug/L			03/13/23 21:13	1
Styrene	ND		0.50		ug/L			03/13/23 21:13	1
trans-1,2-Dichloroethene	ND		0.50		ug/L			03/13/23 21:13	1
trans-1,3-Dichloropropene	ND		0.50		ug/L			03/13/23 21:13	1
Tert-amyl-methyl ether (TAME)	ND		0.50		ug/L			03/13/23 21:13	1
tert-Butyl alcohol (TBA)	ND		5.0		ug/L			03/13/23 21:13	1
tert-Butylbenzene	ND		0.50		ug/L			03/13/23 21:13	1
Tetrachloroethene	ND		0.50		ug/L			03/13/23 21:13	1
Toluene	ND		0.50		ug/L			03/13/23 21:13	1
Trichloroethene	ND		0.50		ug/L			03/13/23 21:13	1
Trichlorofluoromethane	ND		0.50		ug/L			03/13/23 21:13	1
Vinyl acetate	ND		5.0		ug/L			03/13/23 21:13	1
Vinyl chloride	ND		0.50		ug/L			03/13/23 21:13	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	102		64 - 132		03/13/23 21:13	1
4-Bromofluorobenzene (Surr)	90		76 - 120		03/13/23 21:13	1
Dibromofluoromethane (Surr)	102		80 - 120		03/13/23 21:13	1
Toluene-d8 (Surr)	102		80 - 120		03/13/23 21:13	1

Lab Sample ID: LCS 570-311121/5

Matrix: Water

Analysis Batch: 311121

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
1,1-Dichloroethene	10.0	9.638		ug/L		96	80 - 126
1,2-Dibromoethane	10.0	8.777		ug/L		88	80 - 125
1,2-Dichlorobenzene	10.0	9.903		ug/L		99	80 - 120
1,2-Dichloroethane	10.0	9.443		ug/L		94	76 - 130
Benzene	10.0	10.68		ug/L		107	80 - 120
Carbon tetrachloride	10.0	10.09		ug/L		101	61 - 139
Chlorobenzene	10.0	10.31		ug/L		103	80 - 120
Di-isopropyl ether (DIPE)	10.0	9.312		ug/L		93	65 - 145
Ethanol	100	113.6		ug/L		114	20 - 180
Ethylbenzene	10.0	10.58		ug/L		106	80 - 126
Ethyl-t-butyl ether (ETBE)	10.0	8.089		ug/L		81	76 - 125
Methyl-t-Butyl Ether (MTBE)	10.0	7.983		ug/L		80	69 - 128
o-Xylene	10.0	10.17		ug/L		102	80 - 124

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QC Sample Results

Client: Hargis + Associates, Inc.
Project/Site: Raytheon / 532.15

Job ID: 570-130503-1

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

Lab Sample ID: LCS 570-311121/5

Matrix: Water

Analysis Batch: 311121

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
m,p-Xylene	20.0	21.36		ug/L		107	80 - 123
Tert-amyl-methyl ether (TAME)	10.0	7.877		ug/L		79	78 - 133
tert-Butyl alcohol (TBA)	50.0	51.63		ug/L		103	68 - 133
Toluene	10.0	10.34		ug/L		103	80 - 120
Trichloroethene	10.0	10.03		ug/L		100	77 - 124
Vinyl chloride	10.0	9.256		ug/L		93	50 - 160

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	89		64 - 132
4-Bromofluorobenzene (Surr)	91		76 - 120
Dibromofluoromethane (Surr)	97		80 - 120
Toluene-d8 (Surr)	100		80 - 120

Lab Sample ID: LCSD 570-311121/6

Matrix: Water

Analysis Batch: 311121

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-Dichloroethene	10.0	10.79		ug/L		108	80 - 126	11	21
1,2-Dibromoethane	10.0	9.560		ug/L		96	80 - 125	9	20
1,2-Dichlorobenzene	10.0	10.38		ug/L		104	80 - 120	5	20
1,2-Dichloroethane	10.0	10.47		ug/L		105	76 - 130	10	20
Benzene	10.0	11.39		ug/L		114	80 - 120	6	20
Carbon tetrachloride	10.0	10.91		ug/L		109	61 - 139	8	20
Chlorobenzene	10.0	10.83		ug/L		108	80 - 120	5	20
Di-isopropyl ether (DIPE)	10.0	10.21		ug/L		102	65 - 145	9	20
Ethanol	100	115.5		ug/L		116	20 - 180	2	30
Ethylbenzene	10.0	10.98		ug/L		110	80 - 126	4	20
Ethyl-t-butyl ether (ETBE)	10.0	9.241		ug/L		92	76 - 125	13	20
Methyl-t-Butyl Ether (MTBE)	10.0	9.207		ug/L		92	69 - 128	14	20
o-Xylene	10.0	10.55		ug/L		106	80 - 124	4	20
m,p-Xylene	20.0	21.73		ug/L		109	80 - 123	2	20
Tert-amyl-methyl ether (TAME)	10.0	9.366		ug/L		94	78 - 133	17	20
tert-Butyl alcohol (TBA)	50.0	54.11		ug/L		108	68 - 133	5	21
Toluene	10.0	11.19		ug/L		112	80 - 120	8	20
Trichloroethene	10.0	11.00		ug/L		110	77 - 124	9	20
Vinyl chloride	10.0	10.29		ug/L		103	50 - 160	11	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	94		64 - 132
4-Bromofluorobenzene (Surr)	93		76 - 120
Dibromofluoromethane (Surr)	98		80 - 120
Toluene-d8 (Surr)	101		80 - 120

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QC Sample Results

Client: Hargis + Associates, Inc.
Project/Site: Raytheon / 532.15

Job ID: 570-130503-1

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

Lab Sample ID: MB 570-311127/1-A

Matrix: Water

Analysis Batch: 311451

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 311127

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	ND		0.50		ug/L		03/14/23 10:00	03/14/23 16:54	1
Isotope Dilution	%Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,4-Dioxane-d8	23		21 - 120				03/14/23 10:00	03/14/23 16:54	1
Surrogate	%Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
Nitrobenzene-d5	68		58 - 135				03/14/23 10:00	03/14/23 16:54	1

Lab Sample ID: LCS 570-311127/2-A

Matrix: Water

Analysis Batch: 311451

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 311127

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits	
1,4-Dioxane	20.0	17.96		ug/L		90	63 - 144	
Isotope Dilution	%Recovery	LCS Qualifier	Limits					
1,4-Dioxane-d8	21		21 - 120					
Surrogate	%Recovery	LCS Qualifier	Limits					
Nitrobenzene-d5	66		58 - 135					

Lab Sample ID: LCSD 570-311127/3-A

Matrix: Water

Analysis Batch: 311451

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 311127

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
1,4-Dioxane	20.0	20.50		ug/L		103	63 - 144	13	20
Isotope Dilution	%Recovery	LCSD Qualifier	Limits						
1,4-Dioxane-d8	21		21 - 120						
Surrogate	%Recovery	LCSD Qualifier	Limits						
Nitrobenzene-d5	67		58 - 135						

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 570-310527/5

Matrix: Water

Analysis Batch: 310527

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromide	ND		0.10		mg/L			03/10/23 09:51	1

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QC Sample Results

Client: Hargis + Associates, Inc.
Project/Site: Raytheon / 532.15

Job ID: 570-130503-1

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCS 570-310527/6

Matrix: Water

Analysis Batch: 310527

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Bromide	5.00	4.941		mg/L		99	90 - 110

Lab Sample ID: LCSD 570-310527/7

Matrix: Water

Analysis Batch: 310527

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
Bromide	5.00	4.940		mg/L		99	90 - 110	0	15

Lab Sample ID: 570-130621-H-2 MS

Matrix: Water

Analysis Batch: 310527

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Bromide	0.36		5.00	5.487		mg/L		102	80 - 120

Lab Sample ID: 570-130621-H-2 MSD

Matrix: Water

Analysis Batch: 310527

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Bromide	0.36		5.00	5.241		mg/L		98	80 - 120	5	20

Method: 300.1 - Disinfection By-Products, (IC)

Lab Sample ID: MB 570-310916/5

Matrix: Water

Analysis Batch: 310916

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromate	ND		5.0		ug/L			03/13/23 04:28	1

Surrogate	%Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Dichloroacetate (Surr)	106		90 - 115		03/13/23 04:28	1

Lab Sample ID: LCS 570-310916/6

Matrix: Water

Analysis Batch: 310916

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Bromate	25.0	27.08		ug/L		108	75 - 125

Surrogate	%Recovery	LCS Qualifier	Limits
Dichloroacetate (Surr)	106		90 - 115

QC Sample Results

Client: Hargis + Associates, Inc.
Project/Site: Raytheon / 532.15

Job ID: 570-130503-1

Method: 300.1 - Disinfection By-Products, (IC) (Continued)

Lab Sample ID: LCSD 570-310916/7

Matrix: Water

Analysis Batch: 310916

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
Bromate			25.0	26.59		ug/L		106	75 - 125	2	20
Surrogate	%Recovery	LCSD Qualifier	Limits								
Dichloroacetate (Surr)	106		90 - 115								

Lab Sample ID: MRL 570-310916/4

Matrix: Water

Analysis Batch: 310916

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte			Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits		
Bromate			5.00	5.239		ug/L		105	50 - 150		
Surrogate	%Recovery	MRL Qualifier	Limits								
Dichloroacetate (Surr)	108		90 - 115								

Lab Sample ID: 570-130150-J-1 MS

Matrix: Water

Analysis Batch: 310916

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Bromate	ND	F1	100	71.74	F1	ug/L		72	75 - 125		
Surrogate	%Recovery	MS Qualifier	Limits								
Dichloroacetate (Surr)	106		90 - 115								

Lab Sample ID: 570-130150-J-1 MSD

Matrix: Water

Analysis Batch: 310916

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Bromate	ND	F1	100	73.10	F1	ug/L		73	75 - 125	2	20
Surrogate	%Recovery	MSD Qualifier	Limits								
Dichloroacetate (Surr)	113		90 - 115								

Method: SM 2320B - Alkalinity

Lab Sample ID: MB 570-312588/42

Matrix: Water

Analysis Batch: 312588

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity, Total (As CaCO3)	ND		5.00		mg/L			03/16/23 23:45	1
Bicarbonate (as CaCO3)	ND		5.00		mg/L			03/16/23 23:45	1
Carbonate (as CaCO3)	ND		5.00		mg/L			03/16/23 23:45	1
Hydroxide (as CaCO3)	ND		5.00		mg/L			03/16/23 23:45	1

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QC Sample Results

Client: Hargis + Associates, Inc.
Project/Site: Raytheon / 532.15

Job ID: 570-130503-1

Method: SM 2320B - Alkalinity (Continued)

Lab Sample ID: MB 570-312588/9

Matrix: Water

Analysis Batch: 312588

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity, Total (As CaCO ₃)	ND		5.00		mg/L			03/16/23 20:27	1
Bicarbonate (as CaCO ₃)	ND		5.00		mg/L			03/16/23 20:27	1
Carbonate (as CaCO ₃)	ND		5.00		mg/L			03/16/23 20:27	1
Hydroxide (as CaCO ₃)	ND		5.00		mg/L			03/16/23 20:27	1

Lab Sample ID: LCS 570-312588/40

Matrix: Water

Analysis Batch: 312588

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Alkalinity, Total (As CaCO ₃)	106	97.25		mg/L		92	78 - 110

Lab Sample ID: LCSD 570-312588/41

Matrix: Water

Analysis Batch: 312588

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
Alkalinity, Total (As CaCO ₃)	106	97.79		mg/L		92	78 - 110	1	10

Lab Sample ID: 570-131129-C-1 DU

Matrix: Water

Analysis Batch: 312588

Client Sample ID: Duplicate

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Alkalinity, Total (As CaCO ₃)	112		111.9		mg/L		0.1	25
Bicarbonate (as CaCO ₃)	112		111.9		mg/L		0.1	25
Carbonate (as CaCO ₃)	ND		ND		mg/L		NC	25
Hydroxide (as CaCO ₃)	ND		ND		mg/L		NC	25

Method: SM 2540D - Solids, Total Suspended (TSS)

Lab Sample ID: MB 570-310723/1

Matrix: Water

Analysis Batch: 310723

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	ND		1.00		mg/L			03/10/23 16:40	1

Lab Sample ID: LCS 570-310723/2

Matrix: Water

Analysis Batch: 310723

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Suspended Solids	100	94.00		mg/L		94	77 - 116

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QC Sample Results

Client: Hargis + Associates, Inc.
Project/Site: Raytheon / 532.15

Job ID: 570-130503-1

Method: SM 2540D - Solids, Total Suspended (TSS) (Continued)

Lab Sample ID: LCSD 570-310723/3

Matrix: Water

Analysis Batch: 310723

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
Total Suspended Solids	100	96.00		mg/L		96	77 - 116	2	10

Lab Sample ID: 380-39743-A-6 DU

Matrix: Water

Analysis Batch: 310723

Client Sample ID: Duplicate

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Suspended Solids	9280		9380		mg/L		1	10

Method: SM 5310D - Organic Carbon, Total (TOC)

Lab Sample ID: MB 570-313172/33

Matrix: Water

Analysis Batch: 313172

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon, Total Organic	ND		0.500		mg/L			03/18/23 05:33	1

Lab Sample ID: LCS 570-313172/34

Matrix: Water

Analysis Batch: 313172

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Carbon, Total Organic	5.03	4.998		mg/L		99	85 - 115

Lab Sample ID: LCSD 570-313172/35

Matrix: Water

Analysis Batch: 313172

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
Carbon, Total Organic	5.03	4.999		mg/L		99	85 - 115	0	20

Lab Sample ID: 580-124444-B-3 MS

Matrix: Water

Analysis Batch: 313172

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Carbon, Total Organic	1.48		5.03	5.569		mg/L		81	31 - 145

Lab Sample ID: 580-124444-B-3 MSD

Matrix: Water

Analysis Batch: 313172

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Carbon, Total Organic	1.48		5.03	5.498		mg/L		80	31 - 145	1	20

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QC Association Summary

Client: Hargis + Associates, Inc.
Project/Site: Raytheon / 532.15

Job ID: 570-130503-1

GC/MS VOA

Analysis Batch: 311121

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-130503-1	TB-030723	Total/NA	Water	8260B	
570-130503-2	CEFF	Total/NA	Water	8260B	
570-130503-3	CBT	Total/NA	Water	8260B	
570-130503-4	POX	Total/NA	Water	8260B	
570-130503-6	INF	Total/NA	Water	8260B	
570-130503-7	EW-02	Total/NA	Water	8260B	
570-130503-8	MW-29	Total/NA	Water	8260B	
MB 570-311121/8	Method Blank	Total/NA	Water	8260B	
LCS 570-311121/5	Lab Control Sample	Total/NA	Water	8260B	
LCSD 570-311121/6	Lab Control Sample Dup	Total/NA	Water	8260B	

GC/MS Semi VOA

Prep Batch: 311127

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-130503-2	CEFF	Total/NA	Water	3510C	
570-130503-3	CBT	Total/NA	Water	3510C	
570-130503-4	POX	Total/NA	Water	3510C	
MB 570-311127/1-A	Method Blank	Total/NA	Water	3510C	
LCS 570-311127/2-A	Lab Control Sample	Total/NA	Water	3510C	
LCSD 570-311127/3-A	Lab Control Sample Dup	Total/NA	Water	3510C	

Analysis Batch: 311451

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-130503-2	CEFF	Total/NA	Water	8270C SIM ID	311127
570-130503-3	CBT	Total/NA	Water	8270C SIM ID	311127
570-130503-4	POX	Total/NA	Water	8270C SIM ID	311127
MB 570-311127/1-A	Method Blank	Total/NA	Water	8270C SIM ID	311127
LCS 570-311127/2-A	Lab Control Sample	Total/NA	Water	8270C SIM ID	311127
LCSD 570-311127/3-A	Lab Control Sample Dup	Total/NA	Water	8270C SIM ID	311127

HPLC/IC

Analysis Batch: 310527

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-130503-6	INF	Total/NA	Water	300.0	
570-130503-7	EW-02	Total/NA	Water	300.0	
570-130503-8	MW-29	Total/NA	Water	300.0	
MB 570-310527/5	Method Blank	Total/NA	Water	300.0	
LCS 570-310527/6	Lab Control Sample	Total/NA	Water	300.0	
LCSD 570-310527/7	Lab Control Sample Dup	Total/NA	Water	300.0	
570-130621-H-2 MS	Matrix Spike	Total/NA	Water	300.0	
570-130621-H-2 MSD	Matrix Spike Duplicate	Total/NA	Water	300.0	

Analysis Batch: 310916

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-130503-4	POX	Total/NA	Water	300.1	
570-130503-6	INF	Total/NA	Water	300.1	
MB 570-310916/5	Method Blank	Total/NA	Water	300.1	
LCS 570-310916/6	Lab Control Sample	Total/NA	Water	300.1	
LCSD 570-310916/7	Lab Control Sample Dup	Total/NA	Water	300.1	
MRL 570-310916/4	Lab Control Sample	Total/NA	Water	300.1	

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QC Association Summary

Client: Hargis + Associates, Inc.
Project/Site: Raytheon / 532.15

Job ID: 570-130503-1

HPLC/IC (Continued)

Analysis Batch: 310916 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-130150-J-1 MS	Matrix Spike	Total/NA	Water	300.1	
570-130150-J-1 MSD	Matrix Spike Duplicate	Total/NA	Water	300.1	

General Chemistry

Analysis Batch: 310723

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-130503-5	PF	Total/NA	Water	SM 2540D	
MB 570-310723/1	Method Blank	Total/NA	Water	SM 2540D	
LCS 570-310723/2	Lab Control Sample	Total/NA	Water	SM 2540D	
LCSD 570-310723/3	Lab Control Sample Dup	Total/NA	Water	SM 2540D	
380-39743-A-6 DU	Duplicate	Total/NA	Water	SM 2540D	

Analysis Batch: 312588

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-130503-4	POX	Total/NA	Water	SM 2320B	
570-130503-5	PF	Total/NA	Water	SM 2320B	
MB 570-312588/42	Method Blank	Total/NA	Water	SM 2320B	
MB 570-312588/9	Method Blank	Total/NA	Water	SM 2320B	
LCS 570-312588/40	Lab Control Sample	Total/NA	Water	SM 2320B	
LCSD 570-312588/41	Lab Control Sample Dup	Total/NA	Water	SM 2320B	
570-131129-C-1 DU	Duplicate	Total/NA	Water	SM 2320B	

Analysis Batch: 313172

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-130503-4	POX	Total/NA	Water	SM 5310D	
570-130503-5	PF	Total/NA	Water	SM 5310D	
MB 570-313172/33	Method Blank	Total/NA	Water	SM 5310D	
LCS 570-313172/34	Lab Control Sample	Total/NA	Water	SM 5310D	
LCSD 570-313172/35	Lab Control Sample Dup	Total/NA	Water	SM 5310D	
580-124444-B-3 MS	Matrix Spike	Total/NA	Water	SM 5310D	
580-124444-B-3 MSD	Matrix Spike Duplicate	Total/NA	Water	SM 5310D	

Lab Chronicle

Client: Hargis + Associates, Inc.
Project/Site: Raytheon / 532.15

Job ID: 570-130503-1

Client Sample ID: TB-030723

Lab Sample ID: 570-130503-1

Date Collected: 03/07/23 08:00

Matrix: Water

Date Received: 03/07/23 12:58

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	311121	03/14/23 00:00	A1W	EET CAL 4
Instrument ID: GCMSUU										

Client Sample ID: CEFF

Lab Sample ID: 570-130503-2

Date Collected: 03/07/23 08:47

Matrix: Water

Date Received: 03/07/23 12:58

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	311121	03/14/23 00:25	A1W	EET CAL 4
Instrument ID: GCMSUU										
Total/NA	Prep	3510C			100 mL	10 mL	311127	03/14/23 10:00	RY4P	EET CAL 4
Total/NA	Analysis	8270C SIM ID		1	1 mL	1 mL	311451	03/14/23 20:32	A1W	EET CAL 4
Instrument ID: GCMSDDD										

Client Sample ID: CBT

Lab Sample ID: 570-130503-3

Date Collected: 03/07/23 09:00

Matrix: Water

Date Received: 03/07/23 12:58

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	311121	03/14/23 00:50	A1W	EET CAL 4
Instrument ID: GCMSUU										
Total/NA	Prep	3510C			100 mL	10 mL	311127	03/14/23 10:00	RY4P	EET CAL 4
Total/NA	Analysis	8270C SIM ID		1	1 mL	1 mL	311451	03/14/23 20:47	A1W	EET CAL 4
Instrument ID: GCMSDDD										

Client Sample ID: POX

Lab Sample ID: 570-130503-4

Date Collected: 03/07/23 09:05

Matrix: Water

Date Received: 03/07/23 12:58

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	311121	03/14/23 01:15	A1W	EET CAL 4
Instrument ID: GCMSUU										
Total/NA	Prep	3510C			100 mL	10 mL	311127	03/14/23 10:00	RY4P	EET CAL 4
Total/NA	Analysis	8270C SIM ID		1	1 mL	1 mL	311451	03/14/23 21:01	A1W	EET CAL 4
Instrument ID: GCMSDDD										
Total/NA	Analysis	300.1		10	4 mL	4 mL	310916	03/13/23 10:41	YO8L	EET CAL 4
Instrument ID: IC32										
Total/NA	Analysis	SM 2320B		1	10 mL	10 mL	312588	03/17/23 02:18	BDH9	EET CAL 4
Instrument ID: ManSciMantech										
Total/NA	Analysis	SM 5310D		1	40 mL	40 mL	313172	03/18/23 14:40	GG0B	EET CAL 4
Instrument ID: TOC12										

Eurofins Calscience

Lab Chronicle

Client: Hargis + Associates, Inc.
Project/Site: Raytheon / 532.15

Job ID: 570-130503-1

Client Sample ID: PF

Lab Sample ID: 570-130503-5

Date Collected: 03/07/23 09:15

Matrix: Water

Date Received: 03/07/23 12:58

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 2320B		1	10 mL	10 mL	312588	03/17/23 02:24	BDH9	EET CAL 4
		Instrument ID: ManSciMantech								
Total/NA	Analysis	SM 2540D		1	1000 mL	1000 mL	310723	03/10/23 16:40	WVA4	EET CAL 4
		Instrument ID: BAL71								
Total/NA	Analysis	SM 5310D		1	40 mL	40 mL	313172	03/18/23 15:02	GG0B	EET CAL 4
		Instrument ID: TOC12								

Client Sample ID: INF

Lab Sample ID: 570-130503-6

Date Collected: 03/07/23 09:20

Matrix: Water

Date Received: 03/07/23 12:58

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	311121	03/14/23 02:04	A1W	EET CAL 4
		Instrument ID: GCMSUU								
Total/NA	Analysis	300.0		1	4 mL	4 mL	310527	03/10/23 19:23	PS	EET CAL 4
		Instrument ID: IC10								
Total/NA	Analysis	300.1		10	4 mL	4 mL	310916	03/13/23 11:15	YO8L	EET CAL 4
		Instrument ID: IC32								

Client Sample ID: EW-02

Lab Sample ID: 570-130503-7

Date Collected: 03/07/23 09:55

Matrix: Water

Date Received: 03/07/23 12:58

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	311121	03/14/23 02:29	A1W	EET CAL 4
		Instrument ID: GCMSUU								
Total/NA	Analysis	300.0		1	4 mL	4 mL	310527	03/10/23 19:40	PS	EET CAL 4
		Instrument ID: IC10								

Client Sample ID: MW-29

Lab Sample ID: 570-130503-8

Date Collected: 03/07/23 10:30

Matrix: Water

Date Received: 03/07/23 12:58

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		2	20 mL	20 mL	311121	03/14/23 01:39	A1W	EET CAL 4
		Instrument ID: GCMSUU								
Total/NA	Analysis	300.0		1	4 mL	4 mL	310527	03/10/23 19:56	PS	EET CAL 4
		Instrument ID: IC10								

Laboratory References:

EET CAL 4 = Eurofins Calscience Tustin, 2841 Dow Avenue, Tustin, CA 92780, TEL (714)895-5494

Accreditation/Certification Summary

Client: Hargis + Associates, Inc.
Project/Site: Raytheon / 532.15

Job ID: 570-130503-1

Laboratory: Eurofins Calscience

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
Oregon	NELAP	4175	02-02-24
The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.			
Analysis Method	Prep Method	Matrix	Analyte
SM 2320B		Water	Bicarbonate (as CaCO3)
SM 2320B		Water	Carbonate (as CaCO3)
SM 2320B		Water	Hydroxide (as CaCO3)

Method Summary

Client: Hargis + Associates, Inc.
Project/Site: Raytheon / 532.15

Job ID: 570-130503-1

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	EET CAL 4
8270C SIM ID	Semivolatile Organic Compounds (GC/MS SIM / Isotope Dilution)	SW846	EET CAL 4
300.0	Anions, Ion Chromatography	EPA	EET CAL 4
300.1	Disinfection By-Products, (IC)	EPA	EET CAL 4
SM 2320B	Alkalinity	SM	EET CAL 4
SM 2540D	Solids, Total Suspended (TSS)	SM	EET CAL 4
SM 5310D	Organic Carbon, Total (TOC)	SM	EET CAL 4
3510C	Liquid-Liquid Extraction (Separatory Funnel)	SW846	EET CAL 4
5030C	Purge and Trap	SW846	EET CAL 4

Protocol References:

EPA = US Environmental Protection Agency

SM = "Standard Methods For The Examination Of Water And Wastewater"

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

Laboratory References:

EET CAL 4 = Eurofins Calscience Tustin, 2841 Dow Avenue, Tustin, CA 92780, TEL (714)895-5494

Sample Summary

Client: Hargis + Associates, Inc.
Project/Site: Raytheon / 532.15

Job ID: 570-130503-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
570-130503-1	TB-030723	Water	03/07/23 08:00	03/07/23 12:58
570-130503-2	CEFF	Water	03/07/23 08:47	03/07/23 12:58
570-130503-3	CBT	Water	03/07/23 09:00	03/07/23 12:58
570-130503-4	POX	Water	03/07/23 09:05	03/07/23 12:58
570-130503-5	PF	Water	03/07/23 09:15	03/07/23 12:58
570-130503-6	INF	Water	03/07/23 09:20	03/07/23 12:58
570-130503-7	EW-02	Water	03/07/23 09:55	03/07/23 12:58
570-130503-8	MW-29	Water	03/07/23 10:30	03/07/23 12:58

Virendra Patel

From: Ruben Sanchez <RSanchez@HARGIS.COM>
Sent: Monday, March 13, 2023 12:19 PM
To: Virendra Patel
Cc: Steve Netto
Subject: RE: <Response Requested> Eurofins Calscience sample confirmation files from 570-130503-1 Raytheon / 532.15

EXTERNAL EMAIL*

Hi Virendra,

We can cancel the UV Absorption rate analysis to WECK Labs.

We plan on dropping this analysis from our sampling program altogether pending agency approval.

Thanks,

Ruben Sanchez, EIT
Cell: 805.814.1116



From: Virendra Patel <Virendra.Patel@et.eurofinsus.com>
Sent: Saturday, March 11, 2023 7:36 AM
To: Andrew Donnelly <ADONNELLY@HARGIS.COM>; Irish Jacoby <ijacoby@hargis.com>; Monica Morales <MMorales@Hargis.com>; Ross Horton <RHorton@HARGIS.COM>; Ruben Sanchez <RSanchez@HARGIS.COM>; Steve Netto <SNETTO@HARGIS.COM>; Tony Rossi <TROSSI@HARGIS.COM>; Patel Virendra <Virendra.Patel@et.eurofinsus.com>
Subject: <Response Requested> Eurofins Calscience sample confirmation files from 570-130503-1 Raytheon / 532.15
Importance: High

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Hello,

Attached please find the sample confirmation files for job 570-130503-1; Raytheon / 532.15

1. The UV Absorption rate to WECK has not shipped due to the volume of stormwater samples over the past 2 days. This

method is now outside of the 2 days hold time.

ACTION: Do you wish for us to send to WECK labs for screening or cancel? Please look into working directly with WECK labs for future events to meet hold times. Please give me a call to discuss if necessary. Thank you!

Please feel free to contact me if you have any questions.

Thank you.

Virendra Patel
Project Manager

Eurofins Calscience
Phone: 714-895-5494
Mobile: 714-887-9901

E-mail: Virendra.Patel@et.eurofinsus.com
www.eurofinsus.com/env



Reference: [570-436685]
Attachments: 3

> > Bank information has changed, please refer to remittance information on invoice. < <

* WARNING - EXTERNAL: This email originated from outside of Eurofins Environment Testing America. Do not click any links or open any attachments unless you trust the sender and know that the content is safe!



PROJECT: Raytheon Main GETS Monthly Sample

TASK NO.: 532.15

Project Manager Steve Netto

QA Manager Ruben Sanchez

Phone 858.455.6500

Fax 858.455.6533

Date: 3/7/2023
Page 1 of 1

Sampled By:				SAMPLE COLLECTION				MATRIX		PRESERVATION		CONTAINERS		ANALYSIS REQUESTED		Expected Concentration Range (ppb) for VOAs		SPECIAL HANDLING		REMARKS																	
LAB ID	SAMPLE ID	Date	Time	Groundwater	Lab prepared water	Hydrochloric Acid (HCl)	Nitric Acid (HNO ₃)	Ethylene Diamine	Sulfuric Acid (H ₂ SO ₄)	Ice	40-mL VOA	125 mL Poly	250 mL Amber	250 mL Poly	1 L Poly	125 mL Amber	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	Emergent VOCs 8260 SIM	1,4-Dioxane by EPA 8270 SIM	0 - 10	10 - 100	100 - 1,000	>1,000	24 hr TAT	48 Hour TAT	5 Day TAT	Level IV Data Validation Requested	MS/MSD Requested		
1	TB-030723	3/7/2023	8:00		X	X				X	2						X									X											
2	CEFF	3/7/2023	8:47	X	X					X	3					1	X								X	X											
3	CBT	3/7/2023	9:00	X	X					X	3					1	X								X	X											
4	POX	3/7/2023	9:05	X	X			X	X	X	6	1		1		1	X	X		X	X				X	X											
5	PF	3/7/2023	9:15	X					X	X	3		1	1	1					X	X	X	X														
6	INF	3/7/2023	9:20	X	X		X		X	X	6	1		1			X	X	X					X				X									
7	EW-02	3/7/2023	9:55	X	X				X	X	6			1			X	X						X			X										
8	MW-29	3/7/2023	10:30	X	X				X	X	6			1			X	X						X			X										
Total number of containers per analysis:												35	2	1	5	1	3	Total No. of Containers: 47																			
Relinquished By: / Company:				Date / Time		Received By: / Company				Date / Time		☐ No. of containers correct ☐ Received in good condition ☐ Custody seals secure ☐ Conforms to COC document																									
Relinquished By: / Company:				Date / Time		Received By: / Company				Date / Time																											

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.

29/28 SC12
Temperature on receipt



570-130503 Chain of Custody

Send Results to:
Steve Netto & Ruben Sanchez
3131 Camino Del Rio North
Suite 355
San Diego, CA 92108
Ph: 858.455.6500
snetto@hargis.com
rsanchez@hargis.com

Login Sample Receipt Checklist

Client: Hargis + Associates, Inc.

Job Number: 570-130503-1

Login Number: 130503

List Number: 1

Creator: Patel, Virendra

List Source: Eurofins Calscience

Question	Answer	Comment
Radioactivity wasn't checked or is $\leq$ 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 $<6\text{mm}$ (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

ANALYTICAL REPORT

PREPARED FOR

Attn: Steve Netto
Hargis + Associates, Inc.
3131 Camino del Rio N
Suite 355
San Diego, California 92108

Generated 4/5/2023 1:06:13 PM

JOB DESCRIPTION

Raytheon / 532.15

JOB NUMBER

570-130503-3

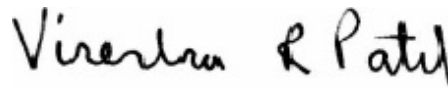
Job Notes

This report is issued solely for the use of the person or company to whom it is addressed. Any use, copying or disclosure other than by the intended recipient is unauthorized. If you have received this report in error, please notify the sender and destroy this report immediately. This report shall not be reproduced except in full, without prior express written approval by the laboratory.

The data in the report relate to the field sample(s) as received by the laboratory and associated QC. All results have been reviewed and have been found to be compliant with laboratory and accreditation requirements, with the exception of the noted deviation(s). For questions, please contact the Project Manager.

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Calscience Project Manager.

Authorization



Generated
4/5/2023 1:06:13 PM

Authorized for release by
Virendra Patel, Project Manager I
Virendra.Patel@et.eurofinsus.com
(714)895-5494

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Definitions/Glossary

Client: Hargis + Associates, Inc.
Project/Site: Raytheon / 532.15

Job ID: 570-130503-3

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
H	Sample was prepped or analyzed beyond the specified holding time

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	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 / 532.15

Job ID: 570-130503-3

Job ID: 570-130503-3

Laboratory: Eurofins Calscience

Narrative

Job Narrative 570-130503-3

Comments

No additional comments.

Receipt

The samples were received on 3/7/2023 12:58 PM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 2.8° C.

GC/MS VOA

Method 8260B SIM: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with analytical batch 570-317267. The laboratory control sample (LCS) was performed in duplicate (LCSD) to provide precision data for this batch.

Method 8260B SIM: The following samples were received outside of holding time: INF (570-130503-6), EW-02 (570-130503-7) and MW-29 (570-130503-8).

No additional analytical or quality issues were noted, other than those described above or 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 / 532.15

Job ID: 570-130503-3

Client Sample ID: INF

Lab Sample ID: 570-130503-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,4-Dioxane	24	H	10		ug/L	10		8260B SIM	Total/NA

Client Sample ID: EW-02

Lab Sample ID: 570-130503-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,4-Dioxane	4.4	H	1.0		ug/L	1		8260B SIM	Total/NA

Client Sample ID: MW-29

Lab Sample ID: 570-130503-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,4-Dioxane	94	H	25		ug/L	25		8260B SIM	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Calscience

Client Sample Results

Client: Hargis + Associates, Inc.
Project/Site: Raytheon / 532.15

Job ID: 570-130503-3

Method: SW846 8260B SIM - Volatile Organic Compounds (GC/MS)

Client Sample ID: INF
Date Collected: 03/07/23 09:20
Date Received: 03/07/23 12:58

Lab Sample ID: 570-130503-6
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	24	H	10		ug/L			04/04/23 19:51	10
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,4-Dichlorobutane (Surr)	111		67 - 133					04/04/23 19:51	10

Client Sample ID: EW-02
Date Collected: 03/07/23 09:55
Date Received: 03/07/23 12:58

Lab Sample ID: 570-130503-7
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	4.4	H	1.0		ug/L			04/04/23 20:17	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,4-Dichlorobutane (Surr)	116		67 - 133					04/04/23 20:17	1

Client Sample ID: MW-29
Date Collected: 03/07/23 10:30
Date Received: 03/07/23 12:58

Lab Sample ID: 570-130503-8
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	94	H	25		ug/L			04/04/23 20:43	25
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,4-Dichlorobutane (Surr)	123		67 - 133					04/04/23 20:43	25

Surrogate Summary

Client: Hargis + Associates, Inc.
Project/Site: Raytheon / 532.15

Job ID: 570-130503-3

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

Matrix: Water

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	14DCBTN (67-133)
570-130503-6	INF	111
570-130503-7	EW-02	116
570-130503-8	MW-29	123
LCS 570-317267/1012	Lab Control Sample	104
LCSD 570-317267/14	Lab Control Sample Dup	102
MB 570-317267/16	Method Blank	108

Surrogate Legend

14DCBTN = 1,4-Dichlorobutane (Surr)

QC Sample Results

Client: Hargis + Associates, Inc.
Project/Site: Raytheon / 532.15

Job ID: 570-130503-3

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

Lab Sample ID: MB 570-317267/16

Matrix: Water

Analysis Batch: 317267

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	ND		1.0		ug/L			04/04/23 18:59	1
Surrogate	MB %Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,4-Dichlorobutane (Surr)	108		67 - 133					04/04/23 18:59	1

Lab Sample ID: LCS 570-317267/1012

Matrix: Water

Analysis Batch: 317267

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
1,4-Dioxane	20.0	23.65		ug/L		118	75 - 120
Surrogate	LCS %Recovery	LCS Qualifier	Limits				
1,4-Dichlorobutane (Surr)	104		67 - 133				

Lab Sample ID: LCSD 570-317267/14

Matrix: Water

Analysis Batch: 317267

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
1,4-Dioxane	20.0	23.11		ug/L		116	75 - 120	2	20
Surrogate	LCSD %Recovery	LCSD Qualifier	Limits						
1,4-Dichlorobutane (Surr)	102		67 - 133						

QC Association Summary

Client: Hargis + Associates, Inc.
Project/Site: Raytheon / 532.15

Job ID: 570-130503-3

GC/MS VOA

Analysis Batch: 317267

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-130503-6	INF	Total/NA	Water	8260B SIM	
570-130503-7	EW-02	Total/NA	Water	8260B SIM	
570-130503-8	MW-29	Total/NA	Water	8260B SIM	
MB 570-317267/16	Method Blank	Total/NA	Water	8260B SIM	
LCS 570-317267/1012	Lab Control Sample	Total/NA	Water	8260B SIM	
LCSD 570-317267/14	Lab Control Sample Dup	Total/NA	Water	8260B SIM	

Lab Chronicle

Client: Hargis + Associates, Inc.
Project/Site: Raytheon / 532.15

Job ID: 570-130503-3

Client Sample ID: INF

Lab Sample ID: 570-130503-6

Date Collected: 03/07/23 09:20

Matrix: Water

Date Received: 03/07/23 12:58

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B SIM		10	25 mL	25 mL	317267	04/04/23 19:51	UJHB	EET CAL 4
Instrument ID: GCMSFFF										

Client Sample ID: EW-02

Lab Sample ID: 570-130503-7

Date Collected: 03/07/23 09:55

Matrix: Water

Date Received: 03/07/23 12:58

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B SIM		1	25 mL	25 mL	317267	04/04/23 20:17	UJHB	EET CAL 4
Instrument ID: GCMSFFF										

Client Sample ID: MW-29

Lab Sample ID: 570-130503-8

Date Collected: 03/07/23 10:30

Matrix: Water

Date Received: 03/07/23 12:58

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B SIM		25	25 mL	25 mL	317267	04/04/23 20:43	UJHB	EET CAL 4
Instrument ID: GCMSFFF										

Laboratory References:

EET CAL 4 = Eurofins Calscience Tustin, 2841 Dow Avenue, Tustin, CA 92780, TEL (714)895-5494

Accreditation/Certification Summary

Client: Hargis + Associates, Inc.
Project/Site: Raytheon / 532.15

Job ID: 570-130503-3

Laboratory: Eurofins Calscience

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Oregon	NELAP	4175	02-02-24

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14
- 15

Method Summary

Client: Hargis + Associates, Inc.
Project/Site: Raytheon / 532.15

Job ID: 570-130503-3

Method	Method Description	Protocol	Laboratory
8260B SIM	Volatile Organic Compounds (GC/MS)	SW846	EET CAL 4
5030C	Purge and Trap	SW846	EET CAL 4

Protocol References:

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

Laboratory References:

EET CAL 4 = Eurofins Calscience Tustin, 2841 Dow Avenue, Tustin, CA 92780, TEL (714)895-5494

Sample Summary

Client: Hargis + Associates, Inc.
Project/Site: Raytheon / 532.15

Job ID: 570-130503-3

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
570-130503-6	INF	Water	03/07/23 09:20	03/07/23 12:58
570-130503-7	EW-02	Water	03/07/23 09:55	03/07/23 12:58
570-130503-8	MW-29	Water	03/07/23 10:30	03/07/23 12:58

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11

12

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15

Virendra Patel

From: Ruben Sanchez <RSanchez@HARGIS.COM>
Sent: Monday, March 13, 2023 12:19 PM
To: Virendra Patel
Cc: Steve Netto
Subject: RE: <Response Requested> Eurofins Calscience sample confirmation files from 570-130503-1 Raytheon / 532.15

EXTERNAL EMAIL*

Hi Virendra,

We can cancel the UV Absorption rate analysis to WECK Labs.

We plan on dropping this analysis from our sampling program altogether pending agency approval.

Thanks,

Ruben Sanchez, EIT
Cell: 805.814.1116



From: Virendra Patel <Virendra.Patel@et.eurofinsus.com>
Sent: Saturday, March 11, 2023 7:36 AM
To: Andrew Donnelly <ADONNELLY@HARGIS.COM>; Irish Jacoby <ijacoby@hargis.com>; Monica Morales <MMorales@Hargis.com>; Ross Horton <RHorton@HARGIS.COM>; Ruben Sanchez <RSanchez@HARGIS.COM>; Steve Netto <SNETTO@HARGIS.COM>; Tony Rossi <TROSSI@HARGIS.COM>; Patel Virendra <Virendra.Patel@et.eurofinsus.com>
Subject: <Response Requested> Eurofins Calscience sample confirmation files from 570-130503-1 Raytheon / 532.15
Importance: High

CAUTION: This email originated from outside your organization. Do not click links, open attachments or follow instructions unless you have verified the sender and know the content is genuine and safe.

Hello,

Attached please find the sample confirmation files for job 570-130503-1; Raytheon / 532.15

1. The UV Absorption rate to WECK has not shipped due to the volume of stormwater samples over the past 2 days. This

method is now outside of the 2 days hold time.

ACTION: Do you wish for us to send to WECK labs for screening or cancel? Please look into working directly with WECK labs for future events to meet hold times. Please give me a call to discuss if necessary. Thank you!

Please feel free to contact me if you have any questions.

Thank you.

Virendra Patel
Project Manager

Eurofins Calscience
Phone: 714-895-5494
Mobile: 714-887-9901

E-mail: Virendra.Patel@et.eurofinsus.com
www.eurofinsus.com/env



Reference: [570-436685]
Attachments: 3

> > Bank information has changed, please refer to remittance information on invoice. < <

* WARNING - EXTERNAL: This email originated from outside of Eurofins Environment Testing America. Do not click any links or open any attachments unless you trust the sender and know that the content is safe!



PROJECT: Raytheon Main GETS Monthly Sample

TASK NO.: 532.15

Project Manager Steve Netto

QA Manager Ruben Sanchez

Phone 858.455.6500

Fax 858.455.6533

Date: 3/7/2023
Page 1 of 1

Sampled By:				SAMPLE COLLECTION				MATRIX		PRESERVATION		CONTAINERS		ANALYSIS REQUESTED		Expected Concentration Range (ppb) for VOAs		SPECIAL HANDLING		REMARKS																	
LAB ID	SAMPLE ID	Date	Time	Groundwater	Lab prepared water	Hydrochloric Acid (HCl)	Nitric Acid (HNO ₃)	Ethylene Diamine	Sulfuric Acid (H ₂ SO ₄)	Ice	40-mL VOA	125 mL Poly	250 mL Amber	250 mL Poly	1 L Poly	125 mL Amber	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	Emergent VOCs - 8260 SIM	1,4-Dioxane by EPA 8270 SIM	0 - 10	10 - 100	100 - 1,000	>1,000	24 hr TAT	48 Hour TAT	5 Day TAT	Level IV Data Validation Requested	MS/MSD Requested		
1	TB-030723	3/7/2023	8:00		X	X				X	2						X									X											
2	CEFF	3/7/2023	8:47	X	X					X	3					1	X								X	X											
3	CBT	3/7/2023	9:00	X		X				X	3					1	X								X	X											
4	POX	3/7/2023	9:05	X		X		X	X	X	6	1		1		1	X	X		X	X				X	X											
5	PF	3/7/2023	9:15	X					X	X	3		1	1	1					X	X	X	X														
6	INF	3/7/2023	9:20	X		X		X		X	6	1		1			X	X	X					X				X									
7	EW-02	3/7/2023	9:55	X		X				X	6			1			X	X						X			X										
8	MW-29	3/7/2023	10:30	X		X				X	6			1			X	X						X			X										
Total number of containers per analysis:											35	2	1	5	1	3	Total No. of Containers: 47																				

Relinquished By: / Company:	Date / Time	Received By: / Company	Date / Time
<i>[Signature]</i> HHA	3/7/23 12:58	<i>[Signature]</i> EC	3-7-23 12:58
Relinquished By: / Company:	Date / Time	Received By: / Company	Date / Time

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

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.

29/28 SC12
Temperature on receipt



570-130503 Chain of Custody

Send Results to:
Steve Netto & Ruben Sanchez
 3131 Camino Del Rio North
 Suite 355
 San Diego, CA 92108
 Ph: 858.455.6500
snetto@hargis.com
rsanchez@hargis.com

Login Sample Receipt Checklist

Client: Hargis + Associates, Inc.

Job Number: 570-130503-3

Login Number: 130503

List Number: 1

Creator: Patel, Virendra

List Source: Eurofins Calscience

Question	Answer	Comment
Radioactivity wasn't checked or is $\leq$ 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 $<6\text{mm}$ (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

ANALYTICAL REPORT

PREPARED FOR

Attn: Steve Netto
Hargis + Associates, Inc.
3131 Camino del Rio N
Suite 355
San Diego, California 92108

Generated 4/14/2023 7:56:49 AM

JOB DESCRIPTION

Raytheon / 532.15

JOB NUMBER

570-133983-1

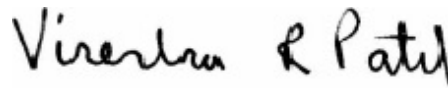
Job Notes

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The data in the report relate to the field sample(s) as received by the laboratory and associated QC. All results have been reviewed and have been found to be compliant with laboratory and accreditation requirements, with the exception of the noted deviation(s). For questions, please contact the Project Manager.

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Calscience Project Manager.

Authorization



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Authorized for release by
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Definitions/Glossary

Client: Hargis + Associates, Inc.
Project/Site: Raytheon / 532.15

Job ID: 570-133983-1

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
*1	LCS/LCSD RPD exceeds control limits.

HPLC/IC

Qualifier	Qualifier Description
F1	MS and/or MSD recovery exceeds control limits.

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 / 532.15

Job ID: 570-133983-1

Job ID: 570-133983-1

Laboratory: Eurofins Calscience

Narrative

Job Narrative 570-133983-1

Comments

No additional comments.

Receipt

The samples were received on 4/6/2023 1:54 PM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 2.6° C.

GC/MS VOA

Method 8260B: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with analytical batch 570-318305. The laboratory control sample (LCS) was performed in duplicate (LCSD) to provide precision data for this batch.

Method 8260B: The RPD of the laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) for analytical batch 570-318305 recovered outside control limits for the following analytes: Ethanol. Laboratory control sample / laboratory control sample duplicate (LCS/LCSD) percent recovery is in control for affected analytes.

Method 8260B SIM: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with analytical batch 570-318126. The laboratory control sample (LCS) was performed in duplicate (LCSD) to provide precision data for this batch.

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.

HPLC/IC

Method 300.1: The following samples were diluted for the bromate analyte due to the abundance of non-target chloride analyte: POX (570-133983-4), INF (570-133983-6) and (570-133665-J-1). Elevated reporting limits (RLs) are provided.

Method 300.0: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for Bromide for analytical batch 570-318712 were outside control limits. Sample matrix interference is suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

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

General Chemistry

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

Organic Prep

Method 3510C: The laboratory control sample (LCS) was performed in duplicate (LCSD) to provide precision data for this batch. Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with preparation batch 570-318959.

Method: 8270_Sim_MS_ID.

No additional analytical or quality issues were noted, other than those described above or 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 / 532.15

Job ID: 570-133983-1

Client Sample ID: TB-030723

Lab Sample ID: 570-133983-1

No Detections.

Client Sample ID: CEFF

Lab Sample ID: 570-133983-2

No Detections.

Client Sample ID: CBT

Lab Sample ID: 570-133983-3

No Detections.

Client Sample ID: POX

Lab Sample ID: 570-133983-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Alkalinity, Total (As CaCO ₃)	208		5.00		mg/L	1		SM 2320B	Total/NA
Bicarbonate (as CaCO ₃)	208		5.00		mg/L	1		SM 2320B	Total/NA

Client Sample ID: PF

Lab Sample ID: 570-133983-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Alkalinity, Total (As CaCO ₃)	209		5.00		mg/L	1		SM 2320B	Total/NA
Bicarbonate (as CaCO ₃)	209		5.00		mg/L	1		SM 2320B	Total/NA

Client Sample ID: INF

Lab Sample ID: 570-133983-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,4-Dioxane	26		10		ug/L	10		8260B SIM	Total/NA
1,1-Dichloroethene	32		0.50		ug/L	1		8260B	Total/NA
Bromide	0.20		0.10		mg/L	1		300.0	Total/NA

Client Sample ID: EW-02

Lab Sample ID: 570-133983-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,4-Dioxane	4.6		1.0		ug/L	1		8260B SIM	Total/NA
1,1-Dichloroethene	9.4		0.50		ug/L	1		8260B	Total/NA
Bromide	0.17		0.10		mg/L	1		300.0	Total/NA

Client Sample ID: MW-29

Lab Sample ID: 570-133983-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,4-Dioxane	71		25		ug/L	25		8260B SIM	Total/NA
1,1-Dichloroethane	0.99		0.50		ug/L	1		8260B	Total/NA
1,1-Dichloroethene	99		0.50		ug/L	1		8260B	Total/NA
Trichloroethene	1.4		0.50		ug/L	1		8260B	Total/NA
Trichlorofluoromethane	0.64		0.50		ug/L	1		8260B	Total/NA
Bromide	0.30		0.10		mg/L	1		300.0	Total/NA

This Detection Summary does not include radiochemical test results.

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Client Sample Results

Client: Hargis + Associates, Inc.
Project/Site: Raytheon / 532.15

Job ID: 570-133983-1

Method: SW846 8260B SIM - Volatile Organic Compounds (GC/MS)

Client Sample ID: INF
Date Collected: 04/06/23 10:15
Date Received: 04/06/23 13:54

Lab Sample ID: 570-133983-6
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	26		10		ug/L			04/07/23 00:16	10
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,4-Dichlorobutane (Surr)	128		67 - 133					04/07/23 00:16	10

Client Sample ID: EW-02
Date Collected: 04/06/23 10:35
Date Received: 04/06/23 13:54

Lab Sample ID: 570-133983-7
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	4.6		1.0		ug/L			04/07/23 00:42	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,4-Dichlorobutane (Surr)	131		67 - 133					04/07/23 00:42	1

Client Sample ID: MW-29
Date Collected: 04/06/23 10:45
Date Received: 04/06/23 13:54

Lab Sample ID: 570-133983-8
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	71		25		ug/L			04/07/23 01:08	25
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,4-Dichlorobutane (Surr)	132		67 - 133					04/07/23 01:08	25

Client Sample Results

Client: Hargis + Associates, Inc.
Project/Site: Raytheon / 532.15

Job ID: 570-133983-1

Method: SW846 8260B - Volatile Organic Compounds (GC/MS)

Client Sample ID: TB-030723
Date Collected: 04/06/23 08:00
Date Received: 04/06/23 13:54

Lab Sample ID: 570-133983-1
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		0.50		ug/L			04/07/23 12:32	1
1,1,1-Trichloroethane	ND		0.50		ug/L			04/07/23 12:32	1
1,1,2,2-Tetrachloroethane	ND		0.50		ug/L			04/07/23 12:32	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.50		ug/L			04/07/23 12:32	1
1,1,2-Trichloroethane	ND		0.50		ug/L			04/07/23 12:32	1
1,1-Dichloroethane	ND		0.50		ug/L			04/07/23 12:32	1
1,1-Dichloroethene	ND		0.50		ug/L			04/07/23 12:32	1
1,1-Dichloropropene	ND		0.50		ug/L			04/07/23 12:32	1
1,2,3-Trichlorobenzene	ND		0.50		ug/L			04/07/23 12:32	1
1,2,3-Trichloropropane	ND		0.50		ug/L			04/07/23 12:32	1
1,2,4-Trichlorobenzene	ND		0.50		ug/L			04/07/23 12:32	1
1,2,4-Trimethylbenzene	ND		0.50		ug/L			04/07/23 12:32	1
1,2-Dibromo-3-Chloropropane	ND		1.0		ug/L			04/07/23 12:32	1
1,2-Dibromoethane	ND		0.50		ug/L			04/07/23 12:32	1
1,2-Dichlorobenzene	ND		0.50		ug/L			04/07/23 12:32	1
1,2-Dichloroethane	ND		0.50		ug/L			04/07/23 12:32	1
1,2-Dichloropropane	ND		0.50		ug/L			04/07/23 12:32	1
1,3,5-Trimethylbenzene	ND		0.50		ug/L			04/07/23 12:32	1
1,3-Dichlorobenzene	ND		0.50		ug/L			04/07/23 12:32	1
1,3-Dichloropropane	ND		0.50		ug/L			04/07/23 12:32	1
1,4-Dichlorobenzene	ND		0.50		ug/L			04/07/23 12:32	1
2,2-Dichloropropane	ND		0.50		ug/L			04/07/23 12:32	1
2-Butanone	ND		5.0		ug/L			04/07/23 12:32	1
2-Chlorotoluene	ND		0.50		ug/L			04/07/23 12:32	1
2-Hexanone	ND		6.0		ug/L			04/07/23 12:32	1
4-Chlorotoluene	ND		0.50		ug/L			04/07/23 12:32	1
4-Methyl-2-pentanone	ND		5.0		ug/L			04/07/23 12:32	1
Acetone	ND		8.0		ug/L			04/07/23 12:32	1
Benzene	ND		0.50		ug/L			04/07/23 12:32	1
Bromobenzene	ND		0.50		ug/L			04/07/23 12:32	1
Bromochloromethane	ND		1.0		ug/L			04/07/23 12:32	1
Bromodichloromethane	ND		0.50		ug/L			04/07/23 12:32	1
Bromoform	ND		0.50		ug/L			04/07/23 12:32	1
Bromomethane	ND		2.0		ug/L			04/07/23 12:32	1
cis-1,2-Dichloroethene	ND		0.50		ug/L			04/07/23 12:32	1
cis-1,3-Dichloropropene	ND		0.50		ug/L			04/07/23 12:32	1
Carbon disulfide	ND		1.0		ug/L			04/07/23 12:32	1
Carbon tetrachloride	ND		0.50		ug/L			04/07/23 12:32	1
Chlorobenzene	ND		0.50		ug/L			04/07/23 12:32	1
Chloroethane	ND		0.50		ug/L			04/07/23 12:32	1
Chloroform	ND		0.50		ug/L			04/07/23 12:32	1
Chloromethane	ND		1.0		ug/L			04/07/23 12:32	1
Dibromochloromethane	ND		0.50		ug/L			04/07/23 12:32	1
Dibromomethane	ND		0.50		ug/L			04/07/23 12:32	1
Dichlorodifluoromethane	ND		1.0		ug/L			04/07/23 12:32	1
Di-isopropyl ether (DIPE)	ND		0.50		ug/L			04/07/23 12:32	1
Ethanol	ND	*1	50		ug/L			04/07/23 12:32	1
Ethylbenzene	ND		0.50		ug/L			04/07/23 12:32	1
Ethyl-t-butyl ether (ETBE)	ND		0.50		ug/L			04/07/23 12:32	1

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Client Sample Results

Client: Hargis + Associates, Inc.
Project/Site: Raytheon / 532.15

Job ID: 570-133983-1

Method: SW846 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: TB-030723
Date Collected: 04/06/23 08:00
Date Received: 04/06/23 13:54

Lab Sample ID: 570-133983-1
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Isopropylbenzene	ND		0.50		ug/L			04/07/23 12:32	1
Methylene Chloride	ND		1.0		ug/L			04/07/23 12:32	1
Methyl-t-Butyl Ether (MTBE)	ND		0.50		ug/L			04/07/23 12:32	1
Naphthalene	ND		1.0		ug/L			04/07/23 12:32	1
n-Butylbenzene	ND		0.50		ug/L			04/07/23 12:32	1
N-Propylbenzene	ND		0.50		ug/L			04/07/23 12:32	1
o-Xylene	ND		0.50		ug/L			04/07/23 12:32	1
m,p-Xylene	ND		1.0		ug/L			04/07/23 12:32	1
p-Isopropyltoluene	ND		0.50		ug/L			04/07/23 12:32	1
sec-Butylbenzene	ND		0.50		ug/L			04/07/23 12:32	1
Styrene	ND		0.50		ug/L			04/07/23 12:32	1
trans-1,2-Dichloroethene	ND		0.50		ug/L			04/07/23 12:32	1
trans-1,3-Dichloropropene	ND		0.50		ug/L			04/07/23 12:32	1
Tert-amyl-methyl ether (TAME)	ND		0.50		ug/L			04/07/23 12:32	1
tert-Butyl alcohol (TBA)	ND		5.0		ug/L			04/07/23 12:32	1
tert-Butylbenzene	ND		0.50		ug/L			04/07/23 12:32	1
Tetrachloroethene	ND		0.50		ug/L			04/07/23 12:32	1
Toluene	ND		0.50		ug/L			04/07/23 12:32	1
Trichloroethene	ND		0.50		ug/L			04/07/23 12:32	1
Trichlorofluoromethane	ND		0.50		ug/L			04/07/23 12:32	1
Vinyl acetate	ND		5.0		ug/L			04/07/23 12:32	1
Vinyl chloride	ND		0.50		ug/L			04/07/23 12:32	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	98		64 - 132		04/07/23 12:32	1
4-Bromofluorobenzene (Surr)	83		76 - 120		04/07/23 12:32	1
Dibromofluoromethane (Surr)	107		80 - 120		04/07/23 12:32	1
Toluene-d8 (Surr)	100		80 - 120		04/07/23 12:32	1

Client Sample ID: CEFF
Date Collected: 04/06/23 09:50
Date Received: 04/06/23 13:54

Lab Sample ID: 570-133983-2
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		0.50		ug/L			04/07/23 13:25	1
1,1,1-Trichloroethane	ND		0.50		ug/L			04/07/23 13:25	1
1,1,2,2-Tetrachloroethane	ND		0.50		ug/L			04/07/23 13:25	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.50		ug/L			04/07/23 13:25	1
1,1,2-Trichloroethane	ND		0.50		ug/L			04/07/23 13:25	1
1,1-Dichloroethane	ND		0.50		ug/L			04/07/23 13:25	1
1,1-Dichloroethene	ND		0.50		ug/L			04/07/23 13:25	1
1,1-Dichloropropene	ND		0.50		ug/L			04/07/23 13:25	1
1,2,3-Trichlorobenzene	ND		0.50		ug/L			04/07/23 13:25	1
1,2,3-Trichloropropane	ND		0.50		ug/L			04/07/23 13:25	1
1,2,4-Trichlorobenzene	ND		0.50		ug/L			04/07/23 13:25	1
1,2,4-Trimethylbenzene	ND		0.50		ug/L			04/07/23 13:25	1
1,2-Dibromo-3-Chloropropane	ND		1.0		ug/L			04/07/23 13:25	1
1,2-Dibromoethane	ND		0.50		ug/L			04/07/23 13:25	1
1,2-Dichlorobenzene	ND		0.50		ug/L			04/07/23 13:25	1
1,2-Dichloroethane	ND		0.50		ug/L			04/07/23 13:25	1
1,2-Dichloropropane	ND		0.50		ug/L			04/07/23 13:25	1

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Client Sample Results

Client: Hargis + Associates, Inc.
Project/Site: Raytheon / 532.15

Job ID: 570-133983-1

Method: SW846 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: CEFF

Date Collected: 04/06/23 09:50

Date Received: 04/06/23 13:54

Lab Sample ID: 570-133983-2

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	ND		0.50		ug/L			04/07/23 13:25	1
1,3-Dichlorobenzene	ND		0.50		ug/L			04/07/23 13:25	1
1,3-Dichloropropane	ND		0.50		ug/L			04/07/23 13:25	1
1,4-Dichlorobenzene	ND		0.50		ug/L			04/07/23 13:25	1
2,2-Dichloropropane	ND		0.50		ug/L			04/07/23 13:25	1
2-Butanone	ND		5.0		ug/L			04/07/23 13:25	1
2-Chlorotoluene	ND		0.50		ug/L			04/07/23 13:25	1
2-Hexanone	ND		6.0		ug/L			04/07/23 13:25	1
4-Chlorotoluene	ND		0.50		ug/L			04/07/23 13:25	1
4-Methyl-2-pentanone	ND		5.0		ug/L			04/07/23 13:25	1
Acetone	ND		8.0		ug/L			04/07/23 13:25	1
Benzene	ND		0.50		ug/L			04/07/23 13:25	1
Bromobenzene	ND		0.50		ug/L			04/07/23 13:25	1
Bromochloromethane	ND		1.0		ug/L			04/07/23 13:25	1
Bromodichloromethane	ND		0.50		ug/L			04/07/23 13:25	1
Bromoform	ND		0.50		ug/L			04/07/23 13:25	1
Bromomethane	ND		2.0		ug/L			04/07/23 13:25	1
cis-1,2-Dichloroethene	ND		0.50		ug/L			04/07/23 13:25	1
cis-1,3-Dichloropropene	ND		0.50		ug/L			04/07/23 13:25	1
Carbon disulfide	ND		1.0		ug/L			04/07/23 13:25	1
Carbon tetrachloride	ND		0.50		ug/L			04/07/23 13:25	1
Chlorobenzene	ND		0.50		ug/L			04/07/23 13:25	1
Chloroethane	ND		0.50		ug/L			04/07/23 13:25	1
Chloroform	ND		0.50		ug/L			04/07/23 13:25	1
Chloromethane	ND		1.0		ug/L			04/07/23 13:25	1
Dibromochloromethane	ND		0.50		ug/L			04/07/23 13:25	1
Dibromomethane	ND		0.50		ug/L			04/07/23 13:25	1
Dichlorodifluoromethane	ND		1.0		ug/L			04/07/23 13:25	1
Di-isopropyl ether (DIPE)	ND		0.50		ug/L			04/07/23 13:25	1
Ethanol	ND	*1	50		ug/L			04/07/23 13:25	1
Ethylbenzene	ND		0.50		ug/L			04/07/23 13:25	1
Ethyl-t-butyl ether (ETBE)	ND		0.50		ug/L			04/07/23 13:25	1
Isopropylbenzene	ND		0.50		ug/L			04/07/23 13:25	1
Methylene Chloride	ND		1.0		ug/L			04/07/23 13:25	1
Methyl-t-Butyl Ether (MTBE)	ND		0.50		ug/L			04/07/23 13:25	1
Naphthalene	ND		1.0		ug/L			04/07/23 13:25	1
n-Butylbenzene	ND		0.50		ug/L			04/07/23 13:25	1
N-Propylbenzene	ND		0.50		ug/L			04/07/23 13:25	1
o-Xylene	ND		0.50		ug/L			04/07/23 13:25	1
m,p-Xylene	ND		1.0		ug/L			04/07/23 13:25	1
p-Isopropyltoluene	ND		0.50		ug/L			04/07/23 13:25	1
sec-Butylbenzene	ND		0.50		ug/L			04/07/23 13:25	1
Styrene	ND		0.50		ug/L			04/07/23 13:25	1
trans-1,2-Dichloroethene	ND		0.50		ug/L			04/07/23 13:25	1
trans-1,3-Dichloropropene	ND		0.50		ug/L			04/07/23 13:25	1
Tert-amyl-methyl ether (TAME)	ND		0.50		ug/L			04/07/23 13:25	1
tert-Butyl alcohol (TBA)	ND		5.0		ug/L			04/07/23 13:25	1
tert-Butylbenzene	ND		0.50		ug/L			04/07/23 13:25	1
Tetrachloroethene	ND		0.50		ug/L			04/07/23 13:25	1

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Client Sample Results

Client: Hargis + Associates, Inc.
Project/Site: Raytheon / 532.15

Job ID: 570-133983-1

Method: SW846 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: CEFF

Date Collected: 04/06/23 09:50

Date Received: 04/06/23 13:54

Lab Sample ID: 570-133983-2

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Toluene	ND		0.50		ug/L			04/07/23 13:25	1
Trichloroethene	ND		0.50		ug/L			04/07/23 13:25	1
Trichlorofluoromethane	ND		0.50		ug/L			04/07/23 13:25	1
Vinyl acetate	ND		5.0		ug/L			04/07/23 13:25	1
Vinyl chloride	ND		0.50		ug/L			04/07/23 13:25	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	106		64 - 132		04/07/23 13:25	1
4-Bromofluorobenzene (Surr)	85		76 - 120		04/07/23 13:25	1
Dibromofluoromethane (Surr)	114		80 - 120		04/07/23 13:25	1
Toluene-d8 (Surr)	99		80 - 120		04/07/23 13:25	1

Client Sample ID: CBT

Date Collected: 04/06/23 09:55

Date Received: 04/06/23 13:54

Lab Sample ID: 570-133983-3

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		0.50		ug/L			04/07/23 13:51	1
1,1,1-Trichloroethane	ND		0.50		ug/L			04/07/23 13:51	1
1,1,2,2-Tetrachloroethane	ND		0.50		ug/L			04/07/23 13:51	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.50		ug/L			04/07/23 13:51	1
1,1,2-Trichloroethane	ND		0.50		ug/L			04/07/23 13:51	1
1,1-Dichloroethane	ND		0.50		ug/L			04/07/23 13:51	1
1,1-Dichloroethene	ND		0.50		ug/L			04/07/23 13:51	1
1,1-Dichloropropene	ND		0.50		ug/L			04/07/23 13:51	1
1,2,3-Trichlorobenzene	ND		0.50		ug/L			04/07/23 13:51	1
1,2,3-Trichloropropane	ND		0.50		ug/L			04/07/23 13:51	1
1,2,4-Trichlorobenzene	ND		0.50		ug/L			04/07/23 13:51	1
1,2,4-Trimethylbenzene	ND		0.50		ug/L			04/07/23 13:51	1
1,2-Dibromo-3-Chloropropane	ND		1.0		ug/L			04/07/23 13:51	1
1,2-Dibromoethane	ND		0.50		ug/L			04/07/23 13:51	1
1,2-Dichlorobenzene	ND		0.50		ug/L			04/07/23 13:51	1
1,2-Dichloroethane	ND		0.50		ug/L			04/07/23 13:51	1
1,2-Dichloropropane	ND		0.50		ug/L			04/07/23 13:51	1
1,3,5-Trimethylbenzene	ND		0.50		ug/L			04/07/23 13:51	1
1,3-Dichlorobenzene	ND		0.50		ug/L			04/07/23 13:51	1
1,3-Dichloropropane	ND		0.50		ug/L			04/07/23 13:51	1
1,4-Dichlorobenzene	ND		0.50		ug/L			04/07/23 13:51	1
2,2-Dichloropropane	ND		0.50		ug/L			04/07/23 13:51	1
2-Butanone	ND		5.0		ug/L			04/07/23 13:51	1
2-Chlorotoluene	ND		0.50		ug/L			04/07/23 13:51	1
2-Hexanone	ND		6.0		ug/L			04/07/23 13:51	1
4-Chlorotoluene	ND		0.50		ug/L			04/07/23 13:51	1
4-Methyl-2-pentanone	ND		5.0		ug/L			04/07/23 13:51	1
Acetone	ND		8.0		ug/L			04/07/23 13:51	1
Benzene	ND		0.50		ug/L			04/07/23 13:51	1
Bromobenzene	ND		0.50		ug/L			04/07/23 13:51	1
Bromochloromethane	ND		1.0		ug/L			04/07/23 13:51	1
Bromodichloromethane	ND		0.50		ug/L			04/07/23 13:51	1
Bromoform	ND		0.50		ug/L			04/07/23 13:51	1
Bromomethane	ND		2.0		ug/L			04/07/23 13:51	1

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Client Sample Results

Client: Hargis + Associates, Inc.
Project/Site: Raytheon / 532.15

Job ID: 570-133983-1

Method: SW846 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: CBT
Date Collected: 04/06/23 09:55
Date Received: 04/06/23 13:54

Lab Sample ID: 570-133983-3
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	ND		0.50		ug/L			04/07/23 13:51	1
cis-1,3-Dichloropropene	ND		0.50		ug/L			04/07/23 13:51	1
Carbon disulfide	ND		1.0		ug/L			04/07/23 13:51	1
Carbon tetrachloride	ND		0.50		ug/L			04/07/23 13:51	1
Chlorobenzene	ND		0.50		ug/L			04/07/23 13:51	1
Chloroethane	ND		0.50		ug/L			04/07/23 13:51	1
Chloroform	ND		0.50		ug/L			04/07/23 13:51	1
Chloromethane	ND		1.0		ug/L			04/07/23 13:51	1
Dibromochloromethane	ND		0.50		ug/L			04/07/23 13:51	1
Dibromomethane	ND		0.50		ug/L			04/07/23 13:51	1
Dichlorodifluoromethane	ND		1.0		ug/L			04/07/23 13:51	1
Di-isopropyl ether (DIPE)	ND		0.50		ug/L			04/07/23 13:51	1
Ethanol	ND	*1	50		ug/L			04/07/23 13:51	1
Ethylbenzene	ND		0.50		ug/L			04/07/23 13:51	1
Ethyl-t-butyl ether (ETBE)	ND		0.50		ug/L			04/07/23 13:51	1
Isopropylbenzene	ND		0.50		ug/L			04/07/23 13:51	1
Methylene Chloride	ND		1.0		ug/L			04/07/23 13:51	1
Methyl-t-Butyl Ether (MTBE)	ND		0.50		ug/L			04/07/23 13:51	1
Naphthalene	ND		1.0		ug/L			04/07/23 13:51	1
n-Butylbenzene	ND		0.50		ug/L			04/07/23 13:51	1
N-Propylbenzene	ND		0.50		ug/L			04/07/23 13:51	1
o-Xylene	ND		0.50		ug/L			04/07/23 13:51	1
m,p-Xylene	ND		1.0		ug/L			04/07/23 13:51	1
p-Isopropyltoluene	ND		0.50		ug/L			04/07/23 13:51	1
sec-Butylbenzene	ND		0.50		ug/L			04/07/23 13:51	1
Styrene	ND		0.50		ug/L			04/07/23 13:51	1
trans-1,2-Dichloroethene	ND		0.50		ug/L			04/07/23 13:51	1
trans-1,3-Dichloropropene	ND		0.50		ug/L			04/07/23 13:51	1
Tert-amyl-methyl ether (TAME)	ND		0.50		ug/L			04/07/23 13:51	1
tert-Butyl alcohol (TBA)	ND		5.0		ug/L			04/07/23 13:51	1
tert-Butylbenzene	ND		0.50		ug/L			04/07/23 13:51	1
Tetrachloroethene	ND		0.50		ug/L			04/07/23 13:51	1
Toluene	ND		0.50		ug/L			04/07/23 13:51	1
Trichloroethene	ND		0.50		ug/L			04/07/23 13:51	1
Trichlorofluoromethane	ND		0.50		ug/L			04/07/23 13:51	1
Vinyl acetate	ND		5.0		ug/L			04/07/23 13:51	1
Vinyl chloride	ND		0.50		ug/L			04/07/23 13:51	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	108		64 - 132		04/07/23 13:51	1
4-Bromofluorobenzene (Surr)	85		76 - 120		04/07/23 13:51	1
Dibromofluoromethane (Surr)	112		80 - 120		04/07/23 13:51	1
Toluene-d8 (Surr)	104		80 - 120		04/07/23 13:51	1

Client Sample ID: POX
Date Collected: 04/06/23 10:00
Date Received: 04/06/23 13:54

Lab Sample ID: 570-133983-4
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		0.50		ug/L			04/07/23 14:18	1
1,1,1-Trichloroethane	ND		0.50		ug/L			04/07/23 14:18	1

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Client Sample Results

Client: Hargis + Associates, Inc.
Project/Site: Raytheon / 532.15

Job ID: 570-133983-1

Method: SW846 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: POX
Date Collected: 04/06/23 10:00
Date Received: 04/06/23 13:54

Lab Sample ID: 570-133983-4
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane	ND		0.50		ug/L			04/07/23 14:18	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.50		ug/L			04/07/23 14:18	1
1,1,2-Trichloroethane	ND		0.50		ug/L			04/07/23 14:18	1
1,1-Dichloroethane	ND		0.50		ug/L			04/07/23 14:18	1
1,1-Dichloroethene	ND		0.50		ug/L			04/07/23 14:18	1
1,1-Dichloropropene	ND		0.50		ug/L			04/07/23 14:18	1
1,2,3-Trichlorobenzene	ND		0.50		ug/L			04/07/23 14:18	1
1,2,3-Trichloropropane	ND		0.50		ug/L			04/07/23 14:18	1
1,2,4-Trichlorobenzene	ND		0.50		ug/L			04/07/23 14:18	1
1,2,4-Trimethylbenzene	ND		0.50		ug/L			04/07/23 14:18	1
1,2-Dibromo-3-Chloropropane	ND		1.0		ug/L			04/07/23 14:18	1
1,2-Dibromoethane	ND		0.50		ug/L			04/07/23 14:18	1
1,2-Dichlorobenzene	ND		0.50		ug/L			04/07/23 14:18	1
1,2-Dichloroethane	ND		0.50		ug/L			04/07/23 14:18	1
1,2-Dichloropropane	ND		0.50		ug/L			04/07/23 14:18	1
1,3,5-Trimethylbenzene	ND		0.50		ug/L			04/07/23 14:18	1
1,3-Dichlorobenzene	ND		0.50		ug/L			04/07/23 14:18	1
1,3-Dichloropropane	ND		0.50		ug/L			04/07/23 14:18	1
1,4-Dichlorobenzene	ND		0.50		ug/L			04/07/23 14:18	1
2,2-Dichloropropane	ND		0.50		ug/L			04/07/23 14:18	1
2-Butanone	ND		5.0		ug/L			04/07/23 14:18	1
2-Chlorotoluene	ND		0.50		ug/L			04/07/23 14:18	1
2-Hexanone	ND		6.0		ug/L			04/07/23 14:18	1
4-Chlorotoluene	ND		0.50		ug/L			04/07/23 14:18	1
4-Methyl-2-pentanone	ND		5.0		ug/L			04/07/23 14:18	1
Acetone	ND		8.0		ug/L			04/07/23 14:18	1
Benzene	ND		0.50		ug/L			04/07/23 14:18	1
Bromobenzene	ND		0.50		ug/L			04/07/23 14:18	1
Bromochloromethane	ND		1.0		ug/L			04/07/23 14:18	1
Bromodichloromethane	ND		0.50		ug/L			04/07/23 14:18	1
Bromoform	ND		0.50		ug/L			04/07/23 14:18	1
Bromomethane	ND		2.0		ug/L			04/07/23 14:18	1
cis-1,2-Dichloroethene	ND		0.50		ug/L			04/07/23 14:18	1
cis-1,3-Dichloropropene	ND		0.50		ug/L			04/07/23 14:18	1
Carbon disulfide	ND		1.0		ug/L			04/07/23 14:18	1
Carbon tetrachloride	ND		0.50		ug/L			04/07/23 14:18	1
Chlorobenzene	ND		0.50		ug/L			04/07/23 14:18	1
Chloroethane	ND		0.50		ug/L			04/07/23 14:18	1
Chloroform	ND		0.50		ug/L			04/07/23 14:18	1
Chloromethane	ND		1.0		ug/L			04/07/23 14:18	1
Dibromochloromethane	ND		0.50		ug/L			04/07/23 14:18	1
Dibromomethane	ND		0.50		ug/L			04/07/23 14:18	1
Dichlorodifluoromethane	ND		1.0		ug/L			04/07/23 14:18	1
Di-isopropyl ether (DIPE)	ND		0.50		ug/L			04/07/23 14:18	1
Ethanol	ND	*1	50		ug/L			04/07/23 14:18	1
Ethylbenzene	ND		0.50		ug/L			04/07/23 14:18	1
Ethyl-t-butyl ether (ETBE)	ND		0.50		ug/L			04/07/23 14:18	1
Isopropylbenzene	ND		0.50		ug/L			04/07/23 14:18	1
Methylene Chloride	ND		1.0		ug/L			04/07/23 14:18	1

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Client Sample Results

Client: Hargis + Associates, Inc.
Project/Site: Raytheon / 532.15

Job ID: 570-133983-1

Method: SW846 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: POX
Date Collected: 04/06/23 10:00
Date Received: 04/06/23 13:54

Lab Sample ID: 570-133983-4
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl-t-Butyl Ether (MTBE)	ND		0.50		ug/L			04/07/23 14:18	1
Naphthalene	ND		1.0		ug/L			04/07/23 14:18	1
n-Butylbenzene	ND		0.50		ug/L			04/07/23 14:18	1
N-Propylbenzene	ND		0.50		ug/L			04/07/23 14:18	1
o-Xylene	ND		0.50		ug/L			04/07/23 14:18	1
m,p-Xylene	ND		1.0		ug/L			04/07/23 14:18	1
p-Isopropyltoluene	ND		0.50		ug/L			04/07/23 14:18	1
sec-Butylbenzene	ND		0.50		ug/L			04/07/23 14:18	1
Styrene	ND		0.50		ug/L			04/07/23 14:18	1
trans-1,2-Dichloroethene	ND		0.50		ug/L			04/07/23 14:18	1
trans-1,3-Dichloropropene	ND		0.50		ug/L			04/07/23 14:18	1
Tert-amyl-methyl ether (TAME)	ND		0.50		ug/L			04/07/23 14:18	1
tert-Butyl alcohol (TBA)	ND		5.0		ug/L			04/07/23 14:18	1
tert-Butylbenzene	ND		0.50		ug/L			04/07/23 14:18	1
Tetrachloroethene	ND		0.50		ug/L			04/07/23 14:18	1
Toluene	ND		0.50		ug/L			04/07/23 14:18	1
Trichloroethene	ND		0.50		ug/L			04/07/23 14:18	1
Trichlorofluoromethane	ND		0.50		ug/L			04/07/23 14:18	1
Vinyl acetate	ND		5.0		ug/L			04/07/23 14:18	1
Vinyl chloride	ND		0.50		ug/L			04/07/23 14:18	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	105		64 - 132		04/07/23 14:18	1
4-Bromofluorobenzene (Surr)	85		76 - 120		04/07/23 14:18	1
Dibromofluoromethane (Surr)	113		80 - 120		04/07/23 14:18	1
Toluene-d8 (Surr)	99		80 - 120		04/07/23 14:18	1

Client Sample ID: INF
Date Collected: 04/06/23 10:15
Date Received: 04/06/23 13:54

Lab Sample ID: 570-133983-6
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		0.50		ug/L			04/07/23 14:44	1
1,1,1-Trichloroethane	ND		0.50		ug/L			04/07/23 14:44	1
1,1,2,2-Tetrachloroethane	ND		0.50		ug/L			04/07/23 14:44	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.50		ug/L			04/07/23 14:44	1
1,1,2-Trichloroethane	ND		0.50		ug/L			04/07/23 14:44	1
1,1-Dichloroethane	ND		0.50		ug/L			04/07/23 14:44	1
1,1-Dichloroethene	32		0.50		ug/L			04/07/23 14:44	1
1,1-Dichloropropene	ND		0.50		ug/L			04/07/23 14:44	1
1,2,3-Trichlorobenzene	ND		0.50		ug/L			04/07/23 14:44	1
1,2,3-Trichloropropane	ND		0.50		ug/L			04/07/23 14:44	1
1,2,4-Trichlorobenzene	ND		0.50		ug/L			04/07/23 14:44	1
1,2,4-Trimethylbenzene	ND		0.50		ug/L			04/07/23 14:44	1
1,2-Dibromo-3-Chloropropane	ND		1.0		ug/L			04/07/23 14:44	1
1,2-Dibromoethane	ND		0.50		ug/L			04/07/23 14:44	1
1,2-Dichlorobenzene	ND		0.50		ug/L			04/07/23 14:44	1
1,2-Dichloroethane	ND		0.50		ug/L			04/07/23 14:44	1
1,2-Dichloropropane	ND		0.50		ug/L			04/07/23 14:44	1
1,3,5-Trimethylbenzene	ND		0.50		ug/L			04/07/23 14:44	1
1,3-Dichlorobenzene	ND		0.50		ug/L			04/07/23 14:44	1

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Client Sample Results

Client: Hargis + Associates, Inc.
Project/Site: Raytheon / 532.15

Job ID: 570-133983-1

Method: SW846 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: INF

Date Collected: 04/06/23 10:15

Date Received: 04/06/23 13:54

Lab Sample ID: 570-133983-6

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3-Dichloropropane	ND		0.50		ug/L			04/07/23 14:44	1
1,4-Dichlorobenzene	ND		0.50		ug/L			04/07/23 14:44	1
2,2-Dichloropropane	ND		0.50		ug/L			04/07/23 14:44	1
2-Butanone	ND		5.0		ug/L			04/07/23 14:44	1
2-Chlorotoluene	ND		0.50		ug/L			04/07/23 14:44	1
2-Hexanone	ND		6.0		ug/L			04/07/23 14:44	1
4-Chlorotoluene	ND		0.50		ug/L			04/07/23 14:44	1
4-Methyl-2-pentanone	ND		5.0		ug/L			04/07/23 14:44	1
Acetone	ND		8.0		ug/L			04/07/23 14:44	1
Benzene	ND		0.50		ug/L			04/07/23 14:44	1
Bromobenzene	ND		0.50		ug/L			04/07/23 14:44	1
Bromochloromethane	ND		1.0		ug/L			04/07/23 14:44	1
Bromodichloromethane	ND		0.50		ug/L			04/07/23 14:44	1
Bromoform	ND		0.50		ug/L			04/07/23 14:44	1
Bromomethane	ND		2.0		ug/L			04/07/23 14:44	1
cis-1,2-Dichloroethene	ND		0.50		ug/L			04/07/23 14:44	1
cis-1,3-Dichloropropene	ND		0.50		ug/L			04/07/23 14:44	1
Carbon disulfide	ND		1.0		ug/L			04/07/23 14:44	1
Carbon tetrachloride	ND		0.50		ug/L			04/07/23 14:44	1
Chlorobenzene	ND		0.50		ug/L			04/07/23 14:44	1
Chloroethane	ND		0.50		ug/L			04/07/23 14:44	1
Chloroform	ND		0.50		ug/L			04/07/23 14:44	1
Chloromethane	ND		1.0		ug/L			04/07/23 14:44	1
Dibromochloromethane	ND		0.50		ug/L			04/07/23 14:44	1
Dibromomethane	ND		0.50		ug/L			04/07/23 14:44	1
Dichlorodifluoromethane	ND		1.0		ug/L			04/07/23 14:44	1
Di-isopropyl ether (DIPE)	ND		0.50		ug/L			04/07/23 14:44	1
Ethanol	ND	*1	50		ug/L			04/07/23 14:44	1
Ethylbenzene	ND		0.50		ug/L			04/07/23 14:44	1
Ethyl-t-butyl ether (ETBE)	ND		0.50		ug/L			04/07/23 14:44	1
Isopropylbenzene	ND		0.50		ug/L			04/07/23 14:44	1
Methylene Chloride	ND		1.0		ug/L			04/07/23 14:44	1
Methyl-t-Butyl Ether (MTBE)	ND		0.50		ug/L			04/07/23 14:44	1
Naphthalene	ND		1.0		ug/L			04/07/23 14:44	1
n-Butylbenzene	ND		0.50		ug/L			04/07/23 14:44	1
N-Propylbenzene	ND		0.50		ug/L			04/07/23 14:44	1
o-Xylene	ND		0.50		ug/L			04/07/23 14:44	1
m,p-Xylene	ND		1.0		ug/L			04/07/23 14:44	1
p-Isopropyltoluene	ND		0.50		ug/L			04/07/23 14:44	1
sec-Butylbenzene	ND		0.50		ug/L			04/07/23 14:44	1
Styrene	ND		0.50		ug/L			04/07/23 14:44	1
trans-1,2-Dichloroethene	ND		0.50		ug/L			04/07/23 14:44	1
trans-1,3-Dichloropropene	ND		0.50		ug/L			04/07/23 14:44	1
Tert-amyl-methyl ether (TAME)	ND		0.50		ug/L			04/07/23 14:44	1
tert-Butyl alcohol (TBA)	ND		5.0		ug/L			04/07/23 14:44	1
tert-Butylbenzene	ND		0.50		ug/L			04/07/23 14:44	1
Tetrachloroethene	ND		0.50		ug/L			04/07/23 14:44	1
Toluene	ND		0.50		ug/L			04/07/23 14:44	1
Trichloroethene	ND		0.50		ug/L			04/07/23 14:44	1

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Client Sample Results

Client: Hargis + Associates, Inc.
Project/Site: Raytheon / 532.15

Job ID: 570-133983-1

Method: SW846 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: INF
Date Collected: 04/06/23 10:15
Date Received: 04/06/23 13:54

Lab Sample ID: 570-133983-6
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Trichlorofluoromethane	ND		0.50		ug/L			04/07/23 14:44	1
Vinyl acetate	ND		5.0		ug/L			04/07/23 14:44	1
Vinyl chloride	ND		0.50		ug/L			04/07/23 14:44	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	106		64 - 132					04/07/23 14:44	1
4-Bromofluorobenzene (Surr)	85		76 - 120					04/07/23 14:44	1
Dibromofluoromethane (Surr)	110		80 - 120					04/07/23 14:44	1
Toluene-d8 (Surr)	103		80 - 120					04/07/23 14:44	1

Client Sample ID: EW-02
Date Collected: 04/06/23 10:35
Date Received: 04/06/23 13:54

Lab Sample ID: 570-133983-7
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		0.50		ug/L			04/07/23 15:11	1
1,1,1-Trichloroethane	ND		0.50		ug/L			04/07/23 15:11	1
1,1,2,2-Tetrachloroethane	ND		0.50		ug/L			04/07/23 15:11	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.50		ug/L			04/07/23 15:11	1
1,1,2-Trichloroethane	ND		0.50		ug/L			04/07/23 15:11	1
1,1-Dichloroethane	ND		0.50		ug/L			04/07/23 15:11	1
1,1-Dichloroethene	9.4		0.50		ug/L			04/07/23 15:11	1
1,1-Dichloropropene	ND		0.50		ug/L			04/07/23 15:11	1
1,2,3-Trichlorobenzene	ND		0.50		ug/L			04/07/23 15:11	1
1,2,3-Trichloropropane	ND		0.50		ug/L			04/07/23 15:11	1
1,2,4-Trichlorobenzene	ND		0.50		ug/L			04/07/23 15:11	1
1,2,4-Trimethylbenzene	ND		0.50		ug/L			04/07/23 15:11	1
1,2-Dibromo-3-Chloropropane	ND		1.0		ug/L			04/07/23 15:11	1
1,2-Dibromoethane	ND		0.50		ug/L			04/07/23 15:11	1
1,2-Dichlorobenzene	ND		0.50		ug/L			04/07/23 15:11	1
1,2-Dichloroethane	ND		0.50		ug/L			04/07/23 15:11	1
1,2-Dichloropropane	ND		0.50		ug/L			04/07/23 15:11	1
1,3,5-Trimethylbenzene	ND		0.50		ug/L			04/07/23 15:11	1
1,3-Dichlorobenzene	ND		0.50		ug/L			04/07/23 15:11	1
1,3-Dichloropropane	ND		0.50		ug/L			04/07/23 15:11	1
1,4-Dichlorobenzene	ND		0.50		ug/L			04/07/23 15:11	1
2,2-Dichloropropane	ND		0.50		ug/L			04/07/23 15:11	1
2-Butanone	ND		5.0		ug/L			04/07/23 15:11	1
2-Chlorotoluene	ND		0.50		ug/L			04/07/23 15:11	1
2-Hexanone	ND		6.0		ug/L			04/07/23 15:11	1
4-Chlorotoluene	ND		0.50		ug/L			04/07/23 15:11	1
4-Methyl-2-pentanone	ND		5.0		ug/L			04/07/23 15:11	1
Acetone	ND		8.0		ug/L			04/07/23 15:11	1
Benzene	ND		0.50		ug/L			04/07/23 15:11	1
Bromobenzene	ND		0.50		ug/L			04/07/23 15:11	1
Bromochloromethane	ND		1.0		ug/L			04/07/23 15:11	1
Bromodichloromethane	ND		0.50		ug/L			04/07/23 15:11	1
Bromoform	ND		0.50		ug/L			04/07/23 15:11	1
Bromomethane	ND		2.0		ug/L			04/07/23 15:11	1
cis-1,2-Dichloroethene	ND		0.50		ug/L			04/07/23 15:11	1
cis-1,3-Dichloropropene	ND		0.50		ug/L			04/07/23 15:11	1

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Client Sample Results

Client: Hargis + Associates, Inc.
Project/Site: Raytheon / 532.15

Job ID: 570-133983-1

Method: SW846 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: EW-02
Date Collected: 04/06/23 10:35
Date Received: 04/06/23 13:54

Lab Sample ID: 570-133983-7
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon disulfide	ND		1.0		ug/L			04/07/23 15:11	1
Carbon tetrachloride	ND		0.50		ug/L			04/07/23 15:11	1
Chlorobenzene	ND		0.50		ug/L			04/07/23 15:11	1
Chloroethane	ND		0.50		ug/L			04/07/23 15:11	1
Chloroform	ND		0.50		ug/L			04/07/23 15:11	1
Chloromethane	ND		1.0		ug/L			04/07/23 15:11	1
Dibromochloromethane	ND		0.50		ug/L			04/07/23 15:11	1
Dibromomethane	ND		0.50		ug/L			04/07/23 15:11	1
Dichlorodifluoromethane	ND		1.0		ug/L			04/07/23 15:11	1
Di-isopropyl ether (DIPE)	ND		0.50		ug/L			04/07/23 15:11	1
Ethanol	ND	*1	50		ug/L			04/07/23 15:11	1
Ethylbenzene	ND		0.50		ug/L			04/07/23 15:11	1
Ethyl-t-butyl ether (ETBE)	ND		0.50		ug/L			04/07/23 15:11	1
Isopropylbenzene	ND		0.50		ug/L			04/07/23 15:11	1
Methylene Chloride	ND		1.0		ug/L			04/07/23 15:11	1
Methyl-t-Butyl Ether (MTBE)	ND		0.50		ug/L			04/07/23 15:11	1
Naphthalene	ND		1.0		ug/L			04/07/23 15:11	1
n-Butylbenzene	ND		0.50		ug/L			04/07/23 15:11	1
N-Propylbenzene	ND		0.50		ug/L			04/07/23 15:11	1
o-Xylene	ND		0.50		ug/L			04/07/23 15:11	1
m,p-Xylene	ND		1.0		ug/L			04/07/23 15:11	1
p-Isopropyltoluene	ND		0.50		ug/L			04/07/23 15:11	1
sec-Butylbenzene	ND		0.50		ug/L			04/07/23 15:11	1
Styrene	ND		0.50		ug/L			04/07/23 15:11	1
trans-1,2-Dichloroethene	ND		0.50		ug/L			04/07/23 15:11	1
trans-1,3-Dichloropropene	ND		0.50		ug/L			04/07/23 15:11	1
Tert-amyl-methyl ether (TAME)	ND		0.50		ug/L			04/07/23 15:11	1
tert-Butyl alcohol (TBA)	ND		5.0		ug/L			04/07/23 15:11	1
tert-Butylbenzene	ND		0.50		ug/L			04/07/23 15:11	1
Tetrachloroethene	ND		0.50		ug/L			04/07/23 15:11	1
Toluene	ND		0.50		ug/L			04/07/23 15:11	1
Trichloroethene	ND		0.50		ug/L			04/07/23 15:11	1
Trichlorofluoromethane	ND		0.50		ug/L			04/07/23 15:11	1
Vinyl acetate	ND		5.0		ug/L			04/07/23 15:11	1
Vinyl chloride	ND		0.50		ug/L			04/07/23 15:11	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	111		64 - 132					04/07/23 15:11	1
4-Bromofluorobenzene (Surr)	84		76 - 120					04/07/23 15:11	1
Dibromofluoromethane (Surr)	114		80 - 120					04/07/23 15:11	1
Toluene-d8 (Surr)	101		80 - 120					04/07/23 15:11	1

Client Sample ID: MW-29
Date Collected: 04/06/23 10:45
Date Received: 04/06/23 13:54

Lab Sample ID: 570-133983-8
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		0.50		ug/L			04/07/23 15:37	1
1,1,1-Trichloroethane	ND		0.50		ug/L			04/07/23 15:37	1
1,1,2,2-Tetrachloroethane	ND		0.50		ug/L			04/07/23 15:37	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.50		ug/L			04/07/23 15:37	1

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Client Sample Results

Client: Hargis + Associates, Inc.
Project/Site: Raytheon / 532.15

Job ID: 570-133983-1

Method: SW846 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: MW-29

Date Collected: 04/06/23 10:45

Date Received: 04/06/23 13:54

Lab Sample ID: 570-133983-8

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2-Trichloroethane	ND		0.50		ug/L			04/07/23 15:37	1
1,1-Dichloroethane	0.99		0.50		ug/L			04/07/23 15:37	1
1,1-Dichloroethene	99		0.50		ug/L			04/07/23 15:37	1
1,1-Dichloropropene	ND		0.50		ug/L			04/07/23 15:37	1
1,2,3-Trichlorobenzene	ND		0.50		ug/L			04/07/23 15:37	1
1,2,3-Trichloropropane	ND		0.50		ug/L			04/07/23 15:37	1
1,2,4-Trichlorobenzene	ND		0.50		ug/L			04/07/23 15:37	1
1,2,4-Trimethylbenzene	ND		0.50		ug/L			04/07/23 15:37	1
1,2-Dibromo-3-Chloropropane	ND		1.0		ug/L			04/07/23 15:37	1
1,2-Dibromoethane	ND		0.50		ug/L			04/07/23 15:37	1
1,2-Dichlorobenzene	ND		0.50		ug/L			04/07/23 15:37	1
1,2-Dichloroethane	ND		0.50		ug/L			04/07/23 15:37	1
1,2-Dichloropropane	ND		0.50		ug/L			04/07/23 15:37	1
1,3,5-Trimethylbenzene	ND		0.50		ug/L			04/07/23 15:37	1
1,3-Dichlorobenzene	ND		0.50		ug/L			04/07/23 15:37	1
1,3-Dichloropropane	ND		0.50		ug/L			04/07/23 15:37	1
1,4-Dichlorobenzene	ND		0.50		ug/L			04/07/23 15:37	1
2,2-Dichloropropane	ND		0.50		ug/L			04/07/23 15:37	1
2-Butanone	ND		5.0		ug/L			04/07/23 15:37	1
2-Chlorotoluene	ND		0.50		ug/L			04/07/23 15:37	1
2-Hexanone	ND		6.0		ug/L			04/07/23 15:37	1
4-Chlorotoluene	ND		0.50		ug/L			04/07/23 15:37	1
4-Methyl-2-pentanone	ND		5.0		ug/L			04/07/23 15:37	1
Acetone	ND		8.0		ug/L			04/07/23 15:37	1
Benzene	ND		0.50		ug/L			04/07/23 15:37	1
Bromobenzene	ND		0.50		ug/L			04/07/23 15:37	1
Bromochloromethane	ND		1.0		ug/L			04/07/23 15:37	1
Bromodichloromethane	ND		0.50		ug/L			04/07/23 15:37	1
Bromoform	ND		0.50		ug/L			04/07/23 15:37	1
Bromomethane	ND		2.0		ug/L			04/07/23 15:37	1
cis-1,2-Dichloroethene	ND		0.50		ug/L			04/07/23 15:37	1
cis-1,3-Dichloropropene	ND		0.50		ug/L			04/07/23 15:37	1
Carbon disulfide	ND		1.0		ug/L			04/07/23 15:37	1
Carbon tetrachloride	ND		0.50		ug/L			04/07/23 15:37	1
Chlorobenzene	ND		0.50		ug/L			04/07/23 15:37	1
Chloroethane	ND		0.50		ug/L			04/07/23 15:37	1
Chloroform	ND		0.50		ug/L			04/07/23 15:37	1
Chloromethane	ND		1.0		ug/L			04/07/23 15:37	1
Dibromochloromethane	ND		0.50		ug/L			04/07/23 15:37	1
Dibromomethane	ND		0.50		ug/L			04/07/23 15:37	1
Dichlorodifluoromethane	ND		1.0		ug/L			04/07/23 15:37	1
Di-isopropyl ether (DIPE)	ND		0.50		ug/L			04/07/23 15:37	1
Ethanol	ND	*1	50		ug/L			04/07/23 15:37	1
Ethylbenzene	ND		0.50		ug/L			04/07/23 15:37	1
Ethyl-t-butyl ether (ETBE)	ND		0.50		ug/L			04/07/23 15:37	1
Isopropylbenzene	ND		0.50		ug/L			04/07/23 15:37	1
Methylene Chloride	ND		1.0		ug/L			04/07/23 15:37	1
Methyl-t-Butyl Ether (MTBE)	ND		0.50		ug/L			04/07/23 15:37	1
Naphthalene	ND		1.0		ug/L			04/07/23 15:37	1

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Client Sample Results

Client: Hargis + Associates, Inc.
Project/Site: Raytheon / 532.15

Job ID: 570-133983-1

Method: SW846 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: MW-29

Date Collected: 04/06/23 10:45

Date Received: 04/06/23 13:54

Lab Sample ID: 570-133983-8

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
n-Butylbenzene	ND		0.50		ug/L			04/07/23 15:37	1
N-Propylbenzene	ND		0.50		ug/L			04/07/23 15:37	1
o-Xylene	ND		0.50		ug/L			04/07/23 15:37	1
m,p-Xylene	ND		1.0		ug/L			04/07/23 15:37	1
p-Isopropyltoluene	ND		0.50		ug/L			04/07/23 15:37	1
sec-Butylbenzene	ND		0.50		ug/L			04/07/23 15:37	1
Styrene	ND		0.50		ug/L			04/07/23 15:37	1
trans-1,2-Dichloroethene	ND		0.50		ug/L			04/07/23 15:37	1
trans-1,3-Dichloropropene	ND		0.50		ug/L			04/07/23 15:37	1
Tert-amyl-methyl ether (TAME)	ND		0.50		ug/L			04/07/23 15:37	1
tert-Butyl alcohol (TBA)	ND		5.0		ug/L			04/07/23 15:37	1
tert-Butylbenzene	ND		0.50		ug/L			04/07/23 15:37	1
Tetrachloroethene	ND		0.50		ug/L			04/07/23 15:37	1
Toluene	ND		0.50		ug/L			04/07/23 15:37	1
Trichloroethene	1.4		0.50		ug/L			04/07/23 15:37	1
Trichlorofluoromethane	0.64		0.50		ug/L			04/07/23 15:37	1
Vinyl acetate	ND		5.0		ug/L			04/07/23 15:37	1
Vinyl chloride	ND		0.50		ug/L			04/07/23 15:37	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	108		64 - 132		04/07/23 15:37	1
4-Bromofluorobenzene (Surr)	82		76 - 120		04/07/23 15:37	1
Dibromofluoromethane (Surr)	113		80 - 120		04/07/23 15:37	1
Toluene-d8 (Surr)	99		80 - 120		04/07/23 15:37	1

Client Sample Results

Client: Hargis + Associates, Inc.
Project/Site: Raytheon / 532.15

Job ID: 570-133983-1

Method: SW846 8270C SIM ID - Semivolatile Organic Compounds (GC/MS SIM / Isotope Dilution)

Client Sample ID: CEFF
Date Collected: 04/06/23 09:50
Date Received: 04/06/23 13:54

Lab Sample ID: 570-133983-2
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	ND		0.37		ug/L		04/11/23 07:15	04/13/23 19:43	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,4-Dioxane-d8	39		21 - 120				04/11/23 07:15	04/13/23 19:43	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Nitrobenzene-d5	102		58 - 135				04/11/23 07:15	04/13/23 19:43	1

Client Sample ID: CBT
Date Collected: 04/06/23 09:55
Date Received: 04/06/23 13:54

Lab Sample ID: 570-133983-3
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	ND		0.37		ug/L		04/11/23 07:15	04/13/23 19:57	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,4-Dioxane-d8	36		21 - 120				04/11/23 07:15	04/13/23 19:57	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Nitrobenzene-d5	93		58 - 135				04/11/23 07:15	04/13/23 19:57	1

Client Sample ID: POX
Date Collected: 04/06/23 10:00
Date Received: 04/06/23 13:54

Lab Sample ID: 570-133983-4
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	ND		0.37		ug/L		04/11/23 07:15	04/13/23 20:12	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,4-Dioxane-d8	35		21 - 120				04/11/23 07:15	04/13/23 20:12	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Nitrobenzene-d5	104		58 - 135				04/11/23 07:15	04/13/23 20:12	1

Client Sample Results

Client: Hargis + Associates, Inc.
Project/Site: Raytheon / 532.15

Job ID: 570-133983-1

Method: EPA 300.0 - Anions, Ion Chromatography

Client Sample ID: INF
Date Collected: 04/06/23 10:15
Date Received: 04/06/23 13:54

Lab Sample ID: 570-133983-6
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromide	0.20		0.10		mg/L			04/10/23 08:33	1

Client Sample ID: EW-02
Date Collected: 04/06/23 10:35
Date Received: 04/06/23 13:54

Lab Sample ID: 570-133983-7
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromide	0.17		0.10		mg/L			04/10/23 08:50	1

Client Sample ID: MW-29
Date Collected: 04/06/23 10:45
Date Received: 04/06/23 13:54

Lab Sample ID: 570-133983-8
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromide	0.30		0.10		mg/L			04/10/23 09:06	1

Client Sample Results

Client: Hargis + Associates, Inc.
Project/Site: Raytheon / 532.15

Job ID: 570-133983-1

Method: EPA 300.1 - Disinfection By-Products, (IC)

Client Sample ID: POX
Date Collected: 04/06/23 10:00
Date Received: 04/06/23 13:54

Lab Sample ID: 570-133983-4
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromate	ND		50		ug/L			04/10/23 16:40	10
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Dichloroacetate (Surr)	109		90 - 115					04/10/23 16:40	10

Client Sample ID: INF
Date Collected: 04/06/23 10:15
Date Received: 04/06/23 13:54

Lab Sample ID: 570-133983-6
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromate	ND		50		ug/L			04/10/23 17:14	10
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Dichloroacetate (Surr)	107		90 - 115					04/10/23 17:14	10

Client Sample Results

Client: Hargis + Associates, Inc.
Project/Site: Raytheon / 532.15

Job ID: 570-133983-1

General Chemistry

Client Sample ID: POX
Date Collected: 04/06/23 10:00
Date Received: 04/06/23 13:54

Lab Sample ID: 570-133983-4
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity, Total (As CaCO3) (SM 2320B)	208		5.00		mg/L			04/12/23 19:43	1
Bicarbonate (as CaCO3) (SM 2320B)	208		5.00		mg/L			04/12/23 19:43	1
Carbonate (as CaCO3) (SM 2320B)	ND		5.00		mg/L			04/12/23 19:43	1
Hydroxide (as CaCO3) (SM 2320B)	ND		5.00		mg/L			04/12/23 19:43	1
Carbon, Total Organic (SM 5310D)	ND		0.500		mg/L			04/13/23 02:39	1

Client Sample ID: PF
Date Collected: 04/06/23 10:05
Date Received: 04/06/23 13:54

Lab Sample ID: 570-133983-5
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity, Total (As CaCO3) (SM 2320B)	209		5.00		mg/L			04/12/23 19:50	1
Bicarbonate (as CaCO3) (SM 2320B)	209		5.00		mg/L			04/12/23 19:50	1
Carbonate (as CaCO3) (SM 2320B)	ND		5.00		mg/L			04/12/23 19:50	1
Hydroxide (as CaCO3) (SM 2320B)	ND		5.00		mg/L			04/12/23 19:50	1
Total Suspended Solids (SM 2540D)	ND		1.00		mg/L			04/07/23 15:40	1
Carbon, Total Organic (SM 5310D)	ND		0.500		mg/L			04/13/23 03:04	1

Surrogate Summary

Client: Hargis + Associates, Inc.
Project/Site: Raytheon / 532.15

Job ID: 570-133983-1

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

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)			
		DCA (64-132)	BFB (76-120)	DBFM (80-120)	TOL (80-120)
570-133983-1	TB-030723	98	83	107	100
570-133983-2	CEFF	106	85	114	99
570-133983-3	CBT	108	85	112	104
570-133983-4	POX	105	85	113	99
570-133983-6	INF	106	85	110	103
570-133983-7	EW-02	111	84	114	101
570-133983-8	MW-29	108	82	113	99
LCS 570-318305/4	Lab Control Sample	102	97	101	100
LCSD 570-318305/5	Lab Control Sample Dup	96	96	99	100
MB 570-318305/7	Method Blank	102	85	103	98

Surrogate Legend

DCA = 1,2-Dichloroethane-d4 (Surr)

BFB = 4-Bromofluorobenzene (Surr)

DBFM = Dibromofluoromethane (Surr)

TOL = Toluene-d8 (Surr)

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

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)			
		14DCBTN (67-133)			
570-133983-6	INF	128			
570-133983-7	EW-02	131			
570-133983-8	MW-29	132			
LCS 570-318126/4	Lab Control Sample	130			
LCSD 570-318126/5	Lab Control Sample Dup	128			
MB 570-318126/7	Method Blank	131			

Surrogate Legend

14DCBTN = 1,4-Dichlorobutane (Surr)

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

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)			
		NBZ (58-135)			
570-133983-2	CEFF	102			
570-133983-3	CBT	93			
570-133983-4	POX	104			

Surrogate Legend

NBZ = Nitrobenzene-d5

Surrogate Summary

Client: Hargis + Associates, Inc.
Project/Site: Raytheon / 532.15

Job ID: 570-133983-1

Method: 300.1 - Disinfection By-Products, (IC)

Matrix: Water

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	DCAA (90-115)
570-133665-J-1 MS	Matrix Spike	109
570-133665-J-1 MSD	Matrix Spike Duplicate	108
570-133983-4	POX	109
570-133983-6	INF	107
LCS 570-318750/6	Lab Control Sample	108
LCSD 570-318750/7	Lab Control Sample Dup	106
MB 570-318750/5	Method Blank	105
MRL 570-318750/4	Lab Control Sample	107

Surrogate Legend

DCAA = Dichloroacetate (Surr)

Isotope Dilution Summary

Client: Hargis + Associates, Inc.
Project/Site: Raytheon / 532.15

Job ID: 570-133983-1

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 (21-120)
570-133983-2	CEFF	39
570-133983-3	CBT	36
570-133983-4	POX	35

Surrogate Legend

DXE = 1,4-Dioxane-d8

QC Sample Results

Client: Hargis + Associates, Inc.
Project/Site: Raytheon / 532.15

Job ID: 570-133983-1

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

Lab Sample ID: MB 570-318305/7

Matrix: Water

Analysis Batch: 318305

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		ug/L			04/07/23 12:05	1
1,1,1-Trichloroethane	ND		0.50		ug/L			04/07/23 12:05	1
1,1,2,2-Tetrachloroethane	ND		0.50		ug/L			04/07/23 12:05	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.50		ug/L			04/07/23 12:05	1
1,1,2-Trichloroethane	ND		0.50		ug/L			04/07/23 12:05	1
1,1-Dichloroethane	ND		0.50		ug/L			04/07/23 12:05	1
1,1-Dichloroethene	ND		0.50		ug/L			04/07/23 12:05	1
1,1-Dichloropropene	ND		0.50		ug/L			04/07/23 12:05	1
1,2,3-Trichlorobenzene	ND		0.50		ug/L			04/07/23 12:05	1
1,2,3-Trichloropropane	ND		0.50		ug/L			04/07/23 12:05	1
1,2,4-Trichlorobenzene	ND		0.50		ug/L			04/07/23 12:05	1
1,2,4-Trimethylbenzene	ND		0.50		ug/L			04/07/23 12:05	1
1,2-Dibromo-3-Chloropropane	ND		1.0		ug/L			04/07/23 12:05	1
1,2-Dibromoethane	ND		0.50		ug/L			04/07/23 12:05	1
1,2-Dichlorobenzene	ND		0.50		ug/L			04/07/23 12:05	1
1,2-Dichloroethane	ND		0.50		ug/L			04/07/23 12:05	1
1,2-Dichloropropane	ND		0.50		ug/L			04/07/23 12:05	1
1,3,5-Trimethylbenzene	ND		0.50		ug/L			04/07/23 12:05	1
1,3-Dichlorobenzene	ND		0.50		ug/L			04/07/23 12:05	1
1,3-Dichloropropane	ND		0.50		ug/L			04/07/23 12:05	1
1,4-Dichlorobenzene	ND		0.50		ug/L			04/07/23 12:05	1
2,2-Dichloropropane	ND		0.50		ug/L			04/07/23 12:05	1
2-Butanone	ND		5.0		ug/L			04/07/23 12:05	1
2-Chlorotoluene	ND		0.50		ug/L			04/07/23 12:05	1
2-Hexanone	ND		6.0		ug/L			04/07/23 12:05	1
4-Chlorotoluene	ND		0.50		ug/L			04/07/23 12:05	1
4-Methyl-2-pentanone	ND		5.0		ug/L			04/07/23 12:05	1
Acetone	ND		8.0		ug/L			04/07/23 12:05	1
Benzene	ND		0.50		ug/L			04/07/23 12:05	1
Bromobenzene	ND		0.50		ug/L			04/07/23 12:05	1
Bromochloromethane	ND		1.0		ug/L			04/07/23 12:05	1
Bromodichloromethane	ND		0.50		ug/L			04/07/23 12:05	1
Bromoform	ND		0.50		ug/L			04/07/23 12:05	1
Bromomethane	ND		2.0		ug/L			04/07/23 12:05	1
cis-1,2-Dichloroethene	ND		0.50		ug/L			04/07/23 12:05	1
cis-1,3-Dichloropropene	ND		0.50		ug/L			04/07/23 12:05	1
Carbon disulfide	ND		1.0		ug/L			04/07/23 12:05	1
Carbon tetrachloride	ND		0.50		ug/L			04/07/23 12:05	1
Chlorobenzene	ND		0.50		ug/L			04/07/23 12:05	1
Chloroethane	ND		0.50		ug/L			04/07/23 12:05	1
Chloroform	ND		0.50		ug/L			04/07/23 12:05	1
Chloromethane	ND		1.0		ug/L			04/07/23 12:05	1
Dibromochloromethane	ND		0.50		ug/L			04/07/23 12:05	1
Dibromomethane	ND		0.50		ug/L			04/07/23 12:05	1
Dichlorodifluoromethane	ND		1.0		ug/L			04/07/23 12:05	1
Di-isopropyl ether (DIPE)	ND		0.50		ug/L			04/07/23 12:05	1
Ethanol	ND		50		ug/L			04/07/23 12:05	1
Ethylbenzene	ND		0.50		ug/L			04/07/23 12:05	1

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QC Sample Results

Client: Hargis + Associates, Inc.
Project/Site: Raytheon / 532.15

Job ID: 570-133983-1

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

Lab Sample ID: MB 570-318305/7

Matrix: Water

Analysis Batch: 318305

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethyl-t-butyl ether (ETBE)	ND		0.50		ug/L			04/07/23 12:05	1
Isopropylbenzene	ND		0.50		ug/L			04/07/23 12:05	1
Methylene Chloride	ND		1.0		ug/L			04/07/23 12:05	1
Methyl-t-Butyl Ether (MTBE)	ND		0.50		ug/L			04/07/23 12:05	1
Naphthalene	ND		1.0		ug/L			04/07/23 12:05	1
n-Butylbenzene	ND		0.50		ug/L			04/07/23 12:05	1
N-Propylbenzene	ND		0.50		ug/L			04/07/23 12:05	1
o-Xylene	ND		0.50		ug/L			04/07/23 12:05	1
m,p-Xylene	ND		1.0		ug/L			04/07/23 12:05	1
p-Isopropyltoluene	ND		0.50		ug/L			04/07/23 12:05	1
sec-Butylbenzene	ND		0.50		ug/L			04/07/23 12:05	1
Styrene	ND		0.50		ug/L			04/07/23 12:05	1
trans-1,2-Dichloroethene	ND		0.50		ug/L			04/07/23 12:05	1
trans-1,3-Dichloropropene	ND		0.50		ug/L			04/07/23 12:05	1
Tert-amyl-methyl ether (TAME)	ND		0.50		ug/L			04/07/23 12:05	1
tert-Butyl alcohol (TBA)	ND		5.0		ug/L			04/07/23 12:05	1
tert-Butylbenzene	ND		0.50		ug/L			04/07/23 12:05	1
Tetrachloroethene	ND		0.50		ug/L			04/07/23 12:05	1
Toluene	ND		0.50		ug/L			04/07/23 12:05	1
Trichloroethene	ND		0.50		ug/L			04/07/23 12:05	1
Trichlorofluoromethane	ND		0.50		ug/L			04/07/23 12:05	1
Vinyl acetate	ND		5.0		ug/L			04/07/23 12:05	1
Vinyl chloride	ND		0.50		ug/L			04/07/23 12:05	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	102		64 - 132		04/07/23 12:05	1
4-Bromofluorobenzene (Surr)	85		76 - 120		04/07/23 12:05	1
Dibromofluoromethane (Surr)	103		80 - 120		04/07/23 12:05	1
Toluene-d8 (Surr)	98		80 - 120		04/07/23 12:05	1

Lab Sample ID: LCS 570-318305/4

Matrix: Water

Analysis Batch: 318305

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
1,1-Dichloroethene	10.0	9.314		ug/L		93	80 - 126
1,2-Dibromoethane	10.0	9.641		ug/L		96	80 - 125
1,2-Dichlorobenzene	10.0	10.31		ug/L		103	80 - 120
1,2-Dichloroethane	10.0	10.23		ug/L		102	76 - 130
Benzene	10.0	10.02		ug/L		100	80 - 120
Carbon tetrachloride	10.0	9.730		ug/L		97	61 - 139
Chlorobenzene	10.0	10.29		ug/L		103	80 - 120
Di-isopropyl ether (DIPE)	10.0	9.571		ug/L		96	65 - 145
Ethanol	100	109.7		ug/L		110	20 - 180
Ethylbenzene	10.0	10.15		ug/L		101	80 - 126
Ethyl-t-butyl ether (ETBE)	10.0	9.566		ug/L		96	76 - 125
Methyl-t-Butyl Ether (MTBE)	10.0	9.381		ug/L		94	69 - 128
o-Xylene	10.0	9.829		ug/L		98	80 - 124

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QC Sample Results

Client: Hargis + Associates, Inc.
Project/Site: Raytheon / 532.15

Job ID: 570-133983-1

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

Lab Sample ID: LCS 570-318305/4

Matrix: Water

Analysis Batch: 318305

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
m,p-Xylene	20.0	20.55		ug/L		103	80 - 123
Tert-amyl-methyl ether (TAME)	10.0	9.575		ug/L		96	78 - 133
tert-Butyl alcohol (TBA)	50.0	53.36		ug/L		107	68 - 133
Toluene	10.0	10.39		ug/L		104	80 - 120
Trichloroethene	10.0	9.929		ug/L		99	77 - 124
Vinyl chloride	10.0	9.608		ug/L		96	50 - 160

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	102		64 - 132
4-Bromofluorobenzene (Surr)	97		76 - 120
Dibromofluoromethane (Surr)	101		80 - 120
Toluene-d8 (Surr)	100		80 - 120

Lab Sample ID: LCSD 570-318305/5

Matrix: Water

Analysis Batch: 318305

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-Dichloroethene	10.0	10.72		ug/L		107	80 - 126	14	21
1,2-Dibromoethane	10.0	9.619		ug/L		96	80 - 125	0	20
1,2-Dichlorobenzene	10.0	10.30		ug/L		103	80 - 120	0	20
1,2-Dichloroethane	10.0	10.27		ug/L		103	76 - 130	0	20
Benzene	10.0	10.25		ug/L		103	80 - 120	2	20
Carbon tetrachloride	10.0	9.469		ug/L		95	61 - 139	3	20
Chlorobenzene	10.0	10.53		ug/L		105	80 - 120	2	20
Di-isopropyl ether (DIPE)	10.0	9.357		ug/L		94	65 - 145	2	20
Ethanol	100	154.4	*1	ug/L		154	20 - 180	34	30
Ethylbenzene	10.0	10.43		ug/L		104	80 - 126	3	20
Ethyl-t-butyl ether (ETBE)	10.0	9.137		ug/L		91	76 - 125	5	20
Methyl-t-Butyl Ether (MTBE)	10.0	9.111		ug/L		91	69 - 128	3	20
o-Xylene	10.0	10.12		ug/L		101	80 - 124	3	20
m,p-Xylene	20.0	20.69		ug/L		103	80 - 123	1	20
Tert-amyl-methyl ether (TAME)	10.0	9.837		ug/L		98	78 - 133	3	20
tert-Butyl alcohol (TBA)	50.0	60.43		ug/L		121	68 - 133	12	21
Toluene	10.0	10.51		ug/L		105	80 - 120	1	20
Trichloroethene	10.0	10.16		ug/L		102	77 - 124	2	20
Vinyl chloride	10.0	9.649		ug/L		96	50 - 160	0	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	96		64 - 132
4-Bromofluorobenzene (Surr)	96		76 - 120
Dibromofluoromethane (Surr)	99		80 - 120
Toluene-d8 (Surr)	100		80 - 120

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QC Sample Results

Client: Hargis + Associates, Inc.
Project/Site: Raytheon / 532.15

Job ID: 570-133983-1

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

Lab Sample ID: MB 570-318126/7

Matrix: Water

Analysis Batch: 318126

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	ND		1.0		ug/L			04/06/23 18:38	1
Surrogate	MB %Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,4-Dichlorobutane (Surr)	131		67 - 133					04/06/23 18:38	1

Lab Sample ID: LCS 570-318126/4

Matrix: Water

Analysis Batch: 318126

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
1,4-Dioxane	20.0	23.78		ug/L		119	75 - 120		
Surrogate	LCS %Recovery	LCS Qualifier	Limits						
1,4-Dichlorobutane (Surr)	130		67 - 133						

Lab Sample ID: LCSD 570-318126/5

Matrix: Water

Analysis Batch: 318126

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
1,4-Dioxane	20.0	23.05		ug/L		115	75 - 120	3	20
Surrogate	LCSD %Recovery	LCSD Qualifier	Limits						
1,4-Dichlorobutane (Surr)	128		67 - 133						

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 570-318712/5

Matrix: Water

Analysis Batch: 318712

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromide	ND		0.10		mg/L			04/10/23 03:50	1

Lab Sample ID: LCS 570-318712/6

Matrix: Water

Analysis Batch: 318712

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Bromide	5.00	4.867		mg/L		97	90 - 110		

Lab Sample ID: LCSD 570-318712/7

Matrix: Water

Analysis Batch: 318712

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
Bromide	5.00	4.859		mg/L		97	90 - 110	0	15

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QC Sample Results

Client: Hargis + Associates, Inc.
Project/Site: Raytheon / 532.15

Job ID: 570-133983-1

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: 570-134253-C-1 MS

Matrix: Water

Analysis Batch: 318712

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Bromide	0.83	F1	5.00	9.265	F1	mg/L		169	80 - 120		

Lab Sample ID: 570-134253-C-1 MSD

Matrix: Water

Analysis Batch: 318712

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Bromide	0.83	F1	5.00	9.183	F1	mg/L		167	80 - 120	1	20

Method: 300.1 - Disinfection By-Products, (IC)

Lab Sample ID: MB 570-318750/5

Matrix: Water

Analysis Batch: 318750

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromate	ND		5.0		ug/L			04/10/23 10:27	1
Surrogate	%Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
Dichloroacetate (Surr)	105		90 - 115					04/10/23 10:27	1

Lab Sample ID: LCS 570-318750/6

Matrix: Water

Analysis Batch: 318750

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Bromate	25.0	25.43		ug/L		102	75 - 125		
Surrogate	%Recovery	LCS Qualifier	Limits						
Dichloroacetate (Surr)	108		90 - 115						

Lab Sample ID: LCSD 570-318750/7

Matrix: Water

Analysis Batch: 318750

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
Bromate	25.0	26.16		ug/L		105	75 - 125	3	20
Surrogate	%Recovery	LCSD Qualifier	Limits						
Dichloroacetate (Surr)	106		90 - 115						

Lab Sample ID: MRL 570-318750/4

Matrix: Water

Analysis Batch: 318750

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits		
Bromate	5.00	5.362		ug/L		107	50 - 150		

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QC Sample Results

Client: Hargis + Associates, Inc.
Project/Site: Raytheon / 532.15

Job ID: 570-133983-1

Method: 300.1 - Disinfection By-Products, (IC) (Continued)

Lab Sample ID: MRL 570-318750/4

Matrix: Water

Analysis Batch: 318750

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

	MRL	MRL	
Surrogate	%Recovery	Qualifier	Limits
Dichloroacetate (Surr)	107		90 - 115

Lab Sample ID: 570-133665-J-1 MS

Matrix: Water

Analysis Batch: 318750

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Bromate	ND		100	121.8		ug/L		122	75 - 125
Surrogate	%Recovery	MS Qualifier	Limits						
Dichloroacetate (Surr)	109		90 - 115						

Lab Sample ID: 570-133665-J-1 MSD

Matrix: Water

Analysis Batch: 318750

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Bromate	ND		100	113.6		ug/L		114	75 - 125	7	20
Surrogate	%Recovery	MSD Qualifier	Limits								
Dichloroacetate (Surr)	108		90 - 115								

Method: SM 2320B - Alkalinity

Lab Sample ID: MB 570-319830/35

Matrix: Water

Analysis Batch: 319830

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity, Total (As CaCO3)	ND		5.00		mg/L			04/12/23 17:37	1
Bicarbonate (as CaCO3)	ND		5.00		mg/L			04/12/23 17:37	1
Carbonate (as CaCO3)	ND		5.00		mg/L			04/12/23 17:37	1
Hydroxide (as CaCO3)	ND		5.00		mg/L			04/12/23 17:37	1

Lab Sample ID: MB 570-319830/4

Matrix: Water

Analysis Batch: 319830

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity, Total (As CaCO3)	ND		5.00		mg/L			04/12/23 14:25	1
Bicarbonate (as CaCO3)	ND		5.00		mg/L			04/12/23 14:25	1
Carbonate (as CaCO3)	ND		5.00		mg/L			04/12/23 14:25	1
Hydroxide (as CaCO3)	ND		5.00		mg/L			04/12/23 14:25	1

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QC Sample Results

Client: Hargis + Associates, Inc.
Project/Site: Raytheon / 532.15

Job ID: 570-133983-1

Method: SM 2320B - Alkalinity (Continued)

Lab Sample ID: LCS 570-319830/33

Matrix: Water

Analysis Batch: 319830

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Alkalinity, Total (As CaCO3)	106	93.44		mg/L		88	78 - 110

Lab Sample ID: LCSD 570-319830/34

Matrix: Water

Analysis Batch: 319830

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
Alkalinity, Total (As CaCO3)	106	96.69		mg/L		91	78 - 110	3	10

Lab Sample ID: 570-133233-A-1 DU

Matrix: Water

Analysis Batch: 319830

Client Sample ID: Duplicate

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Alkalinity, Total (As CaCO3)	110		109.6		mg/L		0.5	25
Bicarbonate (as CaCO3)	110		109.6		mg/L		0.5	25
Carbonate (as CaCO3)	ND		ND		mg/L		NC	25
Hydroxide (as CaCO3)	ND		ND		mg/L		NC	25

Method: SM 2540D - Solids, Total Suspended (TSS)

Lab Sample ID: MB 570-318481/1

Matrix: Water

Analysis Batch: 318481

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	ND		1.00		mg/L			04/07/23 15:40	1

Lab Sample ID: LCS 570-318481/2

Matrix: Water

Analysis Batch: 318481

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Suspended Solids	100	108.0		mg/L		108	77 - 116

Lab Sample ID: LCSD 570-318481/3

Matrix: Water

Analysis Batch: 318481

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
Total Suspended Solids	100	105.0		mg/L		105	77 - 116	3	10

Lab Sample ID: 570-133749-A-4 DU

Matrix: Water

Analysis Batch: 318481

Client Sample ID: Duplicate

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Suspended Solids	578		555.0		mg/L		4	10

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QC Sample Results

Client: Hargis + Associates, Inc.
Project/Site: Raytheon / 532.15

Job ID: 570-133983-1

Method: SM 5310D - Organic Carbon, Total (TOC)

Lab Sample ID: MB 570-319967/4

Matrix: Water

Analysis Batch: 319967

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon, Total Organic	ND		0.500		mg/L			04/12/23 16:45	1

Lab Sample ID: LCS 570-319967/5

Matrix: Water

Analysis Batch: 319967

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Carbon, Total Organic	5.03	5.360		mg/L		107	85 - 115

Lab Sample ID: LCSD 570-319967/6

Matrix: Water

Analysis Batch: 319967

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
Carbon, Total Organic	5.03	5.431		mg/L		108	85 - 115	1	20

Lab Sample ID: 570-133609-I-1 MS

Matrix: Water

Analysis Batch: 319967

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Carbon, Total Organic	0.991		5.03	6.356		mg/L		107	31 - 145

Lab Sample ID: 570-133609-I-1 MSD

Matrix: Water

Analysis Batch: 319967

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Carbon, Total Organic	0.991		5.03	6.368		mg/L		107	31 - 145	0	20

QC Association Summary

Client: Hargis + Associates, Inc.
Project/Site: Raytheon / 532.15

Job ID: 570-133983-1

GC/MS VOA

Analysis Batch: 318126

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-133983-6	INF	Total/NA	Water	8260B SIM	
570-133983-7	EW-02	Total/NA	Water	8260B SIM	
570-133983-8	MW-29	Total/NA	Water	8260B SIM	
MB 570-318126/7	Method Blank	Total/NA	Water	8260B SIM	
LCS 570-318126/4	Lab Control Sample	Total/NA	Water	8260B SIM	
LCSD 570-318126/5	Lab Control Sample Dup	Total/NA	Water	8260B SIM	

Analysis Batch: 318305

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-133983-1	TB-030723	Total/NA	Water	8260B	
570-133983-2	CEFF	Total/NA	Water	8260B	
570-133983-3	CBT	Total/NA	Water	8260B	
570-133983-4	POX	Total/NA	Water	8260B	
570-133983-6	INF	Total/NA	Water	8260B	
570-133983-7	EW-02	Total/NA	Water	8260B	
570-133983-8	MW-29	Total/NA	Water	8260B	
MB 570-318305/7	Method Blank	Total/NA	Water	8260B	
LCS 570-318305/4	Lab Control Sample	Total/NA	Water	8260B	
LCSD 570-318305/5	Lab Control Sample Dup	Total/NA	Water	8260B	

GC/MS Semi VOA

Prep Batch: 318959

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-133983-2	CEFF	Total/NA	Water	3510C	
570-133983-3	CBT	Total/NA	Water	3510C	
570-133983-4	POX	Total/NA	Water	3510C	

Analysis Batch: 319804

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-133983-2	CEFF	Total/NA	Water	8270C SIM ID	318959
570-133983-3	CBT	Total/NA	Water	8270C SIM ID	318959
570-133983-4	POX	Total/NA	Water	8270C SIM ID	318959

HPLC/IC

Analysis Batch: 318712

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-133983-6	INF	Total/NA	Water	300.0	
570-133983-7	EW-02	Total/NA	Water	300.0	
570-133983-8	MW-29	Total/NA	Water	300.0	
MB 570-318712/5	Method Blank	Total/NA	Water	300.0	
LCS 570-318712/6	Lab Control Sample	Total/NA	Water	300.0	
LCSD 570-318712/7	Lab Control Sample Dup	Total/NA	Water	300.0	
570-134253-C-1 MS	Matrix Spike	Total/NA	Water	300.0	
570-134253-C-1 MSD	Matrix Spike Duplicate	Total/NA	Water	300.0	

Analysis Batch: 318750

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-133983-4	POX	Total/NA	Water	300.1	
570-133983-6	INF	Total/NA	Water	300.1	
MB 570-318750/5	Method Blank	Total/NA	Water	300.1	

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QC Association Summary

Client: Hargis + Associates, Inc.
Project/Site: Raytheon / 532.15

Job ID: 570-133983-1

HPLC/IC (Continued)

Analysis Batch: 318750 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 570-318750/6	Lab Control Sample	Total/NA	Water	300.1	
LCSD 570-318750/7	Lab Control Sample Dup	Total/NA	Water	300.1	
MRL 570-318750/4	Lab Control Sample	Total/NA	Water	300.1	
570-133665-J-1 MS	Matrix Spike	Total/NA	Water	300.1	
570-133665-J-1 MSD	Matrix Spike Duplicate	Total/NA	Water	300.1	

General Chemistry

Analysis Batch: 318481

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-133983-5	PF	Total/NA	Water	SM 2540D	
MB 570-318481/1	Method Blank	Total/NA	Water	SM 2540D	
LCS 570-318481/2	Lab Control Sample	Total/NA	Water	SM 2540D	
LCSD 570-318481/3	Lab Control Sample Dup	Total/NA	Water	SM 2540D	
570-133749-A-4 DU	Duplicate	Total/NA	Water	SM 2540D	

Analysis Batch: 319830

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-133983-4	POX	Total/NA	Water	SM 2320B	
570-133983-5	PF	Total/NA	Water	SM 2320B	
MB 570-319830/35	Method Blank	Total/NA	Water	SM 2320B	
MB 570-319830/4	Method Blank	Total/NA	Water	SM 2320B	
LCS 570-319830/33	Lab Control Sample	Total/NA	Water	SM 2320B	
LCSD 570-319830/34	Lab Control Sample Dup	Total/NA	Water	SM 2320B	
570-133233-A-1 DU	Duplicate	Total/NA	Water	SM 2320B	

Analysis Batch: 319967

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-133983-4	POX	Total/NA	Water	SM 5310D	
570-133983-5	PF	Total/NA	Water	SM 5310D	
MB 570-319967/4	Method Blank	Total/NA	Water	SM 5310D	
LCS 570-319967/5	Lab Control Sample	Total/NA	Water	SM 5310D	
LCSD 570-319967/6	Lab Control Sample Dup	Total/NA	Water	SM 5310D	
570-133609-I-1 MS	Matrix Spike	Total/NA	Water	SM 5310D	
570-133609-I-1 MSD	Matrix Spike Duplicate	Total/NA	Water	SM 5310D	

Lab Chronicle

Client: Hargis + Associates, Inc.
Project/Site: Raytheon / 532.15

Job ID: 570-133983-1

Client Sample ID: TB-030723

Lab Sample ID: 570-133983-1

Date Collected: 04/06/23 08:00

Matrix: Water

Date Received: 04/06/23 13:54

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	318305	04/07/23 12:32	N1A	EET CAL 4
Instrument ID: GCMSVV										

Client Sample ID: CEFF

Lab Sample ID: 570-133983-2

Date Collected: 04/06/23 09:50

Matrix: Water

Date Received: 04/06/23 13:54

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	318305	04/07/23 13:25	N1A	EET CAL 4
Instrument ID: GCMSVV										
Total/NA	Prep	3510C			134.2 mL	10 mL	318959	04/11/23 07:15	RY4P	EET CAL 4
Total/NA	Analysis	8270C SIM ID		1	1 mL	1 mL	319804	04/13/23 19:43	UJ3K	EET CAL 4
Instrument ID: GCMSDDD										

Client Sample ID: CBT

Lab Sample ID: 570-133983-3

Date Collected: 04/06/23 09:55

Matrix: Water

Date Received: 04/06/23 13:54

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	318305	04/07/23 13:51	N1A	EET CAL 4
Instrument ID: GCMSVV										
Total/NA	Prep	3510C			134.3 mL	10 mL	318959	04/11/23 07:15	RY4P	EET CAL 4
Total/NA	Analysis	8270C SIM ID		1	1 mL	1 mL	319804	04/13/23 19:57	UJ3K	EET CAL 4
Instrument ID: GCMSDDD										

Client Sample ID: POX

Lab Sample ID: 570-133983-4

Date Collected: 04/06/23 10:00

Matrix: Water

Date Received: 04/06/23 13:54

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	318305	04/07/23 14:18	N1A	EET CAL 4
Instrument ID: GCMSVV										
Total/NA	Prep	3510C			134.7 mL	10 mL	318959	04/11/23 07:15	RY4P	EET CAL 4
Total/NA	Analysis	8270C SIM ID		1	1 mL	1 mL	319804	04/13/23 20:12	UJ3K	EET CAL 4
Instrument ID: GCMSDDD										
Total/NA	Analysis	300.1		10	4 mL	4 mL	318750	04/10/23 16:40	YO8L	EET CAL 4
Instrument ID: IC32										
Total/NA	Analysis	SM 2320B		1	10 mL	10 mL	319830	04/12/23 19:43	BDH9	EET CAL 4
Instrument ID: ManSciMantech										
Total/NA	Analysis	SM 5310D		1	40 mL	40 mL	319967	04/13/23 02:39	UAPD	EET CAL 4
Instrument ID: TOC8										

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Lab Chronicle

Client: Hargis + Associates, Inc.
Project/Site: Raytheon / 532.15

Job ID: 570-133983-1

Client Sample ID: PF

Lab Sample ID: 570-133983-5

Date Collected: 04/06/23 10:05

Matrix: Water

Date Received: 04/06/23 13:54

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 2320B Instrument ID: ManSciMantech		1	10 mL	10 mL	319830	04/12/23 19:50	BDH9	EET CAL 4
Total/NA	Analysis	SM 2540D Instrument ID: BAL71		1	1000 mL	1000 mL	318481	04/07/23 15:40	LNW3	EET CAL 4
Total/NA	Analysis	SM 5310D Instrument ID: TOC8		1	40 mL	40 mL	319967	04/13/23 03:04	UAPD	EET CAL 4

Client Sample ID: INF

Lab Sample ID: 570-133983-6

Date Collected: 04/06/23 10:15

Matrix: Water

Date Received: 04/06/23 13:54

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B Instrument ID: GCMSVV		1	20 mL	20 mL	318305	04/07/23 14:44	N1A	EET CAL 4
Total/NA	Analysis	8260B SIM Instrument ID: GCMSFFF		10	25 mL	25 mL	318126	04/07/23 00:16	UJHB	EET CAL 4
Total/NA	Analysis	300.0 Instrument ID: IC9		1	4 mL	4 mL	318712	04/10/23 08:33	PS	EET CAL 4
Total/NA	Analysis	300.1 Instrument ID: IC32		10	4 mL	4 mL	318750	04/10/23 17:14	YO8L	EET CAL 4

Client Sample ID: EW-02

Lab Sample ID: 570-133983-7

Date Collected: 04/06/23 10:35

Matrix: Water

Date Received: 04/06/23 13:54

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B Instrument ID: GCMSVV		1	20 mL	20 mL	318305	04/07/23 15:11	N1A	EET CAL 4
Total/NA	Analysis	8260B SIM Instrument ID: GCMSFFF		1	25 mL	25 mL	318126	04/07/23 00:42	UJHB	EET CAL 4
Total/NA	Analysis	300.0 Instrument ID: IC9		1	4 mL	4 mL	318712	04/10/23 08:50	PS	EET CAL 4

Client Sample ID: MW-29

Lab Sample ID: 570-133983-8

Date Collected: 04/06/23 10:45

Matrix: Water

Date Received: 04/06/23 13:54

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B Instrument ID: GCMSVV		1	20 mL	20 mL	318305	04/07/23 15:37	N1A	EET CAL 4
Total/NA	Analysis	8260B SIM Instrument ID: GCMSFFF		25	25 mL	25 mL	318126	04/07/23 01:08	UJHB	EET CAL 4
Total/NA	Analysis	300.0 Instrument ID: IC9		1	4 mL	4 mL	318712	04/10/23 09:06	PS	EET CAL 4

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Lab Chronicle

Client: Hargis + Associates, Inc.
Project/Site: Raytheon / 532.15

Job ID: 570-133983-1

Laboratory References:

EET CAL 4 = Eurofins Calscience Tustin, 2841 Dow Avenue, Tustin, CA 92780, TEL (714)895-5494

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Accreditation/Certification Summary

Client: Hargis + Associates, Inc.
Project/Site: Raytheon / 532.15

Job ID: 570-133983-1

Laboratory: Eurofins Calscience

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
Oregon	NELAP	4175	02-02-24

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
SM 2320B		Water	Bicarbonate (as CaCO ₃)
SM 2320B		Water	Carbonate (as CaCO ₃)
SM 2320B		Water	Hydroxide (as CaCO ₃)

Method Summary

Client: Hargis + Associates, Inc.
Project/Site: Raytheon / 532.15

Job ID: 570-133983-1

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	EET CAL 4
8260B SIM	Volatile Organic Compounds (GC/MS)	SW846	EET CAL 4
8270C SIM ID	Semivolatile Organic Compounds (GC/MS SIM / Isotope Dilution)	SW846	EET CAL 4
300.0	Anions, Ion Chromatography	EPA	EET CAL 4
300.1	Disinfection By-Products, (IC)	EPA	EET CAL 4
SM 2320B	Alkalinity	SM	EET CAL 4
SM 2540D	Solids, Total Suspended (TSS)	SM	EET CAL 4
SM 5310D	Organic Carbon, Total (TOC)	SM	EET CAL 4
3510C	Liquid-Liquid Extraction (Separatory Funnel)	SW846	EET CAL 4
5030C	Purge and Trap	SW846	EET CAL 4

Protocol References:

EPA = US Environmental Protection Agency

SM = "Standard Methods For The Examination Of Water And Wastewater"

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

Laboratory References:

EET CAL 4 = Eurofins Calscience Tustin, 2841 Dow Avenue, Tustin, CA 92780, TEL (714)895-5494

Sample Summary

Client: Hargis + Associates, Inc.
Project/Site: Raytheon / 532.15

Job ID: 570-133983-1

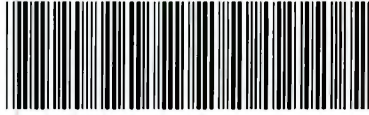
Lab Sample ID	Client Sample ID	Matrix	Collected	Received
570-133983-1	TB-030723	Water	04/06/23 08:00	04/06/23 13:54
570-133983-2	CEFF	Water	04/06/23 09:50	04/06/23 13:54
570-133983-3	CBT	Water	04/06/23 09:55	04/06/23 13:54
570-133983-4	POX	Water	04/06/23 10:00	04/06/23 13:54
570-133983-5	PF	Water	04/06/23 10:05	04/06/23 13:54
570-133983-6	INF	Water	04/06/23 10:15	04/06/23 13:54
570-133983-7	EW-02	Water	04/06/23 10:35	04/06/23 13:54
570-133983-8	MW-29	Water	04/06/23 10:45	04/06/23 13:54

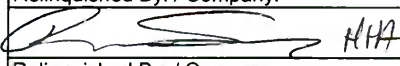
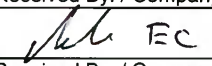
PROJECT: Raytheon Main GETS Monthly Sample

TASK NO.: 532.15

Project Manager Steve Netto
QA Manager Ruben Sanchez
Phone 858.455.6500
Fax 858.455.6533

Sampled By: <u>Ruben Sanchez</u>				SAMPLE COLLECTION				MATRIX		PRESERVATION		CONTAINERS					ANALYSIS REQUESTED										Expected Concentration Range (ppb) for VOAs				SPECIAL HANDLING				Laboratory		
LAB ID	SAMPLE ID	Date	Time	Groundwater	Lab prepared water	Hydrochloric Acid (HCl)	Nitric Acid (HNO ₃)	Ethylene Diamine	Sulfuric Acid (H ₂ SO ₄)	Ice	40-ml VOA	125 mL Poly	250 mL Amber	250 mL Poly	1 L Poly	125 mL Amber	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 8260B SIM Emer	1,4-Dioxane by EPA 8270 SIM	0 - 10	10 - 100	100 - 1,000	>1,000	24 hr TAT	48 Hour TAT	5 Day TAT	Level IV Data Validation Requested	MS/MSD Requested	REMARKS		
1	TB-040623	4/6/2023	8:00		X	X			X		2						X									X											
2	CEFF	4/6/2023	09:50	X		X			X		3					1	X								X	X							X				
3	CBT	4/6/2023	09:55	X		X			X		3					1	X								X	X							X				
4	POX	4/6/2023	10:00	X		X	X	X	X		6	1		1		1	X	X		X	X				X	X							X				
5	PF	4/6/2023	10:05	X				X	X		3		1	1	1					X	X	X	X										X				
6	INF	4/6/2023	10:15	X		X	X		X		6	1		1			X	X	X					X				X					X				
7	EW-02	4/6/2023	10:35	X		X			X		6			1			X	X						X			X						X				
8	MW-29	4/6/2023	10:45	X		X			X		6			1			X	X						X			X						X				
9																																					
10																																					
11																																					
12																																					
13																																					
14																																					
15																																					
16																																					


570-133983 Chain of Custody

Total number of containers per analysis:				35	2	1	5	1	3	Total No. of Containers: <u>47</u>			
Relinquished By: / Company:	Date / Time	Received By: / Company	Date / Time										
 HHA	4-6-23 1354	 EC	4/6/23 13:54										
Relinquished By: / Company:	Date / Time	Received By: / Company	Date / Time										

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

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.

Temperature on receipt

2.7/2.6 SC12

Send Results to:
Steve Netto & Ruben Sanchez
3131 Camino Del Rio North
Suite 355
San Diego, CA 92108
Ph: 858.455.6500
snetto@hargis.com
rsanchez@hargis.com

Login Sample Receipt Checklist

Client: Hargis + Associates, Inc.

Job Number: 570-133983-1

Login Number: 133983

List Number: 1

Creator: Patel, Virendra

List Source: Eurofins Calscience

Question	Answer	Comment
Radioactivity wasn't checked or is $\leq$ 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 $<6\text{mm}$ (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

ANALYTICAL REPORT

PREPARED FOR

Attn: Steve Netto
Hargis + Associates, Inc.
3131 Camino del Rio N
Suite 355
San Diego, California 92108

Generated 5/9/2023 8:29:32 AM

JOB DESCRIPTION

Raytheon / 532.15

JOB NUMBER

570-133983-2

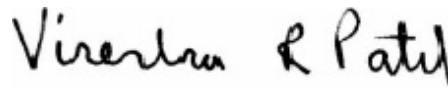
Job Notes

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The data in the report relate to the field sample(s) as received by the laboratory and associated QC. All results have been reviewed and have been found to be compliant with laboratory and accreditation requirements, with the exception of the noted deviation(s). For questions, please contact the Project Manager.

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Calscience Project Manager.

Authorization



Generated
5/9/2023 8:29:32 AM

Authorized for release by
Virendra Patel, Project Manager I
Virendra.Patel@et.eurofinsus.com
(714)895-5494



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Sample Summary	7
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Definitions/Glossary

Client: Hargis + Associates, Inc.
Project/Site: Raytheon / 532.15

Job ID: 570-133983-2

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 / 532.15

Job ID: 570-133983-2

Job ID: 570-133983-2

Laboratory: Eurofins Calscience

Narrative

Job Narrative
570-133983-2

Comments

No additional comments.

Receipt

The samples were received on 4/6/2023 1:54 PM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 2.6° C.

Lab Admin

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

Subcontract Work

Method Specific Ultraviolet Absorption - 254nm: This method was subcontracted to Weck Laboratories, Inc.. The subcontract laboratory certification is different from that of the facility issuing the final report.

Method Summary

Client: Hargis + Associates, Inc.
Project/Site: Raytheon / 532.15

Job ID: 570-133983-2

Method	Method Description	Protocol	Laboratory
5910B	UV-254	SM	Weck Lab

Protocol References:

SM = "Standard Methods For The Examination Of Water And Wastewater"

Laboratory References:

Weck Lab = Weck Laboratories, Inc., 14859 E. Clark Avenue, City of Industry, CA 91745

Sample Summary

Client: Hargis + Associates, Inc.
Project/Site: Raytheon / 532.15

Job ID: 570-133983-2

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
570-133983-5	PF	Water	04/06/23 10:05	04/06/23 13:54

1

2

3

4

5

6

7

8

9

Work Orders: 3D07121

Project: 570-133983-2

Attn: Virendra Patel

Client: Eurofins Calscience - Tustin
2841 Dow Avenue, Suite 100
Tustin, CA 92780

Report Date: 5/05/2023

Received Date: 4/7/2023

Turnaround Time: Normal

Phones: (949) 261-1022

Fax: (949) 260-3297

P.O. #: 570-133983-2

Billing Code:

Dear Virendra Patel,

Enclosed are the results of analyses for samples received 4/07/23 with the Chain-of-Custody document. The samples were received in good condition, at 3.1 °C and on ice. All analyses met the method criteria except as noted in the case narrative or in the report with data qualifiers.

Sample Results

Sample:	PF (570-133983-5)					Sampled: 04/06/23 10:05 by Client		
	3D07121-01 (Water)							
Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier	
Method: EPA 415.3			Instr: UVVIS04					
Batch ID: W3D0693		Preparation: _NONE (WETCHEM)			Prepared: 04/07/23 15:42		Analyst: ymt	
UV 254	0.015		0.009	1/cm	1	04/07/23 17:45		

Quality Control Results

Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	Limit	Qualifier
Batch: W3D0693 - _NONE (WETCHEM)										
Blank (W3D0693-BLK1)				Prepared & Analyzed: 04/07/23						
UV 254	ND	0.009	1/cm							
LCS (W3D0693-BS1)				Prepared & Analyzed: 04/07/23						
UV 254	0.087	0.009	1/cm	0.0880		99	90-110			
Duplicate (W3D0693-DUP1)				Prepared & Analyzed: 04/07/23						
	Source: 3D07036-02									
UV 254	0.039	0.009	1/cm		0.039			0	10	

Notes and Definitions

Item	Definition
%REC	Percent Recovery
Dil	Dilution
MRL	The minimum levels, concentrations, or quantities of a target variable (e.g., target analyte) that can be reported with a specified degree of confidence. The MRL is also known as Limit of Quantitation (LOQ)
ND	NOT DETECTED at or above the Method Reporting Limit (MRL). If Method Detection Limit (MDL) is reported, then ND means not detected at or above the MDL.
RPD	Relative Percent Difference
Source	Sample that was matrix spiked or duplicated.

Any remaining sample(s) will be disposed of one month from the final report date unless other arrangements are made in advance.

All results are expressed on wet weight basis unless otherwise specified.

All samples collected by Weck Laboratories have been sampled in accordance to laboratory SOP Number MIS002.

Analyses Accreditation Summary

Analyte	CAS #	Not By NELAP	ANAB ISO 17025
EPA 415.3 in Water UV 254		✓	

Reviewed by:



Rahul R. Nair
Project Manager



DoD-ELAP ANAB #ADE-2882 • DoD-ISO ANAB # • ELAP-CA #1132 • EPA-UCMR #CA00211 • ISO17025 ANAB #L2457.01 • LACSD #10143

This is a complete final report. The information in this report applies to the samples analyzed in accordance with the chain-of-custody document. Weck Laboratories certifies that the test results meet all requirements of TNI unless noted by qualifiers or written in the Case Narrative. This analytical report must be reproduced in its entirety.

Environment Testing

Ver: 06/08/20215/9/2023

3D07(2)

202

ICOC No:
570-215627

Containers

<u>Count</u>	<u>Container Type</u>	<u>Preservative</u>
1	Amber Glass 250ml - unpreserved	None

Subcontract Method Instructions

Sample IDs	Method	Method Description	Method Comments
5	SUBCONTRACT	SUB (Specific Ultraviolet Absorption - 254nm)/ Specific Ultraviolet Absorption - 254nm	2 day hold time, 250 mL amber required 10 day TAT. Screen if received past hold time.

Sample Receipt Checklist

Weck WKO: **3D07121**
 WKO Logged by: Lester Abad
 Samples Checked by: Lester Abad

Date/Time Received: 04/07/23 @ 09:27
 # of Samples: 01
 Delivered by: Fedex

Task	Yes	No	N/A	Comments	
COC	COC present at receipt?	☒	☐		
	COC properly completed?	☒	☐		
	COC matches sample labels?	☒	☐		
	Project Manager notified?	☐	☐	☒	
Receipt Information	Sample Temperature	3.1°C			
	Samples received on ice?	☒	☐		
	Ice Type (Blue/Wet)	WET			
	All samples intact?	☒	☐		
	Samples in proper containers?	☒	☐		
	Sufficient sample volume?	☒	☐		
	Received within holding time?	☒	☐		
Sample Preservation Verification?	Project Manager notified?	☐	☐	☒	
	Sample labels checked for correct preservation?	☒	☐	☐	
	VOC Headspace: (No) none, If Yes (See comment) 524.2, 524.3, 624.1, 8260, 1666 P/T, LUFT	☐	☐	☒	☐ <6mm/Pea size?
	pH verified upon receipt?				pH paper Lot#
	Metals <2; H2SO4 pres tests <2; 522<4; TOC <2; 508.1, 525.2<2; 6710B<2; 608.3 5-9	☐	☐	☒	
	Free Chlorine Tested <0.1 (Organics Analyses)	☐	☐	☒	Cl Test Strip Lot#
	O&G pH <2 verified?	☐	☐	☐	pH paper Lot#
	pH adjusted for O&G	☐	☐	☐	pH Reading: Acid Lot# Amt added:
Project Manager notified?	☐	☐	☒		

PM Comments

Sample Receipt Checklist Prepared by:

Signature: Lester Abad

Date: 04/07/23

Login Sample Receipt Checklist

Client: Hargis + Associates, Inc.

Job Number: 570-133983-2

Login Number: 133983

List Number: 1

Creator: Patel, Virendra

List Source: Eurofins Calscience

Question	Answer	Comment
Radioactivity wasn't checked or is $\leq$ 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 $<6\text{mm}$ (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	



ANALYTICAL REPORT

PREPARED FOR

Attn: Steve Netto
Hargis + Associates, Inc.
3131 Camino del Rio N
Suite 355
San Diego, California 92108

Generated 5/19/2023 5:49:09 PM

JOB DESCRIPTION

Raytheon / 532.15

JOB NUMBER

570-138209-1

Job Notes

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The data in the report relate to the field sample(s) as received by the laboratory and associated QC. All results have been reviewed and have been found to be compliant with laboratory and accreditation requirements, with the exception of the noted deviation(s). For questions, please contact the Project Manager.

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Calscience Project Manager.

Authorization



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5/19/2023 5:49:09 PM

Authorized for release by
Tina Nguyen, Project Manager
Tina.Nguyen@et.eurofinsus.com
Designee for
Virendra Patel, Project Manager I
Virendra.Patel@et.eurofinsus.com
(714)895-5494

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Definitions/Glossary

Client: Hargis + Associates, Inc.
Project/Site: Raytheon / 532.15

Job ID: 570-138209-1

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
*-	LCS and/or LCSD is outside acceptance limits, low biased.
*+	LCS and/or LCSD is outside acceptance limits, high biased.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	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 / 532.15

Job ID: 570-138209-1

Job ID: 570-138209-1

Laboratory: Eurofins Calscience

Narrative

Job Narrative 570-138209-1

Comments

No additional comments.

Receipt

The samples were received on 5/11/2023 2:10 PM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 3.6° C.

GC/MS VOA

Method 8260B: The laboratory control sample (LCS) and or laboratory control sample duplicate (LCSD) for analytical batch 570-328871 recovered outside control limits for the following analyte: Bromoform. This analyte was biased high in the LCS and was not detected in the associated samples; therefore, the data have been reported.

Method 8260B: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with analytical batch 570-328871. The laboratory control sample (LCS) was performed in duplicate (LCSD) to provide precision data for this batch.

Method 8260B: The following analyte recovered outside control limits for the LCS associated with analytical batch 570-328871: 1,1,1,2-Tetrachloroethane. This is not indicative of a systematic control problem because these were random marginal exceedances. Qualified results have been reported.

Method 8260B: The following analyte recovered outside control limits for the LCSD associated with analytical batch 570-328871: Methylene Chloride. This is not indicative of a systematic control problem because these were random marginal exceedances. Qualified results have been reported.

Method 8260B SIM: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with analytical batch 570-328877. The laboratory control sample (LCS) was performed in duplicate (LCSD) to provide precision data for this batch.

Method 8260B SIM: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with analytical batch 570-329217. The laboratory control sample (LCS) was performed in duplicate (LCSD) to provide precision data for this batch.

Method 8260B SIM: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with analytical batch 570-329590. The laboratory control sample (LCS) was performed in duplicate (LCSD) to provide precision data for this batch.

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.

HPLC/IC

Method 300.1: The following samples were diluted for the bromate analyte due to the abundance of non-target chloride analyte: POX (570-138209-4) and INF (570-138209-6). Elevated reporting limits (RLs) are provided.

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

General Chemistry

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

Organic Prep

Method 3510C: The laboratory control sample (LCS) was performed in duplicate (LCSD) to provide precision data for this batch.

Case Narrative

Client: Hargis + Associates, Inc.
Project/Site: Raytheon / 532.15

Job ID: 570-138209-1

Job ID: 570-138209-1 (Continued)

Laboratory: Eurofins Calscience (Continued)

Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with preparation batch 570-329354.

Method: 8270_Sim_MS_ID.

No additional analytical or quality issues were noted, other than those described above or 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 / 532.15

Job ID: 570-138209-1

Client Sample ID: TB-030723

Lab Sample ID: 570-138209-1

No Detections.

Client Sample ID: CEFF

Lab Sample ID: 570-138209-2

No Detections.

Client Sample ID: CBT

Lab Sample ID: 570-138209-3

No Detections.

Client Sample ID: POX

Lab Sample ID: 570-138209-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Alkalinity, Total (As CaCO ₃)	203		5.00		mg/L	1		SM 2320B	Total/NA
Bicarbonate (as CaCO ₃)	203		5.00		mg/L	1		SM 2320B	Total/NA

Client Sample ID: PF

Lab Sample ID: 570-138209-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Alkalinity, Total (As CaCO ₃)	202		5.00		mg/L	1		SM 2320B	Total/NA
Bicarbonate (as CaCO ₃)	202		5.00		mg/L	1		SM 2320B	Total/NA
Total Suspended Solids	1.20		1.00		mg/L	1		SM 2540D	Total/NA

Client Sample ID: INF

Lab Sample ID: 570-138209-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,4-Dioxane	16		1.0		ug/L	1		8260B SIM	Total/NA
1,1-Dichloroethene	29		0.50		ug/L	1		8260B	Total/NA
Bromide	0.21		0.10		mg/L	1		300.0	Total/NA

Client Sample ID: EW-02

Lab Sample ID: 570-138209-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,4-Dioxane	3.4		1.0		ug/L	1		8260B SIM	Total/NA
1,1-Dichloroethene	7.8		0.50		ug/L	1		8260B	Total/NA
Bromide	0.18		0.10		mg/L	1		300.0	Total/NA

Client Sample ID: MW-29

Lab Sample ID: 570-138209-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,4-Dioxane	51		1.0		ug/L	1		8260B SIM	Total/NA
1,1-Dichloroethane	0.80		0.50		ug/L	1		8260B	Total/NA
1,1-Dichloroethene	94		0.50		ug/L	1		8260B	Total/NA
Trichloroethene	1.1		0.50		ug/L	1		8260B	Total/NA
Trichlorofluoromethane	0.50		0.50		ug/L	1		8260B	Total/NA
Bromide	0.26		0.10		mg/L	1		300.0	Total/NA

This Detection Summary does not include radiochemical test results.

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Client Sample Results

Client: Hargis + Associates, Inc.
Project/Site: Raytheon / 532.15

Job ID: 570-138209-1

Method: SW846 8260B SIM - Volatile Organic Compounds (GC/MS)

Client Sample ID: INF
Date Collected: 05/11/23 10:35
Date Received: 05/11/23 14:10

Lab Sample ID: 570-138209-6
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	16		1.0		ug/L			05/15/23 10:37	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,4-Dichlorobutane (Surr)	105		67 - 133					05/15/23 10:37	1

Client Sample ID: EW-02
Date Collected: 05/11/23 10:55
Date Received: 05/11/23 14:10

Lab Sample ID: 570-138209-7
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	3.4		1.0		ug/L			05/17/23 11:59	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,4-Dichlorobutane (Surr)	130		67 - 133					05/17/23 11:59	1

Client Sample ID: MW-29
Date Collected: 05/11/23 11:15
Date Received: 05/11/23 14:10

Lab Sample ID: 570-138209-8
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	51		1.0		ug/L			05/15/23 16:01	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,4-Dichlorobutane (Surr)	115		67 - 133					05/15/23 16:01	1

Client Sample Results

Client: Hargis + Associates, Inc.
Project/Site: Raytheon / 532.15

Job ID: 570-138209-1

Method: SW846 8260B - Volatile Organic Compounds (GC/MS)

Client Sample ID: TB-030723
Date Collected: 05/11/23 08:00
Date Received: 05/11/23 14:10

Lab Sample ID: 570-138209-1
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND	++	0.50		ug/L			05/15/23 08:53	1
1,1,1-Trichloroethane	ND		0.50		ug/L			05/15/23 08:53	1
1,1,2,2-Tetrachloroethane	ND		0.50		ug/L			05/15/23 08:53	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.50		ug/L			05/15/23 08:53	1
1,1,2-Trichloroethane	ND		0.50		ug/L			05/15/23 08:53	1
1,1-Dichloroethane	ND		0.50		ug/L			05/15/23 08:53	1
1,1-Dichloroethene	ND		0.50		ug/L			05/15/23 08:53	1
1,1-Dichloropropene	ND		0.50		ug/L			05/15/23 08:53	1
1,2,3-Trichlorobenzene	ND		0.50		ug/L			05/15/23 08:53	1
1,2,3-Trichloropropane	ND		0.50		ug/L			05/15/23 08:53	1
1,2,4-Trichlorobenzene	ND		0.50		ug/L			05/15/23 08:53	1
1,2,4-Trimethylbenzene	ND		0.50		ug/L			05/15/23 08:53	1
1,2-Dibromo-3-Chloropropane	ND		1.0		ug/L			05/15/23 08:53	1
1,2-Dibromoethane	ND		0.50		ug/L			05/15/23 08:53	1
1,2-Dichlorobenzene	ND		0.50		ug/L			05/15/23 08:53	1
1,2-Dichloroethane	ND		0.50		ug/L			05/15/23 08:53	1
1,2-Dichloropropane	ND		0.50		ug/L			05/15/23 08:53	1
1,3,5-Trimethylbenzene	ND		0.50		ug/L			05/15/23 08:53	1
1,3-Dichlorobenzene	ND		0.50		ug/L			05/15/23 08:53	1
1,3-Dichloropropane	ND		0.50		ug/L			05/15/23 08:53	1
1,4-Dichlorobenzene	ND		0.50		ug/L			05/15/23 08:53	1
2,2-Dichloropropane	ND		0.50		ug/L			05/15/23 08:53	1
2-Butanone	ND		5.0		ug/L			05/15/23 08:53	1
2-Chlorotoluene	ND		0.50		ug/L			05/15/23 08:53	1
2-Hexanone	ND		6.0		ug/L			05/15/23 08:53	1
4-Chlorotoluene	ND		0.50		ug/L			05/15/23 08:53	1
4-Methyl-2-pentanone	ND		5.0		ug/L			05/15/23 08:53	1
Acetone	ND		8.0		ug/L			05/15/23 08:53	1
Benzene	ND		0.50		ug/L			05/15/23 08:53	1
Bromobenzene	ND		0.50		ug/L			05/15/23 08:53	1
Bromochloromethane	ND		1.0		ug/L			05/15/23 08:53	1
Bromodichloromethane	ND		0.50		ug/L			05/15/23 08:53	1
Bromoform	ND	++	0.50		ug/L			05/15/23 08:53	1
Bromomethane	ND		2.0		ug/L			05/15/23 08:53	1
cis-1,2-Dichloroethene	ND		0.50		ug/L			05/15/23 08:53	1
cis-1,3-Dichloropropene	ND		0.50		ug/L			05/15/23 08:53	1
Carbon disulfide	ND		1.0		ug/L			05/15/23 08:53	1
Carbon tetrachloride	ND		0.50		ug/L			05/15/23 08:53	1
Chlorobenzene	ND		0.50		ug/L			05/15/23 08:53	1
Chloroethane	ND		0.50		ug/L			05/15/23 08:53	1
Chloroform	ND		0.50		ug/L			05/15/23 08:53	1
Chloromethane	ND		1.0		ug/L			05/15/23 08:53	1
Dibromochloromethane	ND		0.50		ug/L			05/15/23 08:53	1
Dibromomethane	ND		0.50		ug/L			05/15/23 08:53	1
Dichlorodifluoromethane	ND		1.0		ug/L			05/15/23 08:53	1
Di-isopropyl ether (DIPE)	ND		0.50		ug/L			05/15/23 08:53	1
Ethanol	ND		50		ug/L			05/15/23 08:53	1
Ethylbenzene	ND		0.50		ug/L			05/15/23 08:53	1
Ethyl-t-butyl ether (ETBE)	ND		0.50		ug/L			05/15/23 08:53	1

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Client Sample Results

Client: Hargis + Associates, Inc.
Project/Site: Raytheon / 532.15

Job ID: 570-138209-1

Method: SW846 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: TB-030723
Date Collected: 05/11/23 08:00
Date Received: 05/11/23 14:10

Lab Sample ID: 570-138209-1
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Isopropylbenzene	ND		0.50		ug/L			05/15/23 08:53	1
Methylene Chloride	ND	*-	1.0		ug/L			05/15/23 08:53	1
Methyl-t-Butyl Ether (MTBE)	ND		0.50		ug/L			05/15/23 08:53	1
Naphthalene	ND		1.0		ug/L			05/15/23 08:53	1
n-Butylbenzene	ND		0.50		ug/L			05/15/23 08:53	1
N-Propylbenzene	ND		0.50		ug/L			05/15/23 08:53	1
o-Xylene	ND		0.50		ug/L			05/15/23 08:53	1
m,p-Xylene	ND		1.0		ug/L			05/15/23 08:53	1
p-Isopropyltoluene	ND		0.50		ug/L			05/15/23 08:53	1
sec-Butylbenzene	ND		0.50		ug/L			05/15/23 08:53	1
Styrene	ND		0.50		ug/L			05/15/23 08:53	1
trans-1,2-Dichloroethene	ND		0.50		ug/L			05/15/23 08:53	1
trans-1,3-Dichloropropene	ND		0.50		ug/L			05/15/23 08:53	1
Tert-amyl-methyl ether (TAME)	ND		0.50		ug/L			05/15/23 08:53	1
tert-Butyl alcohol (TBA)	ND		5.0		ug/L			05/15/23 08:53	1
tert-Butylbenzene	ND		0.50		ug/L			05/15/23 08:53	1
Tetrachloroethene	ND		0.50		ug/L			05/15/23 08:53	1
Toluene	ND		0.50		ug/L			05/15/23 08:53	1
Trichloroethene	ND		0.50		ug/L			05/15/23 08:53	1
Trichlorofluoromethane	ND		0.50		ug/L			05/15/23 08:53	1
Vinyl acetate	ND		5.0		ug/L			05/15/23 08:53	1
Vinyl chloride	ND		0.50		ug/L			05/15/23 08:53	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	108		64 - 132		05/15/23 08:53	1
4-Bromofluorobenzene (Surr)	93		76 - 120		05/15/23 08:53	1
Dibromofluoromethane (Surr)	94		80 - 120		05/15/23 08:53	1
Toluene-d8 (Surr)	97		80 - 120		05/15/23 08:53	1

Client Sample ID: CEFF
Date Collected: 05/11/23 10:15
Date Received: 05/11/23 14:10

Lab Sample ID: 570-138209-2
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND	*+	0.50		ug/L			05/15/23 09:18	1
1,1,1-Trichloroethane	ND		0.50		ug/L			05/15/23 09:18	1
1,1,2,2-Tetrachloroethane	ND		0.50		ug/L			05/15/23 09:18	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.50		ug/L			05/15/23 09:18	1
1,1,2-Trichloroethane	ND		0.50		ug/L			05/15/23 09:18	1
1,1-Dichloroethane	ND		0.50		ug/L			05/15/23 09:18	1
1,1-Dichloroethene	ND		0.50		ug/L			05/15/23 09:18	1
1,1-Dichloropropene	ND		0.50		ug/L			05/15/23 09:18	1
1,2,3-Trichlorobenzene	ND		0.50		ug/L			05/15/23 09:18	1
1,2,3-Trichloropropane	ND		0.50		ug/L			05/15/23 09:18	1
1,2,4-Trichlorobenzene	ND		0.50		ug/L			05/15/23 09:18	1
1,2,4-Trimethylbenzene	ND		0.50		ug/L			05/15/23 09:18	1
1,2-Dibromo-3-Chloropropane	ND		1.0		ug/L			05/15/23 09:18	1
1,2-Dibromoethane	ND		0.50		ug/L			05/15/23 09:18	1
1,2-Dichlorobenzene	ND		0.50		ug/L			05/15/23 09:18	1
1,2-Dichloroethane	ND		0.50		ug/L			05/15/23 09:18	1
1,2-Dichloropropane	ND		0.50		ug/L			05/15/23 09:18	1

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Client Sample Results

Client: Hargis + Associates, Inc.
Project/Site: Raytheon / 532.15

Job ID: 570-138209-1

Method: SW846 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: CEFF
Date Collected: 05/11/23 10:15
Date Received: 05/11/23 14:10

Lab Sample ID: 570-138209-2
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	ND		0.50		ug/L			05/15/23 09:18	1
1,3-Dichlorobenzene	ND		0.50		ug/L			05/15/23 09:18	1
1,3-Dichloropropane	ND		0.50		ug/L			05/15/23 09:18	1
1,4-Dichlorobenzene	ND		0.50		ug/L			05/15/23 09:18	1
2,2-Dichloropropane	ND		0.50		ug/L			05/15/23 09:18	1
2-Butanone	ND		5.0		ug/L			05/15/23 09:18	1
2-Chlorotoluene	ND		0.50		ug/L			05/15/23 09:18	1
2-Hexanone	ND		6.0		ug/L			05/15/23 09:18	1
4-Chlorotoluene	ND		0.50		ug/L			05/15/23 09:18	1
4-Methyl-2-pentanone	ND		5.0		ug/L			05/15/23 09:18	1
Acetone	ND		8.0		ug/L			05/15/23 09:18	1
Benzene	ND		0.50		ug/L			05/15/23 09:18	1
Bromobenzene	ND		0.50		ug/L			05/15/23 09:18	1
Bromochloromethane	ND		1.0		ug/L			05/15/23 09:18	1
Bromodichloromethane	ND		0.50		ug/L			05/15/23 09:18	1
Bromoform	ND	*+	0.50		ug/L			05/15/23 09:18	1
Bromomethane	ND		2.0		ug/L			05/15/23 09:18	1
cis-1,2-Dichloroethene	ND		0.50		ug/L			05/15/23 09:18	1
cis-1,3-Dichloropropene	ND		0.50		ug/L			05/15/23 09:18	1
Carbon disulfide	ND		1.0		ug/L			05/15/23 09:18	1
Carbon tetrachloride	ND		0.50		ug/L			05/15/23 09:18	1
Chlorobenzene	ND		0.50		ug/L			05/15/23 09:18	1
Chloroethane	ND		0.50		ug/L			05/15/23 09:18	1
Chloroform	ND		0.50		ug/L			05/15/23 09:18	1
Chloromethane	ND		1.0		ug/L			05/15/23 09:18	1
Dibromochloromethane	ND		0.50		ug/L			05/15/23 09:18	1
Dibromomethane	ND		0.50		ug/L			05/15/23 09:18	1
Dichlorodifluoromethane	ND		1.0		ug/L			05/15/23 09:18	1
Di-isopropyl ether (DIPE)	ND		0.50		ug/L			05/15/23 09:18	1
Ethanol	ND		50		ug/L			05/15/23 09:18	1
Ethylbenzene	ND		0.50		ug/L			05/15/23 09:18	1
Ethyl-t-butyl ether (ETBE)	ND		0.50		ug/L			05/15/23 09:18	1
Isopropylbenzene	ND		0.50		ug/L			05/15/23 09:18	1
Methylene Chloride	ND	*-	1.0		ug/L			05/15/23 09:18	1
Methyl-t-Butyl Ether (MTBE)	ND		0.50		ug/L			05/15/23 09:18	1
Naphthalene	ND		1.0		ug/L			05/15/23 09:18	1
n-Butylbenzene	ND		0.50		ug/L			05/15/23 09:18	1
N-Propylbenzene	ND		0.50		ug/L			05/15/23 09:18	1
o-Xylene	ND		0.50		ug/L			05/15/23 09:18	1
m,p-Xylene	ND		1.0		ug/L			05/15/23 09:18	1
p-Isopropyltoluene	ND		0.50		ug/L			05/15/23 09:18	1
sec-Butylbenzene	ND		0.50		ug/L			05/15/23 09:18	1
Styrene	ND		0.50		ug/L			05/15/23 09:18	1
trans-1,2-Dichloroethene	ND		0.50		ug/L			05/15/23 09:18	1
trans-1,3-Dichloropropene	ND		0.50		ug/L			05/15/23 09:18	1
Tert-amyl-methyl ether (TAME)	ND		0.50		ug/L			05/15/23 09:18	1
tert-Butyl alcohol (TBA)	ND		5.0		ug/L			05/15/23 09:18	1
tert-Butylbenzene	ND		0.50		ug/L			05/15/23 09:18	1
Tetrachloroethene	ND		0.50		ug/L			05/15/23 09:18	1

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Client Sample Results

Client: Hargis + Associates, Inc.
Project/Site: Raytheon / 532.15

Job ID: 570-138209-1

Method: SW846 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: CEFF
Date Collected: 05/11/23 10:15
Date Received: 05/11/23 14:10

Lab Sample ID: 570-138209-2
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Toluene	ND		0.50		ug/L			05/15/23 09:18	1
Trichloroethene	ND		0.50		ug/L			05/15/23 09:18	1
Trichlorofluoromethane	ND		0.50		ug/L			05/15/23 09:18	1
Vinyl acetate	ND		5.0		ug/L			05/15/23 09:18	1
Vinyl chloride	ND		0.50		ug/L			05/15/23 09:18	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	112		64 - 132		05/15/23 09:18	1
4-Bromofluorobenzene (Surr)	92		76 - 120		05/15/23 09:18	1
Dibromofluoromethane (Surr)	94		80 - 120		05/15/23 09:18	1
Toluene-d8 (Surr)	97		80 - 120		05/15/23 09:18	1

Client Sample ID: CBT
Date Collected: 05/11/23 10:20
Date Received: 05/11/23 14:10

Lab Sample ID: 570-138209-3
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND	+	0.50		ug/L			05/15/23 10:33	1
1,1,1-Trichloroethane	ND		0.50		ug/L			05/15/23 10:33	1
1,1,2,2-Tetrachloroethane	ND		0.50		ug/L			05/15/23 10:33	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.50		ug/L			05/15/23 10:33	1
1,1,2-Trichloroethane	ND		0.50		ug/L			05/15/23 10:33	1
1,1-Dichloroethane	ND		0.50		ug/L			05/15/23 10:33	1
1,1-Dichloroethene	ND		0.50		ug/L			05/15/23 10:33	1
1,1-Dichloropropene	ND		0.50		ug/L			05/15/23 10:33	1
1,2,3-Trichlorobenzene	ND		0.50		ug/L			05/15/23 10:33	1
1,2,3-Trichloropropane	ND		0.50		ug/L			05/15/23 10:33	1
1,2,4-Trichlorobenzene	ND		0.50		ug/L			05/15/23 10:33	1
1,2,4-Trimethylbenzene	ND		0.50		ug/L			05/15/23 10:33	1
1,2-Dibromo-3-Chloropropane	ND		1.0		ug/L			05/15/23 10:33	1
1,2-Dibromoethane	ND		0.50		ug/L			05/15/23 10:33	1
1,2-Dichlorobenzene	ND		0.50		ug/L			05/15/23 10:33	1
1,2-Dichloroethane	ND		0.50		ug/L			05/15/23 10:33	1
1,2-Dichloropropane	ND		0.50		ug/L			05/15/23 10:33	1
1,3,5-Trimethylbenzene	ND		0.50		ug/L			05/15/23 10:33	1
1,3-Dichlorobenzene	ND		0.50		ug/L			05/15/23 10:33	1
1,3-Dichloropropane	ND		0.50		ug/L			05/15/23 10:33	1
1,4-Dichlorobenzene	ND		0.50		ug/L			05/15/23 10:33	1
2,2-Dichloropropane	ND		0.50		ug/L			05/15/23 10:33	1
2-Butanone	ND		5.0		ug/L			05/15/23 10:33	1
2-Chlorotoluene	ND		0.50		ug/L			05/15/23 10:33	1
2-Hexanone	ND		6.0		ug/L			05/15/23 10:33	1
4-Chlorotoluene	ND		0.50		ug/L			05/15/23 10:33	1
4-Methyl-2-pentanone	ND		5.0		ug/L			05/15/23 10:33	1
Acetone	ND		8.0		ug/L			05/15/23 10:33	1
Benzene	ND		0.50		ug/L			05/15/23 10:33	1
Bromobenzene	ND		0.50		ug/L			05/15/23 10:33	1
Bromochloromethane	ND		1.0		ug/L			05/15/23 10:33	1
Bromodichloromethane	ND		0.50		ug/L			05/15/23 10:33	1
Bromoform	ND	+	0.50		ug/L			05/15/23 10:33	1
Bromomethane	ND		2.0		ug/L			05/15/23 10:33	1

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Client Sample Results

Client: Hargis + Associates, Inc.
Project/Site: Raytheon / 532.15

Job ID: 570-138209-1

Method: SW846 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: CBT
Date Collected: 05/11/23 10:20
Date Received: 05/11/23 14:10

Lab Sample ID: 570-138209-3
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	ND		0.50		ug/L			05/15/23 10:33	1
cis-1,3-Dichloropropene	ND		0.50		ug/L			05/15/23 10:33	1
Carbon disulfide	ND		1.0		ug/L			05/15/23 10:33	1
Carbon tetrachloride	ND		0.50		ug/L			05/15/23 10:33	1
Chlorobenzene	ND		0.50		ug/L			05/15/23 10:33	1
Chloroethane	ND		0.50		ug/L			05/15/23 10:33	1
Chloroform	ND		0.50		ug/L			05/15/23 10:33	1
Chloromethane	ND		1.0		ug/L			05/15/23 10:33	1
Dibromochloromethane	ND		0.50		ug/L			05/15/23 10:33	1
Dibromomethane	ND		0.50		ug/L			05/15/23 10:33	1
Dichlorodifluoromethane	ND		1.0		ug/L			05/15/23 10:33	1
Di-isopropyl ether (DIPE)	ND		0.50		ug/L			05/15/23 10:33	1
Ethanol	ND		50		ug/L			05/15/23 10:33	1
Ethylbenzene	ND		0.50		ug/L			05/15/23 10:33	1
Ethyl-t-butyl ether (ETBE)	ND		0.50		ug/L			05/15/23 10:33	1
Isopropylbenzene	ND		0.50		ug/L			05/15/23 10:33	1
Methylene Chloride	ND	*	1.0		ug/L			05/15/23 10:33	1
Methyl-t-Butyl Ether (MTBE)	ND		0.50		ug/L			05/15/23 10:33	1
Naphthalene	ND		1.0		ug/L			05/15/23 10:33	1
n-Butylbenzene	ND		0.50		ug/L			05/15/23 10:33	1
N-Propylbenzene	ND		0.50		ug/L			05/15/23 10:33	1
o-Xylene	ND		0.50		ug/L			05/15/23 10:33	1
m,p-Xylene	ND		1.0		ug/L			05/15/23 10:33	1
p-Isopropyltoluene	ND		0.50		ug/L			05/15/23 10:33	1
sec-Butylbenzene	ND		0.50		ug/L			05/15/23 10:33	1
Styrene	ND		0.50		ug/L			05/15/23 10:33	1
trans-1,2-Dichloroethene	ND		0.50		ug/L			05/15/23 10:33	1
trans-1,3-Dichloropropene	ND		0.50		ug/L			05/15/23 10:33	1
Tert-amyl-methyl ether (TAME)	ND		0.50		ug/L			05/15/23 10:33	1
tert-Butyl alcohol (TBA)	ND		5.0		ug/L			05/15/23 10:33	1
tert-Butylbenzene	ND		0.50		ug/L			05/15/23 10:33	1
Tetrachloroethene	ND		0.50		ug/L			05/15/23 10:33	1
Toluene	ND		0.50		ug/L			05/15/23 10:33	1
Trichloroethene	ND		0.50		ug/L			05/15/23 10:33	1
Trichlorofluoromethane	ND		0.50		ug/L			05/15/23 10:33	1
Vinyl acetate	ND		5.0		ug/L			05/15/23 10:33	1
Vinyl chloride	ND		0.50		ug/L			05/15/23 10:33	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	109		64 - 132		05/15/23 10:33	1
4-Bromofluorobenzene (Surr)	91		76 - 120		05/15/23 10:33	1
Dibromofluoromethane (Surr)	94		80 - 120		05/15/23 10:33	1
Toluene-d8 (Surr)	99		80 - 120		05/15/23 10:33	1

Client Sample ID: POX
Date Collected: 05/11/23 10:25
Date Received: 05/11/23 14:10

Lab Sample ID: 570-138209-4
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND	+	0.50		ug/L			05/15/23 10:58	1
1,1,1-Trichloroethane	ND		0.50		ug/L			05/15/23 10:58	1

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Client Sample Results

Client: Hargis + Associates, Inc.
Project/Site: Raytheon / 532.15

Job ID: 570-138209-1

Method: SW846 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: POX
Date Collected: 05/11/23 10:25
Date Received: 05/11/23 14:10

Lab Sample ID: 570-138209-4
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane	ND		0.50		ug/L			05/15/23 10:58	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.50		ug/L			05/15/23 10:58	1
1,1,2-Trichloroethane	ND		0.50		ug/L			05/15/23 10:58	1
1,1-Dichloroethane	ND		0.50		ug/L			05/15/23 10:58	1
1,1-Dichloroethene	ND		0.50		ug/L			05/15/23 10:58	1
1,1-Dichloropropene	ND		0.50		ug/L			05/15/23 10:58	1
1,2,3-Trichlorobenzene	ND		0.50		ug/L			05/15/23 10:58	1
1,2,3-Trichloropropane	ND		0.50		ug/L			05/15/23 10:58	1
1,2,4-Trichlorobenzene	ND		0.50		ug/L			05/15/23 10:58	1
1,2,4-Trimethylbenzene	ND		0.50		ug/L			05/15/23 10:58	1
1,2-Dibromo-3-Chloropropane	ND		1.0		ug/L			05/15/23 10:58	1
1,2-Dibromoethane	ND		0.50		ug/L			05/15/23 10:58	1
1,2-Dichlorobenzene	ND		0.50		ug/L			05/15/23 10:58	1
1,2-Dichloroethane	ND		0.50		ug/L			05/15/23 10:58	1
1,2-Dichloropropane	ND		0.50		ug/L			05/15/23 10:58	1
1,3,5-Trimethylbenzene	ND		0.50		ug/L			05/15/23 10:58	1
1,3-Dichlorobenzene	ND		0.50		ug/L			05/15/23 10:58	1
1,3-Dichloropropane	ND		0.50		ug/L			05/15/23 10:58	1
1,4-Dichlorobenzene	ND		0.50		ug/L			05/15/23 10:58	1
2,2-Dichloropropane	ND		0.50		ug/L			05/15/23 10:58	1
2-Butanone	ND		5.0		ug/L			05/15/23 10:58	1
2-Chlorotoluene	ND		0.50		ug/L			05/15/23 10:58	1
2-Hexanone	ND		6.0		ug/L			05/15/23 10:58	1
4-Chlorotoluene	ND		0.50		ug/L			05/15/23 10:58	1
4-Methyl-2-pentanone	ND		5.0		ug/L			05/15/23 10:58	1
Acetone	ND		8.0		ug/L			05/15/23 10:58	1
Benzene	ND		0.50		ug/L			05/15/23 10:58	1
Bromobenzene	ND		0.50		ug/L			05/15/23 10:58	1
Bromochloromethane	ND		1.0		ug/L			05/15/23 10:58	1
Bromodichloromethane	ND		0.50		ug/L			05/15/23 10:58	1
Bromoform	ND	+	0.50		ug/L			05/15/23 10:58	1
Bromomethane	ND		2.0		ug/L			05/15/23 10:58	1
cis-1,2-Dichloroethene	ND		0.50		ug/L			05/15/23 10:58	1
cis-1,3-Dichloropropene	ND		0.50		ug/L			05/15/23 10:58	1
Carbon disulfide	ND		1.0		ug/L			05/15/23 10:58	1
Carbon tetrachloride	ND		0.50		ug/L			05/15/23 10:58	1
Chlorobenzene	ND		0.50		ug/L			05/15/23 10:58	1
Chloroethane	ND		0.50		ug/L			05/15/23 10:58	1
Chloroform	ND		0.50		ug/L			05/15/23 10:58	1
Chloromethane	ND		1.0		ug/L			05/15/23 10:58	1
Dibromochloromethane	ND		0.50		ug/L			05/15/23 10:58	1
Dibromomethane	ND		0.50		ug/L			05/15/23 10:58	1
Dichlorodifluoromethane	ND		1.0		ug/L			05/15/23 10:58	1
Di-isopropyl ether (DIPE)	ND		0.50		ug/L			05/15/23 10:58	1
Ethanol	ND		50		ug/L			05/15/23 10:58	1
Ethylbenzene	ND		0.50		ug/L			05/15/23 10:58	1
Ethyl-t-butyl ether (ETBE)	ND		0.50		ug/L			05/15/23 10:58	1
Isopropylbenzene	ND		0.50		ug/L			05/15/23 10:58	1
Methylene Chloride	ND	-	1.0		ug/L			05/15/23 10:58	1

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Client Sample Results

Client: Hargis + Associates, Inc.
Project/Site: Raytheon / 532.15

Job ID: 570-138209-1

Method: SW846 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: POX
Date Collected: 05/11/23 10:25
Date Received: 05/11/23 14:10

Lab Sample ID: 570-138209-4
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl-t-Butyl Ether (MTBE)	ND		0.50		ug/L			05/15/23 10:58	1
Naphthalene	ND		1.0		ug/L			05/15/23 10:58	1
n-Butylbenzene	ND		0.50		ug/L			05/15/23 10:58	1
N-Propylbenzene	ND		0.50		ug/L			05/15/23 10:58	1
o-Xylene	ND		0.50		ug/L			05/15/23 10:58	1
m,p-Xylene	ND		1.0		ug/L			05/15/23 10:58	1
p-Isopropyltoluene	ND		0.50		ug/L			05/15/23 10:58	1
sec-Butylbenzene	ND		0.50		ug/L			05/15/23 10:58	1
Styrene	ND		0.50		ug/L			05/15/23 10:58	1
trans-1,2-Dichloroethene	ND		0.50		ug/L			05/15/23 10:58	1
trans-1,3-Dichloropropene	ND		0.50		ug/L			05/15/23 10:58	1
Tert-amyl-methyl ether (TAME)	ND		0.50		ug/L			05/15/23 10:58	1
tert-Butyl alcohol (TBA)	ND		5.0		ug/L			05/15/23 10:58	1
tert-Butylbenzene	ND		0.50		ug/L			05/15/23 10:58	1
Tetrachloroethene	ND		0.50		ug/L			05/15/23 10:58	1
Toluene	ND		0.50		ug/L			05/15/23 10:58	1
Trichloroethene	ND		0.50		ug/L			05/15/23 10:58	1
Trichlorofluoromethane	ND		0.50		ug/L			05/15/23 10:58	1
Vinyl acetate	ND		5.0		ug/L			05/15/23 10:58	1
Vinyl chloride	ND		0.50		ug/L			05/15/23 10:58	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	112		64 - 132		05/15/23 10:58	1
4-Bromofluorobenzene (Surr)	91		76 - 120		05/15/23 10:58	1
Dibromofluoromethane (Surr)	96		80 - 120		05/15/23 10:58	1
Toluene-d8 (Surr)	96		80 - 120		05/15/23 10:58	1

Client Sample ID: INF
Date Collected: 05/11/23 10:35
Date Received: 05/11/23 14:10

Lab Sample ID: 570-138209-6
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND	+	0.50		ug/L			05/15/23 11:23	1
1,1,1-Trichloroethane	ND		0.50		ug/L			05/15/23 11:23	1
1,1,2,2-Tetrachloroethane	ND		0.50		ug/L			05/15/23 11:23	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.50		ug/L			05/15/23 11:23	1
1,1,2-Trichloroethane	ND		0.50		ug/L			05/15/23 11:23	1
1,1-Dichloroethane	ND		0.50		ug/L			05/15/23 11:23	1
1,1-Dichloroethene	29		0.50		ug/L			05/15/23 11:23	1
1,1-Dichloropropene	ND		0.50		ug/L			05/15/23 11:23	1
1,2,3-Trichlorobenzene	ND		0.50		ug/L			05/15/23 11:23	1
1,2,3-Trichloropropane	ND		0.50		ug/L			05/15/23 11:23	1
1,2,4-Trichlorobenzene	ND		0.50		ug/L			05/15/23 11:23	1
1,2,4-Trimethylbenzene	ND		0.50		ug/L			05/15/23 11:23	1
1,2-Dibromo-3-Chloropropane	ND		1.0		ug/L			05/15/23 11:23	1
1,2-Dibromoethane	ND		0.50		ug/L			05/15/23 11:23	1
1,2-Dichlorobenzene	ND		0.50		ug/L			05/15/23 11:23	1
1,2-Dichloroethane	ND		0.50		ug/L			05/15/23 11:23	1
1,2-Dichloropropane	ND		0.50		ug/L			05/15/23 11:23	1
1,3,5-Trimethylbenzene	ND		0.50		ug/L			05/15/23 11:23	1
1,3-Dichlorobenzene	ND		0.50		ug/L			05/15/23 11:23	1

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Client Sample Results

Client: Hargis + Associates, Inc.
Project/Site: Raytheon / 532.15

Job ID: 570-138209-1

Method: SW846 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: INF

Date Collected: 05/11/23 10:35

Date Received: 05/11/23 14:10

Lab Sample ID: 570-138209-6

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3-Dichloropropane	ND		0.50		ug/L			05/15/23 11:23	1
1,4-Dichlorobenzene	ND		0.50		ug/L			05/15/23 11:23	1
2,2-Dichloropropane	ND		0.50		ug/L			05/15/23 11:23	1
2-Butanone	ND		5.0		ug/L			05/15/23 11:23	1
2-Chlorotoluene	ND		0.50		ug/L			05/15/23 11:23	1
2-Hexanone	ND		6.0		ug/L			05/15/23 11:23	1
4-Chlorotoluene	ND		0.50		ug/L			05/15/23 11:23	1
4-Methyl-2-pentanone	ND		5.0		ug/L			05/15/23 11:23	1
Acetone	ND		8.0		ug/L			05/15/23 11:23	1
Benzene	ND		0.50		ug/L			05/15/23 11:23	1
Bromobenzene	ND		0.50		ug/L			05/15/23 11:23	1
Bromochloromethane	ND		1.0		ug/L			05/15/23 11:23	1
Bromodichloromethane	ND		0.50		ug/L			05/15/23 11:23	1
Bromoform	ND	*+	0.50		ug/L			05/15/23 11:23	1
Bromomethane	ND		2.0		ug/L			05/15/23 11:23	1
cis-1,2-Dichloroethene	ND		0.50		ug/L			05/15/23 11:23	1
cis-1,3-Dichloropropene	ND		0.50		ug/L			05/15/23 11:23	1
Carbon disulfide	ND		1.0		ug/L			05/15/23 11:23	1
Carbon tetrachloride	ND		0.50		ug/L			05/15/23 11:23	1
Chlorobenzene	ND		0.50		ug/L			05/15/23 11:23	1
Chloroethane	ND		0.50		ug/L			05/15/23 11:23	1
Chloroform	ND		0.50		ug/L			05/15/23 11:23	1
Chloromethane	ND		1.0		ug/L			05/15/23 11:23	1
Dibromochloromethane	ND		0.50		ug/L			05/15/23 11:23	1
Dibromomethane	ND		0.50		ug/L			05/15/23 11:23	1
Dichlorodifluoromethane	ND		1.0		ug/L			05/15/23 11:23	1
Di-isopropyl ether (DIPE)	ND		0.50		ug/L			05/15/23 11:23	1
Ethanol	ND		50		ug/L			05/15/23 11:23	1
Ethylbenzene	ND		0.50		ug/L			05/15/23 11:23	1
Ethyl-t-butyl ether (ETBE)	ND		0.50		ug/L			05/15/23 11:23	1
Isopropylbenzene	ND		0.50		ug/L			05/15/23 11:23	1
Methylene Chloride	ND	*-	1.0		ug/L			05/15/23 11:23	1
Methyl-t-Butyl Ether (MTBE)	ND		0.50		ug/L			05/15/23 11:23	1
Naphthalene	ND		1.0		ug/L			05/15/23 11:23	1
n-Butylbenzene	ND		0.50		ug/L			05/15/23 11:23	1
N-Propylbenzene	ND		0.50		ug/L			05/15/23 11:23	1
o-Xylene	ND		0.50		ug/L			05/15/23 11:23	1
m,p-Xylene	ND		1.0		ug/L			05/15/23 11:23	1
p-Isopropyltoluene	ND		0.50		ug/L			05/15/23 11:23	1
sec-Butylbenzene	ND		0.50		ug/L			05/15/23 11:23	1
Styrene	ND		0.50		ug/L			05/15/23 11:23	1
trans-1,2-Dichloroethene	ND		0.50		ug/L			05/15/23 11:23	1
trans-1,3-Dichloropropene	ND		0.50		ug/L			05/15/23 11:23	1
Tert-amyl-methyl ether (TAME)	ND		0.50		ug/L			05/15/23 11:23	1
tert-Butyl alcohol (TBA)	ND		5.0		ug/L			05/15/23 11:23	1
tert-Butylbenzene	ND		0.50		ug/L			05/15/23 11:23	1
Tetrachloroethene	ND		0.50		ug/L			05/15/23 11:23	1
Toluene	ND		0.50		ug/L			05/15/23 11:23	1
Trichloroethene	ND		0.50		ug/L			05/15/23 11:23	1

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Client Sample Results

Client: Hargis + Associates, Inc.
Project/Site: Raytheon / 532.15

Job ID: 570-138209-1

Method: SW846 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: INF

Date Collected: 05/11/23 10:35

Date Received: 05/11/23 14:10

Lab Sample ID: 570-138209-6

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Trichlorofluoromethane	ND		0.50		ug/L			05/15/23 11:23	1
Vinyl acetate	ND		5.0		ug/L			05/15/23 11:23	1
Vinyl chloride	ND		0.50		ug/L			05/15/23 11:23	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	113		64 - 132					05/15/23 11:23	1
4-Bromofluorobenzene (Surr)	92		76 - 120					05/15/23 11:23	1
Dibromofluoromethane (Surr)	96		80 - 120					05/15/23 11:23	1
Toluene-d8 (Surr)	98		80 - 120					05/15/23 11:23	1

Client Sample ID: EW-02

Date Collected: 05/11/23 10:55

Date Received: 05/11/23 14:10

Lab Sample ID: 570-138209-7

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND	*+	0.50		ug/L			05/15/23 11:48	1
1,1,1-Trichloroethane	ND		0.50		ug/L			05/15/23 11:48	1
1,1,2,2-Tetrachloroethane	ND		0.50		ug/L			05/15/23 11:48	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.50		ug/L			05/15/23 11:48	1
1,1,2-Trichloroethane	ND		0.50		ug/L			05/15/23 11:48	1
1,1-Dichloroethane	ND		0.50		ug/L			05/15/23 11:48	1
1,1-Dichloroethene	7.8		0.50		ug/L			05/15/23 11:48	1
1,1-Dichloropropene	ND		0.50		ug/L			05/15/23 11:48	1
1,2,3-Trichlorobenzene	ND		0.50		ug/L			05/15/23 11:48	1
1,2,3-Trichloropropane	ND		0.50		ug/L			05/15/23 11:48	1
1,2,4-Trichlorobenzene	ND		0.50		ug/L			05/15/23 11:48	1
1,2,4-Trimethylbenzene	ND		0.50		ug/L			05/15/23 11:48	1
1,2-Dibromo-3-Chloropropane	ND		1.0		ug/L			05/15/23 11:48	1
1,2-Dibromoethane	ND		0.50		ug/L			05/15/23 11:48	1
1,2-Dichlorobenzene	ND		0.50		ug/L			05/15/23 11:48	1
1,2-Dichloroethane	ND		0.50		ug/L			05/15/23 11:48	1
1,2-Dichloropropane	ND		0.50		ug/L			05/15/23 11:48	1
1,3,5-Trimethylbenzene	ND		0.50		ug/L			05/15/23 11:48	1
1,3-Dichlorobenzene	ND		0.50		ug/L			05/15/23 11:48	1
1,3-Dichloropropane	ND		0.50		ug/L			05/15/23 11:48	1
1,4-Dichlorobenzene	ND		0.50		ug/L			05/15/23 11:48	1
2,2-Dichloropropane	ND		0.50		ug/L			05/15/23 11:48	1
2-Butanone	ND		5.0		ug/L			05/15/23 11:48	1
2-Chlorotoluene	ND		0.50		ug/L			05/15/23 11:48	1
2-Hexanone	ND		6.0		ug/L			05/15/23 11:48	1
4-Chlorotoluene	ND		0.50		ug/L			05/15/23 11:48	1
4-Methyl-2-pentanone	ND		5.0		ug/L			05/15/23 11:48	1
Acetone	ND		8.0		ug/L			05/15/23 11:48	1
Benzene	ND		0.50		ug/L			05/15/23 11:48	1
Bromobenzene	ND		0.50		ug/L			05/15/23 11:48	1
Bromochloromethane	ND		1.0		ug/L			05/15/23 11:48	1
Bromodichloromethane	ND		0.50		ug/L			05/15/23 11:48	1
Bromoform	ND	*+	0.50		ug/L			05/15/23 11:48	1
Bromomethane	ND		2.0		ug/L			05/15/23 11:48	1
cis-1,2-Dichloroethene	ND		0.50		ug/L			05/15/23 11:48	1
cis-1,3-Dichloropropene	ND		0.50		ug/L			05/15/23 11:48	1

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Client Sample Results

Client: Hargis + Associates, Inc.
Project/Site: Raytheon / 532.15

Job ID: 570-138209-1

Method: SW846 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: EW-02
Date Collected: 05/11/23 10:55
Date Received: 05/11/23 14:10

Lab Sample ID: 570-138209-7
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon disulfide	ND		1.0		ug/L			05/15/23 11:48	1
Carbon tetrachloride	ND		0.50		ug/L			05/15/23 11:48	1
Chlorobenzene	ND		0.50		ug/L			05/15/23 11:48	1
Chloroethane	ND		0.50		ug/L			05/15/23 11:48	1
Chloroform	ND		0.50		ug/L			05/15/23 11:48	1
Chloromethane	ND		1.0		ug/L			05/15/23 11:48	1
Dibromochloromethane	ND		0.50		ug/L			05/15/23 11:48	1
Dibromomethane	ND		0.50		ug/L			05/15/23 11:48	1
Dichlorodifluoromethane	ND		1.0		ug/L			05/15/23 11:48	1
Di-isopropyl ether (DIPE)	ND		0.50		ug/L			05/15/23 11:48	1
Ethanol	ND		50		ug/L			05/15/23 11:48	1
Ethylbenzene	ND		0.50		ug/L			05/15/23 11:48	1
Ethyl-t-butyl ether (ETBE)	ND		0.50		ug/L			05/15/23 11:48	1
Isopropylbenzene	ND		0.50		ug/L			05/15/23 11:48	1
Methylene Chloride	ND	*-	1.0		ug/L			05/15/23 11:48	1
Methyl-t-Butyl Ether (MTBE)	ND		0.50		ug/L			05/15/23 11:48	1
Naphthalene	ND		1.0		ug/L			05/15/23 11:48	1
n-Butylbenzene	ND		0.50		ug/L			05/15/23 11:48	1
N-Propylbenzene	ND		0.50		ug/L			05/15/23 11:48	1
o-Xylene	ND		0.50		ug/L			05/15/23 11:48	1
m,p-Xylene	ND		1.0		ug/L			05/15/23 11:48	1
p-Isopropyltoluene	ND		0.50		ug/L			05/15/23 11:48	1
sec-Butylbenzene	ND		0.50		ug/L			05/15/23 11:48	1
Styrene	ND		0.50		ug/L			05/15/23 11:48	1
trans-1,2-Dichloroethene	ND		0.50		ug/L			05/15/23 11:48	1
trans-1,3-Dichloropropene	ND		0.50		ug/L			05/15/23 11:48	1
Tert-amyl-methyl ether (TAME)	ND		0.50		ug/L			05/15/23 11:48	1
tert-Butyl alcohol (TBA)	ND		5.0		ug/L			05/15/23 11:48	1
tert-Butylbenzene	ND		0.50		ug/L			05/15/23 11:48	1
Tetrachloroethene	ND		0.50		ug/L			05/15/23 11:48	1
Toluene	ND		0.50		ug/L			05/15/23 11:48	1
Trichloroethene	ND		0.50		ug/L			05/15/23 11:48	1
Trichlorofluoromethane	ND		0.50		ug/L			05/15/23 11:48	1
Vinyl acetate	ND		5.0		ug/L			05/15/23 11:48	1
Vinyl chloride	ND		0.50		ug/L			05/15/23 11:48	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	110		64 - 132					05/15/23 11:48	1
4-Bromofluorobenzene (Surr)	90		76 - 120					05/15/23 11:48	1
Dibromofluoromethane (Surr)	94		80 - 120					05/15/23 11:48	1
Toluene-d8 (Surr)	96		80 - 120					05/15/23 11:48	1

Client Sample ID: MW-29
Date Collected: 05/11/23 11:15
Date Received: 05/11/23 14:10

Lab Sample ID: 570-138209-8
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND	*+	0.50		ug/L			05/15/23 12:13	1
1,1,1-Trichloroethane	ND		0.50		ug/L			05/15/23 12:13	1
1,1,2,2-Tetrachloroethane	ND		0.50		ug/L			05/15/23 12:13	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.50		ug/L			05/15/23 12:13	1

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Client Sample Results

Client: Hargis + Associates, Inc.
Project/Site: Raytheon / 532.15

Job ID: 570-138209-1

Method: SW846 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: MW-29

Date Collected: 05/11/23 11:15

Date Received: 05/11/23 14:10

Lab Sample ID: 570-138209-8

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2-Trichloroethane	ND		0.50		ug/L			05/15/23 12:13	1
1,1-Dichloroethane	0.80		0.50		ug/L			05/15/23 12:13	1
1,1-Dichloroethene	94		0.50		ug/L			05/15/23 12:13	1
1,1-Dichloropropene	ND		0.50		ug/L			05/15/23 12:13	1
1,2,3-Trichlorobenzene	ND		0.50		ug/L			05/15/23 12:13	1
1,2,3-Trichloropropane	ND		0.50		ug/L			05/15/23 12:13	1
1,2,4-Trichlorobenzene	ND		0.50		ug/L			05/15/23 12:13	1
1,2,4-Trimethylbenzene	ND		0.50		ug/L			05/15/23 12:13	1
1,2-Dibromo-3-Chloropropane	ND		1.0		ug/L			05/15/23 12:13	1
1,2-Dibromoethane	ND		0.50		ug/L			05/15/23 12:13	1
1,2-Dichlorobenzene	ND		0.50		ug/L			05/15/23 12:13	1
1,2-Dichloroethane	ND		0.50		ug/L			05/15/23 12:13	1
1,2-Dichloropropane	ND		0.50		ug/L			05/15/23 12:13	1
1,3,5-Trimethylbenzene	ND		0.50		ug/L			05/15/23 12:13	1
1,3-Dichlorobenzene	ND		0.50		ug/L			05/15/23 12:13	1
1,3-Dichloropropane	ND		0.50		ug/L			05/15/23 12:13	1
1,4-Dichlorobenzene	ND		0.50		ug/L			05/15/23 12:13	1
2,2-Dichloropropane	ND		0.50		ug/L			05/15/23 12:13	1
2-Butanone	ND		5.0		ug/L			05/15/23 12:13	1
2-Chlorotoluene	ND		0.50		ug/L			05/15/23 12:13	1
2-Hexanone	ND		6.0		ug/L			05/15/23 12:13	1
4-Chlorotoluene	ND		0.50		ug/L			05/15/23 12:13	1
4-Methyl-2-pentanone	ND		5.0		ug/L			05/15/23 12:13	1
Acetone	ND		8.0		ug/L			05/15/23 12:13	1
Benzene	ND		0.50		ug/L			05/15/23 12:13	1
Bromobenzene	ND		0.50		ug/L			05/15/23 12:13	1
Bromochloromethane	ND		1.0		ug/L			05/15/23 12:13	1
Bromodichloromethane	ND		0.50		ug/L			05/15/23 12:13	1
Bromoform	ND	+	0.50		ug/L			05/15/23 12:13	1
Bromomethane	ND		2.0		ug/L			05/15/23 12:13	1
cis-1,2-Dichloroethene	ND		0.50		ug/L			05/15/23 12:13	1
cis-1,3-Dichloropropene	ND		0.50		ug/L			05/15/23 12:13	1
Carbon disulfide	ND		1.0		ug/L			05/15/23 12:13	1
Carbon tetrachloride	ND		0.50		ug/L			05/15/23 12:13	1
Chlorobenzene	ND		0.50		ug/L			05/15/23 12:13	1
Chloroethane	ND		0.50		ug/L			05/15/23 12:13	1
Chloroform	ND		0.50		ug/L			05/15/23 12:13	1
Chloromethane	ND		1.0		ug/L			05/15/23 12:13	1
Dibromochloromethane	ND		0.50		ug/L			05/15/23 12:13	1
Dibromomethane	ND		0.50		ug/L			05/15/23 12:13	1
Dichlorodifluoromethane	ND		1.0		ug/L			05/15/23 12:13	1
Di-isopropyl ether (DIPE)	ND		0.50		ug/L			05/15/23 12:13	1
Ethanol	ND		50		ug/L			05/15/23 12:13	1
Ethylbenzene	ND		0.50		ug/L			05/15/23 12:13	1
Ethyl-t-butyl ether (ETBE)	ND		0.50		ug/L			05/15/23 12:13	1
Isopropylbenzene	ND		0.50		ug/L			05/15/23 12:13	1
Methylene Chloride	ND	-	1.0		ug/L			05/15/23 12:13	1
Methyl-t-Butyl Ether (MTBE)	ND		0.50		ug/L			05/15/23 12:13	1
Naphthalene	ND		1.0		ug/L			05/15/23 12:13	1

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Client Sample Results

Client: Hargis + Associates, Inc.
Project/Site: Raytheon / 532.15

Job ID: 570-138209-1

Method: SW846 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: MW-29

Date Collected: 05/11/23 11:15

Date Received: 05/11/23 14:10

Lab Sample ID: 570-138209-8

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
n-Butylbenzene	ND		0.50		ug/L			05/15/23 12:13	1
N-Propylbenzene	ND		0.50		ug/L			05/15/23 12:13	1
o-Xylene	ND		0.50		ug/L			05/15/23 12:13	1
m,p-Xylene	ND		1.0		ug/L			05/15/23 12:13	1
p-Isopropyltoluene	ND		0.50		ug/L			05/15/23 12:13	1
sec-Butylbenzene	ND		0.50		ug/L			05/15/23 12:13	1
Styrene	ND		0.50		ug/L			05/15/23 12:13	1
trans-1,2-Dichloroethene	ND		0.50		ug/L			05/15/23 12:13	1
trans-1,3-Dichloropropene	ND		0.50		ug/L			05/15/23 12:13	1
Tert-amyl-methyl ether (TAME)	ND		0.50		ug/L			05/15/23 12:13	1
tert-Butyl alcohol (TBA)	ND		5.0		ug/L			05/15/23 12:13	1
tert-Butylbenzene	ND		0.50		ug/L			05/15/23 12:13	1
Tetrachloroethene	ND		0.50		ug/L			05/15/23 12:13	1
Toluene	ND		0.50		ug/L			05/15/23 12:13	1
Trichloroethene	1.1		0.50		ug/L			05/15/23 12:13	1
Trichlorofluoromethane	0.50		0.50		ug/L			05/15/23 12:13	1
Vinyl acetate	ND		5.0		ug/L			05/15/23 12:13	1
Vinyl chloride	ND		0.50		ug/L			05/15/23 12:13	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	112		64 - 132		05/15/23 12:13	1
4-Bromofluorobenzene (Surr)	93		76 - 120		05/15/23 12:13	1
Dibromofluoromethane (Surr)	94		80 - 120		05/15/23 12:13	1
Toluene-d8 (Surr)	97		80 - 120		05/15/23 12:13	1

Client Sample Results

Client: Hargis + Associates, Inc.
Project/Site: Raytheon / 532.15

Job ID: 570-138209-1

Method: SW846 8270C SIM ID - Semivolatile Organic Compounds (GC/MS SIM / Isotope Dilution)

Client Sample ID: CEFF
Date Collected: 05/11/23 10:15
Date Received: 05/11/23 14:10

Lab Sample ID: 570-138209-2
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	ND		0.37		ug/L		05/16/23 12:05	05/16/23 17:42	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,4-Dioxane-d8	42		21 - 120				05/16/23 12:05	05/16/23 17:42	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Nitrobenzene-d5	95		58 - 135				05/16/23 12:05	05/16/23 17:42	1

Client Sample ID: CBT
Date Collected: 05/11/23 10:20
Date Received: 05/11/23 14:10

Lab Sample ID: 570-138209-3
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	ND		0.38		ug/L		05/16/23 12:05	05/16/23 17:56	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,4-Dioxane-d8	39		21 - 120				05/16/23 12:05	05/16/23 17:56	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Nitrobenzene-d5	98		58 - 135				05/16/23 12:05	05/16/23 17:56	1

Client Sample ID: POX
Date Collected: 05/11/23 10:25
Date Received: 05/11/23 14:10

Lab Sample ID: 570-138209-4
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	ND		0.37		ug/L		05/16/23 12:05	05/16/23 18:11	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,4-Dioxane-d8	42		21 - 120				05/16/23 12:05	05/16/23 18:11	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Nitrobenzene-d5	92		58 - 135				05/16/23 12:05	05/16/23 18:11	1

Client Sample Results

Client: Hargis + Associates, Inc.
Project/Site: Raytheon / 532.15

Job ID: 570-138209-1

Method: EPA 300.0 - Anions, Ion Chromatography

Client Sample ID: INF
Date Collected: 05/11/23 10:35
Date Received: 05/11/23 14:10

Lab Sample ID: 570-138209-6
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromide	0.21		0.10		mg/L			05/15/23 23:10	1

Client Sample ID: EW-02
Date Collected: 05/11/23 10:55
Date Received: 05/11/23 14:10

Lab Sample ID: 570-138209-7
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromide	0.18		0.10		mg/L			05/15/23 23:27	1

Client Sample ID: MW-29
Date Collected: 05/11/23 11:15
Date Received: 05/11/23 14:10

Lab Sample ID: 570-138209-8
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromide	0.26		0.10		mg/L			05/15/23 23:44	1

Client Sample Results

Client: Hargis + Associates, Inc.
Project/Site: Raytheon / 532.15

Job ID: 570-138209-1

Method: EPA 300.1 - Disinfection By-Products, (IC)

Client Sample ID: POX
Date Collected: 05/11/23 10:25
Date Received: 05/11/23 14:10

Lab Sample ID: 570-138209-4
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromate	ND		50		ug/L			05/16/23 09:56	10
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Dichloroacetate (Surr)	106		90 - 115					05/16/23 09:56	10

Client Sample ID: INF
Date Collected: 05/11/23 10:35
Date Received: 05/11/23 14:10

Lab Sample ID: 570-138209-6
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromate	ND		50		ug/L			05/16/23 10:30	10
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Dichloroacetate (Surr)	109		90 - 115					05/16/23 10:30	10

Client Sample Results

Client: Hargis + Associates, Inc.
Project/Site: Raytheon / 532.15

Job ID: 570-138209-1

General Chemistry

Client Sample ID: POX
Date Collected: 05/11/23 10:25
Date Received: 05/11/23 14:10

Lab Sample ID: 570-138209-4
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity, Total (As CaCO3) (SM 2320B)	203		5.00		mg/L			05/15/23 18:10	1
Bicarbonate (as CaCO3) (SM 2320B)	203		5.00		mg/L			05/15/23 18:10	1
Carbonate (as CaCO3) (SM 2320B)	ND		5.00		mg/L			05/15/23 18:10	1
Hydroxide (as CaCO3) (SM 2320B)	ND		5.00		mg/L			05/15/23 18:10	1
Carbon, Total Organic (SM 5310D)	ND		0.500		mg/L			05/19/23 04:29	1

Client Sample ID: PF
Date Collected: 05/11/23 10:30
Date Received: 05/11/23 14:10

Lab Sample ID: 570-138209-5
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity, Total (As CaCO3) (SM 2320B)	202		5.00		mg/L			05/15/23 18:16	1
Bicarbonate (as CaCO3) (SM 2320B)	202		5.00		mg/L			05/15/23 18:16	1
Carbonate (as CaCO3) (SM 2320B)	ND		5.00		mg/L			05/15/23 18:16	1
Hydroxide (as CaCO3) (SM 2320B)	ND		5.00		mg/L			05/15/23 18:16	1
Total Suspended Solids (SM 2540D)	1.20		1.00		mg/L			05/15/23 12:10	1
Carbon, Total Organic (SM 5310D)	ND		0.500		mg/L			05/19/23 04:55	1

Surrogate Summary

Client: Hargis + Associates, Inc.
Project/Site: Raytheon / 532.15

Job ID: 570-138209-1

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

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)			
		DCA (64-132)	BFB (76-120)	DBFM (80-120)	TOL (80-120)
570-138209-1	TB-030723	108	93	94	97
570-138209-2	CEFF	112	92	94	97
570-138209-3	CBT	109	91	94	99
570-138209-4	POX	112	91	96	96
570-138209-6	INF	113	92	96	98
570-138209-7	EW-02	110	90	94	96
570-138209-8	MW-29	112	93	94	97
LCS 570-328871/4	Lab Control Sample	108	96	94	97
LCSD 570-328871/5	Lab Control Sample Dup	106	97	94	96
MB 570-328871/7	Method Blank	110	93	96	96

Surrogate Legend

DCA = 1,2-Dichloroethane-d4 (Surr)

BFB = 4-Bromofluorobenzene (Surr)

DBFM = Dibromofluoromethane (Surr)

TOL = Toluene-d8 (Surr)

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

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)			
		14DCBTN (67-133)			
570-138209-6	INF	105			
570-138209-7	EW-02	130			
570-138209-8	MW-29	115			
LCS 570-328877/4	Lab Control Sample	112			
LCS 570-329590/8	Lab Control Sample	129			
LCSD 570-328877/5	Lab Control Sample Dup	114			
LCSD 570-329590/9	Lab Control Sample Dup	128			
MB 570-328877/7	Method Blank	123			
MB 570-329590/10	Method Blank	122			

Surrogate Legend

14DCBTN = 1,4-Dichlorobutane (Surr)

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

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)			
		NBZ (58-135)			
570-138209-2	CEFF	95			
570-138209-3	CBT	98			
570-138209-4	POX	92			
LCS 570-329354/2-A	Lab Control Sample	96			
LCSD 570-329354/3-A	Lab Control Sample Dup	99			
MB 570-329354/1-A	Method Blank	84			

Surrogate Legend

NBZ = Nitrobenzene-d5

Surrogate Summary

Client: Hargis + Associates, Inc.
Project/Site: Raytheon / 532.15

Job ID: 570-138209-1

Method: 300.1 - Disinfection By-Products, (IC)

Matrix: Water

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	DCAA (90-115)
570-138209-4	POX	106
570-138209-4 MS	POX	109
570-138209-4 MSD	POX	105
570-138209-6	INF	109
LCS 570-328853/50	Lab Control Sample	109
LCSD 570-328853/51	Lab Control Sample Dup	108
MB 570-328853/52	Method Blank	107
MRL 570-328853/49	Lab Control Sample	113

Surrogate Legend

DCAA = Dichloroacetate (Surr)

Isotope Dilution Summary

Client: Hargis + Associates, Inc.
Project/Site: Raytheon / 532.15

Job ID: 570-138209-1

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 (21-120)
570-138209-2	CEFF	42
570-138209-3	CBT	39
570-138209-4	POX	42
LCS 570-329354/2-A	Lab Control Sample	36
LCSD 570-329354/3-A	Lab Control Sample Dup	41
MB 570-329354/1-A	Method Blank	45

Surrogate Legend

DXE = 1,4-Dioxane-d8

QC Sample Results

Client: Hargis + Associates, Inc.
Project/Site: Raytheon / 532.15

Job ID: 570-138209-1

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

Lab Sample ID: MB 570-328871/7

Matrix: Water

Analysis Batch: 328871

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		ug/L			05/15/23 08:28	1
1,1,1-Trichloroethane	ND		0.50		ug/L			05/15/23 08:28	1
1,1,2,2-Tetrachloroethane	ND		0.50		ug/L			05/15/23 08:28	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.50		ug/L			05/15/23 08:28	1
1,1,2-Trichloroethane	ND		0.50		ug/L			05/15/23 08:28	1
1,1-Dichloroethane	ND		0.50		ug/L			05/15/23 08:28	1
1,1-Dichloroethene	ND		0.50		ug/L			05/15/23 08:28	1
1,1-Dichloropropene	ND		0.50		ug/L			05/15/23 08:28	1
1,2,3-Trichlorobenzene	ND		0.50		ug/L			05/15/23 08:28	1
1,2,3-Trichloropropane	ND		0.50		ug/L			05/15/23 08:28	1
1,2,4-Trichlorobenzene	ND		0.50		ug/L			05/15/23 08:28	1
1,2,4-Trimethylbenzene	ND		0.50		ug/L			05/15/23 08:28	1
1,2-Dibromo-3-Chloropropane	ND		1.0		ug/L			05/15/23 08:28	1
1,2-Dibromoethane	ND		0.50		ug/L			05/15/23 08:28	1
1,2-Dichlorobenzene	ND		0.50		ug/L			05/15/23 08:28	1
1,2-Dichloroethane	ND		0.50		ug/L			05/15/23 08:28	1
1,2-Dichloropropane	ND		0.50		ug/L			05/15/23 08:28	1
1,3,5-Trimethylbenzene	ND		0.50		ug/L			05/15/23 08:28	1
1,3-Dichlorobenzene	ND		0.50		ug/L			05/15/23 08:28	1
1,3-Dichloropropane	ND		0.50		ug/L			05/15/23 08:28	1
1,4-Dichlorobenzene	ND		0.50		ug/L			05/15/23 08:28	1
2,2-Dichloropropane	ND		0.50		ug/L			05/15/23 08:28	1
2-Butanone	ND		5.0		ug/L			05/15/23 08:28	1
2-Chlorotoluene	ND		0.50		ug/L			05/15/23 08:28	1
2-Hexanone	ND		6.0		ug/L			05/15/23 08:28	1
4-Chlorotoluene	ND		0.50		ug/L			05/15/23 08:28	1
4-Methyl-2-pentanone	ND		5.0		ug/L			05/15/23 08:28	1
Acetone	ND		8.0		ug/L			05/15/23 08:28	1
Benzene	ND		0.50		ug/L			05/15/23 08:28	1
Bromobenzene	ND		0.50		ug/L			05/15/23 08:28	1
Bromochloromethane	ND		1.0		ug/L			05/15/23 08:28	1
Bromodichloromethane	ND		0.50		ug/L			05/15/23 08:28	1
Bromoform	ND		0.50		ug/L			05/15/23 08:28	1
Bromomethane	ND		2.0		ug/L			05/15/23 08:28	1
cis-1,2-Dichloroethene	ND		0.50		ug/L			05/15/23 08:28	1
cis-1,3-Dichloropropene	ND		0.50		ug/L			05/15/23 08:28	1
Carbon disulfide	ND		1.0		ug/L			05/15/23 08:28	1
Carbon tetrachloride	ND		0.50		ug/L			05/15/23 08:28	1
Chlorobenzene	ND		0.50		ug/L			05/15/23 08:28	1
Chloroethane	ND		0.50		ug/L			05/15/23 08:28	1
Chloroform	ND		0.50		ug/L			05/15/23 08:28	1
Chloromethane	ND		1.0		ug/L			05/15/23 08:28	1
Dibromochloromethane	ND		0.50		ug/L			05/15/23 08:28	1
Dibromomethane	ND		0.50		ug/L			05/15/23 08:28	1
Dichlorodifluoromethane	ND		1.0		ug/L			05/15/23 08:28	1
Di-isopropyl ether (DIPE)	ND		0.50		ug/L			05/15/23 08:28	1
Ethanol	ND		50		ug/L			05/15/23 08:28	1
Ethylbenzene	ND		0.50		ug/L			05/15/23 08:28	1

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QC Sample Results

Client: Hargis + Associates, Inc.
Project/Site: Raytheon / 532.15

Job ID: 570-138209-1

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

Lab Sample ID: MB 570-328871/7

Matrix: Water

Analysis Batch: 328871

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethyl-t-butyl ether (ETBE)	ND		0.50		ug/L			05/15/23 08:28	1
Isopropylbenzene	ND		0.50		ug/L			05/15/23 08:28	1
Methylene Chloride	ND		1.0		ug/L			05/15/23 08:28	1
Methyl-t-Butyl Ether (MTBE)	ND		0.50		ug/L			05/15/23 08:28	1
Naphthalene	ND		1.0		ug/L			05/15/23 08:28	1
n-Butylbenzene	ND		0.50		ug/L			05/15/23 08:28	1
N-Propylbenzene	ND		0.50		ug/L			05/15/23 08:28	1
o-Xylene	ND		0.50		ug/L			05/15/23 08:28	1
m,p-Xylene	ND		1.0		ug/L			05/15/23 08:28	1
p-Isopropyltoluene	ND		0.50		ug/L			05/15/23 08:28	1
sec-Butylbenzene	ND		0.50		ug/L			05/15/23 08:28	1
Styrene	ND		0.50		ug/L			05/15/23 08:28	1
trans-1,2-Dichloroethene	ND		0.50		ug/L			05/15/23 08:28	1
trans-1,3-Dichloropropene	ND		0.50		ug/L			05/15/23 08:28	1
Tert-amyl-methyl ether (TAME)	ND		0.50		ug/L			05/15/23 08:28	1
tert-Butyl alcohol (TBA)	ND		5.0		ug/L			05/15/23 08:28	1
tert-Butylbenzene	ND		0.50		ug/L			05/15/23 08:28	1
Tetrachloroethene	ND		0.50		ug/L			05/15/23 08:28	1
Toluene	ND		0.50		ug/L			05/15/23 08:28	1
Trichloroethene	ND		0.50		ug/L			05/15/23 08:28	1
Trichlorofluoromethane	ND		0.50		ug/L			05/15/23 08:28	1
Vinyl acetate	ND		5.0		ug/L			05/15/23 08:28	1
Vinyl chloride	ND		0.50		ug/L			05/15/23 08:28	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	110		64 - 132		05/15/23 08:28	1
4-Bromofluorobenzene (Surr)	93		76 - 120		05/15/23 08:28	1
Dibromofluoromethane (Surr)	96		80 - 120		05/15/23 08:28	1
Toluene-d8 (Surr)	96		80 - 120		05/15/23 08:28	1

Lab Sample ID: LCS 570-328871/4

Matrix: Water

Analysis Batch: 328871

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
1,1-Dichloroethene	10.0	9.958		ug/L		100	80 - 126
1,2-Dibromoethane	10.0	10.31		ug/L		103	80 - 125
1,2-Dichlorobenzene	10.0	10.07		ug/L		101	80 - 120
1,2-Dichloroethane	10.0	11.77		ug/L		118	76 - 130
Benzene	10.0	9.744		ug/L		97	80 - 120
Carbon tetrachloride	10.0	12.78		ug/L		128	61 - 139
Chlorobenzene	10.0	9.986		ug/L		100	80 - 120
Di-isopropyl ether (DIPE)	10.0	8.286		ug/L		83	65 - 145
Ethanol	100	106.7		ug/L		107	20 - 180
Ethylbenzene	10.0	9.677		ug/L		97	80 - 126
Ethyl-t-butyl ether (ETBE)	10.0	8.928		ug/L		89	76 - 125
Methyl-t-Butyl Ether (MTBE)	10.0	9.410		ug/L		94	69 - 128
o-Xylene	10.0	9.712		ug/L		97	80 - 124

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QC Sample Results

Client: Hargis + Associates, Inc.
Project/Site: Raytheon / 532.15

Job ID: 570-138209-1

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

Lab Sample ID: LCS 570-328871/4

Matrix: Water

Analysis Batch: 328871

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
m,p-Xylene	20.0	20.01		ug/L		100	80 - 123
Tert-amyl-methyl ether (TAME)	10.0	10.07		ug/L		101	78 - 133
tert-Butyl alcohol (TBA)	50.0	55.73		ug/L		111	68 - 133
Toluene	10.0	9.835		ug/L		98	80 - 120
Trichloroethene	10.0	9.987		ug/L		100	77 - 124
Vinyl chloride	10.0	9.546		ug/L		95	50 - 160

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	108		64 - 132
4-Bromofluorobenzene (Surr)	96		76 - 120
Dibromofluoromethane (Surr)	94		80 - 120
Toluene-d8 (Surr)	97		80 - 120

Lab Sample ID: LCSD 570-328871/5

Matrix: Water

Analysis Batch: 328871

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-Dichloroethene	10.0	9.617		ug/L		96	80 - 126	3	21
1,2-Dibromoethane	10.0	10.03		ug/L		100	80 - 125	3	20
1,2-Dichlorobenzene	10.0	10.03		ug/L		100	80 - 120	0	20
1,2-Dichloroethane	10.0	11.14		ug/L		111	76 - 130	6	20
Benzene	10.0	9.489		ug/L		95	80 - 120	3	20
Carbon tetrachloride	10.0	12.20		ug/L		122	61 - 139	5	20
Chlorobenzene	10.0	9.819		ug/L		98	80 - 120	2	20
Di-isopropyl ether (DIPE)	10.0	8.000		ug/L		80	65 - 145	4	20
Ethanol	100	129.3		ug/L		129	20 - 180	19	30
Ethylbenzene	10.0	9.580		ug/L		96	80 - 126	1	20
Ethyl-t-butyl ether (ETBE)	10.0	8.614		ug/L		86	76 - 125	4	20
Methyl-t-Butyl Ether (MTBE)	10.0	9.058		ug/L		91	69 - 128	4	20
o-Xylene	10.0	9.546		ug/L		95	80 - 124	2	20
m,p-Xylene	20.0	19.77		ug/L		99	80 - 123	1	20
Tert-amyl-methyl ether (TAME)	10.0	9.775		ug/L		98	78 - 133	3	20
tert-Butyl alcohol (TBA)	50.0	63.77		ug/L		128	68 - 133	13	21
Toluene	10.0	9.437		ug/L		94	80 - 120	4	20
Trichloroethene	10.0	9.838		ug/L		98	77 - 124	2	20
Vinyl chloride	10.0	8.980		ug/L		90	50 - 160	6	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	106		64 - 132
4-Bromofluorobenzene (Surr)	97		76 - 120
Dibromofluoromethane (Surr)	94		80 - 120
Toluene-d8 (Surr)	96		80 - 120

QC Sample Results

Client: Hargis + Associates, Inc.
Project/Site: Raytheon / 532.15

Job ID: 570-138209-1

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

Lab Sample ID: MB 570-328877/7

Matrix: Water

Analysis Batch: 328877

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	ND		1.0		ug/L			05/15/23 09:43	1
Surrogate	MB %Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,4-Dichlorobutane (Surr)	123		67 - 133					05/15/23 09:43	1

Lab Sample ID: LCS 570-328877/4

Matrix: Water

Analysis Batch: 328877

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits	
1,4-Dioxane	20.0	20.87		ug/L		104	75 - 120	
Surrogate	LCS %Recovery	LCS Qualifier	Limits					
1,4-Dichlorobutane (Surr)	112		67 - 133					

Lab Sample ID: LCSD 570-328877/5

Matrix: Water

Analysis Batch: 328877

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
1,4-Dioxane	20.0	21.81		ug/L		109	75 - 120	4	20
Surrogate	LCSD %Recovery	LCSD Qualifier	Limits						
1,4-Dichlorobutane (Surr)	114		67 - 133						

Lab Sample ID: MB 570-329590/10

Matrix: Water

Analysis Batch: 329590

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	ND		1.0		ug/L			05/17/23 11:05	1
Surrogate	MB %Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,4-Dichlorobutane (Surr)	122		67 - 133					05/17/23 11:05	1

Lab Sample ID: LCS 570-329590/8

Matrix: Water

Analysis Batch: 329590

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits	
1,4-Dioxane	20.0	20.38		ug/L		102	75 - 120	
Surrogate	LCS %Recovery	LCS Qualifier	Limits					
1,4-Dichlorobutane (Surr)	129		67 - 133					

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QC Sample Results

Client: Hargis + Associates, Inc.
Project/Site: Raytheon / 532.15

Job ID: 570-138209-1

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

Lab Sample ID: LCSD 570-329590/9

Matrix: Water

Analysis Batch: 329590

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
1,4-Dioxane	20.0	20.15		ug/L		101	75 - 120	1	20
Surrogate	%Recovery	LCSD Qualifier	Limits						
1,4-Dichlorobutane (Surr)	128		67 - 133						

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

Lab Sample ID: MB 570-329354/1-A

Matrix: Water

Analysis Batch: 329332

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 329354

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	ND		0.50		ug/L		05/16/23 12:05	05/16/23 16:44	1
Isotope Dilution	%Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,4-Dioxane-d8	45		21 - 120				05/16/23 12:05	05/16/23 16:44	1
Surrogate	%Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
Nitrobenzene-d5	84		58 - 135				05/16/23 12:05	05/16/23 16:44	1

Lab Sample ID: LCS 570-329354/2-A

Matrix: Water

Analysis Batch: 329332

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 329354

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
1,4-Dioxane	20.0	17.06		ug/L		85	63 - 144		
Isotope Dilution	%Recovery	LCS Qualifier	Limits						
1,4-Dioxane-d8	36		21 - 120						
Surrogate	%Recovery	LCS Qualifier	Limits						
Nitrobenzene-d5	96		58 - 135						

Lab Sample ID: LCSD 570-329354/3-A

Matrix: Water

Analysis Batch: 329332

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 329354

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
1,4-Dioxane	20.0	17.55		ug/L		88	63 - 144	3	20
Isotope Dilution	%Recovery	LCSD Qualifier	Limits						
1,4-Dioxane-d8	41		21 - 120						
Surrogate	%Recovery	LCSD Qualifier	Limits						
Nitrobenzene-d5	99		58 - 135						

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QC Sample Results

Client: Hargis + Associates, Inc.
Project/Site: Raytheon / 532.15

Job ID: 570-138209-1

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 570-329155/5

Matrix: Water

Analysis Batch: 329155

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromide	ND		0.10		mg/L			05/15/23 20:04	1

Lab Sample ID: LCS 570-329155/6

Matrix: Water

Analysis Batch: 329155

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Bromide	5.00	4.984		mg/L		100	90 - 110

Lab Sample ID: LCSD 570-329155/7

Matrix: Water

Analysis Batch: 329155

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
Bromide	5.00	4.978		mg/L		100	90 - 110	0	15

Lab Sample ID: 570-137831-E-2 MS

Matrix: Water

Analysis Batch: 329155

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Bromide	ND		5.00	4.978		mg/L		99	80 - 120

Lab Sample ID: 570-137831-E-2 MSD

Matrix: Water

Analysis Batch: 329155

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Bromide	ND		5.00	4.997		mg/L		99	80 - 120	0	20

Method: 300.1 - Disinfection By-Products, (IC)

Lab Sample ID: MB 570-328853/52

Matrix: Water

Analysis Batch: 328853

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromate	ND		5.0		ug/L			05/16/23 07:07	1

Surrogate	%Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Dichloroacetate (Surr)	107		90 - 115		05/16/23 07:07	1

Lab Sample ID: LCS 570-328853/50

Matrix: Water

Analysis Batch: 328853

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Bromate	25.0	26.39		ug/L		106	75 - 125

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QC Sample Results

Client: Hargis + Associates, Inc.
Project/Site: Raytheon / 532.15

Job ID: 570-138209-1

Method: 300.1 - Disinfection By-Products, (IC) (Continued)

Lab Sample ID: LCS 570-328853/50

Matrix: Water

Analysis Batch: 328853

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

	LCS	LCS	
Surrogate	%Recovery	Qualifier	Limits
Dichloroacetate (Surr)	109		90 - 115

Lab Sample ID: LCSD 570-328853/51

Matrix: Water

Analysis Batch: 328853

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

			Spike	LCSD	LCSD				%Rec		RPD
Analyte			Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Bromate			25.0	27.13		ug/L		109	75 - 125	3	20

	LCSD	LCSD	
Surrogate	%Recovery	Qualifier	Limits
Dichloroacetate (Surr)	108		90 - 115

Lab Sample ID: MRL 570-328853/49

Matrix: Water

Analysis Batch: 328853

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

			Spike	MRL	MRL				%Rec		
Analyte			Added	Result	Qualifier	Unit	D	%Rec	Limits		
Bromate			5.00	5.071		ug/L		101	50 - 150		

	MRL	MRL	
Surrogate	%Recovery	Qualifier	Limits
Dichloroacetate (Surr)	113		90 - 115

Lab Sample ID: 570-138209-4 MS

Matrix: Water

Analysis Batch: 328853

Client Sample ID: POX

Prep Type: Total/NA

	Sample	Sample	Spike	MS	MS				%Rec		
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits		
Bromate	ND		100	89.41		ug/L		89	75 - 125		

	MS	MS	
Surrogate	%Recovery	Qualifier	Limits
Dichloroacetate (Surr)	109		90 - 115

Lab Sample ID: 570-138209-4 MSD

Matrix: Water

Analysis Batch: 328853

Client Sample ID: POX

Prep Type: Total/NA

	Sample	Sample	Spike	MSD	MSD				%Rec		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Bromate	ND		100	89.83		ug/L		90	75 - 125	0	20

	MSD	MSD	
Surrogate	%Recovery	Qualifier	Limits
Dichloroacetate (Surr)	105		90 - 115

QC Sample Results

Client: Hargis + Associates, Inc.
Project/Site: Raytheon / 532.15

Job ID: 570-138209-1

Method: SM 2320B - Alkalinity

Lab Sample ID: MB 570-329173/5

Matrix: Water

Analysis Batch: 329173

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity, Total (As CaCO3)	ND		5.00		mg/L			05/15/23 15:34	1
Bicarbonate (as CaCO3)	ND		5.00		mg/L			05/15/23 15:34	1
Carbonate (as CaCO3)	ND		5.00		mg/L			05/15/23 15:34	1
Hydroxide (as CaCO3)	ND		5.00		mg/L			05/15/23 15:34	1

Lab Sample ID: LCS 570-329173/3

Matrix: Water

Analysis Batch: 329173

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Alkalinity, Total (As CaCO3)	106	87.92		mg/L		83	78 - 110

Lab Sample ID: LCSD 570-329173/4

Matrix: Water

Analysis Batch: 329173

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
Alkalinity, Total (As CaCO3)	106	85.87		mg/L		81	78 - 110	2	10

Lab Sample ID: 570-137123-E-1 DU

Matrix: Water

Analysis Batch: 329173

Client Sample ID: Duplicate

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Alkalinity, Total (As CaCO3)	103		102.8		mg/L		0.7	25
Bicarbonate (as CaCO3)	103		102.8		mg/L		0.7	25
Carbonate (as CaCO3)	ND		ND		mg/L		NC	25
Hydroxide (as CaCO3)	ND		ND		mg/L		NC	25

Method: SM 2540D - Solids, Total Suspended (TSS)

Lab Sample ID: MB 570-329014/1

Matrix: Water

Analysis Batch: 329014

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	ND		1.00		mg/L			05/15/23 12:10	1

Lab Sample ID: LCS 570-329014/2

Matrix: Water

Analysis Batch: 329014

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Suspended Solids	100	93.00		mg/L		93	77 - 116

QC Sample Results

Client: Hargis + Associates, Inc.
Project/Site: Raytheon / 532.15

Job ID: 570-138209-1

Method: SM 2540D - Solids, Total Suspended (TSS) (Continued)

Lab Sample ID: LCSD 570-329014/3

Matrix: Water

Analysis Batch: 329014

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
Total Suspended Solids	100	91.00		mg/L		91	77 - 116	2	10

Lab Sample ID: 570-138273-A-4 DU

Matrix: Water

Analysis Batch: 329014

Client Sample ID: Duplicate

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Suspended Solids	129		126.0		mg/L		2	10

Method: SM 5310D - Organic Carbon, Total (TOC)

Lab Sample ID: MB 570-330406/3

Matrix: Water

Analysis Batch: 330406

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon, Total Organic	ND		0.500		mg/L			05/18/23 20:27	1

Lab Sample ID: LCS 570-330406/4

Matrix: Water

Analysis Batch: 330406

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Carbon, Total Organic	5.03	5.019		mg/L		100	85 - 115

Lab Sample ID: LCSD 570-330406/5

Matrix: Water

Analysis Batch: 330406

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
Carbon, Total Organic	5.03	4.962		mg/L		99	85 - 115	1	20

Lab Sample ID: 570-137755-C-6 MS

Matrix: Water

Analysis Batch: 330406

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Carbon, Total Organic	1.38		5.03	7.293		mg/L		117	31 - 145

Lab Sample ID: 570-137755-C-6 MSD

Matrix: Water

Analysis Batch: 330406

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Carbon, Total Organic	1.38		5.03	7.205		mg/L		116	31 - 145	1	20

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QC Association Summary

Client: Hargis + Associates, Inc.
Project/Site: Raytheon / 532.15

Job ID: 570-138209-1

GC/MS VOA

Analysis Batch: 328871

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-138209-1	TB-030723	Total/NA	Water	8260B	
570-138209-2	CEFF	Total/NA	Water	8260B	
570-138209-3	CBT	Total/NA	Water	8260B	
570-138209-4	POX	Total/NA	Water	8260B	
570-138209-6	INF	Total/NA	Water	8260B	
570-138209-7	EW-02	Total/NA	Water	8260B	
570-138209-8	MW-29	Total/NA	Water	8260B	
MB 570-328871/7	Method Blank	Total/NA	Water	8260B	
LCS 570-328871/4	Lab Control Sample	Total/NA	Water	8260B	
LCSD 570-328871/5	Lab Control Sample Dup	Total/NA	Water	8260B	

Analysis Batch: 328877

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-138209-6	INF	Total/NA	Water	8260B SIM	
570-138209-8	MW-29	Total/NA	Water	8260B SIM	
MB 570-328877/7	Method Blank	Total/NA	Water	8260B SIM	
LCS 570-328877/4	Lab Control Sample	Total/NA	Water	8260B SIM	
LCSD 570-328877/5	Lab Control Sample Dup	Total/NA	Water	8260B SIM	

Analysis Batch: 329590

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-138209-7	EW-02	Total/NA	Water	8260B SIM	
MB 570-329590/10	Method Blank	Total/NA	Water	8260B SIM	
LCS 570-329590/8	Lab Control Sample	Total/NA	Water	8260B SIM	
LCSD 570-329590/9	Lab Control Sample Dup	Total/NA	Water	8260B SIM	

GC/MS Semi VOA

Analysis Batch: 329332

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-138209-2	CEFF	Total/NA	Water	8270C SIM ID	329354
570-138209-3	CBT	Total/NA	Water	8270C SIM ID	329354
570-138209-4	POX	Total/NA	Water	8270C SIM ID	329354
MB 570-329354/1-A	Method Blank	Total/NA	Water	8270C SIM ID	329354
LCS 570-329354/2-A	Lab Control Sample	Total/NA	Water	8270C SIM ID	329354
LCSD 570-329354/3-A	Lab Control Sample Dup	Total/NA	Water	8270C SIM ID	329354

Prep Batch: 329354

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-138209-2	CEFF	Total/NA	Water	3510C	
570-138209-3	CBT	Total/NA	Water	3510C	
570-138209-4	POX	Total/NA	Water	3510C	
MB 570-329354/1-A	Method Blank	Total/NA	Water	3510C	
LCS 570-329354/2-A	Lab Control Sample	Total/NA	Water	3510C	
LCSD 570-329354/3-A	Lab Control Sample Dup	Total/NA	Water	3510C	

HPLC/IC

Analysis Batch: 328853

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-138209-4	POX	Total/NA	Water	300.1	
570-138209-6	INF	Total/NA	Water	300.1	

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QC Association Summary

Client: Hargis + Associates, Inc.
Project/Site: Raytheon / 532.15

Job ID: 570-138209-1

HPLC/IC (Continued)

Analysis Batch: 328853 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 570-328853/52	Method Blank	Total/NA	Water	300.1	
LCS 570-328853/50	Lab Control Sample	Total/NA	Water	300.1	
LCSD 570-328853/51	Lab Control Sample Dup	Total/NA	Water	300.1	
MRL 570-328853/49	Lab Control Sample	Total/NA	Water	300.1	
570-138209-4 MS	POX	Total/NA	Water	300.1	
570-138209-4 MSD	POX	Total/NA	Water	300.1	

Analysis Batch: 329155

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-138209-6	INF	Total/NA	Water	300.0	
570-138209-7	EW-02	Total/NA	Water	300.0	
570-138209-8	MW-29	Total/NA	Water	300.0	
MB 570-329155/5	Method Blank	Total/NA	Water	300.0	
LCS 570-329155/6	Lab Control Sample	Total/NA	Water	300.0	
LCSD 570-329155/7	Lab Control Sample Dup	Total/NA	Water	300.0	
570-137831-E-2 MS	Matrix Spike	Total/NA	Water	300.0	
570-137831-E-2 MSD	Matrix Spike Duplicate	Total/NA	Water	300.0	

General Chemistry

Analysis Batch: 329014

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-138209-5	PF	Total/NA	Water	SM 2540D	
MB 570-329014/1	Method Blank	Total/NA	Water	SM 2540D	
LCS 570-329014/2	Lab Control Sample	Total/NA	Water	SM 2540D	
LCSD 570-329014/3	Lab Control Sample Dup	Total/NA	Water	SM 2540D	
570-138273-A-4 DU	Duplicate	Total/NA	Water	SM 2540D	

Analysis Batch: 329173

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-138209-4	POX	Total/NA	Water	SM 2320B	
570-138209-5	PF	Total/NA	Water	SM 2320B	
MB 570-329173/5	Method Blank	Total/NA	Water	SM 2320B	
LCS 570-329173/3	Lab Control Sample	Total/NA	Water	SM 2320B	
LCSD 570-329173/4	Lab Control Sample Dup	Total/NA	Water	SM 2320B	
570-137123-E-1 DU	Duplicate	Total/NA	Water	SM 2320B	

Analysis Batch: 330406

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-138209-4	POX	Total/NA	Water	SM 5310D	
570-138209-5	PF	Total/NA	Water	SM 5310D	
MB 570-330406/3	Method Blank	Total/NA	Water	SM 5310D	
LCS 570-330406/4	Lab Control Sample	Total/NA	Water	SM 5310D	
LCSD 570-330406/5	Lab Control Sample Dup	Total/NA	Water	SM 5310D	
570-137755-C-6 MS	Matrix Spike	Total/NA	Water	SM 5310D	
570-137755-C-6 MSD	Matrix Spike Duplicate	Total/NA	Water	SM 5310D	

Lab Chronicle

Client: Hargis + Associates, Inc.
Project/Site: Raytheon / 532.15

Job ID: 570-138209-1

Client Sample ID: TB-030723

Lab Sample ID: 570-138209-1

Date Collected: 05/11/23 08:00

Matrix: Water

Date Received: 05/11/23 14:10

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	328871	05/15/23 08:53	N5PD	EET CAL 4
Instrument ID: GCMSUU										

Client Sample ID: CEFF

Lab Sample ID: 570-138209-2

Date Collected: 05/11/23 10:15

Matrix: Water

Date Received: 05/11/23 14:10

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	328871	05/15/23 09:18	N5PD	EET CAL 4
Instrument ID: GCMSUU										
Total/NA	Prep	3510C			135.1 mL	10 mL	329354	05/16/23 12:05	RY4P	EET CAL 4
Total/NA	Analysis	8270C SIM ID		1	1 mL	1 mL	329332	05/16/23 17:42	ULLI	EET CAL 4
Instrument ID: GCMSDDD										

Client Sample ID: CBT

Lab Sample ID: 570-138209-3

Date Collected: 05/11/23 10:20

Matrix: Water

Date Received: 05/11/23 14:10

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	328871	05/15/23 10:33	N5PD	EET CAL 4
Instrument ID: GCMSUU										
Total/NA	Prep	3510C			133.1 mL	10 mL	329354	05/16/23 12:05	RY4P	EET CAL 4
Total/NA	Analysis	8270C SIM ID		1	1 mL	1 mL	329332	05/16/23 17:56	ULLI	EET CAL 4
Instrument ID: GCMSDDD										

Client Sample ID: POX

Lab Sample ID: 570-138209-4

Date Collected: 05/11/23 10:25

Matrix: Water

Date Received: 05/11/23 14:10

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	328871	05/15/23 10:58	N5PD	EET CAL 4
Instrument ID: GCMSUU										
Total/NA	Prep	3510C			135.3 mL	10 mL	329354	05/16/23 12:05	RY4P	EET CAL 4
Total/NA	Analysis	8270C SIM ID		1	1 mL	1 mL	329332	05/16/23 18:11	ULLI	EET CAL 4
Instrument ID: GCMSDDD										
Total/NA	Analysis	300.1		10	4 mL	4 mL	328853	05/16/23 09:56	YO8L	EET CAL 4
Instrument ID: IC32										
Total/NA	Analysis	SM 2320B		1	10 mL	10 mL	329173	05/15/23 18:10	BDH9	EET CAL 4
Instrument ID: ManSciMantech										
Total/NA	Analysis	SM 5310D		1	40 mL	40 mL	330406	05/19/23 04:29	ZL4M	EET CAL 4
Instrument ID: TOC10										

Lab Chronicle

Client: Hargis + Associates, Inc.
Project/Site: Raytheon / 532.15

Job ID: 570-138209-1

Client Sample ID: PF

Lab Sample ID: 570-138209-5

Date Collected: 05/11/23 10:30

Matrix: Water

Date Received: 05/11/23 14:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 2320B Instrument ID: ManSciMantech		1	10 mL	10 mL	329173	05/15/23 18:16	BDH9	EET CAL 4
Total/NA	Analysis	SM 2540D Instrument ID: BAL71		1	1000 mL	1000 mL	329014	05/15/23 12:10	UWCT	EET CAL 4
Total/NA	Analysis	SM 5310D Instrument ID: TOC10		1	40 mL	40 mL	330406	05/19/23 04:55	ZL4M	EET CAL 4

Client Sample ID: INF

Lab Sample ID: 570-138209-6

Date Collected: 05/11/23 10:35

Matrix: Water

Date Received: 05/11/23 14:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B Instrument ID: GCMSUU		1	20 mL	20 mL	328871	05/15/23 11:23	N5PD	EET CAL 4
Total/NA	Analysis	8260B SIM Instrument ID: GCMSFFF		1	25 mL	25 mL	328877	05/15/23 10:37	U4JL	EET CAL 4
Total/NA	Analysis	300.0 Instrument ID: IC9		1	4 mL	4 mL	329155	05/15/23 23:10	PS	EET CAL 4
Total/NA	Analysis	300.1 Instrument ID: IC32		10	4 mL	4 mL	328853	05/16/23 10:30	YO8L	EET CAL 4

Client Sample ID: EW-02

Lab Sample ID: 570-138209-7

Date Collected: 05/11/23 10:55

Matrix: Water

Date Received: 05/11/23 14:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B Instrument ID: GCMSUU		1	20 mL	20 mL	328871	05/15/23 11:48	N5PD	EET CAL 4
Total/NA	Analysis	8260B SIM Instrument ID: GCMSFFF		1	25 mL	25 mL	329590	05/17/23 11:59	UJHB	EET CAL 4
Total/NA	Analysis	300.0 Instrument ID: IC9		1	4 mL	4 mL	329155	05/15/23 23:27	PS	EET CAL 4

Client Sample ID: MW-29

Lab Sample ID: 570-138209-8

Date Collected: 05/11/23 11:15

Matrix: Water

Date Received: 05/11/23 14:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B Instrument ID: GCMSUU		1	20 mL	20 mL	328871	05/15/23 12:13	N5PD	EET CAL 4
Total/NA	Analysis	8260B SIM Instrument ID: GCMSFFF		1	25 mL	25 mL	328877	05/15/23 16:01	U4JL	EET CAL 4
Total/NA	Analysis	300.0 Instrument ID: IC9		1	4 mL	4 mL	329155	05/15/23 23:44	PS	EET CAL 4

Eurofins Calscience

Lab Chronicle

Client: Hargis + Associates, Inc.
Project/Site: Raytheon / 532.15

Job ID: 570-138209-1

Laboratory References:

EET CAL 4 = Eurofins Calscience Tustin, 2841 Dow Avenue, Tustin, CA 92780, TEL (714)895-5494

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Accreditation/Certification Summary

Client: Hargis + Associates, Inc.
Project/Site: Raytheon / 532.15

Job ID: 570-138209-1

Laboratory: Eurofins Calscience

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
Oregon	NELAP	4175	02-02-24
The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.			
Analysis Method	Prep Method	Matrix	Analyte
SM 2320B		Water	Bicarbonate (as CaCO3)
SM 2320B		Water	Carbonate (as CaCO3)
SM 2320B		Water	Hydroxide (as CaCO3)

Method Summary

Client: Hargis + Associates, Inc.
Project/Site: Raytheon / 532.15

Job ID: 570-138209-1

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	EET CAL 4
8260B SIM	Volatile Organic Compounds (GC/MS)	SW846	EET CAL 4
8270C SIM ID	Semivolatile Organic Compounds (GC/MS SIM / Isotope Dilution)	SW846	EET CAL 4
300.0	Anions, Ion Chromatography	EPA	EET CAL 4
300.1	Disinfection By-Products, (IC)	EPA	EET CAL 4
SM 2320B	Alkalinity	SM	EET CAL 4
SM 2540D	Solids, Total Suspended (TSS)	SM	EET CAL 4
SM 5310D	Organic Carbon, Total (TOC)	SM	EET CAL 4
3510C	Liquid-Liquid Extraction (Separatory Funnel)	SW846	EET CAL 4
5030C	Purge and Trap	SW846	EET CAL 4

Protocol References:

EPA = US Environmental Protection Agency

SM = "Standard Methods For The Examination Of Water And Wastewater"

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

Laboratory References:

EET CAL 4 = Eurofins Calscience Tustin, 2841 Dow Avenue, Tustin, CA 92780, TEL (714)895-5494

Sample Summary

Client: Hargis + Associates, Inc.
Project/Site: Raytheon / 532.15

Job ID: 570-138209-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
570-138209-1	TB-030723	Water	05/11/23 08:00	05/11/23 14:10
570-138209-2	CEFF	Water	05/11/23 10:15	05/11/23 14:10
570-138209-3	CBT	Water	05/11/23 10:20	05/11/23 14:10
570-138209-4	POX	Water	05/11/23 10:25	05/11/23 14:10
570-138209-5	PF	Water	05/11/23 10:30	05/11/23 14:10
570-138209-6	INF	Water	05/11/23 10:35	05/11/23 14:10
570-138209-7	EW-02	Water	05/11/23 10:55	05/11/23 14:10
570-138209-8	MW-29	Water	05/11/23 11:15	05/11/23 14:10

5/19/2023

5/19/2023

ICOC No:
570-225257

Containers

<u>Count</u>	<u>Container Type</u>	<u>Preservative</u>
1	Amber Glass 250ml - unpreserved	None

Subcontract Method Instructions

Sample IDs	Method	Method Description	Method Comments
5	SUBCONTRACT	SUB (Specific Ultraviolet Absorption - 254nm)/ Specific Ultraviolet Absorption - 254nm	2 day hold time, 250 mL amber required 10 day TAT. Screen if received past hold time.

Login Sample Receipt Checklist

Client: Hargis + Associates, Inc.

Job Number: 570-138209-1

Login Number: 138209

List Source: Eurofins Calscience

List Number: 1

Creator: Patel, Virendra

Question	Answer	Comment
Radioactivity wasn't checked or is $\leq$ 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 $<6\text{mm}$ (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

ANALYTICAL REPORT

PREPARED FOR

Attn: Steve Netto
Hargis + Associates, Inc.
3131 Camino del Rio N
Suite 355
San Diego, California 92108

Generated 5/26/2023 10:49:52 AM

JOB DESCRIPTION

Raytheon Main / Task No.: 532.30

JOB NUMBER

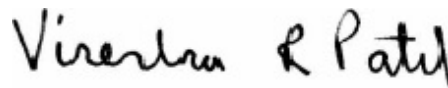
570-138935-1

Job Notes

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Definitions/Glossary

Client: Hargis + Associates, Inc.
Project/Site: Raytheon Main / Task No.: 532.30

Job ID: 570-138935-1

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
*+	LCS and/or LCSD is outside acceptance limits, high biased.
F1	MS and/or MSD recovery exceeds control limits.
F2	MS/MSD RPD exceeds control limits
me	LCS Recovery is within Marginal Exceedance (ME) control limit range (± 4 SD from the mean).

GC/MS Semi VOA

Qualifier	Qualifier Description
*3	ISTD response or retention time outside acceptable limits.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	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 Main / Task No.: 532.30

Job ID: 570-138935-1

Job ID: 570-138935-1

Laboratory: Eurofins Calscience

Narrative

Job Narrative 570-138935-1

Comments

No additional comments.

Receipt

The samples were received on 5/17/2023 7:35 PM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperatures of the 2 coolers at receipt time were 1.7° C and 2.5° C.

Receipt Exceptions

Insufficient sample volume was provided for the following sample for MS/MSD: MW-42_20230517 (570-138935-20).

GC/MS VOA

Method 8260B: The following analyte(s) recovered outside control limits for the LCSD associated with analytical batch 570-331773: Vinyl acetate. This is not indicative of a systematic control problem because this was random marginal exceedances. Qualified results have been reported.

Method 8260B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries and precision for analytical batch 570-331773 were outside control limits. The associated laboratory control sample / laboratory sample control duplicate (LCS/LCSD) recoveries and precision were within acceptance limits.

Method 8260B: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with analytical batch 570-332106. The laboratory control sample (LCS) was performed in duplicate (LCSD) to provide precision data for this batch.

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

GC/MS Semi VOA

Method 8270C SIM ID: Results for sample MW-21_20230517 (570-138935-17) were reported from the analysis of a diluted extract due to high concentration of the target analyte in the analysis of the undiluted extract. The dilution factor was applied to the labeled internal standard area counts and these area counts were within acceptance limits

No additional analytical or quality issues were noted, other than those described above or 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 Main / Task No.: 532.30

Job ID: 570-138935-1

Client Sample ID: TB_20230516

Lab Sample ID: 570-138935-1

No Detections.

Client Sample ID: MW-28_20230516

Lab Sample ID: 570-138935-2

No Detections.

Client Sample ID: MW-26C_20230516

Lab Sample ID: 570-138935-3

No Detections.

Client Sample ID: RB_20230516

Lab Sample ID: 570-138935-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Carbon disulfide	1.6		1.0		ug/L	1		8260B	Total/NA

Client Sample ID: MW-08_20230516

Lab Sample ID: 570-138935-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,1,2-Trichloro-1,2,2-trifluoroethane	0.96		0.50		ug/L	1		8260B	Total/NA
1,1-Dichloroethene	13		0.50		ug/L	1		8260B	Total/NA
cis-1,2-Dichloroethene	1.6		0.50		ug/L	1		8260B	Total/NA
Trichloroethene	39		0.50		ug/L	1		8260B	Total/NA

Client Sample ID: MW-30A_20230516

Lab Sample ID: 570-138935-6

No Detections.

Client Sample ID: MW-30B_20230516

Lab Sample ID: 570-138935-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0		0.50		ug/L	1		8260B	Total/NA
1,1-Dichloroethene	21		0.50		ug/L	1		8260B	Total/NA
cis-1,2-Dichloroethene	4.5		0.50		ug/L	1		8260B	Total/NA
Trichloroethene	79		0.50		ug/L	1		8260B	Total/NA

Client Sample ID: MW-34B_20230516

Lab Sample ID: 570-138935-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,1-Dichloroethene	47		0.50		ug/L	1		8260B	Total/NA
1,4-Dioxane	8.4		0.37		ug/L	1		8270C SIM ID	Total/NA

Client Sample ID: MW-40_20230517

Lab Sample ID: 570-138935-9

No Detections.

Client Sample ID: MW-35C_20230516

Lab Sample ID: 570-138935-10

No Detections.

Client Sample ID: MW-32B_20230516

Lab Sample ID: 570-138935-11

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,1-Dichloroethene	0.92		0.50		ug/L	1		8260B	Total/NA
cis-1,2-Dichloroethene	3.3		0.50		ug/L	1		8260B	Total/NA
Toluene	4.6		0.50		ug/L	1		8260B	Total/NA
Trichloroethene	33		0.50		ug/L	1		8260B	Total/NA
1,1-Dichloroethene - DL	96		2.5		ug/L	5		8260B	Total/NA
1,4-Dioxane	2.9		0.39		ug/L	1		8270C SIM ID	Total/NA

This Detection Summary does not include radiochemical test results.

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Detection Summary

Client: Hargis + Associates, Inc.
Project/Site: Raytheon Main / Task No.: 532.30

Job ID: 570-138935-1

Client Sample ID: MW-33_20230516

Lab Sample ID: 570-138935-12

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,1-Dichloroethene	5.3		0.50		ug/L	1		8260B	Total/NA
Trichloroethene	0.88		0.50		ug/L	1		8260B	Total/NA

Client Sample ID: MW-41_20230517

Lab Sample ID: 570-138935-13

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,1-Dichloroethene	6.6		0.50		ug/L	1		8260B	Total/NA
Chloroform	0.51		0.50		ug/L	1		8260B	Total/NA

Client Sample ID: MW-4100_20230517

Lab Sample ID: 570-138935-14

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,1-Dichloroethene	6.5		0.50		ug/L	1		8260B	Total/NA
Chloroform	0.53		0.50		ug/L	1		8260B	Total/NA

Client Sample ID: MW-31_20230517

Lab Sample ID: 570-138935-15

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,1,2-Trichloro-1,2,2-trifluoroethane	0.50		0.50		ug/L	1		8260B	Total/NA
1,1-Dichloroethene	39		0.50		ug/L	1		8260B	Total/NA
Trichloroethene	4.2		0.50		ug/L	1		8260B	Total/NA

Client Sample ID: MW-3100_20230517

Lab Sample ID: 570-138935-16

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,1,2-Trichloro-1,2,2-trifluoroethane	0.51		0.50		ug/L	1		8260B	Total/NA
1,1-Dichloroethene	40		0.50		ug/L	1		8260B	Total/NA
Trichloroethene	4.2		0.50		ug/L	1		8260B	Total/NA
1,4-Dioxane	3.0		0.37		ug/L	1		8270C SIM ID	Total/NA

Client Sample ID: MW-21_20230517

Lab Sample ID: 570-138935-17

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,1,2-Trichloroethane	12		10		ug/L	20		8260B	Total/NA
1,1-Dichloroethane	27		10		ug/L	20		8260B	Total/NA
1,1-Dichloroethene	1400		10		ug/L	20		8260B	Total/NA
Trichloroethene	11		10		ug/L	20		8260B	Total/NA
1,4-Dioxane - DL	490		19		ug/L	50		8270C SIM ID	Total/NA

Client Sample ID: EW-01_20230517

Lab Sample ID: 570-138935-18

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,1-Dichloroethene	15		0.50		ug/L	1		8260B	Total/NA
1,4-Dioxane	7.2		0.38		ug/L	1		8270C SIM ID	Total/NA

Client Sample ID: MW-43_20230517

Lab Sample ID: 570-138935-19

No Detections.

Client Sample ID: MW-42_20230517

Lab Sample ID: 570-138935-20

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,1-Dichloroethane	0.51		0.50		ug/L	1		8260B	Total/NA
1,1-Dichloroethene	36		0.50		ug/L	1		8260B	Total/NA

This Detection Summary does not include radiochemical test results.

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Client Sample Results

Client: Hargis + Associates, Inc.
Project/Site: Raytheon Main / Task No.: 532.30

Job ID: 570-138935-1

Method: SW846 8260B - Volatile Organic Compounds (GC/MS)

Client Sample ID: TB_20230516
Date Collected: 05/16/23 08:00
Date Received: 05/17/23 19:35

Lab Sample ID: 570-138935-1
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		0.50		ug/L			05/24/23 17:24	1
1,1,1-Trichloroethane	ND		0.50		ug/L			05/24/23 17:24	1
1,1,2,2-Tetrachloroethane	ND		0.50		ug/L			05/24/23 17:24	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.50		ug/L			05/24/23 17:24	1
1,1,2-Trichloroethane	ND		0.50		ug/L			05/24/23 17:24	1
1,1-Dichloroethane	ND		0.50		ug/L			05/24/23 17:24	1
1,1-Dichloroethene	ND		0.50		ug/L			05/24/23 17:24	1
1,1-Dichloropropene	ND		0.50		ug/L			05/24/23 17:24	1
1,2,3-Trichlorobenzene	ND		0.50		ug/L			05/24/23 17:24	1
1,2,3-Trichloropropane	ND		0.50		ug/L			05/24/23 17:24	1
1,2,4-Trichlorobenzene	ND		0.50		ug/L			05/24/23 17:24	1
1,2,4-Trimethylbenzene	ND		0.50		ug/L			05/24/23 17:24	1
1,2-Dibromo-3-Chloropropane	ND		1.0		ug/L			05/24/23 17:24	1
1,2-Dibromoethane	ND		0.50		ug/L			05/24/23 17:24	1
1,2-Dichlorobenzene	ND		0.50		ug/L			05/24/23 17:24	1
1,2-Dichloroethane	ND		0.50		ug/L			05/24/23 17:24	1
1,2-Dichloropropane	ND		0.50		ug/L			05/24/23 17:24	1
1,3,5-Trimethylbenzene	ND		0.50		ug/L			05/24/23 17:24	1
1,3-Dichlorobenzene	ND		0.50		ug/L			05/24/23 17:24	1
1,3-Dichloropropane	ND		0.50		ug/L			05/24/23 17:24	1
1,4-Dichlorobenzene	ND		0.50		ug/L			05/24/23 17:24	1
2,2-Dichloropropane	ND		0.50		ug/L			05/24/23 17:24	1
2-Butanone	ND		5.0		ug/L			05/24/23 17:24	1
2-Chlorotoluene	ND		0.50		ug/L			05/24/23 17:24	1
2-Hexanone	ND		6.0		ug/L			05/24/23 17:24	1
4-Chlorotoluene	ND		0.50		ug/L			05/24/23 17:24	1
4-Methyl-2-pentanone	ND		5.0		ug/L			05/24/23 17:24	1
Acetone	ND		8.0		ug/L			05/24/23 17:24	1
Benzene	ND		0.50		ug/L			05/24/23 17:24	1
Bromobenzene	ND		0.50		ug/L			05/24/23 17:24	1
Bromochloromethane	ND		1.0		ug/L			05/24/23 17:24	1
Bromodichloromethane	ND		0.50		ug/L			05/24/23 17:24	1
Bromoform	ND		0.50		ug/L			05/24/23 17:24	1
Bromomethane	ND		2.0		ug/L			05/24/23 17:24	1
cis-1,2-Dichloroethene	ND		0.50		ug/L			05/24/23 17:24	1
cis-1,3-Dichloropropene	ND		0.50		ug/L			05/24/23 17:24	1
Carbon disulfide	ND		1.0		ug/L			05/24/23 17:24	1
Carbon tetrachloride	ND		0.50		ug/L			05/24/23 17:24	1
Chlorobenzene	ND		0.50		ug/L			05/24/23 17:24	1
Chloroethane	ND		0.50		ug/L			05/24/23 17:24	1
Chloroform	ND		0.50		ug/L			05/24/23 17:24	1
Chloromethane	ND		1.0		ug/L			05/24/23 17:24	1
Dibromochloromethane	ND		0.50		ug/L			05/24/23 17:24	1
Dibromomethane	ND		0.50		ug/L			05/24/23 17:24	1
Dichlorodifluoromethane	ND		1.0		ug/L			05/24/23 17:24	1
Ethylbenzene	ND		0.50		ug/L			05/24/23 17:24	1
Isopropylbenzene	ND		0.50		ug/L			05/24/23 17:24	1
Methylene Chloride	ND		1.0		ug/L			05/24/23 17:24	1
Methyl-t-Butyl Ether (MTBE)	ND		0.50		ug/L			05/24/23 17:24	1

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Client Sample Results

Client: Hargis + Associates, Inc.
Project/Site: Raytheon Main / Task No.: 532.30

Job ID: 570-138935-1

Method: SW846 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: TB_20230516

Date Collected: 05/16/23 08:00

Date Received: 05/17/23 19:35

Lab Sample ID: 570-138935-1

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	ND		1.0		ug/L			05/24/23 17:24	1
n-Butylbenzene	ND		0.50		ug/L			05/24/23 17:24	1
N-Propylbenzene	ND		0.50		ug/L			05/24/23 17:24	1
o-Xylene	ND		0.50		ug/L			05/24/23 17:24	1
m,p-Xylene	ND		1.0		ug/L			05/24/23 17:24	1
p-Isopropyltoluene	ND		0.50		ug/L			05/24/23 17:24	1
sec-Butylbenzene	ND		0.50		ug/L			05/24/23 17:24	1
Styrene	ND		0.50		ug/L			05/24/23 17:24	1
trans-1,2-Dichloroethene	ND		0.50		ug/L			05/24/23 17:24	1
trans-1,3-Dichloropropene	ND		0.50		ug/L			05/24/23 17:24	1
tert-Butylbenzene	ND		0.50		ug/L			05/24/23 17:24	1
Tetrachloroethene	ND		0.50		ug/L			05/24/23 17:24	1
Toluene	ND		0.50		ug/L			05/24/23 17:24	1
Trichloroethene	ND		0.50		ug/L			05/24/23 17:24	1
Trichlorofluoromethane	ND		0.50		ug/L			05/24/23 17:24	1
Vinyl acetate	ND		5.0		ug/L			05/24/23 17:24	1
Vinyl chloride	ND		0.50		ug/L			05/24/23 17:24	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	91		64 - 132		05/24/23 17:24	1
4-Bromofluorobenzene (Surr)	91		76 - 120		05/24/23 17:24	1
Dibromofluoromethane	98		80 - 120		05/24/23 17:24	1
Toluene-d8 (Surr)	97		80 - 120		05/24/23 17:24	1

Client Sample ID: MW-28_20230516

Date Collected: 05/16/23 08:44

Date Received: 05/17/23 19:35

Lab Sample ID: 570-138935-2

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		0.50		ug/L			05/24/23 17:50	1
1,1,1-Trichloroethane	ND		0.50		ug/L			05/24/23 17:50	1
1,1,2,2-Tetrachloroethane	ND		0.50		ug/L			05/24/23 17:50	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.50		ug/L			05/24/23 17:50	1
1,1,2-Trichloroethane	ND		0.50		ug/L			05/24/23 17:50	1
1,1-Dichloroethane	ND		0.50		ug/L			05/24/23 17:50	1
1,1-Dichloroethene	ND		0.50		ug/L			05/24/23 17:50	1
1,1-Dichloropropene	ND		0.50		ug/L			05/24/23 17:50	1
1,2,3-Trichlorobenzene	ND		0.50		ug/L			05/24/23 17:50	1
1,2,3-Trichloropropane	ND		0.50		ug/L			05/24/23 17:50	1
1,2,4-Trichlorobenzene	ND		0.50		ug/L			05/24/23 17:50	1
1,2,4-Trimethylbenzene	ND		0.50		ug/L			05/24/23 17:50	1
1,2-Dibromo-3-Chloropropane	ND		1.0		ug/L			05/24/23 17:50	1
1,2-Dibromoethane	ND		0.50		ug/L			05/24/23 17:50	1
1,2-Dichlorobenzene	ND		0.50		ug/L			05/24/23 17:50	1
1,2-Dichloroethane	ND		0.50		ug/L			05/24/23 17:50	1
1,2-Dichloropropane	ND		0.50		ug/L			05/24/23 17:50	1
1,3,5-Trimethylbenzene	ND		0.50		ug/L			05/24/23 17:50	1
1,3-Dichlorobenzene	ND		0.50		ug/L			05/24/23 17:50	1
1,3-Dichloropropane	ND		0.50		ug/L			05/24/23 17:50	1
1,4-Dichlorobenzene	ND		0.50		ug/L			05/24/23 17:50	1
2,2-Dichloropropane	ND		0.50		ug/L			05/24/23 17:50	1

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Client Sample Results

Client: Hargis + Associates, Inc.
Project/Site: Raytheon Main / Task No.: 532.30

Job ID: 570-138935-1

Method: SW846 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: MW-28_20230516

Date Collected: 05/16/23 08:44

Date Received: 05/17/23 19:35

Lab Sample ID: 570-138935-2

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Butanone	ND		5.0		ug/L			05/24/23 17:50	1
2-Chlorotoluene	ND		0.50		ug/L			05/24/23 17:50	1
2-Hexanone	ND		6.0		ug/L			05/24/23 17:50	1
4-Chlorotoluene	ND		0.50		ug/L			05/24/23 17:50	1
4-Methyl-2-pentanone	ND		5.0		ug/L			05/24/23 17:50	1
Acetone	ND		8.0		ug/L			05/24/23 17:50	1
Benzene	ND		0.50		ug/L			05/24/23 17:50	1
Bromobenzene	ND		0.50		ug/L			05/24/23 17:50	1
Bromochloromethane	ND		1.0		ug/L			05/24/23 17:50	1
Bromodichloromethane	ND		0.50		ug/L			05/24/23 17:50	1
Bromoform	ND		0.50		ug/L			05/24/23 17:50	1
Bromomethane	ND		2.0		ug/L			05/24/23 17:50	1
cis-1,2-Dichloroethene	ND		0.50		ug/L			05/24/23 17:50	1
cis-1,3-Dichloropropene	ND		0.50		ug/L			05/24/23 17:50	1
Carbon disulfide	ND		1.0		ug/L			05/24/23 17:50	1
Carbon tetrachloride	ND		0.50		ug/L			05/24/23 17:50	1
Chlorobenzene	ND		0.50		ug/L			05/24/23 17:50	1
Chloroethane	ND		0.50		ug/L			05/24/23 17:50	1
Chloroform	ND		0.50		ug/L			05/24/23 17:50	1
Chloromethane	ND		1.0		ug/L			05/24/23 17:50	1
Dibromochloromethane	ND		0.50		ug/L			05/24/23 17:50	1
Dibromomethane	ND		0.50		ug/L			05/24/23 17:50	1
Dichlorodifluoromethane	ND		1.0		ug/L			05/24/23 17:50	1
Ethylbenzene	ND		0.50		ug/L			05/24/23 17:50	1
Isopropylbenzene	ND		0.50		ug/L			05/24/23 17:50	1
Methylene Chloride	ND		1.0		ug/L			05/24/23 17:50	1
Methyl-t-Butyl Ether (MTBE)	ND		0.50		ug/L			05/24/23 17:50	1
Naphthalene	ND		1.0		ug/L			05/24/23 17:50	1
n-Butylbenzene	ND		0.50		ug/L			05/24/23 17:50	1
N-Propylbenzene	ND		0.50		ug/L			05/24/23 17:50	1
o-Xylene	ND		0.50		ug/L			05/24/23 17:50	1
m,p-Xylene	ND		1.0		ug/L			05/24/23 17:50	1
p-Isopropyltoluene	ND		0.50		ug/L			05/24/23 17:50	1
sec-Butylbenzene	ND		0.50		ug/L			05/24/23 17:50	1
Styrene	ND		0.50		ug/L			05/24/23 17:50	1
trans-1,2-Dichloroethene	ND		0.50		ug/L			05/24/23 17:50	1
trans-1,3-Dichloropropene	ND		0.50		ug/L			05/24/23 17:50	1
tert-Butylbenzene	ND		0.50		ug/L			05/24/23 17:50	1
Tetrachloroethene	ND		0.50		ug/L			05/24/23 17:50	1
Toluene	ND		0.50		ug/L			05/24/23 17:50	1
Trichloroethene	ND		0.50		ug/L			05/24/23 17:50	1
Trichlorofluoromethane	ND		0.50		ug/L			05/24/23 17:50	1
Vinyl acetate	ND		5.0		ug/L			05/24/23 17:50	1
Vinyl chloride	ND		0.50		ug/L			05/24/23 17:50	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	98		64 - 132		05/24/23 17:50	1
4-Bromofluorobenzene (Surr)	95		76 - 120		05/24/23 17:50	1
Dibromofluoromethane	100		80 - 120		05/24/23 17:50	1
Toluene-d8 (Surr)	102		80 - 120		05/24/23 17:50	1

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Client Sample Results

Client: Hargis + Associates, Inc.
Project/Site: Raytheon Main / Task No.: 532.30

Job ID: 570-138935-1

Method: SW846 8260B - Volatile Organic Compounds (GC/MS)

Client Sample ID: MW-26C_20230516

Date Collected: 05/16/23 10:25

Date Received: 05/17/23 19:35

Lab Sample ID: 570-138935-3

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		0.50		ug/L			05/24/23 18:15	1
1,1,1-Trichloroethane	ND		0.50		ug/L			05/24/23 18:15	1
1,1,2,2-Tetrachloroethane	ND		0.50		ug/L			05/24/23 18:15	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.50		ug/L			05/24/23 18:15	1
1,1,2-Trichloroethane	ND		0.50		ug/L			05/24/23 18:15	1
1,1-Dichloroethane	ND		0.50		ug/L			05/24/23 18:15	1
1,1-Dichloroethene	ND		0.50		ug/L			05/24/23 18:15	1
1,1-Dichloropropene	ND		0.50		ug/L			05/24/23 18:15	1
1,2,3-Trichlorobenzene	ND		0.50		ug/L			05/24/23 18:15	1
1,2,3-Trichloropropane	ND		0.50		ug/L			05/24/23 18:15	1
1,2,4-Trichlorobenzene	ND		0.50		ug/L			05/24/23 18:15	1
1,2,4-Trimethylbenzene	ND		0.50		ug/L			05/24/23 18:15	1
1,2-Dibromo-3-Chloropropane	ND		1.0		ug/L			05/24/23 18:15	1
1,2-Dibromoethane	ND		0.50		ug/L			05/24/23 18:15	1
1,2-Dichlorobenzene	ND		0.50		ug/L			05/24/23 18:15	1
1,2-Dichloroethane	ND		0.50		ug/L			05/24/23 18:15	1
1,2-Dichloropropane	ND		0.50		ug/L			05/24/23 18:15	1
1,3,5-Trimethylbenzene	ND		0.50		ug/L			05/24/23 18:15	1
1,3-Dichlorobenzene	ND		0.50		ug/L			05/24/23 18:15	1
1,3-Dichloropropane	ND		0.50		ug/L			05/24/23 18:15	1
1,4-Dichlorobenzene	ND		0.50		ug/L			05/24/23 18:15	1
2,2-Dichloropropane	ND		0.50		ug/L			05/24/23 18:15	1
2-Butanone	ND		5.0		ug/L			05/24/23 18:15	1
2-Chlorotoluene	ND		0.50		ug/L			05/24/23 18:15	1
2-Hexanone	ND		6.0		ug/L			05/24/23 18:15	1
4-Chlorotoluene	ND		0.50		ug/L			05/24/23 18:15	1
4-Methyl-2-pentanone	ND		5.0		ug/L			05/24/23 18:15	1
Acetone	ND		8.0		ug/L			05/24/23 18:15	1
Benzene	ND		0.50		ug/L			05/24/23 18:15	1
Bromobenzene	ND		0.50		ug/L			05/24/23 18:15	1
Bromochloromethane	ND		1.0		ug/L			05/24/23 18:15	1
Bromodichloromethane	ND		0.50		ug/L			05/24/23 18:15	1
Bromoform	ND		0.50		ug/L			05/24/23 18:15	1
Bromomethane	ND		2.0		ug/L			05/24/23 18:15	1
cis-1,2-Dichloroethene	ND		0.50		ug/L			05/24/23 18:15	1
cis-1,3-Dichloropropene	ND		0.50		ug/L			05/24/23 18:15	1
Carbon disulfide	ND		1.0		ug/L			05/24/23 18:15	1
Carbon tetrachloride	ND		0.50		ug/L			05/24/23 18:15	1
Chlorobenzene	ND		0.50		ug/L			05/24/23 18:15	1
Chloroethane	ND		0.50		ug/L			05/24/23 18:15	1
Chloroform	ND		0.50		ug/L			05/24/23 18:15	1
Chloromethane	ND		1.0		ug/L			05/24/23 18:15	1
Dibromochloromethane	ND		0.50		ug/L			05/24/23 18:15	1
Dibromomethane	ND		0.50		ug/L			05/24/23 18:15	1
Dichlorodifluoromethane	ND		1.0		ug/L			05/24/23 18:15	1
Ethylbenzene	ND		0.50		ug/L			05/24/23 18:15	1
Isopropylbenzene	ND		0.50		ug/L			05/24/23 18:15	1
Methylene Chloride	ND		1.0		ug/L			05/24/23 18:15	1
Methyl-t-Butyl Ether (MTBE)	ND		0.50		ug/L			05/24/23 18:15	1

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Client Sample Results

Client: Hargis + Associates, Inc.
Project/Site: Raytheon Main / Task No.: 532.30

Job ID: 570-138935-1

Method: SW846 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: MW-26C_20230516

Date Collected: 05/16/23 10:25

Date Received: 05/17/23 19:35

Lab Sample ID: 570-138935-3

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	ND		1.0		ug/L			05/24/23 18:15	1
n-Butylbenzene	ND		0.50		ug/L			05/24/23 18:15	1
N-Propylbenzene	ND		0.50		ug/L			05/24/23 18:15	1
o-Xylene	ND		0.50		ug/L			05/24/23 18:15	1
m,p-Xylene	ND		1.0		ug/L			05/24/23 18:15	1
p-Isopropyltoluene	ND		0.50		ug/L			05/24/23 18:15	1
sec-Butylbenzene	ND		0.50		ug/L			05/24/23 18:15	1
Styrene	ND		0.50		ug/L			05/24/23 18:15	1
trans-1,2-Dichloroethene	ND		0.50		ug/L			05/24/23 18:15	1
trans-1,3-Dichloropropene	ND		0.50		ug/L			05/24/23 18:15	1
tert-Butylbenzene	ND		0.50		ug/L			05/24/23 18:15	1
Tetrachloroethene	ND		0.50		ug/L			05/24/23 18:15	1
Toluene	ND		0.50		ug/L			05/24/23 18:15	1
Trichloroethene	ND		0.50		ug/L			05/24/23 18:15	1
Trichlorofluoromethane	ND		0.50		ug/L			05/24/23 18:15	1
Vinyl acetate	ND		5.0		ug/L			05/24/23 18:15	1
Vinyl chloride	ND		0.50		ug/L			05/24/23 18:15	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	100		64 - 132		05/24/23 18:15	1
4-Bromofluorobenzene (Surr)	96		76 - 120		05/24/23 18:15	1
Dibromofluoromethane	102		80 - 120		05/24/23 18:15	1
Toluene-d8 (Surr)	100		80 - 120		05/24/23 18:15	1

Client Sample ID: RB_20230516

Date Collected: 05/16/23 10:50

Date Received: 05/17/23 19:35

Lab Sample ID: 570-138935-4

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		0.50		ug/L			05/24/23 18:40	1
1,1,1-Trichloroethane	ND		0.50		ug/L			05/24/23 18:40	1
1,1,2,2-Tetrachloroethane	ND		0.50		ug/L			05/24/23 18:40	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.50		ug/L			05/24/23 18:40	1
1,1,2-Trichloroethane	ND		0.50		ug/L			05/24/23 18:40	1
1,1-Dichloroethane	ND		0.50		ug/L			05/24/23 18:40	1
1,1-Dichloroethene	ND		0.50		ug/L			05/24/23 18:40	1
1,1-Dichloropropene	ND		0.50		ug/L			05/24/23 18:40	1
1,2,3-Trichlorobenzene	ND		0.50		ug/L			05/24/23 18:40	1
1,2,3-Trichloropropane	ND		0.50		ug/L			05/24/23 18:40	1
1,2,4-Trichlorobenzene	ND		0.50		ug/L			05/24/23 18:40	1
1,2,4-Trimethylbenzene	ND		0.50		ug/L			05/24/23 18:40	1
1,2-Dibromo-3-Chloropropane	ND		1.0		ug/L			05/24/23 18:40	1
1,2-Dibromoethane	ND		0.50		ug/L			05/24/23 18:40	1
1,2-Dichlorobenzene	ND		0.50		ug/L			05/24/23 18:40	1
1,2-Dichloroethane	ND		0.50		ug/L			05/24/23 18:40	1
1,2-Dichloropropane	ND		0.50		ug/L			05/24/23 18:40	1
1,3,5-Trimethylbenzene	ND		0.50		ug/L			05/24/23 18:40	1
1,3-Dichlorobenzene	ND		0.50		ug/L			05/24/23 18:40	1
1,3-Dichloropropane	ND		0.50		ug/L			05/24/23 18:40	1
1,4-Dichlorobenzene	ND		0.50		ug/L			05/24/23 18:40	1
2,2-Dichloropropane	ND		0.50		ug/L			05/24/23 18:40	1

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Client Sample Results

Client: Hargis + Associates, Inc.
Project/Site: Raytheon Main / Task No.: 532.30

Job ID: 570-138935-1

Method: SW846 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: RB_20230516

Date Collected: 05/16/23 10:50

Date Received: 05/17/23 19:35

Lab Sample ID: 570-138935-4

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Butanone	ND		5.0		ug/L			05/24/23 18:40	1
2-Chlorotoluene	ND		0.50		ug/L			05/24/23 18:40	1
2-Hexanone	ND		6.0		ug/L			05/24/23 18:40	1
4-Chlorotoluene	ND		0.50		ug/L			05/24/23 18:40	1
4-Methyl-2-pentanone	ND		5.0		ug/L			05/24/23 18:40	1
Acetone	ND		8.0		ug/L			05/24/23 18:40	1
Benzene	ND		0.50		ug/L			05/24/23 18:40	1
Bromobenzene	ND		0.50		ug/L			05/24/23 18:40	1
Bromochloromethane	ND		1.0		ug/L			05/24/23 18:40	1
Bromodichloromethane	ND		0.50		ug/L			05/24/23 18:40	1
Bromoform	ND		0.50		ug/L			05/24/23 18:40	1
Bromomethane	ND		2.0		ug/L			05/24/23 18:40	1
cis-1,2-Dichloroethene	ND		0.50		ug/L			05/24/23 18:40	1
cis-1,3-Dichloropropene	ND		0.50		ug/L			05/24/23 18:40	1
Carbon disulfide	1.6		1.0		ug/L			05/24/23 18:40	1
Carbon tetrachloride	ND		0.50		ug/L			05/24/23 18:40	1
Chlorobenzene	ND		0.50		ug/L			05/24/23 18:40	1
Chloroethane	ND		0.50		ug/L			05/24/23 18:40	1
Chloroform	ND		0.50		ug/L			05/24/23 18:40	1
Chloromethane	ND		1.0		ug/L			05/24/23 18:40	1
Dibromochloromethane	ND		0.50		ug/L			05/24/23 18:40	1
Dibromomethane	ND		0.50		ug/L			05/24/23 18:40	1
Dichlorodifluoromethane	ND		1.0		ug/L			05/24/23 18:40	1
Ethylbenzene	ND		0.50		ug/L			05/24/23 18:40	1
Isopropylbenzene	ND		0.50		ug/L			05/24/23 18:40	1
Methylene Chloride	ND		1.0		ug/L			05/24/23 18:40	1
Methyl-t-Butyl Ether (MTBE)	ND		0.50		ug/L			05/24/23 18:40	1
Naphthalene	ND		1.0		ug/L			05/24/23 18:40	1
n-Butylbenzene	ND		0.50		ug/L			05/24/23 18:40	1
N-Propylbenzene	ND		0.50		ug/L			05/24/23 18:40	1
o-Xylene	ND		0.50		ug/L			05/24/23 18:40	1
m,p-Xylene	ND		1.0		ug/L			05/24/23 18:40	1
p-Isopropyltoluene	ND		0.50		ug/L			05/24/23 18:40	1
sec-Butylbenzene	ND		0.50		ug/L			05/24/23 18:40	1
Styrene	ND		0.50		ug/L			05/24/23 18:40	1
trans-1,2-Dichloroethene	ND		0.50		ug/L			05/24/23 18:40	1
trans-1,3-Dichloropropene	ND		0.50		ug/L			05/24/23 18:40	1
tert-Butylbenzene	ND		0.50		ug/L			05/24/23 18:40	1
Tetrachloroethene	ND		0.50		ug/L			05/24/23 18:40	1
Toluene	ND		0.50		ug/L			05/24/23 18:40	1
Trichloroethene	ND		0.50		ug/L			05/24/23 18:40	1
Trichlorofluoromethane	ND		0.50		ug/L			05/24/23 18:40	1
Vinyl acetate	ND		5.0		ug/L			05/24/23 18:40	1
Vinyl chloride	ND		0.50		ug/L			05/24/23 18:40	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	102		64 - 132		05/24/23 18:40	1
4-Bromofluorobenzene (Surr)	96		76 - 120		05/24/23 18:40	1
Dibromofluoromethane	101		80 - 120		05/24/23 18:40	1
Toluene-d8 (Surr)	99		80 - 120		05/24/23 18:40	1

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Client Sample Results

Client: Hargis + Associates, Inc.
Project/Site: Raytheon Main / Task No.: 532.30

Job ID: 570-138935-1

Method: SW846 8260B - Volatile Organic Compounds (GC/MS)

Client Sample ID: MW-08_20230516

Date Collected: 05/16/23 12:49

Date Received: 05/17/23 19:35

Lab Sample ID: 570-138935-5

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		0.50		ug/L			05/24/23 19:06	1
1,1,1-Trichloroethane	ND		0.50		ug/L			05/24/23 19:06	1
1,1,2,2-Tetrachloroethane	ND		0.50		ug/L			05/24/23 19:06	1
1,1,2-Trichloro-1,2,2-trifluoroethane	0.96		0.50		ug/L			05/24/23 19:06	1
1,1,2-Trichloroethane	ND		0.50		ug/L			05/24/23 19:06	1
1,1-Dichloroethane	ND		0.50		ug/L			05/24/23 19:06	1
1,1-Dichloroethene	13		0.50		ug/L			05/24/23 19:06	1
1,1-Dichloropropene	ND		0.50		ug/L			05/24/23 19:06	1
1,2,3-Trichlorobenzene	ND		0.50		ug/L			05/24/23 19:06	1
1,2,3-Trichloropropane	ND		0.50		ug/L			05/24/23 19:06	1
1,2,4-Trichlorobenzene	ND		0.50		ug/L			05/24/23 19:06	1
1,2,4-Trimethylbenzene	ND		0.50		ug/L			05/24/23 19:06	1
1,2-Dibromo-3-Chloropropane	ND		1.0		ug/L			05/24/23 19:06	1
1,2-Dibromoethane	ND		0.50		ug/L			05/24/23 19:06	1
1,2-Dichlorobenzene	ND		0.50		ug/L			05/24/23 19:06	1
1,2-Dichloroethane	ND		0.50		ug/L			05/24/23 19:06	1
1,2-Dichloropropane	ND		0.50		ug/L			05/24/23 19:06	1
1,3,5-Trimethylbenzene	ND		0.50		ug/L			05/24/23 19:06	1
1,3-Dichlorobenzene	ND		0.50		ug/L			05/24/23 19:06	1
1,3-Dichloropropane	ND		0.50		ug/L			05/24/23 19:06	1
1,4-Dichlorobenzene	ND		0.50		ug/L			05/24/23 19:06	1
2,2-Dichloropropane	ND		0.50		ug/L			05/24/23 19:06	1
2-Butanone	ND		5.0		ug/L			05/24/23 19:06	1
2-Chlorotoluene	ND		0.50		ug/L			05/24/23 19:06	1
2-Hexanone	ND		6.0		ug/L			05/24/23 19:06	1
4-Chlorotoluene	ND		0.50		ug/L			05/24/23 19:06	1
4-Methyl-2-pentanone	ND		5.0		ug/L			05/24/23 19:06	1
Acetone	ND		8.0		ug/L			05/24/23 19:06	1
Benzene	ND		0.50		ug/L			05/24/23 19:06	1
Bromobenzene	ND		0.50		ug/L			05/24/23 19:06	1
Bromochloromethane	ND		1.0		ug/L			05/24/23 19:06	1
Bromodichloromethane	ND		0.50		ug/L			05/24/23 19:06	1
Bromoform	ND		0.50		ug/L			05/24/23 19:06	1
Bromomethane	ND		2.0		ug/L			05/24/23 19:06	1
cis-1,2-Dichloroethene	1.6		0.50		ug/L			05/24/23 19:06	1
cis-1,3-Dichloropropene	ND		0.50		ug/L			05/24/23 19:06	1
Carbon disulfide	ND		1.0		ug/L			05/24/23 19:06	1
Carbon tetrachloride	ND		0.50		ug/L			05/24/23 19:06	1
Chlorobenzene	ND		0.50		ug/L			05/24/23 19:06	1
Chloroethane	ND		0.50		ug/L			05/24/23 19:06	1
Chloroform	ND		0.50		ug/L			05/24/23 19:06	1
Chloromethane	ND		1.0		ug/L			05/24/23 19:06	1
Dibromochloromethane	ND		0.50		ug/L			05/24/23 19:06	1
Dibromomethane	ND		0.50		ug/L			05/24/23 19:06	1
Dichlorodifluoromethane	ND		1.0		ug/L			05/24/23 19:06	1
Ethylbenzene	ND		0.50		ug/L			05/24/23 19:06	1
Isopropylbenzene	ND		0.50		ug/L			05/24/23 19:06	1
Methylene Chloride	ND		1.0		ug/L			05/24/23 19:06	1
Methyl-t-Butyl Ether (MTBE)	ND		0.50		ug/L			05/24/23 19:06	1

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Client Sample Results

Client: Hargis + Associates, Inc.
Project/Site: Raytheon Main / Task No.: 532.30

Job ID: 570-138935-1

Method: SW846 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: MW-08_20230516

Date Collected: 05/16/23 12:49

Date Received: 05/17/23 19:35

Lab Sample ID: 570-138935-5

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	ND		1.0		ug/L			05/24/23 19:06	1
n-Butylbenzene	ND		0.50		ug/L			05/24/23 19:06	1
N-Propylbenzene	ND		0.50		ug/L			05/24/23 19:06	1
o-Xylene	ND		0.50		ug/L			05/24/23 19:06	1
m,p-Xylene	ND		1.0		ug/L			05/24/23 19:06	1
p-Isopropyltoluene	ND		0.50		ug/L			05/24/23 19:06	1
sec-Butylbenzene	ND		0.50		ug/L			05/24/23 19:06	1
Styrene	ND		0.50		ug/L			05/24/23 19:06	1
trans-1,2-Dichloroethene	ND		0.50		ug/L			05/24/23 19:06	1
trans-1,3-Dichloropropene	ND		0.50		ug/L			05/24/23 19:06	1
tert-Butylbenzene	ND		0.50		ug/L			05/24/23 19:06	1
Tetrachloroethene	ND		0.50		ug/L			05/24/23 19:06	1
Toluene	ND		0.50		ug/L			05/24/23 19:06	1
Trichloroethene	39		0.50		ug/L			05/24/23 19:06	1
Trichlorofluoromethane	ND		0.50		ug/L			05/24/23 19:06	1
Vinyl acetate	ND		5.0		ug/L			05/24/23 19:06	1
Vinyl chloride	ND		0.50		ug/L			05/24/23 19:06	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	99		64 - 132		05/24/23 19:06	1
4-Bromofluorobenzene (Surr)	97		76 - 120		05/24/23 19:06	1
Dibromofluoromethane	98		80 - 120		05/24/23 19:06	1
Toluene-d8 (Surr)	102		80 - 120		05/24/23 19:06	1

Client Sample ID: MW-30A_20230516

Date Collected: 05/16/23 13:30

Date Received: 05/17/23 19:35

Lab Sample ID: 570-138935-6

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		0.50		ug/L			05/24/23 19:31	1
1,1,1-Trichloroethane	ND		0.50		ug/L			05/24/23 19:31	1
1,1,2,2-Tetrachloroethane	ND		0.50		ug/L			05/24/23 19:31	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.50		ug/L			05/24/23 19:31	1
1,1,2-Trichloroethane	ND		0.50		ug/L			05/24/23 19:31	1
1,1-Dichloroethane	ND		0.50		ug/L			05/24/23 19:31	1
1,1-Dichloroethene	ND		0.50		ug/L			05/24/23 19:31	1
1,1-Dichloropropene	ND		0.50		ug/L			05/24/23 19:31	1
1,2,3-Trichlorobenzene	ND		0.50		ug/L			05/24/23 19:31	1
1,2,3-Trichloropropane	ND		0.50		ug/L			05/24/23 19:31	1
1,2,4-Trichlorobenzene	ND		0.50		ug/L			05/24/23 19:31	1
1,2,4-Trimethylbenzene	ND		0.50		ug/L			05/24/23 19:31	1
1,2-Dibromo-3-Chloropropane	ND		1.0		ug/L			05/24/23 19:31	1
1,2-Dibromoethane	ND		0.50		ug/L			05/24/23 19:31	1
1,2-Dichlorobenzene	ND		0.50		ug/L			05/24/23 19:31	1
1,2-Dichloroethane	ND		0.50		ug/L			05/24/23 19:31	1
1,2-Dichloropropane	ND		0.50		ug/L			05/24/23 19:31	1
1,3,5-Trimethylbenzene	ND		0.50		ug/L			05/24/23 19:31	1
1,3-Dichlorobenzene	ND		0.50		ug/L			05/24/23 19:31	1
1,3-Dichloropropane	ND		0.50		ug/L			05/24/23 19:31	1
1,4-Dichlorobenzene	ND		0.50		ug/L			05/24/23 19:31	1
2,2-Dichloropropane	ND		0.50		ug/L			05/24/23 19:31	1

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Client Sample Results

Client: Hargis + Associates, Inc.
Project/Site: Raytheon Main / Task No.: 532.30

Job ID: 570-138935-1

Method: SW846 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: MW-30A_20230516

Date Collected: 05/16/23 13:30

Date Received: 05/17/23 19:35

Lab Sample ID: 570-138935-6

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Butanone	ND		5.0		ug/L			05/24/23 19:31	1
2-Chlorotoluene	ND		0.50		ug/L			05/24/23 19:31	1
2-Hexanone	ND		6.0		ug/L			05/24/23 19:31	1
4-Chlorotoluene	ND		0.50		ug/L			05/24/23 19:31	1
4-Methyl-2-pentanone	ND		5.0		ug/L			05/24/23 19:31	1
Acetone	ND		8.0		ug/L			05/24/23 19:31	1
Benzene	ND		0.50		ug/L			05/24/23 19:31	1
Bromobenzene	ND		0.50		ug/L			05/24/23 19:31	1
Bromochloromethane	ND		1.0		ug/L			05/24/23 19:31	1
Bromodichloromethane	ND		0.50		ug/L			05/24/23 19:31	1
Bromoform	ND		0.50		ug/L			05/24/23 19:31	1
Bromomethane	ND		2.0		ug/L			05/24/23 19:31	1
cis-1,2-Dichloroethene	ND		0.50		ug/L			05/24/23 19:31	1
cis-1,3-Dichloropropene	ND		0.50		ug/L			05/24/23 19:31	1
Carbon disulfide	ND		1.0		ug/L			05/24/23 19:31	1
Carbon tetrachloride	ND		0.50		ug/L			05/24/23 19:31	1
Chlorobenzene	ND		0.50		ug/L			05/24/23 19:31	1
Chloroethane	ND		0.50		ug/L			05/24/23 19:31	1
Chloroform	ND		0.50		ug/L			05/24/23 19:31	1
Chloromethane	ND		1.0		ug/L			05/24/23 19:31	1
Dibromochloromethane	ND		0.50		ug/L			05/24/23 19:31	1
Dibromomethane	ND		0.50		ug/L			05/24/23 19:31	1
Dichlorodifluoromethane	ND		1.0		ug/L			05/24/23 19:31	1
Ethylbenzene	ND		0.50		ug/L			05/24/23 19:31	1
Isopropylbenzene	ND		0.50		ug/L			05/24/23 19:31	1
Methylene Chloride	ND		1.0		ug/L			05/24/23 19:31	1
Methyl-t-Butyl Ether (MTBE)	ND		0.50		ug/L			05/24/23 19:31	1
Naphthalene	ND		1.0		ug/L			05/24/23 19:31	1
n-Butylbenzene	ND		0.50		ug/L			05/24/23 19:31	1
N-Propylbenzene	ND		0.50		ug/L			05/24/23 19:31	1
o-Xylene	ND		0.50		ug/L			05/24/23 19:31	1
m,p-Xylene	ND		1.0		ug/L			05/24/23 19:31	1
p-Isopropyltoluene	ND		0.50		ug/L			05/24/23 19:31	1
sec-Butylbenzene	ND		0.50		ug/L			05/24/23 19:31	1
Styrene	ND		0.50		ug/L			05/24/23 19:31	1
trans-1,2-Dichloroethene	ND		0.50		ug/L			05/24/23 19:31	1
trans-1,3-Dichloropropene	ND		0.50		ug/L			05/24/23 19:31	1
tert-Butylbenzene	ND		0.50		ug/L			05/24/23 19:31	1
Tetrachloroethene	ND		0.50		ug/L			05/24/23 19:31	1
Toluene	ND		0.50		ug/L			05/24/23 19:31	1
Trichloroethene	ND		0.50		ug/L			05/24/23 19:31	1
Trichlorofluoromethane	ND		0.50		ug/L			05/24/23 19:31	1
Vinyl acetate	ND		5.0		ug/L			05/24/23 19:31	1
Vinyl chloride	ND		0.50		ug/L			05/24/23 19:31	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	101		64 - 132		05/24/23 19:31	1
4-Bromofluorobenzene (Surr)	96		76 - 120		05/24/23 19:31	1
Dibromofluoromethane	100		80 - 120		05/24/23 19:31	1
Toluene-d8 (Surr)	103		80 - 120		05/24/23 19:31	1

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Client Sample Results

Client: Hargis + Associates, Inc.
Project/Site: Raytheon Main / Task No.: 532.30

Job ID: 570-138935-1

Method: SW846 8260B - Volatile Organic Compounds (GC/MS)

Client Sample ID: MW-30B_20230516

Date Collected: 05/16/23 14:03

Date Received: 05/17/23 19:35

Lab Sample ID: 570-138935-7

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		0.50		ug/L			05/24/23 19:56	1
1,1,1-Trichloroethane	ND		0.50		ug/L			05/24/23 19:56	1
1,1,2,2-Tetrachloroethane	ND		0.50		ug/L			05/24/23 19:56	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0		0.50		ug/L			05/24/23 19:56	1
1,1,2-Trichloroethane	ND		0.50		ug/L			05/24/23 19:56	1
1,1-Dichloroethane	ND		0.50		ug/L			05/24/23 19:56	1
1,1-Dichloroethene	21		0.50		ug/L			05/24/23 19:56	1
1,1-Dichloropropene	ND		0.50		ug/L			05/24/23 19:56	1
1,2,3-Trichlorobenzene	ND		0.50		ug/L			05/24/23 19:56	1
1,2,3-Trichloropropane	ND		0.50		ug/L			05/24/23 19:56	1
1,2,4-Trichlorobenzene	ND		0.50		ug/L			05/24/23 19:56	1
1,2,4-Trimethylbenzene	ND		0.50		ug/L			05/24/23 19:56	1
1,2-Dibromo-3-Chloropropane	ND		1.0		ug/L			05/24/23 19:56	1
1,2-Dibromoethane	ND		0.50		ug/L			05/24/23 19:56	1
1,2-Dichlorobenzene	ND		0.50		ug/L			05/24/23 19:56	1
1,2-Dichloroethane	ND		0.50		ug/L			05/24/23 19:56	1
1,2-Dichloropropane	ND		0.50		ug/L			05/24/23 19:56	1
1,3,5-Trimethylbenzene	ND		0.50		ug/L			05/24/23 19:56	1
1,3-Dichlorobenzene	ND		0.50		ug/L			05/24/23 19:56	1
1,3-Dichloropropane	ND		0.50		ug/L			05/24/23 19:56	1
1,4-Dichlorobenzene	ND		0.50		ug/L			05/24/23 19:56	1
2,2-Dichloropropane	ND		0.50		ug/L			05/24/23 19:56	1
2-Butanone	ND		5.0		ug/L			05/24/23 19:56	1
2-Chlorotoluene	ND		0.50		ug/L			05/24/23 19:56	1
2-Hexanone	ND		6.0		ug/L			05/24/23 19:56	1
4-Chlorotoluene	ND		0.50		ug/L			05/24/23 19:56	1
4-Methyl-2-pentanone	ND		5.0		ug/L			05/24/23 19:56	1
Acetone	ND		8.0		ug/L			05/24/23 19:56	1
Benzene	ND		0.50		ug/L			05/24/23 19:56	1
Bromobenzene	ND		0.50		ug/L			05/24/23 19:56	1
Bromochloromethane	ND		1.0		ug/L			05/24/23 19:56	1
Bromodichloromethane	ND		0.50		ug/L			05/24/23 19:56	1
Bromoform	ND		0.50		ug/L			05/24/23 19:56	1
Bromomethane	ND		2.0		ug/L			05/24/23 19:56	1
cis-1,2-Dichloroethene	4.5		0.50		ug/L			05/24/23 19:56	1
cis-1,3-Dichloropropene	ND		0.50		ug/L			05/24/23 19:56	1
Carbon disulfide	ND		1.0		ug/L			05/24/23 19:56	1
Carbon tetrachloride	ND		0.50		ug/L			05/24/23 19:56	1
Chlorobenzene	ND		0.50		ug/L			05/24/23 19:56	1
Chloroethane	ND		0.50		ug/L			05/24/23 19:56	1
Chloroform	ND		0.50		ug/L			05/24/23 19:56	1
Chloromethane	ND		1.0		ug/L			05/24/23 19:56	1
Dibromochloromethane	ND		0.50		ug/L			05/24/23 19:56	1
Dibromomethane	ND		0.50		ug/L			05/24/23 19:56	1
Dichlorodifluoromethane	ND		1.0		ug/L			05/24/23 19:56	1
Ethylbenzene	ND		0.50		ug/L			05/24/23 19:56	1
Isopropylbenzene	ND		0.50		ug/L			05/24/23 19:56	1
Methylene Chloride	ND		1.0		ug/L			05/24/23 19:56	1
Methyl-t-Butyl Ether (MTBE)	ND		0.50		ug/L			05/24/23 19:56	1

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Client Sample Results

Client: Hargis + Associates, Inc.
Project/Site: Raytheon Main / Task No.: 532.30

Job ID: 570-138935-1

Method: SW846 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: MW-30B_20230516

Date Collected: 05/16/23 14:03

Date Received: 05/17/23 19:35

Lab Sample ID: 570-138935-7

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	ND		1.0		ug/L			05/24/23 19:56	1
n-Butylbenzene	ND		0.50		ug/L			05/24/23 19:56	1
N-Propylbenzene	ND		0.50		ug/L			05/24/23 19:56	1
o-Xylene	ND		0.50		ug/L			05/24/23 19:56	1
m,p-Xylene	ND		1.0		ug/L			05/24/23 19:56	1
p-Isopropyltoluene	ND		0.50		ug/L			05/24/23 19:56	1
sec-Butylbenzene	ND		0.50		ug/L			05/24/23 19:56	1
Styrene	ND		0.50		ug/L			05/24/23 19:56	1
trans-1,2-Dichloroethene	ND		0.50		ug/L			05/24/23 19:56	1
trans-1,3-Dichloropropene	ND		0.50		ug/L			05/24/23 19:56	1
tert-Butylbenzene	ND		0.50		ug/L			05/24/23 19:56	1
Tetrachloroethene	ND		0.50		ug/L			05/24/23 19:56	1
Toluene	ND		0.50		ug/L			05/24/23 19:56	1
Trichloroethene	79		0.50		ug/L			05/24/23 19:56	1
Trichlorofluoromethane	ND		0.50		ug/L			05/24/23 19:56	1
Vinyl acetate	ND		5.0		ug/L			05/24/23 19:56	1
Vinyl chloride	ND		0.50		ug/L			05/24/23 19:56	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	102		64 - 132		05/24/23 19:56	1
4-Bromofluorobenzene (Surr)	97		76 - 120		05/24/23 19:56	1
Dibromofluoromethane	101		80 - 120		05/24/23 19:56	1
Toluene-d8 (Surr)	103		80 - 120		05/24/23 19:56	1

Client Sample ID: MW-34B_20230516

Date Collected: 05/16/23 14:48

Date Received: 05/17/23 19:35

Lab Sample ID: 570-138935-8

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		0.50		ug/L			05/24/23 20:22	1
1,1,1-Trichloroethane	ND		0.50		ug/L			05/24/23 20:22	1
1,1,2,2-Tetrachloroethane	ND		0.50		ug/L			05/24/23 20:22	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.50		ug/L			05/24/23 20:22	1
1,1,2-Trichloroethane	ND		0.50		ug/L			05/24/23 20:22	1
1,1-Dichloroethane	ND		0.50		ug/L			05/24/23 20:22	1
1,1-Dichloroethene	47		0.50		ug/L			05/24/23 20:22	1
1,1-Dichloropropene	ND		0.50		ug/L			05/24/23 20:22	1
1,2,3-Trichlorobenzene	ND		0.50		ug/L			05/24/23 20:22	1
1,2,3-Trichloropropane	ND		0.50		ug/L			05/24/23 20:22	1
1,2,4-Trichlorobenzene	ND		0.50		ug/L			05/24/23 20:22	1
1,2,4-Trimethylbenzene	ND		0.50		ug/L			05/24/23 20:22	1
1,2-Dibromo-3-Chloropropane	ND		1.0		ug/L			05/24/23 20:22	1
1,2-Dibromoethane	ND		0.50		ug/L			05/24/23 20:22	1
1,2-Dichlorobenzene	ND		0.50		ug/L			05/24/23 20:22	1
1,2-Dichloroethane	ND		0.50		ug/L			05/24/23 20:22	1
1,2-Dichloropropane	ND		0.50		ug/L			05/24/23 20:22	1
1,3,5-Trimethylbenzene	ND		0.50		ug/L			05/24/23 20:22	1
1,3-Dichlorobenzene	ND		0.50		ug/L			05/24/23 20:22	1
1,3-Dichloropropane	ND		0.50		ug/L			05/24/23 20:22	1
1,4-Dichlorobenzene	ND		0.50		ug/L			05/24/23 20:22	1
2,2-Dichloropropane	ND		0.50		ug/L			05/24/23 20:22	1

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Client Sample Results

Client: Hargis + Associates, Inc.
Project/Site: Raytheon Main / Task No.: 532.30

Job ID: 570-138935-1

Method: SW846 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: MW-34B_20230516

Date Collected: 05/16/23 14:48

Date Received: 05/17/23 19:35

Lab Sample ID: 570-138935-8

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Butanone	ND		5.0		ug/L			05/24/23 20:22	1
2-Chlorotoluene	ND		0.50		ug/L			05/24/23 20:22	1
2-Hexanone	ND		6.0		ug/L			05/24/23 20:22	1
4-Chlorotoluene	ND		0.50		ug/L			05/24/23 20:22	1
4-Methyl-2-pentanone	ND		5.0		ug/L			05/24/23 20:22	1
Acetone	ND		8.0		ug/L			05/24/23 20:22	1
Benzene	ND		0.50		ug/L			05/24/23 20:22	1
Bromobenzene	ND		0.50		ug/L			05/24/23 20:22	1
Bromochloromethane	ND		1.0		ug/L			05/24/23 20:22	1
Bromodichloromethane	ND		0.50		ug/L			05/24/23 20:22	1
Bromoform	ND		0.50		ug/L			05/24/23 20:22	1
Bromomethane	ND		2.0		ug/L			05/24/23 20:22	1
cis-1,2-Dichloroethene	ND		0.50		ug/L			05/24/23 20:22	1
cis-1,3-Dichloropropene	ND		0.50		ug/L			05/24/23 20:22	1
Carbon disulfide	ND		1.0		ug/L			05/24/23 20:22	1
Carbon tetrachloride	ND		0.50		ug/L			05/24/23 20:22	1
Chlorobenzene	ND		0.50		ug/L			05/24/23 20:22	1
Chloroethane	ND		0.50		ug/L			05/24/23 20:22	1
Chloroform	ND		0.50		ug/L			05/24/23 20:22	1
Chloromethane	ND		1.0		ug/L			05/24/23 20:22	1
Dibromochloromethane	ND		0.50		ug/L			05/24/23 20:22	1
Dibromomethane	ND		0.50		ug/L			05/24/23 20:22	1
Dichlorodifluoromethane	ND		1.0		ug/L			05/24/23 20:22	1
Ethylbenzene	ND		0.50		ug/L			05/24/23 20:22	1
Isopropylbenzene	ND		0.50		ug/L			05/24/23 20:22	1
Methylene Chloride	ND		1.0		ug/L			05/24/23 20:22	1
Methyl-t-Butyl Ether (MTBE)	ND		0.50		ug/L			05/24/23 20:22	1
Naphthalene	ND		1.0		ug/L			05/24/23 20:22	1
n-Butylbenzene	ND		0.50		ug/L			05/24/23 20:22	1
N-Propylbenzene	ND		0.50		ug/L			05/24/23 20:22	1
o-Xylene	ND		0.50		ug/L			05/24/23 20:22	1
m,p-Xylene	ND		1.0		ug/L			05/24/23 20:22	1
p-Isopropyltoluene	ND		0.50		ug/L			05/24/23 20:22	1
sec-Butylbenzene	ND		0.50		ug/L			05/24/23 20:22	1
Styrene	ND		0.50		ug/L			05/24/23 20:22	1
trans-1,2-Dichloroethene	ND		0.50		ug/L			05/24/23 20:22	1
trans-1,3-Dichloropropene	ND		0.50		ug/L			05/24/23 20:22	1
tert-Butylbenzene	ND		0.50		ug/L			05/24/23 20:22	1
Tetrachloroethene	ND		0.50		ug/L			05/24/23 20:22	1
Toluene	ND		0.50		ug/L			05/24/23 20:22	1
Trichloroethene	ND		0.50		ug/L			05/24/23 20:22	1
Trichlorofluoromethane	ND		0.50		ug/L			05/24/23 20:22	1
Vinyl acetate	ND		5.0		ug/L			05/24/23 20:22	1
Vinyl chloride	ND		0.50		ug/L			05/24/23 20:22	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	105		64 - 132		05/24/23 20:22	1
4-Bromofluorobenzene (Surr)	97		76 - 120		05/24/23 20:22	1
Dibromofluoromethane	102		80 - 120		05/24/23 20:22	1
Toluene-d8 (Surr)	101		80 - 120		05/24/23 20:22	1

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Client Sample Results

Client: Hargis + Associates, Inc.
Project/Site: Raytheon Main / Task No.: 532.30

Job ID: 570-138935-1

Method: SW846 8260B - Volatile Organic Compounds (GC/MS)

Client Sample ID: MW-40_20230517

Date Collected: 05/17/23 09:32

Date Received: 05/17/23 19:35

Lab Sample ID: 570-138935-9

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		0.50		ug/L			05/24/23 20:47	1
1,1,1-Trichloroethane	ND		0.50		ug/L			05/24/23 20:47	1
1,1,2,2-Tetrachloroethane	ND		0.50		ug/L			05/24/23 20:47	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.50		ug/L			05/24/23 20:47	1
1,1,2-Trichloroethane	ND		0.50		ug/L			05/24/23 20:47	1
1,1-Dichloroethane	ND		0.50		ug/L			05/24/23 20:47	1
1,1-Dichloroethene	ND		0.50		ug/L			05/24/23 20:47	1
1,1-Dichloropropene	ND		0.50		ug/L			05/24/23 20:47	1
1,2,3-Trichlorobenzene	ND		0.50		ug/L			05/24/23 20:47	1
1,2,3-Trichloropropane	ND		0.50		ug/L			05/24/23 20:47	1
1,2,4-Trichlorobenzene	ND		0.50		ug/L			05/24/23 20:47	1
1,2,4-Trimethylbenzene	ND		0.50		ug/L			05/24/23 20:47	1
1,2-Dibromo-3-Chloropropane	ND		1.0		ug/L			05/24/23 20:47	1
1,2-Dibromoethane	ND		0.50		ug/L			05/24/23 20:47	1
1,2-Dichlorobenzene	ND		0.50		ug/L			05/24/23 20:47	1
1,2-Dichloroethane	ND		0.50		ug/L			05/24/23 20:47	1
1,2-Dichloropropane	ND		0.50		ug/L			05/24/23 20:47	1
1,3,5-Trimethylbenzene	ND		0.50		ug/L			05/24/23 20:47	1
1,3-Dichlorobenzene	ND		0.50		ug/L			05/24/23 20:47	1
1,3-Dichloropropane	ND		0.50		ug/L			05/24/23 20:47	1
1,4-Dichlorobenzene	ND		0.50		ug/L			05/24/23 20:47	1
2,2-Dichloropropane	ND		0.50		ug/L			05/24/23 20:47	1
2-Butanone	ND		5.0		ug/L			05/24/23 20:47	1
2-Chlorotoluene	ND		0.50		ug/L			05/24/23 20:47	1
2-Hexanone	ND		6.0		ug/L			05/24/23 20:47	1
4-Chlorotoluene	ND		0.50		ug/L			05/24/23 20:47	1
4-Methyl-2-pentanone	ND		5.0		ug/L			05/24/23 20:47	1
Acetone	ND		8.0		ug/L			05/24/23 20:47	1
Benzene	ND		0.50		ug/L			05/24/23 20:47	1
Bromobenzene	ND		0.50		ug/L			05/24/23 20:47	1
Bromochloromethane	ND		1.0		ug/L			05/24/23 20:47	1
Bromodichloromethane	ND		0.50		ug/L			05/24/23 20:47	1
Bromoform	ND		0.50		ug/L			05/24/23 20:47	1
Bromomethane	ND		2.0		ug/L			05/24/23 20:47	1
cis-1,2-Dichloroethene	ND		0.50		ug/L			05/24/23 20:47	1
cis-1,3-Dichloropropene	ND		0.50		ug/L			05/24/23 20:47	1
Carbon disulfide	ND		1.0		ug/L			05/24/23 20:47	1
Carbon tetrachloride	ND		0.50		ug/L			05/24/23 20:47	1
Chlorobenzene	ND		0.50		ug/L			05/24/23 20:47	1
Chloroethane	ND		0.50		ug/L			05/24/23 20:47	1
Chloroform	ND		0.50		ug/L			05/24/23 20:47	1
Chloromethane	ND		1.0		ug/L			05/24/23 20:47	1
Dibromochloromethane	ND		0.50		ug/L			05/24/23 20:47	1
Dibromomethane	ND		0.50		ug/L			05/24/23 20:47	1
Dichlorodifluoromethane	ND		1.0		ug/L			05/24/23 20:47	1
Ethylbenzene	ND		0.50		ug/L			05/24/23 20:47	1
Isopropylbenzene	ND		0.50		ug/L			05/24/23 20:47	1
Methylene Chloride	ND		1.0		ug/L			05/24/23 20:47	1
Methyl-t-Butyl Ether (MTBE)	ND		0.50		ug/L			05/24/23 20:47	1

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Client Sample Results

Client: Hargis + Associates, Inc.
Project/Site: Raytheon Main / Task No.: 532.30

Job ID: 570-138935-1

Method: SW846 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: MW-40_20230517

Date Collected: 05/17/23 09:32

Date Received: 05/17/23 19:35

Lab Sample ID: 570-138935-9

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	ND		1.0		ug/L			05/24/23 20:47	1
n-Butylbenzene	ND		0.50		ug/L			05/24/23 20:47	1
N-Propylbenzene	ND		0.50		ug/L			05/24/23 20:47	1
o-Xylene	ND		0.50		ug/L			05/24/23 20:47	1
m,p-Xylene	ND		1.0		ug/L			05/24/23 20:47	1
p-Isopropyltoluene	ND		0.50		ug/L			05/24/23 20:47	1
sec-Butylbenzene	ND		0.50		ug/L			05/24/23 20:47	1
Styrene	ND		0.50		ug/L			05/24/23 20:47	1
trans-1,2-Dichloroethene	ND		0.50		ug/L			05/24/23 20:47	1
trans-1,3-Dichloropropene	ND		0.50		ug/L			05/24/23 20:47	1
tert-Butylbenzene	ND		0.50		ug/L			05/24/23 20:47	1
Tetrachloroethene	ND		0.50		ug/L			05/24/23 20:47	1
Toluene	ND		0.50		ug/L			05/24/23 20:47	1
Trichloroethene	ND		0.50		ug/L			05/24/23 20:47	1
Trichlorofluoromethane	ND		0.50		ug/L			05/24/23 20:47	1
Vinyl acetate	ND		5.0		ug/L			05/24/23 20:47	1
Vinyl chloride	ND		0.50		ug/L			05/24/23 20:47	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	99		64 - 132		05/24/23 20:47	1
4-Bromofluorobenzene (Surr)	97		76 - 120		05/24/23 20:47	1
Dibromofluoromethane	101		80 - 120		05/24/23 20:47	1
Toluene-d8 (Surr)	101		80 - 120		05/24/23 20:47	1

Client Sample ID: MW-35C_20230516

Date Collected: 05/16/23 10:17

Date Received: 05/17/23 19:35

Lab Sample ID: 570-138935-10

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		0.50		ug/L			05/24/23 21:12	1
1,1,1-Trichloroethane	ND		0.50		ug/L			05/24/23 21:12	1
1,1,2,2-Tetrachloroethane	ND		0.50		ug/L			05/24/23 21:12	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.50		ug/L			05/24/23 21:12	1
1,1,2-Trichloroethane	ND		0.50		ug/L			05/24/23 21:12	1
1,1-Dichloroethane	ND		0.50		ug/L			05/24/23 21:12	1
1,1-Dichloroethene	ND		0.50		ug/L			05/24/23 21:12	1
1,1-Dichloropropene	ND		0.50		ug/L			05/24/23 21:12	1
1,2,3-Trichlorobenzene	ND		0.50		ug/L			05/24/23 21:12	1
1,2,3-Trichloropropane	ND		0.50		ug/L			05/24/23 21:12	1
1,2,4-Trichlorobenzene	ND		0.50		ug/L			05/24/23 21:12	1
1,2,4-Trimethylbenzene	ND		0.50		ug/L			05/24/23 21:12	1
1,2-Dibromo-3-Chloropropane	ND		1.0		ug/L			05/24/23 21:12	1
1,2-Dibromoethane	ND		0.50		ug/L			05/24/23 21:12	1
1,2-Dichlorobenzene	ND		0.50		ug/L			05/24/23 21:12	1
1,2-Dichloroethane	ND		0.50		ug/L			05/24/23 21:12	1
1,2-Dichloropropane	ND		0.50		ug/L			05/24/23 21:12	1
1,3,5-Trimethylbenzene	ND		0.50		ug/L			05/24/23 21:12	1
1,3-Dichlorobenzene	ND		0.50		ug/L			05/24/23 21:12	1
1,3-Dichloropropane	ND		0.50		ug/L			05/24/23 21:12	1
1,4-Dichlorobenzene	ND		0.50		ug/L			05/24/23 21:12	1
2,2-Dichloropropane	ND		0.50		ug/L			05/24/23 21:12	1

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Client Sample Results

Client: Hargis + Associates, Inc.
Project/Site: Raytheon Main / Task No.: 532.30

Job ID: 570-138935-1

Method: SW846 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: MW-35C_20230516

Date Collected: 05/16/23 10:17

Date Received: 05/17/23 19:35

Lab Sample ID: 570-138935-10

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Butanone	ND		5.0		ug/L			05/24/23 21:12	1
2-Chlorotoluene	ND		0.50		ug/L			05/24/23 21:12	1
2-Hexanone	ND		6.0		ug/L			05/24/23 21:12	1
4-Chlorotoluene	ND		0.50		ug/L			05/24/23 21:12	1
4-Methyl-2-pentanone	ND		5.0		ug/L			05/24/23 21:12	1
Acetone	ND		8.0		ug/L			05/24/23 21:12	1
Benzene	ND		0.50		ug/L			05/24/23 21:12	1
Bromobenzene	ND		0.50		ug/L			05/24/23 21:12	1
Bromochloromethane	ND		1.0		ug/L			05/24/23 21:12	1
Bromodichloromethane	ND		0.50		ug/L			05/24/23 21:12	1
Bromoform	ND		0.50		ug/L			05/24/23 21:12	1
Bromomethane	ND		2.0		ug/L			05/24/23 21:12	1
cis-1,2-Dichloroethene	ND		0.50		ug/L			05/24/23 21:12	1
cis-1,3-Dichloropropene	ND		0.50		ug/L			05/24/23 21:12	1
Carbon disulfide	ND		1.0		ug/L			05/24/23 21:12	1
Carbon tetrachloride	ND		0.50		ug/L			05/24/23 21:12	1
Chlorobenzene	ND		0.50		ug/L			05/24/23 21:12	1
Chloroethane	ND		0.50		ug/L			05/24/23 21:12	1
Chloroform	ND		0.50		ug/L			05/24/23 21:12	1
Chloromethane	ND		1.0		ug/L			05/24/23 21:12	1
Dibromochloromethane	ND		0.50		ug/L			05/24/23 21:12	1
Dibromomethane	ND		0.50		ug/L			05/24/23 21:12	1
Dichlorodifluoromethane	ND		1.0		ug/L			05/24/23 21:12	1
Ethylbenzene	ND		0.50		ug/L			05/24/23 21:12	1
Isopropylbenzene	ND		0.50		ug/L			05/24/23 21:12	1
Methylene Chloride	ND		1.0		ug/L			05/24/23 21:12	1
Methyl-t-Butyl Ether (MTBE)	ND		0.50		ug/L			05/24/23 21:12	1
Naphthalene	ND		1.0		ug/L			05/24/23 21:12	1
n-Butylbenzene	ND		0.50		ug/L			05/24/23 21:12	1
N-Propylbenzene	ND		0.50		ug/L			05/24/23 21:12	1
o-Xylene	ND		0.50		ug/L			05/24/23 21:12	1
m,p-Xylene	ND		1.0		ug/L			05/24/23 21:12	1
p-Isopropyltoluene	ND		0.50		ug/L			05/24/23 21:12	1
sec-Butylbenzene	ND		0.50		ug/L			05/24/23 21:12	1
Styrene	ND		0.50		ug/L			05/24/23 21:12	1
trans-1,2-Dichloroethene	ND		0.50		ug/L			05/24/23 21:12	1
trans-1,3-Dichloropropene	ND		0.50		ug/L			05/24/23 21:12	1
tert-Butylbenzene	ND		0.50		ug/L			05/24/23 21:12	1
Tetrachloroethene	ND		0.50		ug/L			05/24/23 21:12	1
Toluene	ND		0.50		ug/L			05/24/23 21:12	1
Trichloroethene	ND		0.50		ug/L			05/24/23 21:12	1
Trichlorofluoromethane	ND		0.50		ug/L			05/24/23 21:12	1
Vinyl acetate	ND		5.0		ug/L			05/24/23 21:12	1
Vinyl chloride	ND		0.50		ug/L			05/24/23 21:12	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	100		64 - 132		05/24/23 21:12	1
4-Bromofluorobenzene (Surr)	97		76 - 120		05/24/23 21:12	1
Dibromofluoromethane	100		80 - 120		05/24/23 21:12	1
Toluene-d8 (Surr)	104		80 - 120		05/24/23 21:12	1

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Client Sample Results

Client: Hargis + Associates, Inc.
Project/Site: Raytheon Main / Task No.: 532.30

Job ID: 570-138935-1

Method: SW846 8260B - Volatile Organic Compounds (GC/MS)

Client Sample ID: MW-32B_20230516

Date Collected: 05/16/23 13:42

Date Received: 05/17/23 19:35

Lab Sample ID: 570-138935-11

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		0.50		ug/L			05/24/23 21:37	1
1,1,1-Trichloroethane	ND		0.50		ug/L			05/24/23 21:37	1
1,1,2,2-Tetrachloroethane	ND		0.50		ug/L			05/24/23 21:37	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.50		ug/L			05/24/23 21:37	1
1,1,2-Trichloroethane	ND		0.50		ug/L			05/24/23 21:37	1
1,1-Dichloroethane	0.92		0.50		ug/L			05/24/23 21:37	1
1,1-Dichloropropene	ND		0.50		ug/L			05/24/23 21:37	1
1,2,3-Trichlorobenzene	ND		0.50		ug/L			05/24/23 21:37	1
1,2,3-Trichloropropane	ND		0.50		ug/L			05/24/23 21:37	1
1,2,4-Trichlorobenzene	ND		0.50		ug/L			05/24/23 21:37	1
1,2,4-Trimethylbenzene	ND		0.50		ug/L			05/24/23 21:37	1
1,2-Dibromo-3-Chloropropane	ND		1.0		ug/L			05/24/23 21:37	1
1,2-Dibromoethane	ND		0.50		ug/L			05/24/23 21:37	1
1,2-Dichlorobenzene	ND		0.50		ug/L			05/24/23 21:37	1
1,2-Dichloroethane	ND		0.50		ug/L			05/24/23 21:37	1
1,2-Dichloropropane	ND		0.50		ug/L			05/24/23 21:37	1
1,3,5-Trimethylbenzene	ND		0.50		ug/L			05/24/23 21:37	1
1,3-Dichlorobenzene	ND		0.50		ug/L			05/24/23 21:37	1
1,3-Dichloropropane	ND		0.50		ug/L			05/24/23 21:37	1
1,4-Dichlorobenzene	ND		0.50		ug/L			05/24/23 21:37	1
2,2-Dichloropropane	ND		0.50		ug/L			05/24/23 21:37	1
2-Butanone	ND		5.0		ug/L			05/24/23 21:37	1
2-Chlorotoluene	ND		0.50		ug/L			05/24/23 21:37	1
2-Hexanone	ND		6.0		ug/L			05/24/23 21:37	1
4-Chlorotoluene	ND		0.50		ug/L			05/24/23 21:37	1
4-Methyl-2-pentanone	ND		5.0		ug/L			05/24/23 21:37	1
Acetone	ND		8.0		ug/L			05/24/23 21:37	1
Benzene	ND		0.50		ug/L			05/24/23 21:37	1
Bromobenzene	ND		0.50		ug/L			05/24/23 21:37	1
Bromochloromethane	ND		1.0		ug/L			05/24/23 21:37	1
Bromodichloromethane	ND		0.50		ug/L			05/24/23 21:37	1
Bromoform	ND		0.50		ug/L			05/24/23 21:37	1
Bromomethane	ND		2.0		ug/L			05/24/23 21:37	1
cis-1,2-Dichloroethene	3.3		0.50		ug/L			05/24/23 21:37	1
cis-1,3-Dichloropropene	ND		0.50		ug/L			05/24/23 21:37	1
Carbon disulfide	ND		1.0		ug/L			05/24/23 21:37	1
Carbon tetrachloride	ND		0.50		ug/L			05/24/23 21:37	1
Chlorobenzene	ND		0.50		ug/L			05/24/23 21:37	1
Chloroethane	ND		0.50		ug/L			05/24/23 21:37	1
Chloroform	ND		0.50		ug/L			05/24/23 21:37	1
Chloromethane	ND		1.0		ug/L			05/24/23 21:37	1
Dibromochloromethane	ND		0.50		ug/L			05/24/23 21:37	1
Dibromomethane	ND		0.50		ug/L			05/24/23 21:37	1
Dichlorodifluoromethane	ND		1.0		ug/L			05/24/23 21:37	1
Ethylbenzene	ND		0.50		ug/L			05/24/23 21:37	1
Isopropylbenzene	ND		0.50		ug/L			05/24/23 21:37	1
Methylene Chloride	ND		1.0		ug/L			05/24/23 21:37	1
Methyl-t-Butyl Ether (MTBE)	ND		0.50		ug/L			05/24/23 21:37	1
Naphthalene	ND		1.0		ug/L			05/24/23 21:37	1

Eurofins Calscience

Client Sample Results

Client: Hargis + Associates, Inc.
Project/Site: Raytheon Main / Task No.: 532.30

Job ID: 570-138935-1

Method: SW846 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: MW-32B_20230516

Date Collected: 05/16/23 13:42

Date Received: 05/17/23 19:35

Lab Sample ID: 570-138935-11

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
n-Butylbenzene	ND		0.50		ug/L			05/24/23 21:37	1
N-Propylbenzene	ND		0.50		ug/L			05/24/23 21:37	1
o-Xylene	ND		0.50		ug/L			05/24/23 21:37	1
m,p-Xylene	ND		1.0		ug/L			05/24/23 21:37	1
p-Isopropyltoluene	ND		0.50		ug/L			05/24/23 21:37	1
sec-Butylbenzene	ND		0.50		ug/L			05/24/23 21:37	1
Styrene	ND		0.50		ug/L			05/24/23 21:37	1
trans-1,2-Dichloroethene	ND		0.50		ug/L			05/24/23 21:37	1
trans-1,3-Dichloropropene	ND		0.50		ug/L			05/24/23 21:37	1
tert-Butylbenzene	ND		0.50		ug/L			05/24/23 21:37	1
Tetrachloroethene	ND		0.50		ug/L			05/24/23 21:37	1
Toluene	4.6		0.50		ug/L			05/24/23 21:37	1
Trichloroethene	33		0.50		ug/L			05/24/23 21:37	1
Trichlorofluoromethane	ND		0.50		ug/L			05/24/23 21:37	1
Vinyl acetate	ND		5.0		ug/L			05/24/23 21:37	1
Vinyl chloride	ND		0.50		ug/L			05/24/23 21:37	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	102		64 - 132		05/24/23 21:37	1
4-Bromofluorobenzene (Surr)	94		76 - 120		05/24/23 21:37	1
Dibromofluoromethane	102		80 - 120		05/24/23 21:37	1
Toluene-d8 (Surr)	102		80 - 120		05/24/23 21:37	1

Client Sample ID: MW-33_20230516

Date Collected: 05/16/23 16:10

Date Received: 05/17/23 19:35

Lab Sample ID: 570-138935-12

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		0.50		ug/L			05/24/23 22:03	1
1,1,1-Trichloroethane	ND		0.50		ug/L			05/24/23 22:03	1
1,1,2,2-Tetrachloroethane	ND		0.50		ug/L			05/24/23 22:03	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.50		ug/L			05/24/23 22:03	1
1,1,2-Trichloroethane	ND		0.50		ug/L			05/24/23 22:03	1
1,1-Dichloroethane	ND		0.50		ug/L			05/24/23 22:03	1
1,1-Dichloroethene	5.3		0.50		ug/L			05/24/23 22:03	1
1,1-Dichloropropene	ND		0.50		ug/L			05/24/23 22:03	1
1,2,3-Trichlorobenzene	ND		0.50		ug/L			05/24/23 22:03	1
1,2,3-Trichloropropane	ND		0.50		ug/L			05/24/23 22:03	1
1,2,4-Trichlorobenzene	ND		0.50		ug/L			05/24/23 22:03	1
1,2,4-Trimethylbenzene	ND		0.50		ug/L			05/24/23 22:03	1
1,2-Dibromo-3-Chloropropane	ND		1.0		ug/L			05/24/23 22:03	1
1,2-Dibromoethane	ND		0.50		ug/L			05/24/23 22:03	1
1,2-Dichlorobenzene	ND		0.50		ug/L			05/24/23 22:03	1
1,2-Dichloroethane	ND		0.50		ug/L			05/24/23 22:03	1
1,2-Dichloropropane	ND		0.50		ug/L			05/24/23 22:03	1
1,3,5-Trimethylbenzene	ND		0.50		ug/L			05/24/23 22:03	1
1,3-Dichlorobenzene	ND		0.50		ug/L			05/24/23 22:03	1
1,3-Dichloropropane	ND		0.50		ug/L			05/24/23 22:03	1
1,4-Dichlorobenzene	ND		0.50		ug/L			05/24/23 22:03	1
2,2-Dichloropropane	ND		0.50		ug/L			05/24/23 22:03	1
2-Butanone	ND		5.0		ug/L			05/24/23 22:03	1

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Client Sample Results

Client: Hargis + Associates, Inc.
Project/Site: Raytheon Main / Task No.: 532.30

Job ID: 570-138935-1

Method: SW846 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: MW-33_20230516

Date Collected: 05/16/23 16:10

Date Received: 05/17/23 19:35

Lab Sample ID: 570-138935-12

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Chlorotoluene	ND		0.50		ug/L			05/24/23 22:03	1
2-Hexanone	ND		6.0		ug/L			05/24/23 22:03	1
4-Chlorotoluene	ND		0.50		ug/L			05/24/23 22:03	1
4-Methyl-2-pentanone	ND		5.0		ug/L			05/24/23 22:03	1
Acetone	ND		8.0		ug/L			05/24/23 22:03	1
Benzene	ND		0.50		ug/L			05/24/23 22:03	1
Bromobenzene	ND		0.50		ug/L			05/24/23 22:03	1
Bromochloromethane	ND		1.0		ug/L			05/24/23 22:03	1
Bromodichloromethane	ND		0.50		ug/L			05/24/23 22:03	1
Bromoform	ND		0.50		ug/L			05/24/23 22:03	1
Bromomethane	ND		2.0		ug/L			05/24/23 22:03	1
cis-1,2-Dichloroethene	ND		0.50		ug/L			05/24/23 22:03	1
cis-1,3-Dichloropropene	ND		0.50		ug/L			05/24/23 22:03	1
Carbon disulfide	ND		1.0		ug/L			05/24/23 22:03	1
Carbon tetrachloride	ND		0.50		ug/L			05/24/23 22:03	1
Chlorobenzene	ND		0.50		ug/L			05/24/23 22:03	1
Chloroethane	ND		0.50		ug/L			05/24/23 22:03	1
Chloroform	ND		0.50		ug/L			05/24/23 22:03	1
Chloromethane	ND		1.0		ug/L			05/24/23 22:03	1
Dibromochloromethane	ND		0.50		ug/L			05/24/23 22:03	1
Dibromomethane	ND		0.50		ug/L			05/24/23 22:03	1
Dichlorodifluoromethane	ND		1.0		ug/L			05/24/23 22:03	1
Ethylbenzene	ND		0.50		ug/L			05/24/23 22:03	1
Isopropylbenzene	ND		0.50		ug/L			05/24/23 22:03	1
Methylene Chloride	ND		1.0		ug/L			05/24/23 22:03	1
Methyl-t-Butyl Ether (MTBE)	ND		0.50		ug/L			05/24/23 22:03	1
Naphthalene	ND		1.0		ug/L			05/24/23 22:03	1
n-Butylbenzene	ND		0.50		ug/L			05/24/23 22:03	1
N-Propylbenzene	ND		0.50		ug/L			05/24/23 22:03	1
o-Xylene	ND		0.50		ug/L			05/24/23 22:03	1
m,p-Xylene	ND		1.0		ug/L			05/24/23 22:03	1
p-Isopropyltoluene	ND		0.50		ug/L			05/24/23 22:03	1
sec-Butylbenzene	ND		0.50		ug/L			05/24/23 22:03	1
Styrene	ND		0.50		ug/L			05/24/23 22:03	1
trans-1,2-Dichloroethene	ND		0.50		ug/L			05/24/23 22:03	1
trans-1,3-Dichloropropene	ND		0.50		ug/L			05/24/23 22:03	1
tert-Butylbenzene	ND		0.50		ug/L			05/24/23 22:03	1
Tetrachloroethene	ND		0.50		ug/L			05/24/23 22:03	1
Toluene	ND		0.50		ug/L			05/24/23 22:03	1
Trichloroethene	0.88		0.50		ug/L			05/24/23 22:03	1
Trichlorofluoromethane	ND		0.50		ug/L			05/24/23 22:03	1
Vinyl acetate	ND		5.0		ug/L			05/24/23 22:03	1
Vinyl chloride	ND		0.50		ug/L			05/24/23 22:03	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	102		64 - 132		05/24/23 22:03	1
4-Bromofluorobenzene (Surr)	95		76 - 120		05/24/23 22:03	1
Dibromofluoromethane	104		80 - 120		05/24/23 22:03	1
Toluene-d8 (Surr)	100		80 - 120		05/24/23 22:03	1

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Client Sample Results

Client: Hargis + Associates, Inc.
Project/Site: Raytheon Main / Task No.: 532.30

Job ID: 570-138935-1

Method: SW846 8260B - Volatile Organic Compounds (GC/MS)

Client Sample ID: MW-41_20230517

Date Collected: 05/17/23 10:45

Date Received: 05/17/23 19:35

Lab Sample ID: 570-138935-13

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		0.50		ug/L			05/24/23 22:28	1
1,1,1-Trichloroethane	ND		0.50		ug/L			05/24/23 22:28	1
1,1,2,2-Tetrachloroethane	ND		0.50		ug/L			05/24/23 22:28	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.50		ug/L			05/24/23 22:28	1
1,1,2-Trichloroethane	ND		0.50		ug/L			05/24/23 22:28	1
1,1-Dichloroethane	ND		0.50		ug/L			05/24/23 22:28	1
1,1-Dichloroethene	6.6		0.50		ug/L			05/24/23 22:28	1
1,1-Dichloropropene	ND		0.50		ug/L			05/24/23 22:28	1
1,2,3-Trichlorobenzene	ND		0.50		ug/L			05/24/23 22:28	1
1,2,3-Trichloropropane	ND		0.50		ug/L			05/24/23 22:28	1
1,2,4-Trichlorobenzene	ND		0.50		ug/L			05/24/23 22:28	1
1,2,4-Trimethylbenzene	ND		0.50		ug/L			05/24/23 22:28	1
1,2-Dibromo-3-Chloropropane	ND		1.0		ug/L			05/24/23 22:28	1
1,2-Dibromoethane	ND		0.50		ug/L			05/24/23 22:28	1
1,2-Dichlorobenzene	ND		0.50		ug/L			05/24/23 22:28	1
1,2-Dichloroethane	ND		0.50		ug/L			05/24/23 22:28	1
1,2-Dichloropropane	ND		0.50		ug/L			05/24/23 22:28	1
1,3,5-Trimethylbenzene	ND		0.50		ug/L			05/24/23 22:28	1
1,3-Dichlorobenzene	ND		0.50		ug/L			05/24/23 22:28	1
1,3-Dichloropropane	ND		0.50		ug/L			05/24/23 22:28	1
1,4-Dichlorobenzene	ND		0.50		ug/L			05/24/23 22:28	1
2,2-Dichloropropane	ND		0.50		ug/L			05/24/23 22:28	1
2-Butanone	ND		5.0		ug/L			05/24/23 22:28	1
2-Chlorotoluene	ND		0.50		ug/L			05/24/23 22:28	1
2-Hexanone	ND		6.0		ug/L			05/24/23 22:28	1
4-Chlorotoluene	ND		0.50		ug/L			05/24/23 22:28	1
4-Methyl-2-pentanone	ND		5.0		ug/L			05/24/23 22:28	1
Acetone	ND		8.0		ug/L			05/24/23 22:28	1
Benzene	ND		0.50		ug/L			05/24/23 22:28	1
Bromobenzene	ND		0.50		ug/L			05/24/23 22:28	1
Bromochloromethane	ND		1.0		ug/L			05/24/23 22:28	1
Bromodichloromethane	ND		0.50		ug/L			05/24/23 22:28	1
Bromoform	ND		0.50		ug/L			05/24/23 22:28	1
Bromomethane	ND		2.0		ug/L			05/24/23 22:28	1
cis-1,2-Dichloroethene	ND		0.50		ug/L			05/24/23 22:28	1
cis-1,3-Dichloropropene	ND		0.50		ug/L			05/24/23 22:28	1
Carbon disulfide	ND		1.0		ug/L			05/24/23 22:28	1
Carbon tetrachloride	ND		0.50		ug/L			05/24/23 22:28	1
Chlorobenzene	ND		0.50		ug/L			05/24/23 22:28	1
Chloroethane	ND		0.50		ug/L			05/24/23 22:28	1
Chloroform	0.51		0.50		ug/L			05/24/23 22:28	1
Chloromethane	ND		1.0		ug/L			05/24/23 22:28	1
Dibromochloromethane	ND		0.50		ug/L			05/24/23 22:28	1
Dibromomethane	ND		0.50		ug/L			05/24/23 22:28	1
Dichlorodifluoromethane	ND		1.0		ug/L			05/24/23 22:28	1
Ethylbenzene	ND		0.50		ug/L			05/24/23 22:28	1
Isopropylbenzene	ND		0.50		ug/L			05/24/23 22:28	1
Methylene Chloride	ND		1.0		ug/L			05/24/23 22:28	1
Methyl-t-Butyl Ether (MTBE)	ND		0.50		ug/L			05/24/23 22:28	1

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Client Sample Results

Client: Hargis + Associates, Inc.
Project/Site: Raytheon Main / Task No.: 532.30

Job ID: 570-138935-1

Method: SW846 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: MW-41_20230517

Date Collected: 05/17/23 10:45

Date Received: 05/17/23 19:35

Lab Sample ID: 570-138935-13

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	ND		1.0		ug/L			05/24/23 22:28	1
n-Butylbenzene	ND		0.50		ug/L			05/24/23 22:28	1
N-Propylbenzene	ND		0.50		ug/L			05/24/23 22:28	1
o-Xylene	ND		0.50		ug/L			05/24/23 22:28	1
m,p-Xylene	ND		1.0		ug/L			05/24/23 22:28	1
p-Isopropyltoluene	ND		0.50		ug/L			05/24/23 22:28	1
sec-Butylbenzene	ND		0.50		ug/L			05/24/23 22:28	1
Styrene	ND		0.50		ug/L			05/24/23 22:28	1
trans-1,2-Dichloroethene	ND		0.50		ug/L			05/24/23 22:28	1
trans-1,3-Dichloropropene	ND		0.50		ug/L			05/24/23 22:28	1
tert-Butylbenzene	ND		0.50		ug/L			05/24/23 22:28	1
Tetrachloroethene	ND		0.50		ug/L			05/24/23 22:28	1
Toluene	ND		0.50		ug/L			05/24/23 22:28	1
Trichloroethene	ND		0.50		ug/L			05/24/23 22:28	1
Trichlorofluoromethane	ND		0.50		ug/L			05/24/23 22:28	1
Vinyl acetate	ND		5.0		ug/L			05/24/23 22:28	1
Vinyl chloride	ND		0.50		ug/L			05/24/23 22:28	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	103		64 - 132		05/24/23 22:28	1
4-Bromofluorobenzene (Surr)	95		76 - 120		05/24/23 22:28	1
Dibromofluoromethane	101		80 - 120		05/24/23 22:28	1
Toluene-d8 (Surr)	101		80 - 120		05/24/23 22:28	1

Client Sample ID: MW-4100_20230517

Date Collected: 05/17/23 10:50

Date Received: 05/17/23 19:35

Lab Sample ID: 570-138935-14

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		0.50		ug/L			05/24/23 22:53	1
1,1,1-Trichloroethane	ND		0.50		ug/L			05/24/23 22:53	1
1,1,2,2-Tetrachloroethane	ND		0.50		ug/L			05/24/23 22:53	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.50		ug/L			05/24/23 22:53	1
1,1,2-Trichloroethane	ND		0.50		ug/L			05/24/23 22:53	1
1,1-Dichloroethane	ND		0.50		ug/L			05/24/23 22:53	1
1,1-Dichloroethene	6.5		0.50		ug/L			05/24/23 22:53	1
1,1-Dichloropropene	ND		0.50		ug/L			05/24/23 22:53	1
1,2,3-Trichlorobenzene	ND		0.50		ug/L			05/24/23 22:53	1
1,2,3-Trichloropropane	ND		0.50		ug/L			05/24/23 22:53	1
1,2,4-Trichlorobenzene	ND		0.50		ug/L			05/24/23 22:53	1
1,2,4-Trimethylbenzene	ND		0.50		ug/L			05/24/23 22:53	1
1,2-Dibromo-3-Chloropropane	ND		1.0		ug/L			05/24/23 22:53	1
1,2-Dibromoethane	ND		0.50		ug/L			05/24/23 22:53	1
1,2-Dichlorobenzene	ND		0.50		ug/L			05/24/23 22:53	1
1,2-Dichloroethane	ND		0.50		ug/L			05/24/23 22:53	1
1,2-Dichloropropane	ND		0.50		ug/L			05/24/23 22:53	1
1,3,5-Trimethylbenzene	ND		0.50		ug/L			05/24/23 22:53	1
1,3-Dichlorobenzene	ND		0.50		ug/L			05/24/23 22:53	1
1,3-Dichloropropane	ND		0.50		ug/L			05/24/23 22:53	1
1,4-Dichlorobenzene	ND		0.50		ug/L			05/24/23 22:53	1
2,2-Dichloropropane	ND		0.50		ug/L			05/24/23 22:53	1

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Client Sample Results

Client: Hargis + Associates, Inc.
Project/Site: Raytheon Main / Task No.: 532.30

Job ID: 570-138935-1

Method: SW846 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: MW-4100_20230517

Date Collected: 05/17/23 10:50

Date Received: 05/17/23 19:35

Lab Sample ID: 570-138935-14

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Butanone	ND		5.0		ug/L			05/24/23 22:53	1
2-Chlorotoluene	ND		0.50		ug/L			05/24/23 22:53	1
2-Hexanone	ND		6.0		ug/L			05/24/23 22:53	1
4-Chlorotoluene	ND		0.50		ug/L			05/24/23 22:53	1
4-Methyl-2-pentanone	ND		5.0		ug/L			05/24/23 22:53	1
Acetone	ND		8.0		ug/L			05/24/23 22:53	1
Benzene	ND		0.50		ug/L			05/24/23 22:53	1
Bromobenzene	ND		0.50		ug/L			05/24/23 22:53	1
Bromochloromethane	ND		1.0		ug/L			05/24/23 22:53	1
Bromodichloromethane	ND		0.50		ug/L			05/24/23 22:53	1
Bromoform	ND		0.50		ug/L			05/24/23 22:53	1
Bromomethane	ND		2.0		ug/L			05/24/23 22:53	1
cis-1,2-Dichloroethene	ND		0.50		ug/L			05/24/23 22:53	1
cis-1,3-Dichloropropene	ND		0.50		ug/L			05/24/23 22:53	1
Carbon disulfide	ND		1.0		ug/L			05/24/23 22:53	1
Carbon tetrachloride	ND		0.50		ug/L			05/24/23 22:53	1
Chlorobenzene	ND		0.50		ug/L			05/24/23 22:53	1
Chloroethane	ND		0.50		ug/L			05/24/23 22:53	1
Chloroform	0.53		0.50		ug/L			05/24/23 22:53	1
Chloromethane	ND		1.0		ug/L			05/24/23 22:53	1
Dibromochloromethane	ND		0.50		ug/L			05/24/23 22:53	1
Dibromomethane	ND		0.50		ug/L			05/24/23 22:53	1
Dichlorodifluoromethane	ND		1.0		ug/L			05/24/23 22:53	1
Ethylbenzene	ND		0.50		ug/L			05/24/23 22:53	1
Isopropylbenzene	ND		0.50		ug/L			05/24/23 22:53	1
Methylene Chloride	ND		1.0		ug/L			05/24/23 22:53	1
Methyl-t-Butyl Ether (MTBE)	ND		0.50		ug/L			05/24/23 22:53	1
Naphthalene	ND		1.0		ug/L			05/24/23 22:53	1
n-Butylbenzene	ND		0.50		ug/L			05/24/23 22:53	1
N-Propylbenzene	ND		0.50		ug/L			05/24/23 22:53	1
o-Xylene	ND		0.50		ug/L			05/24/23 22:53	1
m,p-Xylene	ND		1.0		ug/L			05/24/23 22:53	1
p-Isopropyltoluene	ND		0.50		ug/L			05/24/23 22:53	1
sec-Butylbenzene	ND		0.50		ug/L			05/24/23 22:53	1
Styrene	ND		0.50		ug/L			05/24/23 22:53	1
trans-1,2-Dichloroethene	ND		0.50		ug/L			05/24/23 22:53	1
trans-1,3-Dichloropropene	ND		0.50		ug/L			05/24/23 22:53	1
tert-Butylbenzene	ND		0.50		ug/L			05/24/23 22:53	1
Tetrachloroethene	ND		0.50		ug/L			05/24/23 22:53	1
Toluene	ND		0.50		ug/L			05/24/23 22:53	1
Trichloroethene	ND		0.50		ug/L			05/24/23 22:53	1
Trichlorofluoromethane	ND		0.50		ug/L			05/24/23 22:53	1
Vinyl acetate	ND		5.0		ug/L			05/24/23 22:53	1
Vinyl chloride	ND		0.50		ug/L			05/24/23 22:53	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	103		64 - 132		05/24/23 22:53	1
4-Bromofluorobenzene (Surr)	96		76 - 120		05/24/23 22:53	1
Dibromofluoromethane	103		80 - 120		05/24/23 22:53	1
Toluene-d8 (Surr)	100		80 - 120		05/24/23 22:53	1

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Client Sample Results

Client: Hargis + Associates, Inc.
Project/Site: Raytheon Main / Task No.: 532.30

Job ID: 570-138935-1

Method: SW846 8260B - Volatile Organic Compounds (GC/MS)

Client Sample ID: MW-31_20230517

Date Collected: 05/17/23 12:43

Date Received: 05/17/23 19:35

Lab Sample ID: 570-138935-15

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		0.50		ug/L			05/24/23 23:18	1
1,1,1-Trichloroethane	ND		0.50		ug/L			05/24/23 23:18	1
1,1,2,2-Tetrachloroethane	ND		0.50		ug/L			05/24/23 23:18	1
1,1,2-Trichloro-1,2,2-trifluoroethane	0.50		0.50		ug/L			05/24/23 23:18	1
1,1,2-Trichloroethane	ND		0.50		ug/L			05/24/23 23:18	1
1,1-Dichloroethane	ND		0.50		ug/L			05/24/23 23:18	1
1,1-Dichloroethene	39		0.50		ug/L			05/24/23 23:18	1
1,1-Dichloropropene	ND		0.50		ug/L			05/24/23 23:18	1
1,2,3-Trichlorobenzene	ND		0.50		ug/L			05/24/23 23:18	1
1,2,3-Trichloropropane	ND		0.50		ug/L			05/24/23 23:18	1
1,2,4-Trichlorobenzene	ND		0.50		ug/L			05/24/23 23:18	1
1,2,4-Trimethylbenzene	ND		0.50		ug/L			05/24/23 23:18	1
1,2-Dibromo-3-Chloropropane	ND		1.0		ug/L			05/24/23 23:18	1
1,2-Dibromoethane	ND		0.50		ug/L			05/24/23 23:18	1
1,2-Dichlorobenzene	ND		0.50		ug/L			05/24/23 23:18	1
1,2-Dichloroethane	ND		0.50		ug/L			05/24/23 23:18	1
1,2-Dichloropropane	ND		0.50		ug/L			05/24/23 23:18	1
1,3,5-Trimethylbenzene	ND		0.50		ug/L			05/24/23 23:18	1
1,3-Dichlorobenzene	ND		0.50		ug/L			05/24/23 23:18	1
1,3-Dichloropropane	ND		0.50		ug/L			05/24/23 23:18	1
1,4-Dichlorobenzene	ND		0.50		ug/L			05/24/23 23:18	1
2,2-Dichloropropane	ND		0.50		ug/L			05/24/23 23:18	1
2-Butanone	ND		5.0		ug/L			05/24/23 23:18	1
2-Chlorotoluene	ND		0.50		ug/L			05/24/23 23:18	1
2-Hexanone	ND		6.0		ug/L			05/24/23 23:18	1
4-Chlorotoluene	ND		0.50		ug/L			05/24/23 23:18	1
4-Methyl-2-pentanone	ND		5.0		ug/L			05/24/23 23:18	1
Acetone	ND		8.0		ug/L			05/24/23 23:18	1
Benzene	ND		0.50		ug/L			05/24/23 23:18	1
Bromobenzene	ND		0.50		ug/L			05/24/23 23:18	1
Bromochloromethane	ND		1.0		ug/L			05/24/23 23:18	1
Bromodichloromethane	ND		0.50		ug/L			05/24/23 23:18	1
Bromoform	ND		0.50		ug/L			05/24/23 23:18	1
Bromomethane	ND		2.0		ug/L			05/24/23 23:18	1
cis-1,2-Dichloroethene	ND		0.50		ug/L			05/24/23 23:18	1
cis-1,3-Dichloropropene	ND		0.50		ug/L			05/24/23 23:18	1
Carbon disulfide	ND		1.0		ug/L			05/24/23 23:18	1
Carbon tetrachloride	ND		0.50		ug/L			05/24/23 23:18	1
Chlorobenzene	ND		0.50		ug/L			05/24/23 23:18	1
Chloroethane	ND		0.50		ug/L			05/24/23 23:18	1
Chloroform	ND		0.50		ug/L			05/24/23 23:18	1
Chloromethane	ND		1.0		ug/L			05/24/23 23:18	1
Dibromochloromethane	ND		0.50		ug/L			05/24/23 23:18	1
Dibromomethane	ND		0.50		ug/L			05/24/23 23:18	1
Dichlorodifluoromethane	ND		1.0		ug/L			05/24/23 23:18	1
Ethylbenzene	ND		0.50		ug/L			05/24/23 23:18	1
Isopropylbenzene	ND		0.50		ug/L			05/24/23 23:18	1
Methylene Chloride	ND		1.0		ug/L			05/24/23 23:18	1
Methyl-t-Butyl Ether (MTBE)	ND		0.50		ug/L			05/24/23 23:18	1

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Client Sample Results

Client: Hargis + Associates, Inc.
Project/Site: Raytheon Main / Task No.: 532.30

Job ID: 570-138935-1

Method: SW846 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: MW-31_20230517

Date Collected: 05/17/23 12:43

Date Received: 05/17/23 19:35

Lab Sample ID: 570-138935-15

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	ND		1.0		ug/L			05/24/23 23:18	1
n-Butylbenzene	ND		0.50		ug/L			05/24/23 23:18	1
N-Propylbenzene	ND		0.50		ug/L			05/24/23 23:18	1
o-Xylene	ND		0.50		ug/L			05/24/23 23:18	1
m,p-Xylene	ND		1.0		ug/L			05/24/23 23:18	1
p-Isopropyltoluene	ND		0.50		ug/L			05/24/23 23:18	1
sec-Butylbenzene	ND		0.50		ug/L			05/24/23 23:18	1
Styrene	ND		0.50		ug/L			05/24/23 23:18	1
trans-1,2-Dichloroethene	ND		0.50		ug/L			05/24/23 23:18	1
trans-1,3-Dichloropropene	ND		0.50		ug/L			05/24/23 23:18	1
tert-Butylbenzene	ND		0.50		ug/L			05/24/23 23:18	1
Tetrachloroethene	ND		0.50		ug/L			05/24/23 23:18	1
Toluene	ND		0.50		ug/L			05/24/23 23:18	1
Trichloroethene	4.2		0.50		ug/L			05/24/23 23:18	1
Trichlorofluoromethane	ND		0.50		ug/L			05/24/23 23:18	1
Vinyl acetate	ND		5.0		ug/L			05/24/23 23:18	1
Vinyl chloride	ND		0.50		ug/L			05/24/23 23:18	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	100		64 - 132		05/24/23 23:18	1
4-Bromofluorobenzene (Surr)	94		76 - 120		05/24/23 23:18	1
Dibromofluoromethane	99		80 - 120		05/24/23 23:18	1
Toluene-d8 (Surr)	102		80 - 120		05/24/23 23:18	1

Client Sample ID: MW-3100_20230517

Date Collected: 05/17/23 12:45

Date Received: 05/17/23 19:35

Lab Sample ID: 570-138935-16

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		0.50		ug/L			05/24/23 23:44	1
1,1,1-Trichloroethane	ND		0.50		ug/L			05/24/23 23:44	1
1,1,2,2-Tetrachloroethane	ND		0.50		ug/L			05/24/23 23:44	1
1,1,2-Trichloro-1,2,2-trifluoroethane	0.51		0.50		ug/L			05/24/23 23:44	1
1,1,2-Trichloroethane	ND		0.50		ug/L			05/24/23 23:44	1
1,1-Dichloroethane	ND		0.50		ug/L			05/24/23 23:44	1
1,1-Dichloroethene	40		0.50		ug/L			05/24/23 23:44	1
1,1-Dichloropropene	ND		0.50		ug/L			05/24/23 23:44	1
1,2,3-Trichlorobenzene	ND		0.50		ug/L			05/24/23 23:44	1
1,2,3-Trichloropropane	ND		0.50		ug/L			05/24/23 23:44	1
1,2,4-Trichlorobenzene	ND		0.50		ug/L			05/24/23 23:44	1
1,2,4-Trimethylbenzene	ND		0.50		ug/L			05/24/23 23:44	1
1,2-Dibromo-3-Chloropropane	ND		1.0		ug/L			05/24/23 23:44	1
1,2-Dibromoethane	ND		0.50		ug/L			05/24/23 23:44	1
1,2-Dichlorobenzene	ND		0.50		ug/L			05/24/23 23:44	1
1,2-Dichloroethane	ND		0.50		ug/L			05/24/23 23:44	1
1,2-Dichloropropane	ND		0.50		ug/L			05/24/23 23:44	1
1,3,5-Trimethylbenzene	ND		0.50		ug/L			05/24/23 23:44	1
1,3-Dichlorobenzene	ND		0.50		ug/L			05/24/23 23:44	1
1,3-Dichloropropane	ND		0.50		ug/L			05/24/23 23:44	1
1,4-Dichlorobenzene	ND		0.50		ug/L			05/24/23 23:44	1

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Client Sample Results

Client: Hargis + Associates, Inc.
Project/Site: Raytheon Main / Task No.: 532.30

Job ID: 570-138935-1

Method: SW846 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: MW-3100_20230517

Date Collected: 05/17/23 12:45

Date Received: 05/17/23 19:35

Lab Sample ID: 570-138935-16

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,2-Dichloropropane	ND		0.50		ug/L			05/24/23 23:44	1
2-Butanone	ND		5.0		ug/L			05/24/23 23:44	1
2-Chlorotoluene	ND		0.50		ug/L			05/24/23 23:44	1
2-Hexanone	ND		6.0		ug/L			05/24/23 23:44	1
4-Chlorotoluene	ND		0.50		ug/L			05/24/23 23:44	1
4-Methyl-2-pentanone	ND		5.0		ug/L			05/24/23 23:44	1
Acetone	ND		8.0		ug/L			05/24/23 23:44	1
Benzene	ND		0.50		ug/L			05/24/23 23:44	1
Bromobenzene	ND		0.50		ug/L			05/24/23 23:44	1
Bromochloromethane	ND		1.0		ug/L			05/24/23 23:44	1
Bromodichloromethane	ND		0.50		ug/L			05/24/23 23:44	1
Bromoform	ND		0.50		ug/L			05/24/23 23:44	1
Bromomethane	ND		2.0		ug/L			05/24/23 23:44	1
cis-1,2-Dichloroethene	ND		0.50		ug/L			05/24/23 23:44	1
cis-1,3-Dichloropropene	ND		0.50		ug/L			05/24/23 23:44	1
Carbon disulfide	ND		1.0		ug/L			05/24/23 23:44	1
Carbon tetrachloride	ND		0.50		ug/L			05/24/23 23:44	1
Chlorobenzene	ND		0.50		ug/L			05/24/23 23:44	1
Chloroethane	ND		0.50		ug/L			05/24/23 23:44	1
Chloroform	ND		0.50		ug/L			05/24/23 23:44	1
Chloromethane	ND		1.0		ug/L			05/24/23 23:44	1
Dibromochloromethane	ND		0.50		ug/L			05/24/23 23:44	1
Dibromomethane	ND		0.50		ug/L			05/24/23 23:44	1
Dichlorodifluoromethane	ND		1.0		ug/L			05/24/23 23:44	1
Ethylbenzene	ND		0.50		ug/L			05/24/23 23:44	1
Isopropylbenzene	ND		0.50		ug/L			05/24/23 23:44	1
Methylene Chloride	ND		1.0		ug/L			05/24/23 23:44	1
Methyl-t-Butyl Ether (MTBE)	ND		0.50		ug/L			05/24/23 23:44	1
Naphthalene	ND		1.0		ug/L			05/24/23 23:44	1
n-Butylbenzene	ND		0.50		ug/L			05/24/23 23:44	1
N-Propylbenzene	ND		0.50		ug/L			05/24/23 23:44	1
o-Xylene	ND		0.50		ug/L			05/24/23 23:44	1
m,p-Xylene	ND		1.0		ug/L			05/24/23 23:44	1
p-Isopropyltoluene	ND		0.50		ug/L			05/24/23 23:44	1
sec-Butylbenzene	ND		0.50		ug/L			05/24/23 23:44	1
Styrene	ND		0.50		ug/L			05/24/23 23:44	1
trans-1,2-Dichloroethene	ND		0.50		ug/L			05/24/23 23:44	1
trans-1,3-Dichloropropene	ND		0.50		ug/L			05/24/23 23:44	1
tert-Butylbenzene	ND		0.50		ug/L			05/24/23 23:44	1
Tetrachloroethene	ND		0.50		ug/L			05/24/23 23:44	1
Toluene	ND		0.50		ug/L			05/24/23 23:44	1
Trichloroethene	4.2		0.50		ug/L			05/24/23 23:44	1
Trichlorofluoromethane	ND		0.50		ug/L			05/24/23 23:44	1
Vinyl acetate	ND		5.0		ug/L			05/24/23 23:44	1
Vinyl chloride	ND		0.50		ug/L			05/24/23 23:44	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	102		64 - 132		05/24/23 23:44	1
4-Bromofluorobenzene (Surr)	94		76 - 120		05/24/23 23:44	1
Dibromofluoromethane	101		80 - 120		05/24/23 23:44	1

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Client Sample Results

Client: Hargis + Associates, Inc.
Project/Site: Raytheon Main / Task No.: 532.30

Job ID: 570-138935-1

Method: SW846 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: MW-3100_20230517

Date Collected: 05/17/23 12:45

Date Received: 05/17/23 19:35

Lab Sample ID: 570-138935-16

Matrix: Water

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	103		80 - 120		05/24/23 23:44	1

Client Sample ID: MW-21_20230517

Date Collected: 05/17/23 13:37

Date Received: 05/17/23 19:35

Lab Sample ID: 570-138935-17

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		10		ug/L			05/25/23 00:09	20
1,1,1-Trichloroethane	ND		10		ug/L			05/25/23 00:09	20
1,1,2,2-Tetrachloroethane	ND		10		ug/L			05/25/23 00:09	20
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		10		ug/L			05/25/23 00:09	20
1,1,2-Trichloroethane	12		10		ug/L			05/25/23 00:09	20
1,1-Dichloroethane	27		10		ug/L			05/25/23 00:09	20
1,1-Dichloroethene	1400		10		ug/L			05/25/23 00:09	20
1,1-Dichloropropene	ND		10		ug/L			05/25/23 00:09	20
1,2,3-Trichlorobenzene	ND		10		ug/L			05/25/23 00:09	20
1,2,3-Trichloropropane	ND		10		ug/L			05/25/23 00:09	20
1,2,4-Trichlorobenzene	ND		10		ug/L			05/25/23 00:09	20
1,2,4-Trimethylbenzene	ND		10		ug/L			05/25/23 00:09	20
1,2-Dibromo-3-Chloropropane	ND		20		ug/L			05/25/23 00:09	20
1,2-Dibromoethane	ND		10		ug/L			05/25/23 00:09	20
1,2-Dichlorobenzene	ND		10		ug/L			05/25/23 00:09	20
1,2-Dichloroethane	ND		10		ug/L			05/25/23 00:09	20
1,2-Dichloropropane	ND		10		ug/L			05/25/23 00:09	20
1,3,5-Trimethylbenzene	ND		10		ug/L			05/25/23 00:09	20
1,3-Dichlorobenzene	ND		10		ug/L			05/25/23 00:09	20
1,3-Dichloropropane	ND		10		ug/L			05/25/23 00:09	20
1,4-Dichlorobenzene	ND		10		ug/L			05/25/23 00:09	20
2,2-Dichloropropane	ND		10		ug/L			05/25/23 00:09	20
2-Butanone	ND		100		ug/L			05/25/23 00:09	20
2-Chlorotoluene	ND		10		ug/L			05/25/23 00:09	20
2-Hexanone	ND		120		ug/L			05/25/23 00:09	20
4-Chlorotoluene	ND		10		ug/L			05/25/23 00:09	20
4-Methyl-2-pentanone	ND		100		ug/L			05/25/23 00:09	20
Acetone	ND		160		ug/L			05/25/23 00:09	20
Benzene	ND		10		ug/L			05/25/23 00:09	20
Bromobenzene	ND		10		ug/L			05/25/23 00:09	20
Bromochloromethane	ND		20		ug/L			05/25/23 00:09	20
Bromodichloromethane	ND		10		ug/L			05/25/23 00:09	20
Bromoform	ND		10		ug/L			05/25/23 00:09	20
Bromomethane	ND		40		ug/L			05/25/23 00:09	20
cis-1,2-Dichloroethene	ND		10		ug/L			05/25/23 00:09	20
cis-1,3-Dichloropropene	ND		10		ug/L			05/25/23 00:09	20
Carbon disulfide	ND		20		ug/L			05/25/23 00:09	20
Carbon tetrachloride	ND		10		ug/L			05/25/23 00:09	20
Chlorobenzene	ND		10		ug/L			05/25/23 00:09	20
Chloroethane	ND		10		ug/L			05/25/23 00:09	20
Chloroform	ND		10		ug/L			05/25/23 00:09	20
Chloromethane	ND		20		ug/L			05/25/23 00:09	20
Dibromochloromethane	ND		10		ug/L			05/25/23 00:09	20

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Client Sample Results

Client: Hargis + Associates, Inc.
Project/Site: Raytheon Main / Task No.: 532.30

Job ID: 570-138935-1

Method: SW846 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: MW-21_20230517

Date Collected: 05/17/23 13:37

Date Received: 05/17/23 19:35

Lab Sample ID: 570-138935-17

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dibromomethane	ND		10		ug/L			05/25/23 00:09	20
Dichlorodifluoromethane	ND		20		ug/L			05/25/23 00:09	20
Ethylbenzene	ND		10		ug/L			05/25/23 00:09	20
Isopropylbenzene	ND		10		ug/L			05/25/23 00:09	20
Methylene Chloride	ND		20		ug/L			05/25/23 00:09	20
Methyl-t-Butyl Ether (MTBE)	ND		10		ug/L			05/25/23 00:09	20
Naphthalene	ND		20		ug/L			05/25/23 00:09	20
n-Butylbenzene	ND		10		ug/L			05/25/23 00:09	20
N-Propylbenzene	ND		10		ug/L			05/25/23 00:09	20
o-Xylene	ND		10		ug/L			05/25/23 00:09	20
m,p-Xylene	ND		20		ug/L			05/25/23 00:09	20
p-Isopropyltoluene	ND		10		ug/L			05/25/23 00:09	20
sec-Butylbenzene	ND		10		ug/L			05/25/23 00:09	20
Styrene	ND		10		ug/L			05/25/23 00:09	20
trans-1,2-Dichloroethene	ND		10		ug/L			05/25/23 00:09	20
trans-1,3-Dichloropropene	ND		10		ug/L			05/25/23 00:09	20
tert-Butylbenzene	ND		10		ug/L			05/25/23 00:09	20
Tetrachloroethene	ND		10		ug/L			05/25/23 00:09	20
Toluene	ND		10		ug/L			05/25/23 00:09	20
Trichloroethene	11		10		ug/L			05/25/23 00:09	20
Trichlorofluoromethane	ND		10		ug/L			05/25/23 00:09	20
Vinyl acetate	ND		100		ug/L			05/25/23 00:09	20
Vinyl chloride	ND		10		ug/L			05/25/23 00:09	20

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	100		64 - 132		05/25/23 00:09	20
4-Bromofluorobenzene (Surr)	98		76 - 120		05/25/23 00:09	20
Dibromofluoromethane	100		80 - 120		05/25/23 00:09	20
Toluene-d8 (Surr)	102		80 - 120		05/25/23 00:09	20

Client Sample ID: EW-01_20230517

Date Collected: 05/17/23 14:00

Date Received: 05/17/23 19:35

Lab Sample ID: 570-138935-18

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		0.50		ug/L			05/25/23 00:34	1
1,1,1-Trichloroethane	ND		0.50		ug/L			05/25/23 00:34	1
1,1,2,2-Tetrachloroethane	ND		0.50		ug/L			05/25/23 00:34	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.50		ug/L			05/25/23 00:34	1
1,1,2-Trichloroethane	ND		0.50		ug/L			05/25/23 00:34	1
1,1-Dichloroethane	ND		0.50		ug/L			05/25/23 00:34	1
1,1-Dichloroethene	15		0.50		ug/L			05/25/23 00:34	1
1,1-Dichloropropene	ND		0.50		ug/L			05/25/23 00:34	1
1,2,3-Trichlorobenzene	ND		0.50		ug/L			05/25/23 00:34	1
1,2,3-Trichloropropane	ND		0.50		ug/L			05/25/23 00:34	1
1,2,4-Trichlorobenzene	ND		0.50		ug/L			05/25/23 00:34	1
1,2,4-Trimethylbenzene	ND		0.50		ug/L			05/25/23 00:34	1
1,2-Dibromo-3-Chloropropane	ND		1.0		ug/L			05/25/23 00:34	1
1,2-Dibromoethane	ND		0.50		ug/L			05/25/23 00:34	1
1,2-Dichlorobenzene	ND		0.50		ug/L			05/25/23 00:34	1
1,2-Dichloroethane	ND		0.50		ug/L			05/25/23 00:34	1

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Client Sample Results

Client: Hargis + Associates, Inc.
Project/Site: Raytheon Main / Task No.: 532.30

Job ID: 570-138935-1

Method: SW846 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: EW-01_20230517

Date Collected: 05/17/23 14:00

Date Received: 05/17/23 19:35

Lab Sample ID: 570-138935-18

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dichloropropane	ND		0.50		ug/L			05/25/23 00:34	1
1,3,5-Trimethylbenzene	ND		0.50		ug/L			05/25/23 00:34	1
1,3-Dichlorobenzene	ND		0.50		ug/L			05/25/23 00:34	1
1,3-Dichloropropane	ND		0.50		ug/L			05/25/23 00:34	1
1,4-Dichlorobenzene	ND		0.50		ug/L			05/25/23 00:34	1
2,2-Dichloropropane	ND		0.50		ug/L			05/25/23 00:34	1
2-Butanone	ND		5.0		ug/L			05/25/23 00:34	1
2-Chlorotoluene	ND		0.50		ug/L			05/25/23 00:34	1
2-Hexanone	ND		6.0		ug/L			05/25/23 00:34	1
4-Chlorotoluene	ND		0.50		ug/L			05/25/23 00:34	1
4-Methyl-2-pentanone	ND		5.0		ug/L			05/25/23 00:34	1
Acetone	ND		8.0		ug/L			05/25/23 00:34	1
Benzene	ND		0.50		ug/L			05/25/23 00:34	1
Bromobenzene	ND		0.50		ug/L			05/25/23 00:34	1
Bromochloromethane	ND		1.0		ug/L			05/25/23 00:34	1
Bromodichloromethane	ND		0.50		ug/L			05/25/23 00:34	1
Bromoform	ND		0.50		ug/L			05/25/23 00:34	1
Bromomethane	ND		2.0		ug/L			05/25/23 00:34	1
cis-1,2-Dichloroethene	ND		0.50		ug/L			05/25/23 00:34	1
cis-1,3-Dichloropropene	ND		0.50		ug/L			05/25/23 00:34	1
Carbon disulfide	ND		1.0		ug/L			05/25/23 00:34	1
Carbon tetrachloride	ND		0.50		ug/L			05/25/23 00:34	1
Chlorobenzene	ND		0.50		ug/L			05/25/23 00:34	1
Chloroethane	ND		0.50		ug/L			05/25/23 00:34	1
Chloroform	ND		0.50		ug/L			05/25/23 00:34	1
Chloromethane	ND		1.0		ug/L			05/25/23 00:34	1
Dibromochloromethane	ND		0.50		ug/L			05/25/23 00:34	1
Dibromomethane	ND		0.50		ug/L			05/25/23 00:34	1
Dichlorodifluoromethane	ND		1.0		ug/L			05/25/23 00:34	1
Ethylbenzene	ND		0.50		ug/L			05/25/23 00:34	1
Isopropylbenzene	ND		0.50		ug/L			05/25/23 00:34	1
Methylene Chloride	ND		1.0		ug/L			05/25/23 00:34	1
Methyl-t-Butyl Ether (MTBE)	ND		0.50		ug/L			05/25/23 00:34	1
Naphthalene	ND		1.0		ug/L			05/25/23 00:34	1
n-Butylbenzene	ND		0.50		ug/L			05/25/23 00:34	1
N-Propylbenzene	ND		0.50		ug/L			05/25/23 00:34	1
o-Xylene	ND		0.50		ug/L			05/25/23 00:34	1
m,p-Xylene	ND		1.0		ug/L			05/25/23 00:34	1
p-Isopropyltoluene	ND		0.50		ug/L			05/25/23 00:34	1
sec-Butylbenzene	ND		0.50		ug/L			05/25/23 00:34	1
Styrene	ND		0.50		ug/L			05/25/23 00:34	1
trans-1,2-Dichloroethene	ND		0.50		ug/L			05/25/23 00:34	1
trans-1,3-Dichloropropene	ND		0.50		ug/L			05/25/23 00:34	1
tert-Butylbenzene	ND		0.50		ug/L			05/25/23 00:34	1
Tetrachloroethene	ND		0.50		ug/L			05/25/23 00:34	1
Toluene	ND		0.50		ug/L			05/25/23 00:34	1
Trichloroethene	ND		0.50		ug/L			05/25/23 00:34	1
Trichlorofluoromethane	ND		0.50		ug/L			05/25/23 00:34	1
Vinyl acetate	ND		5.0		ug/L			05/25/23 00:34	1

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Client Sample Results

Client: Hargis + Associates, Inc.
Project/Site: Raytheon Main / Task No.: 532.30

Job ID: 570-138935-1

Method: SW846 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: EW-01_20230517

Date Collected: 05/17/23 14:00

Date Received: 05/17/23 19:35

Lab Sample ID: 570-138935-18

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Vinyl chloride	ND		0.50		ug/L			05/25/23 00:34	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	102		64 - 132					05/25/23 00:34	1
4-Bromofluorobenzene (Surr)	94		76 - 120					05/25/23 00:34	1
Dibromofluoromethane	99		80 - 120					05/25/23 00:34	1
Toluene-d8 (Surr)	102		80 - 120					05/25/23 00:34	1

Client Sample ID: MW-43_20230517

Date Collected: 05/17/23 09:25

Date Received: 05/17/23 19:35

Lab Sample ID: 570-138935-19

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND	F2	0.50		ug/L			05/25/23 06:18	1
1,1,1-Trichloroethane	ND		0.50		ug/L			05/25/23 06:18	1
1,1,2,2-Tetrachloroethane	ND	F1 F2	0.50		ug/L			05/25/23 06:18	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.50		ug/L			05/25/23 06:18	1
1,1,2-Trichloroethane	ND	F1 F2	0.50		ug/L			05/25/23 06:18	1
1,1-Dichloroethane	ND		0.50		ug/L			05/25/23 06:18	1
1,1-Dichloroethene	ND		0.50		ug/L			05/25/23 06:18	1
1,1-Dichloropropene	ND		0.50		ug/L			05/25/23 06:18	1
1,2,3-Trichlorobenzene	ND	F2	0.50		ug/L			05/25/23 06:18	1
1,2,3-Trichloropropane	ND	F1 F2	0.50		ug/L			05/25/23 06:18	1
1,2,4-Trichlorobenzene	ND	F1 F2	0.50		ug/L			05/25/23 06:18	1
1,2,4-Trimethylbenzene	ND	F2	0.50		ug/L			05/25/23 06:18	1
1,2-Dibromo-3-Chloropropane	ND	F1 F2	1.0		ug/L			05/25/23 06:18	1
1,2-Dibromoethane	ND	F1 F2	0.50		ug/L			05/25/23 06:18	1
1,2-Dichlorobenzene	ND	F1 F2	0.50		ug/L			05/25/23 06:18	1
1,2-Dichloroethane	ND		0.50		ug/L			05/25/23 06:18	1
1,2-Dichloropropane	ND		0.50		ug/L			05/25/23 06:18	1
1,3,5-Trimethylbenzene	ND	F2	0.50		ug/L			05/25/23 06:18	1
1,3-Dichlorobenzene	ND	F1 F2	0.50		ug/L			05/25/23 06:18	1
1,3-Dichloropropane	ND	F1 F2	0.50		ug/L			05/25/23 06:18	1
1,4-Dichlorobenzene	ND	F1 F2	0.50		ug/L			05/25/23 06:18	1
2,2-Dichloropropane	ND		0.50		ug/L			05/25/23 06:18	1
2-Butanone	ND		5.0		ug/L			05/25/23 06:18	1
2-Chlorotoluene	ND	F1 F2	0.50		ug/L			05/25/23 06:18	1
2-Hexanone	ND	F1 F2	6.0		ug/L			05/25/23 06:18	1
4-Chlorotoluene	ND	F1 F2	0.50		ug/L			05/25/23 06:18	1
4-Methyl-2-pentanone	ND	F2	5.0		ug/L			05/25/23 06:18	1
Acetone	ND		8.0		ug/L			05/25/23 06:18	1
Benzene	ND		0.50		ug/L			05/25/23 06:18	1
Bromobenzene	ND	F2	0.50		ug/L			05/25/23 06:18	1
Bromochloromethane	ND		1.0		ug/L			05/25/23 06:18	1
Bromodichloromethane	ND	F2	0.50		ug/L			05/25/23 06:18	1
Bromoform	ND	F2	0.50		ug/L			05/25/23 06:18	1
Bromomethane	ND		2.0		ug/L			05/25/23 06:18	1
cis-1,2-Dichloroethene	ND		0.50		ug/L			05/25/23 06:18	1
cis-1,3-Dichloropropene	ND	F2	0.50		ug/L			05/25/23 06:18	1
Carbon disulfide	ND		1.0		ug/L			05/25/23 06:18	1
Carbon tetrachloride	ND		0.50		ug/L			05/25/23 06:18	1

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Client Sample Results

Client: Hargis + Associates, Inc.
Project/Site: Raytheon Main / Task No.: 532.30

Job ID: 570-138935-1

Method: SW846 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: MW-43_20230517

Date Collected: 05/17/23 09:25

Date Received: 05/17/23 19:35

Lab Sample ID: 570-138935-19

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chlorobenzene	ND	F2	0.50		ug/L			05/25/23 06:18	1
Chloroethane	ND		0.50		ug/L			05/25/23 06:18	1
Chloroform	ND		0.50		ug/L			05/25/23 06:18	1
Chloromethane	ND		1.0		ug/L			05/25/23 06:18	1
Dibromochloromethane	ND	F2	0.50		ug/L			05/25/23 06:18	1
Dibromomethane	ND		0.50		ug/L			05/25/23 06:18	1
Dichlorodifluoromethane	ND		1.0		ug/L			05/25/23 06:18	1
Ethylbenzene	ND		0.50		ug/L			05/25/23 06:18	1
Isopropylbenzene	ND		0.50		ug/L			05/25/23 06:18	1
Methylene Chloride	ND		1.0		ug/L			05/25/23 06:18	1
Methyl-t-Butyl Ether (MTBE)	ND		0.50		ug/L			05/25/23 06:18	1
Naphthalene	ND	F1 F2	1.0		ug/L			05/25/23 06:18	1
n-Butylbenzene	ND		0.50		ug/L			05/25/23 06:18	1
N-Propylbenzene	ND	F1	0.50		ug/L			05/25/23 06:18	1
o-Xylene	ND	F2	0.50		ug/L			05/25/23 06:18	1
m,p-Xylene	ND		1.0		ug/L			05/25/23 06:18	1
p-Isopropyltoluene	ND		0.50		ug/L			05/25/23 06:18	1
sec-Butylbenzene	ND	F1	0.50		ug/L			05/25/23 06:18	1
Styrene	ND		0.50		ug/L			05/25/23 06:18	1
trans-1,2-Dichloroethene	ND		0.50		ug/L			05/25/23 06:18	1
trans-1,3-Dichloropropene	ND	F1 F2	0.50		ug/L			05/25/23 06:18	1
tert-Butylbenzene	ND	F2	0.50		ug/L			05/25/23 06:18	1
Tetrachloroethene	ND		0.50		ug/L			05/25/23 06:18	1
Toluene	ND		0.50		ug/L			05/25/23 06:18	1
Trichloroethene	ND		0.50		ug/L			05/25/23 06:18	1
Trichlorofluoromethane	ND		0.50		ug/L			05/25/23 06:18	1
Vinyl acetate	ND	+	5.0		ug/L			05/25/23 06:18	1
Vinyl chloride	ND		0.50		ug/L			05/25/23 06:18	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	114		64 - 132		05/25/23 06:18	1
4-Bromofluorobenzene (Surr)	97		76 - 120		05/25/23 06:18	1
Dibromofluoromethane	109		80 - 120		05/25/23 06:18	1
Toluene-d8 (Surr)	102		80 - 120		05/25/23 06:18	1

Client Sample ID: MW-42_20230517

Date Collected: 05/17/23 12:02

Date Received: 05/17/23 19:35

Lab Sample ID: 570-138935-20

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		0.50		ug/L			05/25/23 01:00	1
1,1,1-Trichloroethane	ND		0.50		ug/L			05/25/23 01:00	1
1,1,2,2-Tetrachloroethane	ND		0.50		ug/L			05/25/23 01:00	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.50		ug/L			05/25/23 01:00	1
1,1,2-Trichloroethane	ND		0.50		ug/L			05/25/23 01:00	1
1,1-Dichloroethane	0.51		0.50		ug/L			05/25/23 01:00	1
1,1-Dichloroethene	36		0.50		ug/L			05/25/23 01:00	1
1,1-Dichloropropene	ND		0.50		ug/L			05/25/23 01:00	1
1,2,3-Trichlorobenzene	ND		0.50		ug/L			05/25/23 01:00	1
1,2,3-Trichloropropane	ND		0.50		ug/L			05/25/23 01:00	1
1,2,4-Trichlorobenzene	ND		0.50		ug/L			05/25/23 01:00	1

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Client Sample Results

Client: Hargis + Associates, Inc.
Project/Site: Raytheon Main / Task No.: 532.30

Job ID: 570-138935-1

Method: SW846 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: MW-42_20230517

Date Collected: 05/17/23 12:02

Date Received: 05/17/23 19:35

Lab Sample ID: 570-138935-20

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trimethylbenzene	ND		0.50		ug/L			05/25/23 01:00	1
1,2-Dibromo-3-Chloropropane	ND		1.0		ug/L			05/25/23 01:00	1
1,2-Dibromoethane	ND		0.50		ug/L			05/25/23 01:00	1
1,2-Dichlorobenzene	ND		0.50		ug/L			05/25/23 01:00	1
1,2-Dichloroethane	ND		0.50		ug/L			05/25/23 01:00	1
1,2-Dichloropropane	ND		0.50		ug/L			05/25/23 01:00	1
1,3,5-Trimethylbenzene	ND		0.50		ug/L			05/25/23 01:00	1
1,3-Dichlorobenzene	ND		0.50		ug/L			05/25/23 01:00	1
1,3-Dichloropropane	ND		0.50		ug/L			05/25/23 01:00	1
1,4-Dichlorobenzene	ND		0.50		ug/L			05/25/23 01:00	1
2,2-Dichloropropane	ND		0.50		ug/L			05/25/23 01:00	1
2-Butanone	ND		5.0		ug/L			05/25/23 01:00	1
2-Chlorotoluene	ND		0.50		ug/L			05/25/23 01:00	1
2-Hexanone	ND		6.0		ug/L			05/25/23 01:00	1
4-Chlorotoluene	ND		0.50		ug/L			05/25/23 01:00	1
4-Methyl-2-pentanone	ND		5.0		ug/L			05/25/23 01:00	1
Acetone	ND		8.0		ug/L			05/25/23 01:00	1
Benzene	ND		0.50		ug/L			05/25/23 01:00	1
Bromobenzene	ND		0.50		ug/L			05/25/23 01:00	1
Bromochloromethane	ND		1.0		ug/L			05/25/23 01:00	1
Bromodichloromethane	ND		0.50		ug/L			05/25/23 01:00	1
Bromoform	ND		0.50		ug/L			05/25/23 01:00	1
Bromomethane	ND		2.0		ug/L			05/25/23 01:00	1
cis-1,2-Dichloroethene	ND		0.50		ug/L			05/25/23 01:00	1
cis-1,3-Dichloropropene	ND		0.50		ug/L			05/25/23 01:00	1
Carbon disulfide	ND		1.0		ug/L			05/25/23 01:00	1
Carbon tetrachloride	ND		0.50		ug/L			05/25/23 01:00	1
Chlorobenzene	ND		0.50		ug/L			05/25/23 01:00	1
Chloroethane	ND		0.50		ug/L			05/25/23 01:00	1
Chloroform	ND		0.50		ug/L			05/25/23 01:00	1
Chloromethane	ND		1.0		ug/L			05/25/23 01:00	1
Dibromochloromethane	ND		0.50		ug/L			05/25/23 01:00	1
Dibromomethane	ND		0.50		ug/L			05/25/23 01:00	1
Dichlorodifluoromethane	ND		1.0		ug/L			05/25/23 01:00	1
Ethylbenzene	ND		0.50		ug/L			05/25/23 01:00	1
Isopropylbenzene	ND		0.50		ug/L			05/25/23 01:00	1
Methylene Chloride	ND		1.0		ug/L			05/25/23 01:00	1
Methyl-t-Butyl Ether (MTBE)	ND		0.50		ug/L			05/25/23 01:00	1
Naphthalene	ND		1.0		ug/L			05/25/23 01:00	1
n-Butylbenzene	ND		0.50		ug/L			05/25/23 01:00	1
N-Propylbenzene	ND		0.50		ug/L			05/25/23 01:00	1
o-Xylene	ND		0.50		ug/L			05/25/23 01:00	1
m,p-Xylene	ND		1.0		ug/L			05/25/23 01:00	1
p-Isopropyltoluene	ND		0.50		ug/L			05/25/23 01:00	1
sec-Butylbenzene	ND		0.50		ug/L			05/25/23 01:00	1
Styrene	ND		0.50		ug/L			05/25/23 01:00	1
trans-1,2-Dichloroethene	ND		0.50		ug/L			05/25/23 01:00	1
trans-1,3-Dichloropropene	ND		0.50		ug/L			05/25/23 01:00	1
tert-Butylbenzene	ND		0.50		ug/L			05/25/23 01:00	1

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Client Sample Results

Client: Hargis + Associates, Inc.
Project/Site: Raytheon Main / Task No.: 532.30

Job ID: 570-138935-1

Method: SW846 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: MW-42_20230517

Date Collected: 05/17/23 12:02

Date Received: 05/17/23 19:35

Lab Sample ID: 570-138935-20

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Tetrachloroethene	ND		0.50		ug/L			05/25/23 01:00	1
Toluene	ND		0.50		ug/L			05/25/23 01:00	1
Trichloroethene	ND		0.50		ug/L			05/25/23 01:00	1
Trichlorofluoromethane	ND		0.50		ug/L			05/25/23 01:00	1
Vinyl acetate	ND		5.0		ug/L			05/25/23 01:00	1
Vinyl chloride	ND		0.50		ug/L			05/25/23 01:00	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	102		64 - 132		05/25/23 01:00	1
4-Bromofluorobenzene (Surr)	96		76 - 120		05/25/23 01:00	1
Dibromofluoromethane	100		80 - 120		05/25/23 01:00	1
Toluene-d8 (Surr)	101		80 - 120		05/25/23 01:00	1

Client Sample Results

Client: Hargis + Associates, Inc.
Project/Site: Raytheon Main / Task No.: 532.30

Job ID: 570-138935-1

Method: SW846 8260B - Volatile Organic Compounds (GC/MS) - DL

Client Sample ID: MW-32B_20230516

Date Collected: 05/16/23 13:42

Date Received: 05/17/23 19:35

Lab Sample ID: 570-138935-11

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	96		2.5		ug/L			05/26/23 03:41	5
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	98		64 - 132					05/26/23 03:41	5
4-Bromofluorobenzene (Surr)	95		76 - 120					05/26/23 03:41	5
Dibromofluoromethane	100		80 - 120					05/26/23 03:41	5
Toluene-d8 (Surr)	100		80 - 120					05/26/23 03:41	5

Client Sample Results

Client: Hargis + Associates, Inc.
Project/Site: Raytheon Main / Task No.: 532.30

Job ID: 570-138935-1

Method: SW846 8270C SIM ID - Semivolatile Organic Compounds (GC/MS SIM / Isotope Dilution)

Client Sample ID: MW-28_20230516

Date Collected: 05/16/23 08:44

Date Received: 05/17/23 19:35

Lab Sample ID: 570-138935-2

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	ND		0.38		ug/L		05/22/23 08:02	05/22/23 17:40	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,4-Dioxane-d8	38		21 - 120				05/22/23 08:02	05/22/23 17:40	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Nitrobenzene-d5	78		58 - 135				05/22/23 08:02	05/22/23 17:40	1

Client Sample ID: MW-26C_20230516

Date Collected: 05/16/23 10:25

Date Received: 05/17/23 19:35

Lab Sample ID: 570-138935-3

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	ND		0.38		ug/L		05/22/23 08:02	05/22/23 17:55	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,4-Dioxane-d8	44		21 - 120				05/22/23 08:02	05/22/23 17:55	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Nitrobenzene-d5	94		58 - 135				05/22/23 08:02	05/22/23 17:55	1

Client Sample ID: RB_20230516

Date Collected: 05/16/23 10:50

Date Received: 05/17/23 19:35

Lab Sample ID: 570-138935-4

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	ND		0.37		ug/L		05/22/23 08:02	05/22/23 18:09	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,4-Dioxane-d8	39		21 - 120				05/22/23 08:02	05/22/23 18:09	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Nitrobenzene-d5	105		58 - 135				05/22/23 08:02	05/22/23 18:09	1

Client Sample ID: MW-08_20230516

Date Collected: 05/16/23 12:49

Date Received: 05/17/23 19:35

Lab Sample ID: 570-138935-5

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	ND		0.38		ug/L		05/22/23 08:02	05/22/23 18:23	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,4-Dioxane-d8	38		21 - 120				05/22/23 08:02	05/22/23 18:23	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Nitrobenzene-d5	60		58 - 135				05/22/23 08:02	05/22/23 18:23	1

Client Sample ID: MW-30A_20230516

Date Collected: 05/16/23 13:30

Date Received: 05/17/23 19:35

Lab Sample ID: 570-138935-6

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	ND		0.38		ug/L		05/22/23 08:02	05/22/23 18:38	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,4-Dioxane-d8	41		21 - 120				05/22/23 08:02	05/22/23 18:38	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Nitrobenzene-d5	79		58 - 135				05/22/23 08:02	05/22/23 18:38	1

Eurofins Calscience

Client Sample Results

Client: Hargis + Associates, Inc.
Project/Site: Raytheon Main / Task No.: 532.30

Job ID: 570-138935-1

Method: SW846 8270C SIM ID - Semivolatile Organic Compounds (GC/MS SIM / Isotope Dilution)

Client Sample ID: MW-30B_20230516

Date Collected: 05/16/23 14:03

Date Received: 05/17/23 19:35

Lab Sample ID: 570-138935-7

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	ND		0.38		ug/L		05/22/23 08:02	05/22/23 18:52	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,4-Dioxane-d8	43		21 - 120				05/22/23 08:02	05/22/23 18:52	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Nitrobenzene-d5	59		58 - 135				05/22/23 08:02	05/22/23 18:52	1

Client Sample ID: MW-34B_20230516

Date Collected: 05/16/23 14:48

Date Received: 05/17/23 19:35

Lab Sample ID: 570-138935-8

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	8.4		0.37		ug/L		05/22/23 08:02	05/22/23 19:07	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,4-Dioxane-d8	40		21 - 120				05/22/23 08:02	05/22/23 19:07	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Nitrobenzene-d5	78		58 - 135				05/22/23 08:02	05/22/23 19:07	1

Client Sample ID: MW-40_20230517

Date Collected: 05/17/23 09:32

Date Received: 05/17/23 19:35

Lab Sample ID: 570-138935-9

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	ND		0.38		ug/L		05/22/23 08:02	05/22/23 19:21	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,4-Dioxane-d8	47		21 - 120				05/22/23 08:02	05/22/23 19:21	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Nitrobenzene-d5	94		58 - 135				05/22/23 08:02	05/22/23 19:21	1

Client Sample ID: MW-35C_20230516

Date Collected: 05/16/23 10:17

Date Received: 05/17/23 19:35

Lab Sample ID: 570-138935-10

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	ND		0.38		ug/L		05/22/23 08:02	05/22/23 19:35	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,4-Dioxane-d8	39		21 - 120				05/22/23 08:02	05/22/23 19:35	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Nitrobenzene-d5	75		58 - 135				05/22/23 08:02	05/22/23 19:35	1

Client Sample ID: MW-32B_20230516

Date Collected: 05/16/23 13:42

Date Received: 05/17/23 19:35

Lab Sample ID: 570-138935-11

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	2.9		0.39		ug/L		05/22/23 08:02	05/22/23 19:50	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,4-Dioxane-d8	43		21 - 120				05/22/23 08:02	05/22/23 19:50	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Nitrobenzene-d5	64		58 - 135				05/22/23 08:02	05/22/23 19:50	1

Eurofins Calscience

Client Sample Results

Client: Hargis + Associates, Inc.
Project/Site: Raytheon Main / Task No.: 532.30

Job ID: 570-138935-1

Method: SW846 8270C SIM ID - Semivolatile Organic Compounds (GC/MS SIM / Isotope Dilution)

Client Sample ID: MW-33_20230516

Date Collected: 05/16/23 16:10

Date Received: 05/17/23 19:35

Lab Sample ID: 570-138935-12

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	ND		0.41		ug/L		05/22/23 08:02	05/22/23 20:04	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,4-Dioxane-d8	44		21 - 120				05/22/23 08:02	05/22/23 20:04	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Nitrobenzene-d5	79		58 - 135				05/22/23 08:02	05/22/23 20:04	1

Client Sample ID: MW-41_20230517

Date Collected: 05/17/23 10:45

Date Received: 05/17/23 19:35

Lab Sample ID: 570-138935-13

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	ND		0.38		ug/L		05/22/23 08:02	05/22/23 20:19	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,4-Dioxane-d8	36		21 - 120				05/22/23 08:02	05/22/23 20:19	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Nitrobenzene-d5	68		58 - 135				05/22/23 08:02	05/22/23 20:19	1

Client Sample ID: MW-4100_20230517

Date Collected: 05/17/23 10:50

Date Received: 05/17/23 19:35

Lab Sample ID: 570-138935-14

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	ND		0.37		ug/L		05/22/23 08:02	05/22/23 20:33	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,4-Dioxane-d8	39		21 - 120				05/22/23 08:02	05/22/23 20:33	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Nitrobenzene-d5	77		58 - 135				05/22/23 08:02	05/22/23 20:33	1

Client Sample ID: MW-31_20230517

Date Collected: 05/17/23 12:43

Date Received: 05/17/23 19:35

Lab Sample ID: 570-138935-15

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	ND		0.38		ug/L		05/22/23 08:02	05/22/23 20:47	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,4-Dioxane-d8	33		21 - 120				05/22/23 08:02	05/22/23 20:47	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Nitrobenzene-d5	79		58 - 135				05/22/23 08:02	05/22/23 20:47	1

Client Sample ID: MW-3100_20230517

Date Collected: 05/17/23 12:45

Date Received: 05/17/23 19:35

Lab Sample ID: 570-138935-16

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	3.0		0.37		ug/L		05/22/23 08:02	05/22/23 21:02	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,4-Dioxane-d8	42		21 - 120				05/22/23 08:02	05/22/23 21:02	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Nitrobenzene-d5	73		58 - 135				05/22/23 08:02	05/22/23 21:02	1

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Client Sample Results

Client: Hargis + Associates, Inc.
Project/Site: Raytheon Main / Task No.: 532.30

Job ID: 570-138935-1

Method: SW846 8270C SIM ID - Semivolatile Organic Compounds (GC/MS SIM / Isotope Dilution)

Client Sample ID: EW-01_20230517

Date Collected: 05/17/23 14:00

Date Received: 05/17/23 19:35

Lab Sample ID: 570-138935-18

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	7.2		0.38		ug/L		05/22/23 08:02	05/22/23 21:31	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,4-Dioxane-d8	40		21 - 120				05/22/23 08:02	05/22/23 21:31	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Nitrobenzene-d5	64		58 - 135				05/22/23 08:02	05/22/23 21:31	1

Client Sample ID: MW-43_20230517

Date Collected: 05/17/23 09:25

Date Received: 05/17/23 19:35

Lab Sample ID: 570-138935-19

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	ND		0.37		ug/L		05/22/23 08:02	05/22/23 21:45	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,4-Dioxane-d8	42		21 - 120				05/22/23 08:02	05/22/23 21:45	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Nitrobenzene-d5	76		58 - 135				05/22/23 08:02	05/22/23 21:45	1

Client Sample ID: MW-42_20230517

Date Collected: 05/17/23 12:02

Date Received: 05/17/23 19:35

Lab Sample ID: 570-138935-20

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	ND		0.38		ug/L		05/22/23 08:03	05/22/23 21:59	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,4-Dioxane-d8	48		21 - 120				05/22/23 08:03	05/22/23 21:59	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Nitrobenzene-d5	79		58 - 135				05/22/23 08:03	05/22/23 21:59	1

Client Sample Results

Client: Hargis + Associates, Inc.
Project/Site: Raytheon Main / Task No.: 532.30

Job ID: 570-138935-1

Method: SW846 8270C SIM ID - Semivolatile Organic Compounds (GC/MS SIM / Isotope Dilution) - DL

Client Sample ID: MW-21_20230517

Date Collected: 05/17/23 13:37

Date Received: 05/17/23 19:35

Lab Sample ID: 570-138935-17

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	490		19		ug/L		05/22/23 08:02	05/23/23 07:52	50
<i>Isotope Dilution</i>									
1,4-Dioxane-d8	31	*3	21 - 120				05/22/23 08:02	05/23/23 07:52	50
<i>Surrogate</i>									
Nitrobenzene-d5	83	*3	58 - 135				05/22/23 08:02	05/23/23 07:52	50

Surrogate Summary

Client: Hargis + Associates, Inc.
Project/Site: Raytheon Main / Task No.: 532.30

Job ID: 570-138935-1

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

Matrix: Water

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	DCA (64-132)	BFB (76-120)	DBFM (80-120)	TOL (80-120)
570-138935-1	TB_20230516	91	91	98	97
570-138935-2	MW-28_20230516	98	95	100	102
570-138935-3	MW-26C_20230516	100	96	102	100
570-138935-4	RB_20230516	102	96	101	99
570-138935-5	MW-08_20230516	99	97	98	102
570-138935-6	MW-30A_20230516	101	96	100	103
570-138935-7	MW-30B_20230516	102	97	101	103
570-138935-8	MW-34B_20230516	105	97	102	101
570-138935-9	MW-40_20230517	99	97	101	101
570-138935-10	MW-35C_20230516	100	97	100	104
570-138935-10 MS	MW-35C_20230516	104	100	100	102
570-138935-10 MSD	MW-35C_20230516	102	100	100	101
570-138935-11	MW-32B_20230516	102	94	102	102
570-138935-11 - DL	MW-32B_20230516	98	95	100	100
570-138935-12	MW-33_20230516	102	95	104	100
570-138935-13	MW-41_20230517	103	95	101	101
570-138935-14	MW-4100_20230517	103	96	103	100
570-138935-15	MW-31_20230517	100	94	99	102
570-138935-16	MW-3100_20230517	102	94	101	103
570-138935-17	MW-21_20230517	100	98	100	102
570-138935-18	EW-01_20230517	102	94	99	102
570-138935-19	MW-43_20230517	114	97	109	102
570-138935-19 MS	MW-43_20230517	110	102	104	100
570-138935-19 MSD	MW-43_20230517	108	103	103	99
570-138935-20	MW-42_20230517	102	96	100	101
LCS 570-331683/3	Lab Control Sample	99	101	96	102
LCS 570-331773/4	Lab Control Sample	101	103	100	100
LCS 570-332106/3	Lab Control Sample	103	100	100	100
LCSD 570-331683/4	Lab Control Sample Dup	100	100	97	101
LCSD 570-331773/5	Lab Control Sample Dup	106	101	101	101
LCSD 570-332106/4	Lab Control Sample Dup	103	98	99	101
MB 570-331683/6	Method Blank	99	95	100	102
MB 570-331773/7	Method Blank	112	97	106	101
MB 570-332106/6	Method Blank	98	95	97	101

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)

Lab Sample ID	Client Sample ID	NBZ (58-135)
570-138935-2	MW-28_20230516	78
570-138935-3	MW-26C_20230516	94
570-138935-4	RB_20230516	105

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Surrogate Summary

Client: Hargis + Associates, Inc.

Job ID: 570-138935-1

Project/Site: Raytheon Main / Task No.: 532.30

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

(Continued)

Matrix: Water

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	NBZ (58-135)
570-138935-5	MW-08_20230516	60
570-138935-6	MW-30A_20230516	79
570-138935-7	MW-30B_20230516	59
570-138935-8	MW-34B_20230516	78
570-138935-9	MW-40_20230517	94
570-138935-10	MW-35C_20230516	75
570-138935-10 MS	MW-35C_20230516	67
570-138935-10 MSD	MW-35C_20230516	69
570-138935-11	MW-32B_20230516	64
570-138935-12	MW-33_20230516	79
570-138935-13	MW-41_20230517	68
570-138935-14	MW-4100_20230517	77
570-138935-15	MW-31_20230517	79
570-138935-16	MW-3100_20230517	73
570-138935-17 - DL	MW-21_20230517	83 *3
570-138935-18	EW-01_20230517	64
570-138935-19	MW-43_20230517	76
570-138935-19 MS	MW-43_20230517	65
570-138935-19 MSD	MW-43_20230517	63
570-138935-20	MW-42_20230517	79
LCS 570-330747/2-A	Lab Control Sample	84
LCSD 570-330747/3-A	Lab Control Sample Dup	87
MB 570-330747/1-A	Method Blank	93

Surrogate Legend

NBZ = Nitrobenzene-d5

Isotope Dilution Summary

Client: Hargis + Associates, Inc.
Project/Site: Raytheon Main / Task No.: 532.30

Job ID: 570-138935-1

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 (21-120)
570-138935-2	MW-28_20230516	38
570-138935-3	MW-26C_20230516	44
570-138935-4	RB_20230516	39
570-138935-5	MW-08_20230516	38
570-138935-6	MW-30A_20230516	41
570-138935-7	MW-30B_20230516	43
570-138935-8	MW-34B_20230516	40
570-138935-9	MW-40_20230517	47
570-138935-10	MW-35C_20230516	39
570-138935-10 MS	MW-35C_20230516	46
570-138935-10 MSD	MW-35C_20230516	47
570-138935-11	MW-32B_20230516	43
570-138935-12	MW-33_20230516	44
570-138935-13	MW-41_20230517	36
570-138935-14	MW-4100_20230517	39
570-138935-15	MW-31_20230517	33
570-138935-16	MW-3100_20230517	42
570-138935-17 - DL	MW-21_20230517	31 *3
570-138935-18	EW-01_20230517	40
570-138935-19	MW-43_20230517	42
570-138935-19 MS	MW-43_20230517	41
570-138935-19 MSD	MW-43_20230517	41
570-138935-20	MW-42_20230517	48
LCS 570-330747/2-A	Lab Control Sample	53
LCSD 570-330747/3-A	Lab Control Sample Dup	60
MB 570-330747/1-A	Method Blank	55

Surrogate Legend

DXE = 1,4-Dioxane-d8

QC Sample Results

Client: Hargis + Associates, Inc.
Project/Site: Raytheon Main / Task No.: 532.30

Job ID: 570-138935-1

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

Lab Sample ID: MB 570-331683/6

Matrix: Water

Analysis Batch: 331683

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		ug/L			05/24/23 16:13	1
1,1,1-Trichloroethane	ND		0.50		ug/L			05/24/23 16:13	1
1,1,2,2-Tetrachloroethane	ND		0.50		ug/L			05/24/23 16:13	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.50		ug/L			05/24/23 16:13	1
1,1,2-Trichloroethane	ND		0.50		ug/L			05/24/23 16:13	1
1,1-Dichloroethane	ND		0.50		ug/L			05/24/23 16:13	1
1,1-Dichloroethene	ND		0.50		ug/L			05/24/23 16:13	1
1,1-Dichloropropene	ND		0.50		ug/L			05/24/23 16:13	1
1,2,3-Trichlorobenzene	ND		0.50		ug/L			05/24/23 16:13	1
1,2,3-Trichloropropane	ND		0.50		ug/L			05/24/23 16:13	1
1,2,4-Trichlorobenzene	ND		0.50		ug/L			05/24/23 16:13	1
1,2,4-Trimethylbenzene	ND		0.50		ug/L			05/24/23 16:13	1
1,2-Dibromo-3-Chloropropane	ND		1.0		ug/L			05/24/23 16:13	1
1,2-Dibromoethane	ND		0.50		ug/L			05/24/23 16:13	1
1,2-Dichlorobenzene	ND		0.50		ug/L			05/24/23 16:13	1
1,2-Dichloroethane	ND		0.50		ug/L			05/24/23 16:13	1
1,2-Dichloropropane	ND		0.50		ug/L			05/24/23 16:13	1
1,3,5-Trimethylbenzene	ND		0.50		ug/L			05/24/23 16:13	1
1,3-Dichlorobenzene	ND		0.50		ug/L			05/24/23 16:13	1
1,3-Dichloropropane	ND		0.50		ug/L			05/24/23 16:13	1
1,4-Dichlorobenzene	ND		0.50		ug/L			05/24/23 16:13	1
2,2-Dichloropropane	ND		0.50		ug/L			05/24/23 16:13	1
2-Butanone	ND		5.0		ug/L			05/24/23 16:13	1
2-Chlorotoluene	ND		0.50		ug/L			05/24/23 16:13	1
2-Hexanone	ND		6.0		ug/L			05/24/23 16:13	1
4-Chlorotoluene	ND		0.50		ug/L			05/24/23 16:13	1
4-Methyl-2-pentanone	ND		5.0		ug/L			05/24/23 16:13	1
Acetone	ND		8.0		ug/L			05/24/23 16:13	1
Benzene	ND		0.50		ug/L			05/24/23 16:13	1
Bromobenzene	ND		0.50		ug/L			05/24/23 16:13	1
Bromochloromethane	ND		1.0		ug/L			05/24/23 16:13	1
Bromodichloromethane	ND		0.50		ug/L			05/24/23 16:13	1
Bromoform	ND		0.50		ug/L			05/24/23 16:13	1
Bromomethane	ND		2.0		ug/L			05/24/23 16:13	1
cis-1,2-Dichloroethene	ND		0.50		ug/L			05/24/23 16:13	1
cis-1,3-Dichloropropene	ND		0.50		ug/L			05/24/23 16:13	1
Carbon disulfide	ND		1.0		ug/L			05/24/23 16:13	1
Carbon tetrachloride	ND		0.50		ug/L			05/24/23 16:13	1
Chlorobenzene	ND		0.50		ug/L			05/24/23 16:13	1
Chloroethane	ND		0.50		ug/L			05/24/23 16:13	1
Chloroform	ND		0.50		ug/L			05/24/23 16:13	1
Chloromethane	ND		1.0		ug/L			05/24/23 16:13	1
Dibromochloromethane	ND		0.50		ug/L			05/24/23 16:13	1
Dibromomethane	ND		0.50		ug/L			05/24/23 16:13	1
Dichlorodifluoromethane	ND		1.0		ug/L			05/24/23 16:13	1
Ethylbenzene	ND		0.50		ug/L			05/24/23 16:13	1
Isopropylbenzene	ND		0.50		ug/L			05/24/23 16:13	1
Methylene Chloride	ND		1.0		ug/L			05/24/23 16:13	1

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QC Sample Results

Client: Hargis + Associates, Inc.
Project/Site: Raytheon Main / Task No.: 532.30

Job ID: 570-138935-1

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

Lab Sample ID: MB 570-331683/6

Matrix: Water

Analysis Batch: 331683

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		ug/L			05/24/23 16:13	1
Naphthalene	ND		1.0		ug/L			05/24/23 16:13	1
n-Butylbenzene	ND		0.50		ug/L			05/24/23 16:13	1
N-Propylbenzene	ND		0.50		ug/L			05/24/23 16:13	1
o-Xylene	ND		0.50		ug/L			05/24/23 16:13	1
m,p-Xylene	ND		1.0		ug/L			05/24/23 16:13	1
p-Isopropyltoluene	ND		0.50		ug/L			05/24/23 16:13	1
sec-Butylbenzene	ND		0.50		ug/L			05/24/23 16:13	1
Styrene	ND		0.50		ug/L			05/24/23 16:13	1
trans-1,2-Dichloroethene	ND		0.50		ug/L			05/24/23 16:13	1
trans-1,3-Dichloropropene	ND		0.50		ug/L			05/24/23 16:13	1
tert-Butylbenzene	ND		0.50		ug/L			05/24/23 16:13	1
Tetrachloroethene	ND		0.50		ug/L			05/24/23 16:13	1
Toluene	ND		0.50		ug/L			05/24/23 16:13	1
Trichloroethene	ND		0.50		ug/L			05/24/23 16:13	1
Trichlorofluoromethane	ND		0.50		ug/L			05/24/23 16:13	1
Vinyl acetate	ND		5.0		ug/L			05/24/23 16:13	1
Vinyl chloride	ND		0.50		ug/L			05/24/23 16:13	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	99		64 - 132		05/24/23 16:13	1
4-Bromofluorobenzene (Surr)	95		76 - 120		05/24/23 16:13	1
Dibromofluoromethane	100		80 - 120		05/24/23 16:13	1
Toluene-d8 (Surr)	102		80 - 120		05/24/23 16:13	1

Lab Sample ID: LCS 570-331683/3

Matrix: Water

Analysis Batch: 331683

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	10.36		ug/L		104	80 - 125
1,1,1-Trichloroethane	10.0	8.973		ug/L		90	75 - 121
1,1,2,2-Tetrachloroethane	10.0	9.667		ug/L		97	80 - 120
1,1,2-Trichloro-1,2,2-trifluoroethane	10.0	9.878		ug/L		99	56 - 132
1,1,2-Trichloroethane	10.0	9.974		ug/L		100	80 - 121
1,1-Dichloroethane	10.0	8.826		ug/L		88	80 - 120
1,1-Dichloroethene	10.0	9.031		ug/L		90	80 - 126
1,1-Dichloropropene	10.0	8.706		ug/L		87	72 - 122
1,2,3-Trichlorobenzene	10.0	9.660		ug/L		97	80 - 125
1,2,3-Trichloropropane	10.0	10.30		ug/L		103	75 - 127
1,2,4-Trichlorobenzene	10.0	9.787		ug/L		98	80 - 124
1,2,4-Trimethylbenzene	10.0	9.254		ug/L		93	80 - 128
1,2-Dibromo-3-Chloropropane	10.0	9.086		ug/L		91	63 - 123
1,2-Dibromoethane	10.0	9.173		ug/L		92	80 - 125
1,2-Dichlorobenzene	10.0	9.535		ug/L		95	80 - 120
1,2-Dichloroethane	10.0	9.457		ug/L		95	76 - 130
1,2-Dichloropropane	10.0	9.304		ug/L		93	74 - 124
1,3,5-Trimethylbenzene	10.0	9.798		ug/L		98	80 - 122

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QC Sample Results

Client: Hargis + Associates, Inc.
Project/Site: Raytheon Main / Task No.: 532.30

Job ID: 570-138935-1

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

Lab Sample ID: LCS 570-331683/3

Matrix: Water

Analysis Batch: 331683

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	9.590		ug/L		96	80 - 120
1,3-Dichloropropane	10.0	10.15		ug/L		102	80 - 121
1,4-Dichlorobenzene	10.0	9.063		ug/L		91	80 - 120
2,2-Dichloropropane	10.0	9.583		ug/L		96	79 - 131
2-Butanone	10.0	8.473		ug/L		85	48 - 145
2-Chlorotoluene	10.0	9.467		ug/L		95	80 - 120
2-Hexanone	10.0	9.678		ug/L		97	50 - 149
4-Chlorotoluene	10.0	9.457		ug/L		95	80 - 120
4-Methyl-2-pentanone	10.0	8.519		ug/L		85	63 - 120
Acetone	10.0	9.799		ug/L		98	45 - 139
Benzene	10.0	9.107		ug/L		91	80 - 120
Bromobenzene	10.0	9.834		ug/L		98	80 - 125
Bromochloromethane	10.0	9.304		ug/L		93	80 - 120
Bromodichloromethane	10.0	9.890		ug/L		99	73 - 131
Bromoform	10.0	9.925		ug/L		99	76 - 124
Bromomethane	10.0	9.922		ug/L		99	26 - 180
cis-1,2-Dichloroethene	10.0	9.018		ug/L		90	80 - 120
cis-1,3-Dichloropropene	10.0	9.356		ug/L		94	76 - 123
Carbon disulfide	10.0	8.874		ug/L		89	75 - 123
Carbon tetrachloride	10.0	9.634		ug/L		96	61 - 139
Chlorobenzene	10.0	9.572		ug/L		96	80 - 120
Chloroethane	10.0	10.90		ug/L		109	54 - 150
Chloroform	10.0	8.588		ug/L		86	80 - 120
Chloromethane	10.0	9.017		ug/L		90	28 - 151
Dibromochloromethane	10.0	9.838		ug/L		98	74 - 136
Dibromomethane	10.0	9.701		ug/L		97	80 - 122
Dichlorodifluoromethane	10.0	10.98		ug/L		110	27 - 154
Ethylbenzene	10.0	9.611		ug/L		96	80 - 126
Isopropylbenzene	10.0	10.21		ug/L		102	80 - 120
Methylene Chloride	10.0	8.481		ug/L		85	80 - 120
Methyl-t-Butyl Ether (MTBE)	10.0	9.299		ug/L		93	69 - 128
Naphthalene	10.0	9.797		ug/L		98	70 - 130
n-Butylbenzene	10.0	9.882		ug/L		99	78 - 127
N-Propylbenzene	10.0	10.09		ug/L		101	80 - 121
o-Xylene	10.0	9.477		ug/L		95	80 - 124
m,p-Xylene	20.0	19.61		ug/L		98	80 - 123
p-Isopropyltoluene	10.0	9.345		ug/L		93	80 - 128
sec-Butylbenzene	10.0	9.401		ug/L		94	80 - 125
Styrene	10.0	9.886		ug/L		99	80 - 121
trans-1,2-Dichloroethene	10.0	8.787		ug/L		88	79 - 120
trans-1,3-Dichloropropene	10.0	9.971		ug/L		100	80 - 126
tert-Butylbenzene	10.0	9.263		ug/L		93	80 - 121
Tetrachloroethene	10.0	9.857		ug/L		99	80 - 125
Toluene	10.0	9.389		ug/L		94	80 - 120
Trichloroethene	10.0	9.128		ug/L		91	77 - 124
Trichlorofluoromethane	10.0	11.26		ug/L		113	41 - 163
Vinyl acetate	10.0	8.525		ug/L		85	61 - 126
Vinyl chloride	10.0	10.02		ug/L		100	50 - 160

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QC Sample Results

Client: Hargis + Associates, Inc.
Project/Site: Raytheon Main / Task No.: 532.30

Job ID: 570-138935-1

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

Lab Sample ID: LCS 570-331683/3

Matrix: Water

Analysis Batch: 331683

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Surrogate	LCS		Limits
	%Recovery	Qualifier	
1,2-Dichloroethane-d4 (Surr)	99		64 - 132
4-Bromofluorobenzene (Surr)	101		76 - 120
Dibromofluoromethane	96		80 - 120
Toluene-d8 (Surr)	102		80 - 120

Lab Sample ID: LCSD 570-331683/4

Matrix: Water

Analysis Batch: 331683

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec		RPD	RPD Limit
							Limits			
1,1,1,2-Tetrachloroethane	10.0	10.83		ug/L		108	80 - 125	4		20
1,1,1-Trichloroethane	10.0	10.14		ug/L		101	75 - 121	12		20
1,1,2,2-Tetrachloroethane	10.0	9.655		ug/L		97	80 - 120	0		20
1,1,2-Trichloro-1,2,2-trifluoroethane	10.0	11.25		ug/L		112	56 - 132	13		22
1,1,2-Trichloroethane	10.0	10.14		ug/L		101	80 - 121	2		20
1,1-Dichloroethane	10.0	9.598		ug/L		96	80 - 120	8		20
1,1-Dichloroethene	10.0	10.21		ug/L		102	80 - 126	12		21
1,1-Dichloropropene	10.0	9.717		ug/L		97	72 - 122	11		20
1,2,3-Trichlorobenzene	10.0	9.923		ug/L		99	80 - 125	3		20
1,2,3-Trichloropropane	10.0	10.41		ug/L		104	75 - 127	1		20
1,2,4-Trichlorobenzene	10.0	10.14		ug/L		101	80 - 124	4		20
1,2,4-Trimethylbenzene	10.0	9.766		ug/L		98	80 - 128	5		20
1,2-Dibromo-3-Chloropropane	10.0	9.041		ug/L		90	63 - 123	1		20
1,2-Dibromoethane	10.0	9.429		ug/L		94	80 - 125	3		20
1,2-Dichlorobenzene	10.0	9.853		ug/L		99	80 - 120	3		20
1,2-Dichloroethane	10.0	9.684		ug/L		97	76 - 130	2		20
1,2-Dichloropropane	10.0	9.780		ug/L		98	74 - 124	5		20
1,3,5-Trimethylbenzene	10.0	10.39		ug/L		104	80 - 122	6		20
1,3-Dichlorobenzene	10.0	9.982		ug/L		100	80 - 120	4		20
1,3-Dichloropropane	10.0	10.50		ug/L		105	80 - 121	3		20
1,4-Dichlorobenzene	10.0	9.686		ug/L		97	80 - 120	7		20
2,2-Dichloropropane	10.0	10.61		ug/L		106	79 - 131	10		20
2-Butanone	10.0	8.146		ug/L		81	48 - 145	4		30
2-Chlorotoluene	10.0	10.11		ug/L		101	80 - 120	7		20
2-Hexanone	10.0	8.540		ug/L		85	50 - 149	13		29
4-Chlorotoluene	10.0	9.892		ug/L		99	80 - 120	4		20
4-Methyl-2-pentanone	10.0	8.656		ug/L		87	63 - 120	2		20
Acetone	10.0	10.22		ug/L		102	45 - 139	4		30
Benzene	10.0	9.778		ug/L		98	80 - 120	7		20
Bromobenzene	10.0	10.31		ug/L		103	80 - 125	5		20
Bromochloromethane	10.0	9.948		ug/L		99	80 - 120	7		20
Bromodichloromethane	10.0	10.30		ug/L		103	73 - 131	4		20
Bromoform	10.0	9.928		ug/L		99	76 - 124	0		20
Bromomethane	10.0	10.84		ug/L		108	26 - 180	9		20
cis-1,2-Dichloroethene	10.0	9.661		ug/L		97	80 - 120	7		20
cis-1,3-Dichloropropene	10.0	9.714		ug/L		97	76 - 123	4		20
Carbon disulfide	10.0	10.10		ug/L		101	75 - 123	13		20
Carbon tetrachloride	10.0	10.95		ug/L		109	61 - 139	13		20

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QC Sample Results

Client: Hargis + Associates, Inc.
Project/Site: Raytheon Main / Task No.: 532.30

Job ID: 570-138935-1

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

Lab Sample ID: LCSD 570-331683/4

Matrix: Water

Analysis Batch: 331683

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	10.20		ug/L		102	80 - 120	6	20
Chloroethane	10.0	11.76		ug/L		118	54 - 150	8	25
Chloroform	10.0	9.262		ug/L		93	80 - 120	8	20
Chloromethane	10.0	10.22		ug/L		102	28 - 151	13	20
Dibromochloromethane	10.0	10.06		ug/L		101	74 - 136	2	20
Dibromomethane	10.0	9.964		ug/L		100	80 - 122	3	20
Dichlorodifluoromethane	10.0	12.38		ug/L		124	27 - 154	12	21
Ethylbenzene	10.0	10.47		ug/L		105	80 - 126	9	20
Isopropylbenzene	10.0	11.12		ug/L		111	80 - 120	8	20
Methylene Chloride	10.0	9.155		ug/L		92	80 - 120	8	20
Methyl-t-Butyl Ether (MTBE)	10.0	9.306		ug/L		93	69 - 128	0	20
Naphthalene	10.0	9.933		ug/L		99	70 - 130	1	20
n-Butylbenzene	10.0	10.76		ug/L		108	78 - 127	8	20
N-Propylbenzene	10.0	10.82		ug/L		108	80 - 121	7	20
o-Xylene	10.0	10.18		ug/L		102	80 - 124	7	20
m,p-Xylene	20.0	20.92		ug/L		105	80 - 123	6	20
p-Isopropyltoluene	10.0	10.05		ug/L		101	80 - 128	7	20
sec-Butylbenzene	10.0	10.12		ug/L		101	80 - 125	7	20
Styrene	10.0	10.48		ug/L		105	80 - 121	6	20
trans-1,2-Dichloroethene	10.0	9.691		ug/L		97	79 - 120	10	20
trans-1,3-Dichloropropene	10.0	10.25		ug/L		103	80 - 126	3	20
tert-Butylbenzene	10.0	10.07		ug/L		101	80 - 121	8	20
Tetrachloroethene	10.0	10.83		ug/L		108	80 - 125	9	20
Toluene	10.0	10.18		ug/L		102	80 - 120	8	20
Trichloroethene	10.0	9.972		ug/L		100	77 - 124	9	20
Trichlorofluoromethane	10.0	12.91		ug/L		129	41 - 163	14	21
Vinyl acetate	10.0	8.202		ug/L		82	61 - 126	4	24
Vinyl chloride	10.0	11.55		ug/L		116	50 - 160	14	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	100		64 - 132
4-Bromofluorobenzene (Surr)	100		76 - 120
Dibromofluoromethane	97		80 - 120
Toluene-d8 (Surr)	101		80 - 120

Lab Sample ID: 570-138935-10 MS

Matrix: Water

Analysis Batch: 331683

Client Sample ID: MW-35C_20230516

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
1,1,1,2-Tetrachloroethane	ND		10.0	10.90		ug/L		109	61 - 142
1,1,1-Trichloroethane	ND		10.0	10.43		ug/L		104	68 - 138
1,1,2,2-Tetrachloroethane	ND		10.0	10.51		ug/L		105	71 - 133
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		10.0	9.440		ug/L		94	51 - 132
1,1,2-Trichloroethane	ND		10.0	10.94		ug/L		109	70 - 132
1,1-Dichloroethane	ND		10.0	10.75		ug/L		107	70 - 132
1,1-Dichloroethene	ND		10.0	11.01		ug/L		110	57 - 148
1,1-Dichloropropene	ND		10.0	10.39		ug/L		104	74 - 132

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QC Sample Results

Client: Hargis + Associates, Inc.
Project/Site: Raytheon Main / Task No.: 532.30

Job ID: 570-138935-1

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

Lab Sample ID: 570-138935-10 MS

Matrix: Water

Analysis Batch: 331683

Client Sample ID: MW-35C_20230516

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
1,2,3-Trichlorobenzene	ND		10.0	10.22		ug/L		102	66 - 135
1,2,3-Trichloropropane	ND		10.0	10.51		ug/L		105	61 - 130
1,2,4-Trichlorobenzene	ND		10.0	10.36		ug/L		104	66 - 131
1,2,4-Trimethylbenzene	ND		10.0	10.03		ug/L		100	65 - 132
1,2-Dibromo-3-Chloropropane	ND		10.0	8.972		ug/L		90	48 - 132
1,2-Dibromoethane	ND		10.0	9.753		ug/L		98	74 - 128
1,2-Dichlorobenzene	ND		10.0	10.31		ug/L		103	74 - 126
1,2-Dichloroethane	ND		10.0	10.57		ug/L		106	65 - 140
1,2-Dichloropropane	ND		10.0	10.62		ug/L		106	75 - 127
1,3,5-Trimethylbenzene	ND		10.0	10.71		ug/L		107	64 - 144
1,3-Dichlorobenzene	ND		10.0	10.29		ug/L		103	73 - 125
1,3-Dichloropropane	ND		10.0	11.01		ug/L		110	71 - 131
1,4-Dichlorobenzene	ND		10.0	10.10		ug/L		101	73 - 125
2,2-Dichloropropane	ND		10.0	9.218		ug/L		92	39 - 138
2-Butanone	ND		10.0	8.962		ug/L		90	44 - 140
2-Chlorotoluene	ND		10.0	10.50		ug/L		105	71 - 130
2-Hexanone	ND		10.0	9.158		ug/L		92	52 - 136
4-Chlorotoluene	ND		10.0	10.34		ug/L		103	69 - 127
4-Methyl-2-pentanone	ND		10.0	8.504		ug/L		85	44 - 139
Acetone	ND		10.0	8.788		ug/L		88	20 - 174
Benzene	ND		10.0	10.68		ug/L		107	75 - 125
Bromobenzene	ND		10.0	10.64		ug/L		106	75 - 132
Bromochloromethane	ND		10.0	10.75		ug/L		108	75 - 125
Bromodichloromethane	ND		10.0	10.70		ug/L		107	70 - 137
Bromoform	ND		10.0	9.653		ug/L		97	51 - 142
Bromomethane	ND		10.0	13.41		ug/L		134	46 - 164
cis-1,2-Dichloroethene	ND		10.0	10.65		ug/L		106	62 - 138
cis-1,3-Dichloropropene	ND		10.0	9.853		ug/L		99	67 - 125
Carbon disulfide	ND		10.0	10.76		ug/L		108	70 - 132
Carbon tetrachloride	ND		10.0	10.40		ug/L		104	50 - 159
Chlorobenzene	ND		10.0	10.67		ug/L		107	75 - 128
Chloroethane	ND		10.0	10.59		ug/L		106	62 - 161
Chloroform	ND		10.0	10.15		ug/L		101	73 - 130
Chloromethane	ND		10.0	13.19		ug/L		132	45 - 157
Dibromochloromethane	ND		10.0	10.08		ug/L		101	63 - 145
Dibromomethane	ND		10.0	10.50		ug/L		105	75 - 127
Dichlorodifluoromethane	ND		10.0	8.888		ug/L		89	31 - 132
Ethylbenzene	ND		10.0	10.91		ug/L		109	73 - 135
Isopropylbenzene	ND		10.0	11.46		ug/L		115	69 - 141
Methylene Chloride	ND		10.0	9.919		ug/L		99	65 - 127
Methyl-t-Butyl Ether (MTBE)	ND		10.0	10.25		ug/L		103	59 - 131
Naphthalene	ND		10.0	10.03		ug/L		100	51 - 133
n-Butylbenzene	ND		10.0	10.67		ug/L		107	66 - 128
N-Propylbenzene	ND		10.0	11.05		ug/L		111	73 - 136
o-Xylene	ND		10.0	10.61		ug/L		106	69 - 138
m,p-Xylene	ND		20.0	21.61		ug/L		108	73 - 138
p-Isopropyltoluene	ND		10.0	10.21		ug/L		102	69 - 134
sec-Butylbenzene	ND		10.0	10.29		ug/L		103	70 - 130
Styrene	ND		10.0	10.46		ug/L		105	45 - 144

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QC Sample Results

Client: Hargis + Associates, Inc.
Project/Site: Raytheon Main / Task No.: 532.30

Job ID: 570-138935-1

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

Lab Sample ID: 570-138935-10 MS

Matrix: Water

Analysis Batch: 331683

Client Sample ID: MW-35C_20230516

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
trans-1,2-Dichloroethene	ND		10.0	10.73		ug/L		107	61 - 138
trans-1,3-Dichloropropene	ND		10.0	9.836		ug/L		98	61 - 131
tert-Butylbenzene	ND		10.0	10.27		ug/L		103	71 - 131
Tetrachloroethene	ND		10.0	10.91		ug/L		109	64 - 150
Toluene	ND		10.0	10.83		ug/L		108	75 - 127
Trichloroethene	ND		10.0	10.51		ug/L		105	34 - 159
Trichlorofluoromethane	ND		10.0	10.85		ug/L		108	69 - 142
Vinyl acetate	ND		10.0	8.377		ug/L		84	35 - 132
Vinyl chloride	ND		10.0	11.20		ug/L		112	51 - 168

Surrogate	MS %Recovery	MS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	104		64 - 132
4-Bromofluorobenzene (Surr)	100		76 - 120
Dibromofluoromethane	100		80 - 120
Toluene-d8 (Surr)	102		80 - 120

Lab Sample ID: 570-138935-10 MSD

Matrix: Water

Analysis Batch: 331683

Client Sample ID: MW-35C_20230516

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
1,1,1,2-Tetrachloroethane	ND		10.0	11.04		ug/L		110	61 - 142	1	20
1,1,1-Trichloroethane	ND		10.0	10.29		ug/L		103	68 - 138	1	20
1,1,2,2-Tetrachloroethane	ND		10.0	10.92		ug/L		109	71 - 133	4	20
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		10.0	9.433		ug/L		94	51 - 132	0	21
1,1,2-Trichloroethane	ND		10.0	10.81		ug/L		108	70 - 132	1	20
1,1-Dichloroethane	ND		10.0	10.62		ug/L		106	70 - 132	1	20
1,1-Dichloroethene	ND		10.0	10.77		ug/L		108	57 - 148	2	20
1,1-Dichloropropene	ND		10.0	10.37		ug/L		104	74 - 132	0	20
1,2,3-Trichlorobenzene	ND		10.0	11.02		ug/L		110	66 - 135	8	22
1,2,3-Trichloropropane	ND		10.0	10.77		ug/L		108	61 - 130	2	20
1,2,4-Trichlorobenzene	ND		10.0	11.15		ug/L		112	66 - 131	7	24
1,2,4-Trimethylbenzene	ND		10.0	10.23		ug/L		102	65 - 132	2	22
1,2-Dibromo-3-Chloropropane	ND		10.0	9.712		ug/L		97	48 - 132	8	20
1,2-Dibromoethane	ND		10.0	9.827		ug/L		98	74 - 128	1	20
1,2-Dichlorobenzene	ND		10.0	10.78		ug/L		108	74 - 126	4	20
1,2-Dichloroethane	ND		10.0	10.55		ug/L		105	65 - 140	0	20
1,2-Dichloropropane	ND		10.0	10.61		ug/L		106	75 - 127	0	20
1,3,5-Trimethylbenzene	ND		10.0	10.88		ug/L		109	64 - 144	2	22
1,3-Dichlorobenzene	ND		10.0	10.82		ug/L		108	73 - 125	5	21
1,3-Dichloropropane	ND		10.0	11.13		ug/L		111	71 - 131	1	20
1,4-Dichlorobenzene	ND		10.0	10.51		ug/L		105	73 - 125	4	20
2,2-Dichloropropane	ND		10.0	9.022		ug/L		90	39 - 138	2	20
2-Butanone	ND		10.0	8.844		ug/L		88	44 - 140	1	34
2-Chlorotoluene	ND		10.0	10.68		ug/L		107	71 - 130	2	20
2-Hexanone	ND		10.0	8.718		ug/L		87	52 - 136	5	37
4-Chlorotoluene	ND		10.0	10.56		ug/L		106	69 - 127	2	20
4-Methyl-2-pentanone	ND		10.0	9.319		ug/L		93	44 - 139	9	21

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QC Sample Results

Client: Hargis + Associates, Inc.
Project/Site: Raytheon Main / Task No.: 532.30

Job ID: 570-138935-1

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

Lab Sample ID: 570-138935-10 MSD

Matrix: Water

Analysis Batch: 331683

Client Sample ID: MW-35C_20230516

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Acetone	ND		10.0	9.158		ug/L		92	20 - 174	4	35
Benzene	ND		10.0	10.65		ug/L		107	75 - 125	0	20
Bromobenzene	ND		10.0	10.96		ug/L		110	75 - 132	3	20
Bromochloromethane	ND		10.0	10.53		ug/L		105	75 - 125	2	20
Bromodichloromethane	ND		10.0	10.86		ug/L		109	70 - 137	1	20
Bromoform	ND		10.0	9.773		ug/L		98	51 - 142	1	20
Bromomethane	ND		10.0	11.55		ug/L		116	46 - 164	15	25
cis-1,2-Dichloroethene	ND		10.0	10.61		ug/L		106	62 - 138	0	20
cis-1,3-Dichloropropene	ND		10.0	9.765		ug/L		98	67 - 125	1	20
Carbon disulfide	ND		10.0	10.75		ug/L		107	70 - 132	0	20
Carbon tetrachloride	ND		10.0	10.45		ug/L		105	50 - 159	0	20
Chlorobenzene	ND		10.0	10.85		ug/L		108	75 - 128	2	20
Chloroethane	ND		10.0	11.52		ug/L		115	62 - 161	8	20
Chloroform	ND		10.0	10.00		ug/L		100	73 - 130	1	20
Chloromethane	ND		10.0	12.33		ug/L		123	45 - 157	7	21
Dibromochloromethane	ND		10.0	10.26		ug/L		103	63 - 145	2	20
Dibromomethane	ND		10.0	10.55		ug/L		105	75 - 127	0	20
Dichlorodifluoromethane	ND		10.0	8.435		ug/L		84	31 - 132	5	21
Ethylbenzene	ND		10.0	11.05		ug/L		110	73 - 135	1	20
Isopropylbenzene	ND		10.0	11.65		ug/L		117	69 - 141	2	22
Methylene Chloride	ND		10.0	9.949		ug/L		99	65 - 127	0	20
Methyl-t-Butyl Ether (MTBE)	ND		10.0	10.10		ug/L		101	59 - 131	2	20
Naphthalene	ND		10.0	11.21		ug/L		112	51 - 133	11	25
n-Butylbenzene	ND		10.0	11.21		ug/L		112	66 - 128	5	24
N-Propylbenzene	ND		10.0	11.30		ug/L		113	73 - 136	2	22
o-Xylene	ND		10.0	10.79		ug/L		108	69 - 138	2	20
m,p-Xylene	ND		20.0	22.22		ug/L		111	73 - 138	3	21
p-Isopropyltoluene	ND		10.0	10.64		ug/L		106	69 - 134	4	23
sec-Butylbenzene	ND		10.0	10.62		ug/L		106	70 - 130	3	22
Styrene	ND		10.0	10.54		ug/L		105	45 - 144	1	32
trans-1,2-Dichloroethene	ND		10.0	10.70		ug/L		107	61 - 138	0	21
trans-1,3-Dichloropropene	ND		10.0	10.01		ug/L		100	61 - 131	2	20
tert-Butylbenzene	ND		10.0	10.58		ug/L		106	71 - 131	3	23
Tetrachloroethene	ND		10.0	11.01		ug/L		110	64 - 150	1	23
Toluene	ND		10.0	10.86		ug/L		109	75 - 127	0	20
Trichloroethene	ND		10.0	10.47		ug/L		105	34 - 159	0	23
Trichlorofluoromethane	ND		10.0	10.02		ug/L		100	69 - 142	8	20
Vinyl acetate	ND		10.0	8.681		ug/L		87	35 - 132	4	29
Vinyl chloride	ND		10.0	10.84		ug/L		108	51 - 168	3	20

Surrogate	MSD %Recovery	MSD Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	102		64 - 132
4-Bromofluorobenzene (Surr)	100		76 - 120
Dibromofluoromethane	100		80 - 120
Toluene-d8 (Surr)	101		80 - 120

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QC Sample Results

Client: Hargis + Associates, Inc.
Project/Site: Raytheon Main / Task No.: 532.30

Job ID: 570-138935-1

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

Lab Sample ID: MB 570-331773/7

Matrix: Water

Analysis Batch: 331773

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		ug/L			05/24/23 22:49	1
1,1,1-Trichloroethane	ND		0.50		ug/L			05/24/23 22:49	1
1,1,2,2-Tetrachloroethane	ND		0.50		ug/L			05/24/23 22:49	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.50		ug/L			05/24/23 22:49	1
1,1,2-Trichloroethane	ND		0.50		ug/L			05/24/23 22:49	1
1,1-Dichloroethane	ND		0.50		ug/L			05/24/23 22:49	1
1,1-Dichloroethene	ND		0.50		ug/L			05/24/23 22:49	1
1,1-Dichloropropene	ND		0.50		ug/L			05/24/23 22:49	1
1,2,3-Trichlorobenzene	ND		0.50		ug/L			05/24/23 22:49	1
1,2,3-Trichloropropane	ND		0.50		ug/L			05/24/23 22:49	1
1,2,4-Trichlorobenzene	ND		0.50		ug/L			05/24/23 22:49	1
1,2,4-Trimethylbenzene	ND		0.50		ug/L			05/24/23 22:49	1
1,2-Dibromo-3-Chloropropane	ND		1.0		ug/L			05/24/23 22:49	1
1,2-Dibromoethane	ND		0.50		ug/L			05/24/23 22:49	1
1,2-Dichlorobenzene	ND		0.50		ug/L			05/24/23 22:49	1
1,2-Dichloroethane	ND		0.50		ug/L			05/24/23 22:49	1
1,2-Dichloropropane	ND		0.50		ug/L			05/24/23 22:49	1
1,3,5-Trimethylbenzene	ND		0.50		ug/L			05/24/23 22:49	1
1,3-Dichlorobenzene	ND		0.50		ug/L			05/24/23 22:49	1
1,3-Dichloropropane	ND		0.50		ug/L			05/24/23 22:49	1
1,4-Dichlorobenzene	ND		0.50		ug/L			05/24/23 22:49	1
2,2-Dichloropropane	ND		0.50		ug/L			05/24/23 22:49	1
2-Butanone	ND		5.0		ug/L			05/24/23 22:49	1
2-Chlorotoluene	ND		0.50		ug/L			05/24/23 22:49	1
2-Hexanone	ND		6.0		ug/L			05/24/23 22:49	1
4-Chlorotoluene	ND		0.50		ug/L			05/24/23 22:49	1
4-Methyl-2-pentanone	ND		5.0		ug/L			05/24/23 22:49	1
Acetone	ND		8.0		ug/L			05/24/23 22:49	1
Benzene	ND		0.50		ug/L			05/24/23 22:49	1
Bromobenzene	ND		0.50		ug/L			05/24/23 22:49	1
Bromochloromethane	ND		1.0		ug/L			05/24/23 22:49	1
Bromodichloromethane	ND		0.50		ug/L			05/24/23 22:49	1
Bromoform	ND		0.50		ug/L			05/24/23 22:49	1
Bromomethane	ND		2.0		ug/L			05/24/23 22:49	1
cis-1,2-Dichloroethene	ND		0.50		ug/L			05/24/23 22:49	1
cis-1,3-Dichloropropene	ND		0.50		ug/L			05/24/23 22:49	1
Carbon disulfide	ND		1.0		ug/L			05/24/23 22:49	1
Carbon tetrachloride	ND		0.50		ug/L			05/24/23 22:49	1
Chlorobenzene	ND		0.50		ug/L			05/24/23 22:49	1
Chloroethane	ND		0.50		ug/L			05/24/23 22:49	1
Chloroform	ND		0.50		ug/L			05/24/23 22:49	1
Chloromethane	ND		1.0		ug/L			05/24/23 22:49	1
Dibromochloromethane	ND		0.50		ug/L			05/24/23 22:49	1
Dibromomethane	ND		0.50		ug/L			05/24/23 22:49	1
Dichlorodifluoromethane	ND		1.0		ug/L			05/24/23 22:49	1
Ethylbenzene	ND		0.50		ug/L			05/24/23 22:49	1
Isopropylbenzene	ND		0.50		ug/L			05/24/23 22:49	1
Methylene Chloride	ND		1.0		ug/L			05/24/23 22:49	1

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QC Sample Results

Client: Hargis + Associates, Inc.
Project/Site: Raytheon Main / Task No.: 532.30

Job ID: 570-138935-1

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

Lab Sample ID: MB 570-331773/7

Matrix: Water

Analysis Batch: 331773

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		ug/L			05/24/23 22:49	1
Naphthalene	ND		1.0		ug/L			05/24/23 22:49	1
n-Butylbenzene	ND		0.50		ug/L			05/24/23 22:49	1
N-Propylbenzene	ND		0.50		ug/L			05/24/23 22:49	1
o-Xylene	ND		0.50		ug/L			05/24/23 22:49	1
m,p-Xylene	ND		1.0		ug/L			05/24/23 22:49	1
p-Isopropyltoluene	ND		0.50		ug/L			05/24/23 22:49	1
sec-Butylbenzene	ND		0.50		ug/L			05/24/23 22:49	1
Styrene	ND		0.50		ug/L			05/24/23 22:49	1
trans-1,2-Dichloroethene	ND		0.50		ug/L			05/24/23 22:49	1
trans-1,3-Dichloropropene	ND		0.50		ug/L			05/24/23 22:49	1
tert-Butylbenzene	ND		0.50		ug/L			05/24/23 22:49	1
Tetrachloroethene	ND		0.50		ug/L			05/24/23 22:49	1
Toluene	ND		0.50		ug/L			05/24/23 22:49	1
Trichloroethene	ND		0.50		ug/L			05/24/23 22:49	1
Trichlorofluoromethane	ND		0.50		ug/L			05/24/23 22:49	1
Vinyl acetate	ND		5.0		ug/L			05/24/23 22:49	1
Vinyl chloride	ND		0.50		ug/L			05/24/23 22:49	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	112		64 - 132		05/24/23 22:49	1
4-Bromofluorobenzene (Surr)	97		76 - 120		05/24/23 22:49	1
Dibromofluoromethane	106		80 - 120		05/24/23 22:49	1
Toluene-d8 (Surr)	101		80 - 120		05/24/23 22:49	1

Lab Sample ID: LCS 570-331773/4

Matrix: Water

Analysis Batch: 331773

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	9.860		ug/L		99	80 - 125
1,1,1-Trichloroethane	10.0	10.39		ug/L		104	75 - 121
1,1,2,2-Tetrachloroethane	10.0	10.03		ug/L		100	80 - 120
1,1,2-Trichloro-1,2,2-trifluoroethane	10.0	9.851		ug/L		99	56 - 132
1,1,2-Trichloroethane	10.0	9.634		ug/L		96	80 - 121
1,1-Dichloroethane	10.0	10.56		ug/L		106	80 - 120
1,1-Dichloroethene	10.0	9.999		ug/L		100	80 - 126
1,1-Dichloropropene	10.0	10.61		ug/L		106	72 - 122
1,2,3-Trichlorobenzene	10.0	9.350		ug/L		93	80 - 125
1,2,3-Trichloropropane	10.0	9.617		ug/L		96	75 - 127
1,2,4-Trichlorobenzene	10.0	10.41		ug/L		104	80 - 124
1,2,4-Trimethylbenzene	10.0	11.20		ug/L		112	80 - 128
1,2-Dibromo-3-Chloropropane	10.0	9.313		ug/L		93	63 - 123
1,2-Dibromoethane	10.0	9.406		ug/L		94	80 - 125
1,2-Dichlorobenzene	10.0	10.07		ug/L		101	80 - 120
1,2-Dichloroethane	10.0	9.729		ug/L		97	76 - 130
1,2-Dichloropropane	10.0	10.19		ug/L		102	74 - 124
1,3,5-Trimethylbenzene	10.0	9.905		ug/L		99	80 - 122

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QC Sample Results

Client: Hargis + Associates, Inc.
Project/Site: Raytheon Main / Task No.: 532.30

Job ID: 570-138935-1

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

Lab Sample ID: LCS 570-331773/4

Matrix: Water

Analysis Batch: 331773

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	10.24		ug/L		102	80 - 120
1,3-Dichloropropane	10.0	9.801		ug/L		98	80 - 121
1,4-Dichlorobenzene	10.0	10.17		ug/L		102	80 - 120
2,2-Dichloropropane	10.0	11.65		ug/L		117	79 - 131
2-Butanone	10.0	9.609		ug/L		96	48 - 145
2-Chlorotoluene	10.0	10.43		ug/L		104	80 - 120
2-Hexanone	10.0	9.069		ug/L		91	50 - 149
4-Chlorotoluene	10.0	10.84		ug/L		108	80 - 120
4-Methyl-2-pentanone	10.0	8.262		ug/L		83	63 - 120
Acetone	10.0	9.857		ug/L		99	45 - 139
Benzene	10.0	10.33		ug/L		103	80 - 120
Bromobenzene	10.0	9.545		ug/L		95	80 - 125
Bromochloromethane	10.0	9.544		ug/L		95	80 - 120
Bromodichloromethane	10.0	9.984		ug/L		100	73 - 131
Bromoform	10.0	9.376		ug/L		94	76 - 124
Bromomethane	10.0	8.108		ug/L		81	26 - 180
cis-1,2-Dichloroethene	10.0	10.25		ug/L		103	80 - 120
cis-1,3-Dichloropropene	10.0	10.23		ug/L		102	76 - 123
Carbon disulfide	10.0	10.35		ug/L		103	75 - 123
Carbon tetrachloride	10.0	10.46		ug/L		105	61 - 139
Chlorobenzene	10.0	9.898		ug/L		99	80 - 120
Chloroethane	10.0	9.963		ug/L		100	54 - 150
Chloroform	10.0	10.06		ug/L		101	80 - 120
Chloromethane	10.0	9.047		ug/L		90	28 - 151
Dibromochloromethane	10.0	9.502		ug/L		95	74 - 136
Dibromomethane	10.0	9.343		ug/L		93	80 - 122
Dichlorodifluoromethane	10.0	8.758		ug/L		88	27 - 154
Ethylbenzene	10.0	10.46		ug/L		105	80 - 126
Isopropylbenzene	10.0	9.983		ug/L		100	80 - 120
Methylene Chloride	10.0	10.12		ug/L		101	80 - 120
Methyl-t-Butyl Ether (MTBE)	10.0	9.581		ug/L		96	69 - 128
Naphthalene	10.0	9.165		ug/L		92	70 - 130
n-Butylbenzene	10.0	10.90		ug/L		109	78 - 127
N-Propylbenzene	10.0	11.07		ug/L		111	80 - 121
o-Xylene	10.0	10.46		ug/L		105	80 - 124
m,p-Xylene	20.0	21.84		ug/L		109	80 - 123
p-Isopropyltoluene	10.0	11.36		ug/L		114	80 - 128
sec-Butylbenzene	10.0	11.36		ug/L		114	80 - 125
Styrene	10.0	9.414		ug/L		94	80 - 121
trans-1,2-Dichloroethene	10.0	10.22		ug/L		102	79 - 120
trans-1,3-Dichloropropene	10.0	10.10		ug/L		101	80 - 126
tert-Butylbenzene	10.0	10.84		ug/L		108	80 - 121
Tetrachloroethene	10.0	10.38		ug/L		104	80 - 125
Toluene	10.0	10.10		ug/L		101	80 - 120
Trichloroethene	10.0	9.928		ug/L		99	77 - 124
Trichlorofluoromethane	10.0	7.554		ug/L		76	41 - 163
Vinyl acetate	10.0	11.66		ug/L		117	61 - 126
Vinyl chloride	10.0	8.465		ug/L		85	50 - 160

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QC Sample Results

Client: Hargis + Associates, Inc.
Project/Site: Raytheon Main / Task No.: 532.30

Job ID: 570-138935-1

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

Lab Sample ID: LCS 570-331773/4

Matrix: Water

Analysis Batch: 331773

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Surrogate	LCS		Limits
	%Recovery	Qualifier	
1,2-Dichloroethane-d4 (Surr)	101		64 - 132
4-Bromofluorobenzene (Surr)	103		76 - 120
Dibromofluoromethane	100		80 - 120
Toluene-d8 (Surr)	100		80 - 120

Lab Sample ID: LCSD 570-331773/5

Matrix: Water

Analysis Batch: 331773

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike	LCSD	Unit	D	%Rec	%Rec	RPD	RPD
	Added	Result			Qualifier	Limits		
1,1,1,2-Tetrachloroethane	10.0	10.19	ug/L		102	80 - 125	3	20
1,1,1-Trichloroethane	10.0	11.19	ug/L		112	75 - 121	7	20
1,1,2,2-Tetrachloroethane	10.0	11.01	ug/L		110	80 - 120	9	20
1,1,2-Trichloro-1,2,2-trifluoroethane	10.0	10.82	ug/L		108	56 - 132	9	22
1,1,2-Trichloroethane	10.0	10.40	ug/L		104	80 - 121	8	20
1,1-Dichloroethane	10.0	11.14	ug/L		111	80 - 120	5	20
1,1-Dichloroethene	10.0	11.11	ug/L		111	80 - 126	11	21
1,1-Dichloropropene	10.0	11.30	ug/L		113	72 - 122	6	20
1,2,3-Trichlorobenzene	10.0	10.15	ug/L		102	80 - 125	8	20
1,2,3-Trichloropropane	10.0	10.66	ug/L		107	75 - 127	10	20
1,2,4-Trichlorobenzene	10.0	11.05	ug/L		111	80 - 124	6	20
1,2,4-Trimethylbenzene	10.0	11.36	ug/L		114	80 - 128	1	20
1,2-Dibromo-3-Chloropropane	10.0	10.21	ug/L		102	63 - 123	9	20
1,2-Dibromoethane	10.0	10.23	ug/L		102	80 - 125	8	20
1,2-Dichlorobenzene	10.0	10.42	ug/L		104	80 - 120	3	20
1,2-Dichloroethane	10.0	10.79	ug/L		108	76 - 130	10	20
1,2-Dichloropropane	10.0	11.01	ug/L		110	74 - 124	8	20
1,3,5-Trimethylbenzene	10.0	10.28	ug/L		103	80 - 122	4	20
1,3-Dichlorobenzene	10.0	10.48	ug/L		105	80 - 120	2	20
1,3-Dichloropropane	10.0	10.59	ug/L		106	80 - 121	8	20
1,4-Dichlorobenzene	10.0	10.35	ug/L		103	80 - 120	2	20
2,2-Dichloropropane	10.0	12.21	ug/L		122	79 - 131	5	20
2-Butanone	10.0	10.72	ug/L		107	48 - 145	11	30
2-Chlorotoluene	10.0	10.97	ug/L		110	80 - 120	5	20
2-Hexanone	10.0	10.02	ug/L		100	50 - 149	10	29
4-Chlorotoluene	10.0	10.99	ug/L		110	80 - 120	1	20
4-Methyl-2-pentanone	10.0	9.677	ug/L		97	63 - 120	16	20
Acetone	10.0	10.90	ug/L		109	45 - 139	10	30
Benzene	10.0	10.98	ug/L		110	80 - 120	6	20
Bromobenzene	10.0	10.19	ug/L		102	80 - 125	6	20
Bromochloromethane	10.0	10.59	ug/L		106	80 - 120	10	20
Bromodichloromethane	10.0	11.01	ug/L		110	73 - 131	10	20
Bromoform	10.0	10.26	ug/L		103	76 - 124	9	20
Bromomethane	10.0	8.373	ug/L		84	26 - 180	3	20
cis-1,2-Dichloroethene	10.0	10.93	ug/L		109	80 - 120	6	20
cis-1,3-Dichloropropene	10.0	11.23	ug/L		112	76 - 123	9	20
Carbon disulfide	10.0	11.90	ug/L		119	75 - 123	14	20
Carbon tetrachloride	10.0	11.21	ug/L		112	61 - 139	7	20

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QC Sample Results

Client: Hargis + Associates, Inc.
Project/Site: Raytheon Main / Task No.: 532.30

Job ID: 570-138935-1

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

Lab Sample ID: LCSD 570-331773/5

Matrix: Water

Analysis Batch: 331773

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	10.27		ug/L		103	80 - 120	4	20
Chloroethane	10.0	10.43		ug/L		104	54 - 150	5	25
Chloroform	10.0	10.63		ug/L		106	80 - 120	5	20
Chloromethane	10.0	9.707		ug/L		97	28 - 151	7	20
Dibromochloromethane	10.0	10.40		ug/L		104	74 - 136	9	20
Dibromomethane	10.0	10.56		ug/L		106	80 - 122	12	20
Dichlorodifluoromethane	10.0	9.222		ug/L		92	27 - 154	5	21
Ethylbenzene	10.0	10.90		ug/L		109	80 - 126	4	20
Isopropylbenzene	10.0	10.20		ug/L		102	80 - 120	2	20
Methylene Chloride	10.0	11.15		ug/L		112	80 - 120	10	20
Methyl-t-Butyl Ether (MTBE)	10.0	11.19		ug/L		112	69 - 128	15	20
Naphthalene	10.0	10.58		ug/L		106	70 - 130	14	20
n-Butylbenzene	10.0	11.10		ug/L		111	78 - 127	2	20
N-Propylbenzene	10.0	11.41		ug/L		114	80 - 121	3	20
o-Xylene	10.0	10.77		ug/L		108	80 - 124	3	20
m,p-Xylene	20.0	22.61		ug/L		113	80 - 123	3	20
p-Isopropyltoluene	10.0	11.44		ug/L		114	80 - 128	1	20
sec-Butylbenzene	10.0	11.69		ug/L		117	80 - 125	3	20
Styrene	10.0	9.770		ug/L		98	80 - 121	4	20
trans-1,2-Dichloroethene	10.0	11.10		ug/L		111	79 - 120	8	20
trans-1,3-Dichloropropene	10.0	10.94		ug/L		109	80 - 126	8	20
tert-Butylbenzene	10.0	11.03		ug/L		110	80 - 121	2	20
Tetrachloroethene	10.0	10.71		ug/L		107	80 - 125	3	20
Toluene	10.0	10.94		ug/L		109	80 - 120	8	20
Trichloroethene	10.0	10.65		ug/L		107	77 - 124	7	20
Trichlorofluoromethane	10.0	8.422		ug/L		84	41 - 163	11	21
Vinyl acetate	10.0	12.67	*+ me	ug/L		127	61 - 126	8	24
Vinyl chloride	10.0	9.201		ug/L		92	50 - 160	8	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	106		64 - 132
4-Bromofluorobenzene (Surr)	101		76 - 120
Dibromofluoromethane	101		80 - 120
Toluene-d8 (Surr)	101		80 - 120

Lab Sample ID: 570-138935-19 MS

Matrix: Water

Analysis Batch: 331773

Client Sample ID: MW-43_20230517

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
1,1,1,2-Tetrachloroethane	ND	F2	10.0	13.30		ug/L		133	61 - 142
1,1,1-Trichloroethane	ND		10.0	11.53		ug/L		115	68 - 138
1,1,2,2-Tetrachloroethane	ND	F1 F2	10.0	15.51	F1	ug/L		155	71 - 133
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		10.0	8.387		ug/L		84	51 - 132
1,1,2-Trichloroethane	ND	F1 F2	10.0	13.77	F1	ug/L		138	70 - 132
1,1-Dichloroethane	ND		10.0	11.88		ug/L		119	70 - 132
1,1-Dichloroethene	ND		10.0	11.52		ug/L		115	57 - 148
1,1-Dichloropropene	ND		10.0	11.34		ug/L		113	74 - 132

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QC Sample Results

Client: Hargis + Associates, Inc.
Project/Site: Raytheon Main / Task No.: 532.30

Job ID: 570-138935-1

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

Lab Sample ID: 570-138935-19 MS

Matrix: Water

Analysis Batch: 331773

Client Sample ID: MW-43_20230517

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
1,2,3-Trichlorobenzene	ND	F2	10.0	12.66		ug/L		127	66 - 135
1,2,3-Trichloropropane	ND	F1 F2	10.0	14.33	F1	ug/L		143	61 - 130
1,2,4-Trichlorobenzene	ND	F1 F2	10.0	13.67	F1	ug/L		137	66 - 131
1,2,4-Trimethylbenzene	ND	F2	10.0	13.12		ug/L		131	65 - 132
1,2-Dibromo-3-Chloropropane	ND	F1 F2	10.0	13.85	F1	ug/L		138	48 - 132
1,2-Dibromoethane	ND	F1 F2	10.0	13.06	F1	ug/L		131	74 - 128
1,2-Dichlorobenzene	ND	F1 F2	10.0	13.25	F1	ug/L		132	74 - 126
1,2-Dichloroethane	ND		10.0	11.86		ug/L		119	65 - 140
1,2-Dichloropropane	ND		10.0	12.52		ug/L		125	75 - 127
1,3,5-Trimethylbenzene	ND	F2	10.0	12.42		ug/L		124	64 - 144
1,3-Dichlorobenzene	ND	F1 F2	10.0	12.87	F1	ug/L		129	73 - 125
1,3-Dichloropropane	ND	F1 F2	10.0	13.55	F1	ug/L		135	71 - 131
1,4-Dichlorobenzene	ND	F1 F2	10.0	12.90	F1	ug/L		129	73 - 125
2,2-Dichloropropane	ND		10.0	8.623		ug/L		86	39 - 138
2-Butanone	ND		10.0	13.60		ug/L		136	44 - 140
2-Chlorotoluene	ND	F1 F2	10.0	13.54	F1	ug/L		135	71 - 130
2-Hexanone	ND	F1 F2	10.0	13.81	F1	ug/L		138	52 - 136
4-Chlorotoluene	ND	F1 F2	10.0	13.28	F1	ug/L		133	69 - 127
4-Methyl-2-pentanone	ND	F2	10.0	13.54		ug/L		135	44 - 139
Acetone	ND		10.0	11.37		ug/L		114	20 - 174
Benzene	ND		10.0	11.50		ug/L		115	75 - 125
Bromobenzene	ND	F2	10.0	13.21		ug/L		132	75 - 132
Bromochloromethane	ND		10.0	12.35		ug/L		124	75 - 125
Bromodichloromethane	ND	F2	10.0	13.28		ug/L		133	70 - 137
Bromoform	ND	F2	10.0	13.88		ug/L		139	51 - 142
Bromomethane	ND		10.0	10.53		ug/L		105	46 - 164
cis-1,2-Dichloroethene	ND		10.0	11.92		ug/L		119	62 - 138
cis-1,3-Dichloropropene	ND	F2	10.0	11.67		ug/L		117	67 - 125
Carbon disulfide	ND		10.0	11.43		ug/L		114	70 - 132
Carbon tetrachloride	ND		10.0	11.13		ug/L		111	50 - 159
Chlorobenzene	ND	F2	10.0	12.56		ug/L		126	75 - 128
Chloroethane	ND		10.0	12.78		ug/L		128	62 - 161
Chloroform	ND		10.0	11.87		ug/L		119	73 - 130
Chloromethane	ND		10.0	11.37		ug/L		114	45 - 157
Dibromochloromethane	ND	F2	10.0	13.78		ug/L		138	63 - 145
Dibromomethane	ND		10.0	12.30		ug/L		123	75 - 127
Dichlorodifluoromethane	ND		10.0	9.031		ug/L		90	31 - 132
Ethylbenzene	ND		10.0	12.78		ug/L		128	73 - 135
Isopropylbenzene	ND		10.0	13.04		ug/L		130	69 - 141
Methylene Chloride	ND		10.0	11.55		ug/L		115	65 - 127
Methyl-t-Butyl Ether (MTBE)	ND		10.0	11.84		ug/L		118	59 - 131
Naphthalene	ND	F1 F2	10.0	13.83	F1	ug/L		138	51 - 133
n-Butylbenzene	ND		10.0	12.09		ug/L		121	66 - 128
N-Propylbenzene	ND	F1	10.0	13.67	F1	ug/L		137	73 - 136
o-Xylene	ND	F2	10.0	12.75		ug/L		127	69 - 138
m,p-Xylene	ND		20.0	26.48		ug/L		132	73 - 138
p-Isopropyltoluene	ND		10.0	12.96		ug/L		130	69 - 134
sec-Butylbenzene	ND	F1	10.0	13.44	F1	ug/L		134	70 - 130
Styrene	ND		10.0	12.26		ug/L		123	45 - 144

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QC Sample Results

Client: Hargis + Associates, Inc.
Project/Site: Raytheon Main / Task No.: 532.30

Job ID: 570-138935-1

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

Lab Sample ID: 570-138935-19 MS

Matrix: Water

Analysis Batch: 331773

Client Sample ID: MW-43_20230517

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
trans-1,2-Dichloroethene	ND		10.0	11.40		ug/L		114	61 - 138
trans-1,3-Dichloropropene	ND	F1 F2	10.0	13.18	F1	ug/L		132	61 - 131
tert-Butylbenzene	ND	F2	10.0	12.97		ug/L		130	71 - 131
Tetrachloroethene	ND		10.0	11.46		ug/L		115	64 - 150
Toluene	ND		10.0	12.10		ug/L		121	75 - 127
Trichloroethene	ND		10.0	11.63		ug/L		116	34 - 159
Trichlorofluoromethane	ND		10.0	10.24		ug/L		102	69 - 142
Vinyl acetate	ND	*+	10.0	10.71		ug/L		107	35 - 132
Vinyl chloride	ND		10.0	11.53		ug/L		115	51 - 168

Surrogate	MS %Recovery	MS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	110		64 - 132
4-Bromofluorobenzene (Surr)	102		76 - 120
Dibromofluoromethane	104		80 - 120
Toluene-d8 (Surr)	100		80 - 120

Lab Sample ID: 570-138935-19 MSD

Matrix: Water

Analysis Batch: 331773

Client Sample ID: MW-43_20230517

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
1,1,1,2-Tetrachloroethane	ND	F2	10.0	10.15	F2	ug/L		102	61 - 142	27	20
1,1,1-Trichloroethane	ND		10.0	10.48		ug/L		105	68 - 138	10	20
1,1,2,2-Tetrachloroethane	ND	F1 F2	10.0	10.89	F2	ug/L		109	71 - 133	35	20
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		10.0	6.938		ug/L		69	51 - 132	19	21
1,1,2-Trichloroethane	ND	F1 F2	10.0	10.31	F2	ug/L		103	70 - 132	29	20
1,1-Dichloroethane	ND		10.0	10.90		ug/L		109	70 - 132	9	20
1,1-Dichloroethene	ND		10.0	10.64		ug/L		106	57 - 148	8	20
1,1-Dichloropropene	ND		10.0	10.37		ug/L		104	74 - 132	9	20
1,2,3-Trichlorobenzene	ND	F2	10.0	9.801	F2	ug/L		98	66 - 135	25	22
1,2,3-Trichloropropane	ND	F1 F2	10.0	10.29	F2	ug/L		103	61 - 130	33	20
1,2,4-Trichlorobenzene	ND	F1 F2	10.0	10.66	F2	ug/L		107	66 - 131	25	24
1,2,4-Trimethylbenzene	ND	F2	10.0	10.42	F2	ug/L		104	65 - 132	23	22
1,2-Dibromo-3-Chloropropane	ND	F1 F2	10.0	9.185	F2	ug/L		92	48 - 132	41	20
1,2-Dibromoethane	ND	F1 F2	10.0	10.31	F2	ug/L		103	74 - 128	23	20
1,2-Dichlorobenzene	ND	F1 F2	10.0	10.21	F2	ug/L		102	74 - 126	26	20
1,2-Dichloroethane	ND		10.0	10.50		ug/L		105	65 - 140	12	20
1,2-Dichloropropane	ND		10.0	10.43		ug/L		104	75 - 127	18	20
1,3,5-Trimethylbenzene	ND	F2	10.0	9.864	F2	ug/L		99	64 - 144	23	22
1,3-Dichlorobenzene	ND	F1 F2	10.0	10.07	F2	ug/L		101	73 - 125	24	21
1,3-Dichloropropane	ND	F1 F2	10.0	10.66	F2	ug/L		107	71 - 131	24	20
1,4-Dichlorobenzene	ND	F1 F2	10.0	10.14	F2	ug/L		101	73 - 125	24	20
2,2-Dichloropropane	ND		10.0	7.517		ug/L		75	39 - 138	14	20
2-Butanone	ND		10.0	9.911		ug/L		99	44 - 140	31	34
2-Chlorotoluene	ND	F1 F2	10.0	10.63	F2	ug/L		106	71 - 130	24	20
2-Hexanone	ND	F1 F2	10.0	9.399	F2	ug/L		94	52 - 136	38	37
4-Chlorotoluene	ND	F1 F2	10.0	10.44	F2	ug/L		104	69 - 127	24	20
4-Methyl-2-pentanone	ND	F2	10.0	9.164	F2	ug/L		92	44 - 139	39	21

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QC Sample Results

Client: Hargis + Associates, Inc.
Project/Site: Raytheon Main / Task No.: 532.30

Job ID: 570-138935-1

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

Lab Sample ID: 570-138935-19 MSD

Matrix: Water

Analysis Batch: 331773

Client Sample ID: MW-43_20230517

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Acetone	ND		10.0	10.77		ug/L		108	20 - 174	5	35
Benzene	ND		10.0	10.58		ug/L		106	75 - 125	8	20
Bromobenzene	ND	F2	10.0	10.16	F2	ug/L		102	75 - 132	26	20
Bromochloromethane	ND		10.0	10.73		ug/L		107	75 - 125	14	20
Bromodichloromethane	ND	F2	10.0	10.63	F2	ug/L		106	70 - 137	22	20
Bromoform	ND	F2	10.0	9.936	F2	ug/L		99	51 - 142	33	20
Bromomethane	ND		10.0	10.42		ug/L		104	46 - 164	1	25
cis-1,2-Dichloroethene	ND		10.0	10.48		ug/L		105	62 - 138	13	20
cis-1,3-Dichloropropene	ND	F2	10.0	9.371	F2	ug/L		94	67 - 125	22	20
Carbon disulfide	ND		10.0	10.34		ug/L		103	70 - 132	10	20
Carbon tetrachloride	ND		10.0	10.16		ug/L		102	50 - 159	9	20
Chlorobenzene	ND	F2	10.0	9.867	F2	ug/L		99	75 - 128	24	20
Chloroethane	ND		10.0	11.89		ug/L		119	62 - 161	7	20
Chloroform	ND		10.0	10.32		ug/L		103	73 - 130	14	20
Chloromethane	ND		10.0	11.74		ug/L		117	45 - 157	3	21
Dibromochloromethane	ND	F2	10.0	10.39	F2	ug/L		104	63 - 145	28	20
Dibromomethane	ND		10.0	10.45		ug/L		104	75 - 127	16	20
Dichlorodifluoromethane	ND		10.0	8.701		ug/L		87	31 - 132	4	21
Ethylbenzene	ND		10.0	10.44		ug/L		104	73 - 135	20	20
Isopropylbenzene	ND		10.0	10.46		ug/L		105	69 - 141	22	22
Methylene Chloride	ND		10.0	10.71		ug/L		107	65 - 127	8	20
Methyl-t-Butyl Ether (MTBE)	ND		10.0	10.78		ug/L		108	59 - 131	9	20
Naphthalene	ND	F1 F2	10.0	10.20	F2	ug/L		102	51 - 133	30	25
n-Butylbenzene	ND		10.0	9.877		ug/L		99	66 - 128	20	24
N-Propylbenzene	ND	F1	10.0	11.02		ug/L		110	73 - 136	21	22
o-Xylene	ND	F2	10.0	10.23	F2	ug/L		102	69 - 138	22	20
m,p-Xylene	ND		20.0	21.54		ug/L		108	73 - 138	21	21
p-Isopropyltoluene	ND		10.0	10.56		ug/L		106	69 - 134	20	23
sec-Butylbenzene	ND	F1	10.0	10.73		ug/L		107	70 - 130	22	22
Styrene	ND		10.0	9.503		ug/L		95	45 - 144	25	32
trans-1,2-Dichloroethene	ND		10.0	10.74		ug/L		107	61 - 138	6	21
trans-1,3-Dichloropropene	ND	F1 F2	10.0	10.17	F2	ug/L		102	61 - 131	26	20
tert-Butylbenzene	ND	F2	10.0	10.16	F2	ug/L		102	71 - 131	24	23
Tetrachloroethene	ND		10.0	10.16		ug/L		102	64 - 150	12	23
Toluene	ND		10.0	10.28		ug/L		103	75 - 127	16	20
Trichloroethene	ND		10.0	10.04		ug/L		100	34 - 159	15	23
Trichlorofluoromethane	ND		10.0	9.726		ug/L		97	69 - 142	5	20
Vinyl acetate	ND	++	10.0	8.735		ug/L		87	35 - 132	20	29
Vinyl chloride	ND		10.0	11.29		ug/L		113	51 - 168	2	20

Surrogate	MSD %Recovery	MSD Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	108		64 - 132
4-Bromofluorobenzene (Surr)	103		76 - 120
Dibromofluoromethane	103		80 - 120
Toluene-d8 (Surr)	99		80 - 120

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QC Sample Results

Client: Hargis + Associates, Inc.
Project/Site: Raytheon Main / Task No.: 532.30

Job ID: 570-138935-1

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

Lab Sample ID: MB 570-332106/6

Matrix: Water

Analysis Batch: 332106

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		ug/L			05/25/23 19:58	1
1,1,1-Trichloroethane	ND		0.50		ug/L			05/25/23 19:58	1
1,1,2,2-Tetrachloroethane	ND		0.50		ug/L			05/25/23 19:58	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.50		ug/L			05/25/23 19:58	1
1,1,2-Trichloroethane	ND		0.50		ug/L			05/25/23 19:58	1
1,1-Dichloroethane	ND		0.50		ug/L			05/25/23 19:58	1
1,1-Dichloroethene	ND		0.50		ug/L			05/25/23 19:58	1
1,1-Dichloropropene	ND		0.50		ug/L			05/25/23 19:58	1
1,2,3-Trichlorobenzene	ND		0.50		ug/L			05/25/23 19:58	1
1,2,3-Trichloropropane	ND		0.50		ug/L			05/25/23 19:58	1
1,2,4-Trichlorobenzene	ND		0.50		ug/L			05/25/23 19:58	1
1,2,4-Trimethylbenzene	ND		0.50		ug/L			05/25/23 19:58	1
1,2-Dibromo-3-Chloropropane	ND		1.0		ug/L			05/25/23 19:58	1
1,2-Dibromoethane	ND		0.50		ug/L			05/25/23 19:58	1
1,2-Dichlorobenzene	ND		0.50		ug/L			05/25/23 19:58	1
1,2-Dichloroethane	ND		0.50		ug/L			05/25/23 19:58	1
1,2-Dichloropropane	ND		0.50		ug/L			05/25/23 19:58	1
1,3,5-Trimethylbenzene	ND		0.50		ug/L			05/25/23 19:58	1
1,3-Dichlorobenzene	ND		0.50		ug/L			05/25/23 19:58	1
1,3-Dichloropropane	ND		0.50		ug/L			05/25/23 19:58	1
1,4-Dichlorobenzene	ND		0.50		ug/L			05/25/23 19:58	1
2,2-Dichloropropane	ND		0.50		ug/L			05/25/23 19:58	1
2-Butanone	ND		5.0		ug/L			05/25/23 19:58	1
2-Chlorotoluene	ND		0.50		ug/L			05/25/23 19:58	1
2-Hexanone	ND		6.0		ug/L			05/25/23 19:58	1
4-Chlorotoluene	ND		0.50		ug/L			05/25/23 19:58	1
4-Methyl-2-pentanone	ND		5.0		ug/L			05/25/23 19:58	1
Acetone	ND		8.0		ug/L			05/25/23 19:58	1
Benzene	ND		0.50		ug/L			05/25/23 19:58	1
Bromobenzene	ND		0.50		ug/L			05/25/23 19:58	1
Bromochloromethane	ND		1.0		ug/L			05/25/23 19:58	1
Bromodichloromethane	ND		0.50		ug/L			05/25/23 19:58	1
Bromoform	ND		0.50		ug/L			05/25/23 19:58	1
Bromomethane	ND		2.0		ug/L			05/25/23 19:58	1
cis-1,2-Dichloroethene	ND		0.50		ug/L			05/25/23 19:58	1
cis-1,3-Dichloropropene	ND		0.50		ug/L			05/25/23 19:58	1
Carbon disulfide	ND		1.0		ug/L			05/25/23 19:58	1
Carbon tetrachloride	ND		0.50		ug/L			05/25/23 19:58	1
Chlorobenzene	ND		0.50		ug/L			05/25/23 19:58	1
Chloroethane	ND		0.50		ug/L			05/25/23 19:58	1
Chloroform	ND		0.50		ug/L			05/25/23 19:58	1
Chloromethane	ND		1.0		ug/L			05/25/23 19:58	1
Dibromochloromethane	ND		0.50		ug/L			05/25/23 19:58	1
Dibromomethane	ND		0.50		ug/L			05/25/23 19:58	1
Dichlorodifluoromethane	ND		1.0		ug/L			05/25/23 19:58	1
Ethylbenzene	ND		0.50		ug/L			05/25/23 19:58	1
Isopropylbenzene	ND		0.50		ug/L			05/25/23 19:58	1
Methylene Chloride	ND		1.0		ug/L			05/25/23 19:58	1

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QC Sample Results

Client: Hargis + Associates, Inc.
Project/Site: Raytheon Main / Task No.: 532.30

Job ID: 570-138935-1

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

Lab Sample ID: MB 570-332106/6

Matrix: Water

Analysis Batch: 332106

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		ug/L			05/25/23 19:58	1
Naphthalene	ND		1.0		ug/L			05/25/23 19:58	1
n-Butylbenzene	ND		0.50		ug/L			05/25/23 19:58	1
N-Propylbenzene	ND		0.50		ug/L			05/25/23 19:58	1
o-Xylene	ND		0.50		ug/L			05/25/23 19:58	1
m,p-Xylene	ND		1.0		ug/L			05/25/23 19:58	1
p-Isopropyltoluene	ND		0.50		ug/L			05/25/23 19:58	1
sec-Butylbenzene	ND		0.50		ug/L			05/25/23 19:58	1
Styrene	ND		0.50		ug/L			05/25/23 19:58	1
trans-1,2-Dichloroethene	ND		0.50		ug/L			05/25/23 19:58	1
trans-1,3-Dichloropropene	ND		0.50		ug/L			05/25/23 19:58	1
tert-Butylbenzene	ND		0.50		ug/L			05/25/23 19:58	1
Tetrachloroethene	ND		0.50		ug/L			05/25/23 19:58	1
Toluene	ND		0.50		ug/L			05/25/23 19:58	1
Trichloroethene	ND		0.50		ug/L			05/25/23 19:58	1
Trichlorofluoromethane	ND		0.50		ug/L			05/25/23 19:58	1
Vinyl acetate	ND		5.0		ug/L			05/25/23 19:58	1
Vinyl chloride	ND		0.50		ug/L			05/25/23 19:58	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	98		64 - 132		05/25/23 19:58	1
4-Bromofluorobenzene (Surr)	95		76 - 120		05/25/23 19:58	1
Dibromofluoromethane	97		80 - 120		05/25/23 19:58	1
Toluene-d8 (Surr)	101		80 - 120		05/25/23 19:58	1

Lab Sample ID: LCS 570-332106/3

Matrix: Water

Analysis Batch: 332106

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	11.13		ug/L		111	80 - 125
1,1,1-Trichloroethane	10.0	9.543		ug/L		95	75 - 121
1,1,2,2-Tetrachloroethane	10.0	10.55		ug/L		105	80 - 120
1,1,2-Trichloro-1,2,2-trifluoroethane	10.0	9.992		ug/L		100	56 - 132
1,1,2-Trichloroethane	10.0	11.07		ug/L		111	80 - 121
1,1-Dichloroethane	10.0	10.18		ug/L		102	80 - 120
1,1-Dichloroethene	10.0	9.861		ug/L		99	80 - 126
1,1-Dichloropropene	10.0	9.378		ug/L		94	72 - 122
1,2,3-Trichlorobenzene	10.0	11.24		ug/L		112	80 - 125
1,2,3-Trichloropropane	10.0	10.64		ug/L		106	75 - 127
1,2,4-Trichlorobenzene	10.0	11.37		ug/L		114	80 - 124
1,2,4-Trimethylbenzene	10.0	10.17		ug/L		102	80 - 128
1,2-Dibromo-3-Chloropropane	10.0	9.266		ug/L		93	63 - 123
1,2-Dibromoethane	10.0	10.08		ug/L		101	80 - 125
1,2-Dichlorobenzene	10.0	10.49		ug/L		105	80 - 120
1,2-Dichloroethane	10.0	10.50		ug/L		105	76 - 130
1,2-Dichloropropane	10.0	10.37		ug/L		104	74 - 124
1,3,5-Trimethylbenzene	10.0	10.70		ug/L		107	80 - 122

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QC Sample Results

Client: Hargis + Associates, Inc.
Project/Site: Raytheon Main / Task No.: 532.30

Job ID: 570-138935-1

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

Lab Sample ID: LCS 570-332106/3

Matrix: Water

Analysis Batch: 332106

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	10.46		ug/L		105	80 - 120
1,3-Dichloropropane	10.0	11.32		ug/L		113	80 - 121
1,4-Dichlorobenzene	10.0	10.30		ug/L		103	80 - 120
2,2-Dichloropropane	10.0	9.767		ug/L		98	79 - 131
2-Butanone	10.0	9.734		ug/L		97	48 - 145
2-Chlorotoluene	10.0	10.35		ug/L		103	80 - 120
2-Hexanone	10.0	10.30		ug/L		103	50 - 149
4-Chlorotoluene	10.0	10.30		ug/L		103	80 - 120
4-Methyl-2-pentanone	10.0	9.196		ug/L		92	63 - 120
Acetone	10.0	10.87		ug/L		109	45 - 139
Benzene	10.0	10.08		ug/L		101	80 - 120
Bromobenzene	10.0	10.75		ug/L		108	80 - 125
Bromochloromethane	10.0	10.50		ug/L		105	80 - 120
Bromodichloromethane	10.0	10.65		ug/L		107	73 - 131
Bromoform	10.0	9.847		ug/L		98	76 - 124
Bromomethane	10.0	10.42		ug/L		104	26 - 180
cis-1,2-Dichloroethene	10.0	10.33		ug/L		103	80 - 120
cis-1,3-Dichloropropene	10.0	9.875		ug/L		99	76 - 123
Carbon disulfide	10.0	9.477		ug/L		95	75 - 123
Carbon tetrachloride	10.0	9.378		ug/L		94	61 - 139
Chlorobenzene	10.0	10.59		ug/L		106	80 - 120
Chloroethane	10.0	9.535		ug/L		95	54 - 150
Chloroform	10.0	9.931		ug/L		99	80 - 120
Chloromethane	10.0	11.40		ug/L		114	28 - 151
Dibromochloromethane	10.0	10.30		ug/L		103	74 - 136
Dibromomethane	10.0	10.60		ug/L		106	80 - 122
Dichlorodifluoromethane	10.0	10.62		ug/L		106	27 - 154
Ethylbenzene	10.0	10.60		ug/L		106	80 - 126
Isopropylbenzene	10.0	10.95		ug/L		110	80 - 120
Methylene Chloride	10.0	9.607		ug/L		96	80 - 120
Methyl-t-Butyl Ether (MTBE)	10.0	10.31		ug/L		103	69 - 128
Naphthalene	10.0	11.95		ug/L		120	70 - 130
n-Butylbenzene	10.0	10.80		ug/L		108	78 - 127
N-Propylbenzene	10.0	10.74		ug/L		107	80 - 121
o-Xylene	10.0	10.65		ug/L		106	80 - 124
m,p-Xylene	20.0	21.37		ug/L		107	80 - 123
p-Isopropyltoluene	10.0	10.11		ug/L		101	80 - 128
sec-Butylbenzene	10.0	10.04		ug/L		100	80 - 125
Styrene	10.0	10.97		ug/L		110	80 - 121
trans-1,2-Dichloroethene	10.0	10.01		ug/L		100	79 - 120
trans-1,3-Dichloropropene	10.0	10.25		ug/L		103	80 - 126
tert-Butylbenzene	10.0	9.827		ug/L		98	80 - 121
Tetrachloroethene	10.0	10.41		ug/L		104	80 - 125
Toluene	10.0	10.29		ug/L		103	80 - 120
Trichloroethene	10.0	9.901		ug/L		99	77 - 124
Trichlorofluoromethane	10.0	11.53		ug/L		115	41 - 163
Vinyl acetate	10.0	8.864		ug/L		89	61 - 126
Vinyl chloride	10.0	10.33		ug/L		103	50 - 160

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QC Sample Results

Client: Hargis + Associates, Inc.
Project/Site: Raytheon Main / Task No.: 532.30

Job ID: 570-138935-1

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

Lab Sample ID: LCS 570-332106/3

Matrix: Water

Analysis Batch: 332106

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	103		64 - 132
4-Bromofluorobenzene (Surr)	100		76 - 120
Dibromofluoromethane	100		80 - 120
Toluene-d8 (Surr)	100		80 - 120

Lab Sample ID: LCSD 570-332106/4

Matrix: Water

Analysis Batch: 332106

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	10.75		ug/L		108	80 - 125	3	20
1,1,1-Trichloroethane	10.0	9.245		ug/L		92	75 - 121	3	20
1,1,2,2-Tetrachloroethane	10.0	10.31		ug/L		103	80 - 120	2	20
1,1,2-Trichloro-1,2,2-trifluoroethane	10.0	9.436		ug/L		94	56 - 132	6	22
1,1,2-Trichloroethane	10.0	10.82		ug/L		108	80 - 121	2	20
1,1-Dichloroethane	10.0	9.828		ug/L		98	80 - 120	4	20
1,1-Dichloroethene	10.0	9.445		ug/L		94	80 - 126	4	21
1,1-Dichloropropene	10.0	9.088		ug/L		91	72 - 122	3	20
1,2,3-Trichlorobenzene	10.0	10.96		ug/L		110	80 - 125	3	20
1,2,3-Trichloropropane	10.0	10.51		ug/L		105	75 - 127	1	20
1,2,4-Trichlorobenzene	10.0	10.92		ug/L		109	80 - 124	4	20
1,2,4-Trimethylbenzene	10.0	9.964		ug/L		100	80 - 128	2	20
1,2-Dibromo-3-Chloropropane	10.0	9.182		ug/L		92	63 - 123	1	20
1,2-Dibromoethane	10.0	9.892		ug/L		99	80 - 125	2	20
1,2-Dichlorobenzene	10.0	10.49		ug/L		105	80 - 120	0	20
1,2-Dichloroethane	10.0	10.15		ug/L		101	76 - 130	3	20
1,2-Dichloropropane	10.0	10.17		ug/L		102	74 - 124	2	20
1,3,5-Trimethylbenzene	10.0	10.19		ug/L		102	80 - 122	5	20
1,3-Dichlorobenzene	10.0	10.30		ug/L		103	80 - 120	1	20
1,3-Dichloropropane	10.0	11.12		ug/L		111	80 - 121	2	20
1,4-Dichlorobenzene	10.0	10.06		ug/L		101	80 - 120	2	20
2,2-Dichloropropane	10.0	9.391		ug/L		94	79 - 131	4	20
2-Butanone	10.0	8.965		ug/L		90	48 - 145	8	30
2-Chlorotoluene	10.0	9.911		ug/L		99	80 - 120	4	20
2-Hexanone	10.0	9.569		ug/L		96	50 - 149	7	29
4-Chlorotoluene	10.0	10.04		ug/L		100	80 - 120	3	20
4-Methyl-2-pentanone	10.0	8.693		ug/L		87	63 - 120	6	20
Acetone	10.0	11.06		ug/L		111	45 - 139	2	30
Benzene	10.0	9.835		ug/L		98	80 - 120	2	20
Bromobenzene	10.0	10.38		ug/L		104	80 - 125	3	20
Bromochloromethane	10.0	10.13		ug/L		101	80 - 120	4	20
Bromodichloromethane	10.0	10.40		ug/L		104	73 - 131	2	20
Bromoform	10.0	9.673		ug/L		97	76 - 124	2	20
Bromomethane	10.0	10.10		ug/L		101	26 - 180	3	20
cis-1,2-Dichloroethene	10.0	9.975		ug/L		100	80 - 120	4	20
cis-1,3-Dichloropropene	10.0	9.727		ug/L		97	76 - 123	2	20
Carbon disulfide	10.0	8.867		ug/L		89	75 - 123	7	20
Carbon tetrachloride	10.0	9.194		ug/L		92	61 - 139	2	20

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QC Sample Results

Client: Hargis + Associates, Inc.
Project/Site: Raytheon Main / Task No.: 532.30

Job ID: 570-138935-1

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

Lab Sample ID: LCSD 570-332106/4

Matrix: Water

Analysis Batch: 332106

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	10.35		ug/L		103	80 - 120	2	20
Chloroethane	10.0	10.56		ug/L		106	54 - 150	10	25
Chloroform	10.0	9.538		ug/L		95	80 - 120	4	20
Chloromethane	10.0	10.93		ug/L		109	28 - 151	4	20
Dibromochloromethane	10.0	10.04		ug/L		100	74 - 136	3	20
Dibromomethane	10.0	10.29		ug/L		103	80 - 122	3	20
Dichlorodifluoromethane	10.0	10.00		ug/L		100	27 - 154	6	21
Ethylbenzene	10.0	10.24		ug/L		102	80 - 126	3	20
Isopropylbenzene	10.0	10.66		ug/L		107	80 - 120	3	20
Methylene Chloride	10.0	9.159		ug/L		92	80 - 120	5	20
Methyl-t-Butyl Ether (MTBE)	10.0	9.813		ug/L		98	69 - 128	5	20
Naphthalene	10.0	11.70		ug/L		117	70 - 130	2	20
n-Butylbenzene	10.0	10.55		ug/L		105	78 - 127	2	20
N-Propylbenzene	10.0	10.34		ug/L		103	80 - 121	4	20
o-Xylene	10.0	10.17		ug/L		102	80 - 124	5	20
m,p-Xylene	20.0	20.77		ug/L		104	80 - 123	3	20
p-Isopropyltoluene	10.0	9.841		ug/L		98	80 - 128	3	20
sec-Butylbenzene	10.0	9.786		ug/L		98	80 - 125	3	20
Styrene	10.0	10.59		ug/L		106	80 - 121	4	20
trans-1,2-Dichloroethene	10.0	9.656		ug/L		97	79 - 120	4	20
trans-1,3-Dichloropropene	10.0	9.977		ug/L		100	80 - 126	3	20
tert-Butylbenzene	10.0	9.723		ug/L		97	80 - 121	1	20
Tetrachloroethene	10.0	10.09		ug/L		101	80 - 125	3	20
Toluene	10.0	10.03		ug/L		100	80 - 120	3	20
Trichloroethene	10.0	9.818		ug/L		98	77 - 124	1	20
Trichlorofluoromethane	10.0	11.15		ug/L		111	41 - 163	3	21
Vinyl acetate	10.0	7.810		ug/L		78	61 - 126	13	24
Vinyl chloride	10.0	9.854		ug/L		99	50 - 160	5	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	103		64 - 132
4-Bromofluorobenzene (Surr)	98		76 - 120
Dibromofluoromethane	99		80 - 120
Toluene-d8 (Surr)	101		80 - 120

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

Lab Sample ID: MB 570-330747/1-A

Matrix: Water

Analysis Batch: 330882

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 330747

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	ND		0.50		ug/L		05/22/23 08:02	05/22/23 16:00	1
Isotope Dilution	MB %Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,4-Dioxane-d8	55		21 - 120				05/22/23 08:02	05/22/23 16:00	1

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QC Sample Results

Client: Hargis + Associates, Inc.
Project/Site: Raytheon Main / Task No.: 532.30

Job ID: 570-138935-1

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

Lab Sample ID: MB 570-330747/1-A
Matrix: Water
Analysis Batch: 330882

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 330747

Surrogate	MB	MB	Limits	Prepared	Analyzed	Dil Fac
Nitrobenzene-d5	93		58 - 135	05/22/23 08:02	05/22/23 16:00	1

Lab Sample ID: LCS 570-330747/2-A
Matrix: Water
Analysis Batch: 330882

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 330747

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
1,4-Dioxane	20.0	16.36		ug/L		82	63 - 144
Isotope Dilution	%Recovery	LCS Qualifier	Limits				
1,4-Dioxane-d8	53		21 - 120				
Surrogate	%Recovery	LCS Qualifier	Limits				
Nitrobenzene-d5	84		58 - 135				

Lab Sample ID: LCSD 570-330747/3-A
Matrix: Water
Analysis Batch: 330882

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 330747

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
1,4-Dioxane	20.0	16.10		ug/L		81	63 - 144	2	20
Isotope Dilution	%Recovery	LCSD Qualifier	Limits						
1,4-Dioxane-d8	60		21 - 120						
Surrogate	%Recovery	LCSD Qualifier	Limits						
Nitrobenzene-d5	87		58 - 135						

Lab Sample ID: 570-138935-10 MS
Matrix: Water
Analysis Batch: 330882

Client Sample ID: MW-35C_20230516
Prep Type: Total/NA
Prep Batch: 330747

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
1,4-Dioxane	ND		16.0	10.21		ug/L		64	48 - 164
Isotope Dilution	%Recovery	MS Qualifier	Limits						
1,4-Dioxane-d8	46		21 - 120						
Surrogate	%Recovery	MS Qualifier	Limits						
Nitrobenzene-d5	67		58 - 135						

QC Sample Results

Client: Hargis + Associates, Inc.
Project/Site: Raytheon Main / Task No.: 532.30

Job ID: 570-138935-1

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

Lab Sample ID: 570-138935-10 MSD

Matrix: Water

Analysis Batch: 330882

Client Sample ID: MW-35C_20230516

Prep Type: Total/NA

Prep Batch: 330747

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
1,4-Dioxane	ND		15.2	12.17		ug/L	-	80	48 - 164	17	20
	MSD	MSD									
Isotope Dilution	%Recovery	Qualifier	Limits								
1,4-Dioxane-d8	47		21 - 120								
	MSD	MSD									
Surrogate	%Recovery	Qualifier	Limits								
Nitrobenzene-d5	69		58 - 135								

Lab Sample ID: 570-138935-19 MS

Matrix: Water

Analysis Batch: 330882

Client Sample ID: MW-43_20230517

Prep Type: Total/NA

Prep Batch: 330747

Analysis Date: 000002											Rep Date: 000747										
Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits												
1,4-Dioxane	ND		15.5	13.05		ug/L		84	48 - 164												
	MS	MS																			
Isotope Dilution	%Recovery	Qualifier	Limits																		
1,4-Dioxane-d8	41		21 - 120																		
	MS	MS																			
Surrogate	%Recovery	Qualifier	Limits																		
Nitrobenzene-d5	65		58 - 135																		

Lab Sample ID: 570-138935-19 MSD

Matrix: Water

Analysis Batch: 330882

Client Sample ID: MW-43_20230517

Prep Type: Total/NA

Prep Batch: 330747

Rep Data: 00000											
Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
1,4-Dioxane	ND		15.3	11.84		ug/L	-	78	48 - 164	10	20
MSD MSD											
Isotope Dilution	%Recovery	Qualifier	Limits								
1,4-Dioxane-d8	41		21 - 120								
MSD MSD											
Surrogate	%Recovery	Qualifier	Limits								
Nitrobenzene-d5	63		58 - 135								

Marginal Exceedance (ME) Summary

Client: Hargis + Associates, Inc.
Project/Site: Raytheon Main / Task No.: 532.30

Job ID: 570-138935-1

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

Lab Sample ID: LCSD 570-331773/5

Matrix: Water

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	%Rec	%Rec. Limits	ME %Rec. Limits	Marginal Exceedance Status
1,1,1,2-Tetrachloroethane	10.0	10.19		ug/L	102	80 - 125	73 - 133	
1,1,1-Trichloroethane	10.0	11.19		ug/L	112	75 - 121	67 - 129	
1,1,2,2-Tetrachloroethane	10.0	11.01		ug/L	110	80 - 120	73 - 127	
1,1,2-Trichloro-1,2,2-trifluoroethane	10.0	10.82		ug/L	108	56 - 132	43 - 145	
1,1,2-Trichloroethane	10.0	10.40		ug/L	104	80 - 121	73 - 128	
1,1-Dichloroethane	10.0	11.14		ug/L	111	80 - 120	73 - 127	
1,1-Dichloroethene	10.0	11.11		ug/L	111	80 - 126	72 - 134	
1,1-Dichloropropene	10.0	11.30		ug/L	113	72 - 122	64 - 130	
1,2,3-Trichlorobenzene	10.0	10.15		ug/L	102	80 - 125	73 - 133	
1,2,3-Trichloropropane	10.0	10.66		ug/L	107	75 - 127	66 - 136	
1,2,4-Trichlorobenzene	10.0	11.05		ug/L	111	80 - 124	73 - 131	
1,2,4-Trimethylbenzene	10.0	11.36		ug/L	114	80 - 128	72 - 136	
1,2-Dibromo-3-Chloropropane	10.0	10.21		ug/L	102	63 - 123	53 - 133	
1,2-Dibromoethane	10.0	10.23		ug/L	102	80 - 125	73 - 133	
1,2-Dichlorobenzene	10.0	10.42		ug/L	104	80 - 120	73 - 127	
1,2-Dichloroethane	10.0	10.79		ug/L	108	76 - 130	67 - 139	
1,2-Dichloropropane	10.0	11.01		ug/L	110	74 - 124	66 - 132	
1,3,5-Trimethylbenzene	10.0	10.28		ug/L	103	80 - 122	73 - 129	
1,3-Dichlorobenzene	10.0	10.48		ug/L	105	80 - 120	73 - 127	
1,3-Dichloropropane	10.0	10.59		ug/L	106	80 - 121	73 - 128	
1,4-Dichlorobenzene	10.0	10.35		ug/L	103	80 - 120	73 - 127	
2,2-Dichloropropane	10.0	12.21		ug/L	122	79 - 131	70 - 140	
2-Butanone	10.0	10.72		ug/L	107	48 - 145	32 - 161	
2-Chlorotoluene	10.0	10.97		ug/L	110	80 - 120	73 - 127	
2-Hexanone	10.0	10.02		ug/L	100	50 - 149	34 - 166	
4-Chlorotoluene	10.0	10.99		ug/L	110	80 - 120	73 - 127	
4-Methyl-2-pentanone	10.0	9.677		ug/L	97	63 - 120	54 - 130	
Acetone	10.0	10.90		ug/L	109	45 - 139	29 - 155	
Benzene	10.0	10.98		ug/L	110	80 - 120	73 - 127	
Bromobenzene	10.0	10.19		ug/L	102	80 - 125	73 - 133	
Bromochloromethane	10.0	10.59		ug/L	106	80 - 120	73 - 127	
Bromodichloromethane	10.0	11.01		ug/L	110	73 - 131	63 - 141	
Bromoform	10.0	10.26		ug/L	103	76 - 124	68 - 132	
Bromomethane	10.0	8.373		ug/L	84	26 - 180	1 - 206	
cis-1,2-Dichloroethene	10.0	10.93		ug/L	109	80 - 120	73 - 127	
cis-1,3-Dichloropropene	10.0	11.23		ug/L	112	76 - 123	68 - 131	
Carbon disulfide	10.0	11.90		ug/L	119	75 - 123	67 - 131	
Carbon tetrachloride	10.0	11.21		ug/L	112	61 - 139	48 - 152	
Chlorobenzene	10.0	10.27		ug/L	103	80 - 120	73 - 127	
Chloroethane	10.0	10.43		ug/L	104	54 - 150	38 - 166	
Chloroform	10.0	10.63		ug/L	106	80 - 120	73 - 127	
Chloromethane	10.0	9.707		ug/L	97	28 - 151	8 - 172	
Dibromochloromethane	10.0	10.40		ug/L	104	74 - 136	64 - 146	
Dibromomethane	10.0	10.56		ug/L	106	80 - 122	73 - 129	
Dichlorodifluoromethane	10.0	9.222		ug/L	92	27 - 154	6 - 175	
Ethylbenzene	10.0	10.90		ug/L	109	80 - 126	72 - 134	
Isopropylbenzene	10.0	10.20		ug/L	102	80 - 120	73 - 127	
Methylene Chloride	10.0	11.15		ug/L	112	80 - 120	73 - 127	
Methyl-t-Butyl Ether (MTBE)	10.0	11.19		ug/L	112	69 - 128	59 - 138	

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Marginal Exceedance (ME) Summary

Client: Hargis + Associates, Inc.
Project/Site: Raytheon Main / Task No.: 532.30

Job ID: 570-138935-1

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

Lab Sample ID: LCSD 570-331773/5

Matrix: Water

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

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	%Rec	%Rec. Limits	ME %Rec. Limits	Marginal Exceedance Status
Naphthalene	10.0	10.58		ug/L	106	70 - 130	60 - 140	
n-Butylbenzene	10.0	11.10		ug/L	111	78 - 127	70 - 135	
N-Propylbenzene	10.0	11.41		ug/L	114	80 - 121	73 - 128	
o-Xylene	10.0	10.77		ug/L	108	80 - 124	73 - 131	
m,p-Xylene	20.0	22.61		ug/L	113	80 - 123	73 - 130	
p-Isopropyltoluene	10.0	11.44		ug/L	114	80 - 128	72 - 136	
sec-Butylbenzene	10.0	11.69		ug/L	117	80 - 125	73 - 133	
Styrene	10.0	9.770		ug/L	98	80 - 121	73 - 128	
trans-1,2-Dichloroethene	10.0	11.10		ug/L	111	79 - 120	72 - 127	
trans-1,3-Dichloropropene	10.0	10.94		ug/L	109	80 - 126	72 - 134	
tert-Butylbenzene	10.0	11.03		ug/L	110	80 - 121	73 - 128	
Tetrachloroethene	10.0	10.71		ug/L	107	80 - 125	73 - 133	
Toluene	10.0	10.94		ug/L	109	80 - 120	73 - 127	
Trichloroethene	10.0	10.65		ug/L	107	77 - 124	69 - 132	
Trichlorofluoromethane	10.0	8.422		ug/L	84	41 - 163	21 - 183	
Vinyl acetate	10.0	12.67	*+ me	ug/L	127	61 - 126	50 - 137	ME
Vinyl chloride	10.0	9.201		ug/L	92	50 - 160	32 - 178	

Summary

Number of Analytes Reported	Number of Marginal Exceedances Allowed	Number of Marginal Exceedances Found
66	3	1

ME = Marginal Exceedance

QC Association Summary

Client: Hargis + Associates, Inc.
Project/Site: Raytheon Main / Task No.: 532.30

Job ID: 570-138935-1

GC/MS VOA

Analysis Batch: 331683

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-138935-1	TB_20230516	Total/NA	Water	8260B	
570-138935-2	MW-28_20230516	Total/NA	Water	8260B	
570-138935-3	MW-26C_20230516	Total/NA	Water	8260B	
570-138935-4	RB_20230516	Total/NA	Water	8260B	
570-138935-5	MW-08_20230516	Total/NA	Water	8260B	
570-138935-6	MW-30A_20230516	Total/NA	Water	8260B	
570-138935-7	MW-30B_20230516	Total/NA	Water	8260B	
570-138935-8	MW-34B_20230516	Total/NA	Water	8260B	
570-138935-9	MW-40_20230517	Total/NA	Water	8260B	
570-138935-10	MW-35C_20230516	Total/NA	Water	8260B	
570-138935-11	MW-32B_20230516	Total/NA	Water	8260B	
570-138935-12	MW-33_20230516	Total/NA	Water	8260B	
570-138935-13	MW-41_20230517	Total/NA	Water	8260B	
570-138935-14	MW-4100_20230517	Total/NA	Water	8260B	
570-138935-15	MW-31_20230517	Total/NA	Water	8260B	
570-138935-16	MW-3100_20230517	Total/NA	Water	8260B	
570-138935-17	MW-21_20230517	Total/NA	Water	8260B	
570-138935-18	EW-01_20230517	Total/NA	Water	8260B	
570-138935-20	MW-42_20230517	Total/NA	Water	8260B	
MB 570-331683/6	Method Blank	Total/NA	Water	8260B	
LCS 570-331683/3	Lab Control Sample	Total/NA	Water	8260B	
LCSD 570-331683/4	Lab Control Sample Dup	Total/NA	Water	8260B	
570-138935-10 MS	MW-35C_20230516	Total/NA	Water	8260B	
570-138935-10 MSD	MW-35C_20230516	Total/NA	Water	8260B	

Analysis Batch: 331773

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-138935-19	MW-43_20230517	Total/NA	Water	8260B	
MB 570-331773/7	Method Blank	Total/NA	Water	8260B	
LCS 570-331773/4	Lab Control Sample	Total/NA	Water	8260B	
LCSD 570-331773/5	Lab Control Sample Dup	Total/NA	Water	8260B	
570-138935-19 MS	MW-43_20230517	Total/NA	Water	8260B	
570-138935-19 MSD	MW-43_20230517	Total/NA	Water	8260B	

Analysis Batch: 332106

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-138935-11 - DL	MW-32B_20230516	Total/NA	Water	8260B	
MB 570-332106/6	Method Blank	Total/NA	Water	8260B	
LCS 570-332106/3	Lab Control Sample	Total/NA	Water	8260B	
LCSD 570-332106/4	Lab Control Sample Dup	Total/NA	Water	8260B	

GC/MS Semi VOA

Prep Batch: 330747

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-138935-2	MW-28_20230516	Total/NA	Water	3510C	
570-138935-3	MW-26C_20230516	Total/NA	Water	3510C	
570-138935-4	RB_20230516	Total/NA	Water	3510C	
570-138935-5	MW-08_20230516	Total/NA	Water	3510C	
570-138935-6	MW-30A_20230516	Total/NA	Water	3510C	
570-138935-7	MW-30B_20230516	Total/NA	Water	3510C	

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QC Association Summary

Client: Hargis + Associates, Inc.
Project/Site: Raytheon Main / Task No.: 532.30

Job ID: 570-138935-1

GC/MS Semi VOA (Continued)

Prep Batch: 330747 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-138935-8	MW-34B_20230516	Total/NA	Water	3510C	
570-138935-9	MW-40_20230517	Total/NA	Water	3510C	
570-138935-10	MW-35C_20230516	Total/NA	Water	3510C	
570-138935-11	MW-32B_20230516	Total/NA	Water	3510C	
570-138935-12	MW-33_20230516	Total/NA	Water	3510C	
570-138935-13	MW-41_20230517	Total/NA	Water	3510C	
570-138935-14	MW-4100_20230517	Total/NA	Water	3510C	
570-138935-15	MW-31_20230517	Total/NA	Water	3510C	
570-138935-16	MW-3100_20230517	Total/NA	Water	3510C	
570-138935-17 - DL	MW-21_20230517	Total/NA	Water	3510C	
570-138935-18	EW-01_20230517	Total/NA	Water	3510C	
570-138935-19	MW-43_20230517	Total/NA	Water	3510C	
570-138935-20	MW-42_20230517	Total/NA	Water	3510C	
MB 570-330747/1-A	Method Blank	Total/NA	Water	3510C	
LCS 570-330747/2-A	Lab Control Sample	Total/NA	Water	3510C	
LCSD 570-330747/3-A	Lab Control Sample Dup	Total/NA	Water	3510C	
570-138935-10 MS	MW-35C_20230516	Total/NA	Water	3510C	
570-138935-10 MSD	MW-35C_20230516	Total/NA	Water	3510C	
570-138935-19 MS	MW-43_20230517	Total/NA	Water	3510C	
570-138935-19 MSD	MW-43_20230517	Total/NA	Water	3510C	

Analysis Batch: 330882

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-138935-2	MW-28_20230516	Total/NA	Water	8270C SIM ID	330747
570-138935-3	MW-26C_20230516	Total/NA	Water	8270C SIM ID	330747
570-138935-4	RB_20230516	Total/NA	Water	8270C SIM ID	330747
570-138935-5	MW-08_20230516	Total/NA	Water	8270C SIM ID	330747
570-138935-6	MW-30A_20230516	Total/NA	Water	8270C SIM ID	330747
570-138935-7	MW-30B_20230516	Total/NA	Water	8270C SIM ID	330747
570-138935-8	MW-34B_20230516	Total/NA	Water	8270C SIM ID	330747
570-138935-9	MW-40_20230517	Total/NA	Water	8270C SIM ID	330747
570-138935-10	MW-35C_20230516	Total/NA	Water	8270C SIM ID	330747
570-138935-11	MW-32B_20230516	Total/NA	Water	8270C SIM ID	330747
570-138935-12	MW-33_20230516	Total/NA	Water	8270C SIM ID	330747
570-138935-13	MW-41_20230517	Total/NA	Water	8270C SIM ID	330747
570-138935-14	MW-4100_20230517	Total/NA	Water	8270C SIM ID	330747
570-138935-15	MW-31_20230517	Total/NA	Water	8270C SIM ID	330747
570-138935-16	MW-3100_20230517	Total/NA	Water	8270C SIM ID	330747
570-138935-18	EW-01_20230517	Total/NA	Water	8270C SIM ID	330747
570-138935-19	MW-43_20230517	Total/NA	Water	8270C SIM ID	330747
570-138935-20	MW-42_20230517	Total/NA	Water	8270C SIM ID	330747
MB 570-330747/1-A	Method Blank	Total/NA	Water	8270C SIM ID	330747
LCS 570-330747/2-A	Lab Control Sample	Total/NA	Water	8270C SIM ID	330747
LCSD 570-330747/3-A	Lab Control Sample Dup	Total/NA	Water	8270C SIM ID	330747
570-138935-10 MS	MW-35C_20230516	Total/NA	Water	8270C SIM ID	330747
570-138935-10 MSD	MW-35C_20230516	Total/NA	Water	8270C SIM ID	330747
570-138935-19 MS	MW-43_20230517	Total/NA	Water	8270C SIM ID	330747
570-138935-19 MSD	MW-43_20230517	Total/NA	Water	8270C SIM ID	330747

QC Association Summary

Client: Hargis + Associates, Inc.
Project/Site: Raytheon Main / Task No.: 532.30

Job ID: 570-138935-1

GC/MS Semi VOA

Analysis Batch: 331130

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-138935-17 - DL	MW-21_20230517	Total/NA	Water	8270C SIM ID	330747

- 1
- 2
- 3
- 4
- 5
- 6
- 7
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- 11
- 12
- 13
- 14
- 15
- 16

Lab Chronicle

Client: Hargis + Associates, Inc.
Project/Site: Raytheon Main / Task No.: 532.30

Job ID: 570-138935-1

Client Sample ID: TB_20230516

Lab Sample ID: 570-138935-1

Date Collected: 05/16/23 08:00

Matrix: Water

Date Received: 05/17/23 19:35

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	331683	05/24/23 17:24	A1W	EET CAL 4
Instrument ID: GCMSL										

Client Sample ID: MW-28_20230516

Lab Sample ID: 570-138935-2

Date Collected: 05/16/23 08:44

Matrix: Water

Date Received: 05/17/23 19:35

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	331683	05/24/23 17:50	A1W	EET CAL 4
Instrument ID: GCMSL										
Total/NA	Prep	3510C			132.6 mL	10 mL	330747	05/22/23 08:02	RY4P	EET CAL 4
Total/NA	Analysis	8270C SIM ID		1	1 mL	1 mL	330882	05/22/23 17:40	ULLI	EET CAL 4
Instrument ID: GCMSDDD										

Client Sample ID: MW-26C_20230516

Lab Sample ID: 570-138935-3

Date Collected: 05/16/23 10:25

Matrix: Water

Date Received: 05/17/23 19:35

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	331683	05/24/23 18:15	A1W	EET CAL 4
Instrument ID: GCMSL										
Total/NA	Prep	3510C			131.2 mL	10 mL	330747	05/22/23 08:02	RY4P	EET CAL 4
Total/NA	Analysis	8270C SIM ID		1	1 mL	1 mL	330882	05/22/23 17:55	ULLI	EET CAL 4
Instrument ID: GCMSDDD										

Client Sample ID: RB_20230516

Lab Sample ID: 570-138935-4

Date Collected: 05/16/23 10:50

Matrix: Water

Date Received: 05/17/23 19:35

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	331683	05/24/23 18:40	A1W	EET CAL 4
Instrument ID: GCMSL										
Total/NA	Prep	3510C			134.8 mL	10 mL	330747	05/22/23 08:02	RY4P	EET CAL 4
Total/NA	Analysis	8270C SIM ID		1	1 mL	1 mL	330882	05/22/23 18:09	ULLI	EET CAL 4
Instrument ID: GCMSDDD										

Client Sample ID: MW-08_20230516

Lab Sample ID: 570-138935-5

Date Collected: 05/16/23 12:49

Matrix: Water

Date Received: 05/17/23 19:35

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	331683	05/24/23 19:06	A1W	EET CAL 4
Instrument ID: GCMSL										
Total/NA	Prep	3510C			133.1 mL	10 mL	330747	05/22/23 08:02	RY4P	EET CAL 4
Total/NA	Analysis	8270C SIM ID		1	1 mL	1 mL	330882	05/22/23 18:23	ULLI	EET CAL 4
Instrument ID: GCMSDDD										

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Lab Chronicle

Client: Hargis + Associates, Inc.
Project/Site: Raytheon Main / Task No.: 532.30

Job ID: 570-138935-1

Client Sample ID: MW-30A_20230516

Lab Sample ID: 570-138935-6

Date Collected: 05/16/23 13:30

Matrix: Water

Date Received: 05/17/23 19:35

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	331683	05/24/23 19:31	A1W	EET CAL 4
Instrument ID: GCMSL										
Total/NA	Prep	3510C			133.2 mL	10 mL	330747	05/22/23 08:02	RY4P	EET CAL 4
Total/NA	Analysis	8270C SIM ID		1	1 mL	1 mL	330882	05/22/23 18:38	ULLI	EET CAL 4
Instrument ID: GCMSDDD										

Client Sample ID: MW-30B_20230516

Lab Sample ID: 570-138935-7

Date Collected: 05/16/23 14:03

Matrix: Water

Date Received: 05/17/23 19:35

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	331683	05/24/23 19:56	A1W	EET CAL 4
Instrument ID: GCMSL										
Total/NA	Prep	3510C			130.4 mL	10 mL	330747	05/22/23 08:02	RY4P	EET CAL 4
Total/NA	Analysis	8270C SIM ID		1	1 mL	1 mL	330882	05/22/23 18:52	ULLI	EET CAL 4
Instrument ID: GCMSDDD										

Client Sample ID: MW-34B_20230516

Lab Sample ID: 570-138935-8

Date Collected: 05/16/23 14:48

Matrix: Water

Date Received: 05/17/23 19:35

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	331683	05/24/23 20:22	A1W	EET CAL 4
Instrument ID: GCMSL										
Total/NA	Prep	3510C			134.3 mL	10 mL	330747	05/22/23 08:02	RY4P	EET CAL 4
Total/NA	Analysis	8270C SIM ID		1	1 mL	1 mL	330882	05/22/23 19:07	ULLI	EET CAL 4
Instrument ID: GCMSDDD										

Client Sample ID: MW-40_20230517

Lab Sample ID: 570-138935-9

Date Collected: 05/17/23 09:32

Matrix: Water

Date Received: 05/17/23 19:35

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	331683	05/24/23 20:47	A1W	EET CAL 4
Instrument ID: GCMSL										
Total/NA	Prep	3510C			132.6 mL	10 mL	330747	05/22/23 08:02	RY4P	EET CAL 4
Total/NA	Analysis	8270C SIM ID		1	1 mL	1 mL	330882	05/22/23 19:21	ULLI	EET CAL 4
Instrument ID: GCMSDDD										

Client Sample ID: MW-35C_20230516

Lab Sample ID: 570-138935-10

Date Collected: 05/16/23 10:17

Matrix: Water

Date Received: 05/17/23 19:35

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	331683	05/24/23 21:12	A1W	EET CAL 4
Instrument ID: GCMSL										

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Lab Chronicle

Client: Hargis + Associates, Inc.
Project/Site: Raytheon Main / Task No.: 532.30

Job ID: 570-138935-1

Client Sample ID: MW-35C_20230516

Lab Sample ID: 570-138935-10

Date Collected: 05/16/23 10:17

Matrix: Water

Date Received: 05/17/23 19:35

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			131.6 mL	10 mL	330747	05/22/23 08:02	RY4P	EET CAL 4
Total/NA	Analysis	8270C SIM ID		1	1 mL	1 mL	330882	05/22/23 19:35	ULLI	EET CAL 4
Instrument ID: GCMSDDD										

Client Sample ID: MW-32B_20230516

Lab Sample ID: 570-138935-11

Date Collected: 05/16/23 13:42

Matrix: Water

Date Received: 05/17/23 19:35

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	331683	05/24/23 21:37	A1W	EET CAL 4
Instrument ID: GCMSL										
Total/NA	Analysis	8260B	DL	5	20 mL	20 mL	332106	05/26/23 03:41	N1A	EET CAL 4
Instrument ID: GCMSL										
Total/NA	Prep	3510C			127.5 mL	10 mL	330747	05/22/23 08:02	RY4P	EET CAL 4
Total/NA	Analysis	8270C SIM ID		1	1 mL	1 mL	330882	05/22/23 19:50	ULLI	EET CAL 4
Instrument ID: GCMSDDD										

Client Sample ID: MW-33_20230516

Lab Sample ID: 570-138935-12

Date Collected: 05/16/23 16:10

Matrix: Water

Date Received: 05/17/23 19:35

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	331683	05/24/23 22:03	A1W	EET CAL 4
Instrument ID: GCMSL										
Total/NA	Prep	3510C			121.2 mL	10 mL	330747	05/22/23 08:02	RY4P	EET CAL 4
Total/NA	Analysis	8270C SIM ID		1	1 mL	1 mL	330882	05/22/23 20:04	ULLI	EET CAL 4
Instrument ID: GCMSDDD										

Client Sample ID: MW-41_20230517

Lab Sample ID: 570-138935-13

Date Collected: 05/17/23 10:45

Matrix: Water

Date Received: 05/17/23 19:35

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	331683	05/24/23 22:28	A1W	EET CAL 4
Instrument ID: GCMSL										
Total/NA	Prep	3510C			132.3 mL	10 mL	330747	05/22/23 08:02	RY4P	EET CAL 4
Total/NA	Analysis	8270C SIM ID		1	1 mL	1 mL	330882	05/22/23 20:19	ULLI	EET CAL 4
Instrument ID: GCMSDDD										

Client Sample ID: MW-4100_20230517

Lab Sample ID: 570-138935-14

Date Collected: 05/17/23 10:50

Matrix: Water

Date Received: 05/17/23 19:35

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	331683	05/24/23 22:53	A1W	EET CAL 4
Instrument ID: GCMSL										

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Lab Chronicle

Client: Hargis + Associates, Inc.
Project/Site: Raytheon Main / Task No.: 532.30

Job ID: 570-138935-1

Client Sample ID: MW-4100_20230517

Lab Sample ID: 570-138935-14

Date Collected: 05/17/23 10:50

Matrix: Water

Date Received: 05/17/23 19:35

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			133.8 mL	10 mL	330747	05/22/23 08:02	RY4P	EET CAL 4
Total/NA	Analysis	8270C SIM ID		1	1 mL	1 mL	330882	05/22/23 20:33	ULLI	EET CAL 4
Instrument ID: GCMSDDD										

Client Sample ID: MW-31_20230517

Lab Sample ID: 570-138935-15

Date Collected: 05/17/23 12:43

Matrix: Water

Date Received: 05/17/23 19:35

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	331683	05/24/23 23:18	A1W	EET CAL 4
Instrument ID: GCMSL										
Total/NA	Prep	3510C			131.3 mL	10 mL	330747	05/22/23 08:02	RY4P	EET CAL 4
Total/NA	Analysis	8270C SIM ID		1	1 mL	1 mL	330882	05/22/23 20:47	ULLI	EET CAL 4
Instrument ID: GCMSDDD										

Client Sample ID: MW-3100_20230517

Lab Sample ID: 570-138935-16

Date Collected: 05/17/23 12:45

Matrix: Water

Date Received: 05/17/23 19:35

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	331683	05/24/23 23:44	A1W	EET CAL 4
Instrument ID: GCMSL										
Total/NA	Prep	3510C			133.5 mL	10 mL	330747	05/22/23 08:02	RY4P	EET CAL 4
Total/NA	Analysis	8270C SIM ID		1	1 mL	1 mL	330882	05/22/23 21:02	ULLI	EET CAL 4
Instrument ID: GCMSDDD										

Client Sample ID: MW-21_20230517

Lab Sample ID: 570-138935-17

Date Collected: 05/17/23 13:37

Matrix: Water

Date Received: 05/17/23 19:35

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		20	20 mL	20 mL	331683	05/25/23 00:09	A1W	EET CAL 4
Instrument ID: GCMSL										
Total/NA	Prep	3510C	DL		131.8 mL	10 mL	330747	05/22/23 08:02	RY4P	EET CAL 4
Total/NA	Analysis	8270C SIM ID	DL	50	1 mL	1 mL	331130	05/23/23 07:52	UFLE	EET CAL 4
Instrument ID: GCMSDDD										

Client Sample ID: EW-01_20230517

Lab Sample ID: 570-138935-18

Date Collected: 05/17/23 14:00

Matrix: Water

Date Received: 05/17/23 19:35

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	331683	05/25/23 00:34	A1W	EET CAL 4
Instrument ID: GCMSL										

Lab Chronicle

Client: Hargis + Associates, Inc.
Project/Site: Raytheon Main / Task No.: 532.30

Job ID: 570-138935-1

Client Sample ID: EW-01_20230517

Lab Sample ID: 570-138935-18

Date Collected: 05/17/23 14:00

Matrix: Water

Date Received: 05/17/23 19:35

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			131.1 mL	10 mL	330747	05/22/23 08:02	RY4P	EET CAL 4
Total/NA	Analysis	8270C SIM ID		1	1 mL	1 mL	330882	05/22/23 21:31	ULLI	EET CAL 4
Instrument ID: GCMSDDD										

Client Sample ID: MW-43_20230517

Lab Sample ID: 570-138935-19

Date Collected: 05/17/23 09:25

Matrix: Water

Date Received: 05/17/23 19:35

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	331773	05/25/23 06:18	N1A	EET CAL 4
Instrument ID: GCMSUU										
Total/NA	Prep	3510C			133.5 mL	10 mL	330747	05/22/23 08:02	RY4P	EET CAL 4
Total/NA	Analysis	8270C SIM ID		1	1 mL	1 mL	330882	05/22/23 21:45	ULLI	EET CAL 4
Instrument ID: GCMSDDD										

Client Sample ID: MW-42_20230517

Lab Sample ID: 570-138935-20

Date Collected: 05/17/23 12:02

Matrix: Water

Date Received: 05/17/23 19:35

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	331683	05/25/23 01:00	A1W	EET CAL 4
Instrument ID: GCMSL										
Total/NA	Prep	3510C			132.1 mL	10 mL	330747	05/22/23 08:03	RY4P	EET CAL 4
Total/NA	Analysis	8270C SIM ID		1	1 mL	1 mL	330882	05/22/23 21:59	ULLI	EET CAL 4
Instrument ID: GCMSDDD										

Laboratory References:

EET CAL 4 = Eurofins Calscience Tustin, 2841 Dow Avenue, Tustin, CA 92780, TEL (714)895-5494

Accreditation/Certification Summary

Client: Hargis + Associates, Inc.
Project/Site: Raytheon Main / Task No.: 532.30

Job ID: 570-138935-1

Laboratory: Eurofins Calscience

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Oregon	NELAP	4175	02-02-24

- 1
- 2
- 3
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Method Summary

Client: Hargis + Associates, Inc.
Project/Site: Raytheon Main / Task No.: 532.30

Job ID: 570-138935-1

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	EET CAL 4
8270C SIM ID	Semivolatile Organic Compounds (GC/MS SIM / Isotope Dilution)	SW846	EET CAL 4
3510C	Liquid-Liquid Extraction (Separatory Funnel)	SW846	EET CAL 4
5030C	Purge and Trap	SW846	EET CAL 4

Protocol References:

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

Laboratory References:

EET CAL 4 = Eurofins Calscience Tustin, 2841 Dow Avenue, Tustin, CA 92780, TEL (714)895-5494

Sample Summary

Client: Hargis + Associates, Inc.
Project/Site: Raytheon Main / Task No.: 532.30

Job ID: 570-138935-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
570-138935-1	TB_20230516	Water	05/16/23 08:00	05/17/23 19:35
570-138935-2	MW-28_20230516	Water	05/16/23 08:44	05/17/23 19:35
570-138935-3	MW-26C_20230516	Water	05/16/23 10:25	05/17/23 19:35
570-138935-4	RB_20230516	Water	05/16/23 10:50	05/17/23 19:35
570-138935-5	MW-08_20230516	Water	05/16/23 12:49	05/17/23 19:35
570-138935-6	MW-30A_20230516	Water	05/16/23 13:30	05/17/23 19:35
570-138935-7	MW-30B_20230516	Water	05/16/23 14:03	05/17/23 19:35
570-138935-8	MW-34B_20230516	Water	05/16/23 14:48	05/17/23 19:35
570-138935-9	MW-40_20230517	Water	05/17/23 09:32	05/17/23 19:35
570-138935-10	MW-35C_20230516	Water	05/16/23 10:17	05/17/23 19:35
570-138935-11	MW-32B_20230516	Water	05/16/23 13:42	05/17/23 19:35
570-138935-12	MW-33_20230516	Water	05/16/23 16:10	05/17/23 19:35
570-138935-13	MW-41_20230517	Water	05/17/23 10:45	05/17/23 19:35
570-138935-14	MW-4100_20230517	Water	05/17/23 10:50	05/17/23 19:35
570-138935-15	MW-31_20230517	Water	05/17/23 12:43	05/17/23 19:35
570-138935-16	MW-3100_20230517	Water	05/17/23 12:45	05/17/23 19:35
570-138935-17	MW-21_20230517	Water	05/17/23 13:37	05/17/23 19:35
570-138935-18	EW-01_20230517	Water	05/17/23 14:00	05/17/23 19:35
570-138935-19	MW-43_20230517	Water	05/17/23 09:25	05/17/23 19:35
570-138935-20	MW-42_20230517	Water	05/17/23 12:02	05/17/23 19:35

PROJECT: Raytheon Main

TASK NO.: 532.30

Project Manager Steve Netto

QA Manager Amber Warden-Plum

Phone 858.455.6500

Fax 858.455.6533

Sampled By:				SAMPLE COLLECTION				MATRIX		PRESERVATION		CONTAINERS		ANALYSIS REQUESTED		Expected Concentration Range (ppb) for VOA's				SPECIAL HANDLING				Laboratory		
A. DONNELLY								Groundwater	Lab prepared water	Hydrochloric Acid (HCl)		Ice	40-ml VOA	125 mL Amber	VOCs by EPA 8260B	1,4 Dioxane by 8270C	0-10	10-100	100-1,000	>1,000	24 hr TAT	48 hr TAT	Standard TAT	Level IV Data Validation Requested	MS/MSD Requested	ECI Project #57003509
LAB ID	SAMPLE ID	Date	Time																							REMARKS
1	TB-20230516	5/16/23	0800	X	X			X	2					X			X									Report J Flags
2	MW-28-20230516	↓	0844	X	X			X	3					X			X									No EDF requested
3	MW-26C-20230516	↓	1025	X	X			X	3					X			X									
4	RB-20230516	↓	1050	X	X			X	3					X			X									
5	MW-08-20230516	↓	1249	X	X			X	3					X			X									
6	MW-30A-20230516	↓	1330	X	X			X	3					X			X									
7	MW-30B-20230516	↓	1403	X	X			X	3					X			X									
8	MW-34B-20230516	↓	1448	X	X			X	3					X			X									
9	MW-40-20230517	5/17/23	0932	X	X			X	3					X			X									
		↓		X				X																		

Total number of containers per analysis:

Total No. of Containers:

Relinquished By: / Company:	Date / Time	Received By: / Company	Date / Time
A. Donnelly / H+H	5/17/23 1700	LYNNAS EC	05/17/23 1700
Relinquished By: / Company:	Date / Time	Received By: / Company	Date / Time
LYNNAS EC	05/17/23 1935	7/10/23 EC	05/17/23 1935

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

Send Results to:

Steve Netto

3131 Camino del Rio N
Suite 355

San Diego, CA 92108

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.



570-138935 Chain of Custody

① 2.7/2.5°C ② 1.9/1.7°C SCG

Temperature on receipt



Fax 858.455.6533

Date: 5/17/23
Page 2 of 4

[illegible]

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

snetto@hargis.com

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 x
4. Note applicable preservatives, special instructions, and deviations from typical environmental samples.
5. Consult project QA documents for specific instructions.

Temperature on receipt

PROJECT: Raytheon Main

TASK NO.: 532.30

Project Manager Steve Netto

QA Manager Amber Warden-Plum

Phone 858.455.6500

Fax 858.455.6533

Date: 5/17/23
Page 3 of 4

Page 3 of 4[illegible]

Laboratory
Eurofins Calscience, Inc.
Attn: Virendra Patel
2841 Dow Ave, Ste 100
Tustin, CA 92780
714-895-5494
ECI Project #57003509

Sampled By:		SAMPLE COLLECTION	
A. DONNELLY			
LAB ID	SAMPLE ID	Date	Time
	• MW-41_20230517	5/17/23	1045
	↓		↓
	MW-4100_20230517		1050
	↓		↓
	• MW-31_20230517		1243
	↓		↓
	• MW-3100_20230517		1245
	↓		↓
	• MW-21_20230517		1337
	↓		↓
	• EW-01-20230517		1400
	↓		↓

Total number of containers per analysis:

Relinquished By: / Company:

Date / Time

Received By: / Company

Date / Time

90 only / H + A

5/17/23
1700

WANTOS BC

05/17/23
1700

Relinquished By: / Company:

Date / Time

Received By: / Company

Date / Time

Total No. of Containers: _____

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

Send Results to:

Steve Netto

3131 Camino del Rio N

Suite 355

San Diego, CA 92108

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.

① 2.7/2.5°C ② 1.9/1.7°C SC6
Temperature

Temperature on receipt



Fax 858.455.6533

Login Sample Receipt Checklist

Client: Hargis + Associates, Inc.

Job Number: 570-138935-1

Login Number: 138935

List Number: 1

Creator: Moffatt, Jennifer

List Source: Eurofins Calscience

Question	Answer	Comment
Radioactivity wasn't checked or is $\leq$ 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	False	Insufficient volume received for MS/MSD.
Containers requiring zero headspace have no headspace or bubble is $<6\text{mm}$ (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

ANALYTICAL REPORT

PREPARED FOR

Attn: Steve Netto
Hargis + Associates, Inc.
3131 Camino del Rio N
Suite 355
San Diego, California 92108

Generated 6/7/2023 12:24:35 PM

JOB DESCRIPTION

Raytheon Main GETS OCSD Quarterly Sample / 532.15

JOB NUMBER

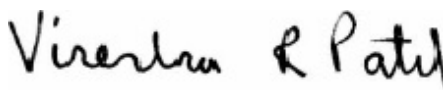
570-140142-1

Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Calscience Project Manager.

Authorization



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Authorized for release by
Virendra Patel, Project Manager I
Virendra.Patel@et.eurofinsus.com
(714)895-5494

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Definitions/Glossary

Client: Hargis + Associates, Inc.

Job ID: 570-140142-1

Project/Site: Raytheon Main GETS OCSD Quarterly Sample /
532.15

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	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 Main GETS OCSD Quarterly Sample / 532.

Job ID: 570-140142-1

Job ID: 570-140142-1

Laboratory: Eurofins Calscience

Narrative

**Job Narrative
570-140142-1**

Comments

No additional comments.

Receipt

The samples were received on 6/1/2023 2:25 PM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 2.4° C.

GC/MS VOA

Method 624.1: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with analytical batch 570-333831. The laboratory control sample (LCS) was performed in duplicate (LCSD) to provide precision data for this batch.

Method 624.1: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with analytical batch 570-333961. The laboratory control sample (LCS) was performed in duplicate (LCSD) to provide precision data for this batch.

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

Method 3510C: The laboratory control sample (LCS) was performed in duplicate (LCSD) to provide precision data for this batch. Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with preparation batch 570-334393.

Method: 8270_Sim_MS_ID.

No additional analytical or quality issues were noted, other than those described above or 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.

Job ID: 570-140142-1

Project/Site: Raytheon Main GETS OCSD Quarterly Sample /
532.15

Client Sample ID: TB-060123

Lab Sample ID: 570-140142-1

☐ No Detections.

Client Sample ID: CEFF

Lab Sample ID: 570-140142-2

☐ No Detections.

This Detection Summary does not include radiochemical test results.

Eurofins Calscience

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Client Sample Results

Client: Hargis + Associates, Inc.

Job ID: 570-140142-1

Project/Site: Raytheon Main GETS OCSD Quarterly Sample /
532.15

Method: EPA 624.1 - Volatile Organic Compounds (GC/MS)

Client Sample ID: TB-060123
Date Collected: 06/01/23 08:00
Date Received: 06/01/23 14:25

Lab Sample ID: 570-140142-1
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		1.0		ug/L			06/01/23 22:30	1
1,1,2,2-Tetrachloroethane	ND		1.0		ug/L			06/01/23 22:30	1
1,1-Dichloroethane	ND		1.0		ug/L			06/01/23 22:30	1
1,1-Dichloroethene	ND		1.0		ug/L			06/01/23 22:30	1
1,2-Dichlorobenzene	ND		1.0		ug/L			06/01/23 22:30	1
1,2-Dichloroethane	ND		0.50		ug/L			06/01/23 22:30	1
1,2-Dichloropropane	ND		1.0		ug/L			06/01/23 22:30	1
1,3-Dichlorobenzene	ND		1.0		ug/L			06/01/23 22:30	1
1,4-Dichlorobenzene	ND		1.0		ug/L			06/01/23 22:30	1
2-Chloroethyl vinyl ether	ND		2.0		ug/L			06/01/23 22:30	1
Acrolein	ND		5.0		ug/L			06/01/23 22:30	1
Acrylonitrile	ND		2.0		ug/L			06/01/23 22:30	1
Benzene	ND		0.50		ug/L			06/01/23 22:30	1
Bromodichloromethane	ND		1.0		ug/L			06/01/23 22:30	1
Bromoform	ND		1.0		ug/L			06/01/23 22:30	1
Bromomethane	ND		5.0		ug/L			06/01/23 22:30	1
cis-1,2-Dichloroethene	ND		1.0		ug/L			06/01/23 22:30	1
cis-1,3-Dichloropropene	ND		0.50		ug/L			06/01/23 22:30	1
Carbon tetrachloride	ND		0.50		ug/L			06/01/23 22:30	1
Chlorobenzene	ND		1.0		ug/L			06/01/23 22:30	1
Chloroethane	ND		1.0		ug/L			06/01/23 22:30	1
Chloroform	ND		1.0		ug/L			06/01/23 22:30	1
Chloromethane	ND		1.0		ug/L			06/01/23 22:30	1
Dibromochloromethane	ND		1.0		ug/L			06/01/23 22:30	1
Ethylbenzene	ND		1.0		ug/L			06/01/23 22:30	1
Methylene Chloride	ND		2.0		ug/L			06/01/23 22:30	1
Methyl-t-Butyl Ether (MTBE)	ND		1.0		ug/L			06/01/23 22:30	1
o-Xylene	ND		1.0		ug/L			06/01/23 22:30	1
m,p-Xylene	ND		1.0		ug/L			06/01/23 22:30	1
trans-1,2-Dichloroethene	ND		1.0		ug/L			06/01/23 22:30	1
trans-1,3-Dichloropropene	ND		0.50		ug/L			06/01/23 22:30	1
Tetrachloroethene	ND		1.0		ug/L			06/01/23 22:30	1
Toluene	ND		1.0		ug/L			06/01/23 22:30	1
Trichloroethene	ND		1.0		ug/L			06/01/23 22:30	1
Trichlorofluoromethane	ND		5.0		ug/L			06/01/23 22:30	1
Vinyl chloride	ND		0.50		ug/L			06/01/23 22:30	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	100		60 - 140		06/01/23 22:30	1
4-Bromofluorobenzene (Surr)	97		60 - 140		06/01/23 22:30	1
Dibromofluoromethane	99		60 - 140		06/01/23 22:30	1
Toluene-d8 (Surr)	101		60 - 140		06/01/23 22:30	1

Client Sample ID: CEFF
Date Collected: 06/01/23 10:25
Date Received: 06/01/23 14:25

Lab Sample ID: 570-140142-2
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		1.0		ug/L			06/02/23 00:35	1
1,1,2,2-Tetrachloroethane	ND		1.0		ug/L			06/02/23 00:35	1

Eurofins Calscience

Client Sample Results

Client: Hargis + Associates, Inc.

Job ID: 570-140142-1

Project/Site: Raytheon Main GETS OCSD Quarterly Sample /
532.15

Method: EPA 624.1 - Volatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: CEFF

Date Collected: 06/01/23 10:25

Date Received: 06/01/23 14:25

Lab Sample ID: 570-140142-2

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethane	ND		1.0		ug/L			06/02/23 00:35	1
1,1-Dichloroethene	ND		1.0		ug/L			06/02/23 00:35	1
1,2-Dichlorobenzene	ND		1.0		ug/L			06/02/23 00:35	1
1,2-Dichloroethane	ND		0.50		ug/L			06/02/23 00:35	1
1,2-Dichloropropane	ND		1.0		ug/L			06/02/23 00:35	1
1,3-Dichlorobenzene	ND		1.0		ug/L			06/02/23 00:35	1
1,4-Dichlorobenzene	ND		1.0		ug/L			06/02/23 00:35	1
2-Chloroethyl vinyl ether	ND		2.0		ug/L			06/02/23 00:35	1
Acrolein	ND		5.0		ug/L			06/02/23 00:35	1
Acrylonitrile	ND		2.0		ug/L			06/02/23 00:35	1
Benzene	ND		0.50		ug/L			06/02/23 00:35	1
Bromodichloromethane	ND		1.0		ug/L			06/02/23 00:35	1
Bromoform	ND		1.0		ug/L			06/02/23 00:35	1
Bromomethane	ND		5.0		ug/L			06/02/23 00:35	1
cis-1,2-Dichloroethene	ND		1.0		ug/L			06/02/23 00:35	1
cis-1,3-Dichloropropene	ND		0.50		ug/L			06/02/23 00:35	1
Carbon tetrachloride	ND		0.50		ug/L			06/02/23 00:35	1
Chlorobenzene	ND		1.0		ug/L			06/02/23 00:35	1
Chloroethane	ND		1.0		ug/L			06/02/23 00:35	1
Chloroform	ND		1.0		ug/L			06/02/23 00:35	1
Chloromethane	ND		1.0		ug/L			06/02/23 00:35	1
Dibromochloromethane	ND		1.0		ug/L			06/02/23 00:35	1
Ethylbenzene	ND		1.0		ug/L			06/02/23 00:35	1
Methylene Chloride	ND		2.0		ug/L			06/02/23 00:35	1
Methyl-t-Butyl Ether (MTBE)	ND		1.0		ug/L			06/02/23 00:35	1
o-Xylene	ND		1.0		ug/L			06/02/23 00:35	1
m,p-Xylene	ND		1.0		ug/L			06/02/23 00:35	1
trans-1,2-Dichloroethene	ND		1.0		ug/L			06/02/23 00:35	1
trans-1,3-Dichloropropene	ND		0.50		ug/L			06/02/23 00:35	1
Tetrachloroethene	ND		1.0		ug/L			06/02/23 00:35	1
Toluene	ND		1.0		ug/L			06/02/23 00:35	1
Trichloroethene	ND		1.0		ug/L			06/02/23 00:35	1
Trichlorofluoromethane	ND		5.0		ug/L			06/02/23 00:35	1
Vinyl chloride	ND		0.50		ug/L			06/02/23 00:35	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	101		60 - 140					06/02/23 00:35	1
4-Bromofluorobenzene (Surr)	95		60 - 140					06/02/23 00:35	1
Dibromofluoromethane	100		60 - 140					06/02/23 00:35	1
Toluene-d8 (Surr)	100		60 - 140					06/02/23 00:35	1

Eurofins Calscience

Client Sample Results

Client: Hargis + Associates, Inc.

Job ID: 570-140142-1

Project/Site: Raytheon Main GETS OCSD Quarterly Sample /
532.15

Method: EPA 624.1 - Volatile Organic Compounds (GC/MS) - RA

Client Sample ID: TB-060123
Date Collected: 06/01/23 08:00
Date Received: 06/01/23 14:25

Lab Sample ID: 570-140142-1
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dichlorodifluoromethane	ND		1.0		ug/L			06/02/23 12:01	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	99		60 - 140					06/02/23 12:01	1
4-Bromofluorobenzene (Surr)	96		60 - 140					06/02/23 12:01	1
Dibromofluoromethane	97		60 - 140					06/02/23 12:01	1
Toluene-d8 (Surr)	99		60 - 140					06/02/23 12:01	1

Client Sample ID: CEFF
Date Collected: 06/01/23 10:25
Date Received: 06/01/23 14:25

Lab Sample ID: 570-140142-2
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dichlorodifluoromethane	ND		1.0		ug/L			06/02/23 12:22	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	97		60 - 140					06/02/23 12:22	1
4-Bromofluorobenzene (Surr)	95		60 - 140					06/02/23 12:22	1
Dibromofluoromethane	97		60 - 140					06/02/23 12:22	1
Toluene-d8 (Surr)	100		60 - 140					06/02/23 12:22	1

Client Sample Results

Client: Hargis + Associates, Inc.

Job ID: 570-140142-1

Project/Site: Raytheon Main GETS OCSD Quarterly Sample /
532.15

Method: SW846 8270C SIM ID - Semivolatile Organic Compounds (GC/MS SIM / Isotope Dilution)

Client Sample ID: CEFF

Date Collected: 06/01/23 10:25

Date Received: 06/01/23 14:25

Lab Sample ID: 570-140142-2

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	ND		0.37		ug/L		06/05/23 08:14	06/07/23 09:51	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,4-Dioxane-d8	43		21 - 120				06/05/23 08:14	06/07/23 09:51	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Nitrobenzene-d5	91		58 - 135				06/05/23 08:14	06/07/23 09:51	1

Surrogate Summary

Client: Hargis + Associates, Inc.

Job ID: 570-140142-1

Project/Site: Raytheon Main GETS OCSD Quarterly Sample /
532.15

Method: 624.1 - Volatile Organic Compounds (GC/MS)

Matrix: Water

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	DCA (60-140)	BFB (60-140)	DBFM (60-140)	TOL (60-140)
570-140142-1	TB-060123	100	97	99	101
570-140142-1 - RA	TB-060123	99	96	97	99
570-140142-2	CEFF	101	95	100	100
570-140142-2 - RA	CEFF	97	95	97	100
LCS 570-333831/4	Lab Control Sample	98	101	96	99
LCS 570-333961/4	Lab Control Sample	96	100	97	100
LCSD 570-333831/5	Lab Control Sample Dup	97	101	97	99
LCSD 570-333961/5	Lab Control Sample Dup	94	98	96	100
MB 570-333831/7	Method Blank	97	96	98	100
MB 570-333961/7	Method Blank	99	97	97	101

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)

Lab Sample ID	Client Sample ID	NBZ (58-135)
570-140142-2	CEFF	91
LCS 570-334393/2-A	Lab Control Sample	93
LCSD 570-334393/3-A	Lab Control Sample Dup	89
MB 570-334393/1-A	Method Blank	82

Surrogate Legend

NBZ = Nitrobenzene-d5

Isotope Dilution Summary

Client: Hargis + Associates, Inc.

Job ID: 570-140142-1

Project/Site: Raytheon Main GETS OCSD Quarterly Sample /
532.15

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 (21-120)
570-140142-2	CEFF	43
LCS 570-334393/2-A	Lab Control Sample	36
LCSD 570-334393/3-A	Lab Control Sample Dup	37
MB 570-334393/1-A	Method Blank	53

Surrogate Legend

DXE = 1,4-Dioxane-d8

QC Sample Results

Client: Hargis + Associates, Inc.

Job ID: 570-140142-1

Project/Site: Raytheon Main GETS OCSD Quarterly Sample / 532.15

Method: 624.1 - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 570-333831/7

Matrix: Water

Analysis Batch: 333831

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-Trichloroethane	ND		1.0		ug/L			06/01/23 21:49	1
1,1,2,2-Tetrachloroethane	ND		1.0		ug/L			06/01/23 21:49	1
1,1-Dichloroethane	ND		1.0		ug/L			06/01/23 21:49	1
1,1-Dichloroethene	ND		1.0		ug/L			06/01/23 21:49	1
1,2-Dichlorobenzene	ND		1.0		ug/L			06/01/23 21:49	1
1,2-Dichloroethane	ND		0.50		ug/L			06/01/23 21:49	1
1,2-Dichloropropane	ND		1.0		ug/L			06/01/23 21:49	1
1,3-Dichlorobenzene	ND		1.0		ug/L			06/01/23 21:49	1
1,4-Dichlorobenzene	ND		1.0		ug/L			06/01/23 21:49	1
2-Chloroethyl vinyl ether	ND		2.0		ug/L			06/01/23 21:49	1
Acrolein	ND		5.0		ug/L			06/01/23 21:49	1
Acrylonitrile	ND		2.0		ug/L			06/01/23 21:49	1
Benzene	ND		0.50		ug/L			06/01/23 21:49	1
Bromodichloromethane	ND		1.0		ug/L			06/01/23 21:49	1
Bromoform	ND		1.0		ug/L			06/01/23 21:49	1
Bromomethane	ND		5.0		ug/L			06/01/23 21:49	1
cis-1,2-Dichloroethene	ND		1.0		ug/L			06/01/23 21:49	1
cis-1,3-Dichloropropene	ND		0.50		ug/L			06/01/23 21:49	1
Carbon tetrachloride	ND		0.50		ug/L			06/01/23 21:49	1
Chlorobenzene	ND		1.0		ug/L			06/01/23 21:49	1
Chloroethane	ND		1.0		ug/L			06/01/23 21:49	1
Chloroform	ND		1.0		ug/L			06/01/23 21:49	1
Chloromethane	ND		1.0		ug/L			06/01/23 21:49	1
Dibromochloromethane	ND		1.0		ug/L			06/01/23 21:49	1
Ethylbenzene	ND		1.0		ug/L			06/01/23 21:49	1
Methylene Chloride	ND		2.0		ug/L			06/01/23 21:49	1
Methyl-t-Butyl Ether (MTBE)	ND		1.0		ug/L			06/01/23 21:49	1
o-Xylene	ND		1.0		ug/L			06/01/23 21:49	1
m,p-Xylene	ND		1.0		ug/L			06/01/23 21:49	1
trans-1,2-Dichloroethene	ND		1.0		ug/L			06/01/23 21:49	1
trans-1,3-Dichloropropene	ND		0.50		ug/L			06/01/23 21:49	1
Tetrachloroethene	ND		1.0		ug/L			06/01/23 21:49	1
Toluene	ND		1.0		ug/L			06/01/23 21:49	1
Trichloroethene	ND		1.0		ug/L			06/01/23 21:49	1
Trichlorofluoromethane	ND		5.0		ug/L			06/01/23 21:49	1
Vinyl chloride	ND		0.50		ug/L			06/01/23 21:49	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	97		60 - 140		06/01/23 21:49	1
4-Bromofluorobenzene (Surr)	96		60 - 140		06/01/23 21:49	1
Dibromofluoromethane	98		60 - 140		06/01/23 21:49	1
Toluene-d8 (Surr)	100		60 - 140		06/01/23 21:49	1

Eurofins Calscience

QC Sample Results

Client: Hargis + Associates, Inc.

Job ID: 570-140142-1

Project/Site: Raytheon Main GETS OCSD Quarterly Sample / 532.15

Method: 624.1 - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 570-333831/4

Matrix: Water

Analysis Batch: 333831

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-Trichloroethane	20.0	18.28		ug/L		91	70 - 130
1,1,2,2-Tetrachloroethane	20.0	22.33		ug/L		112	60 - 140
1,1-Dichloroethane	20.0	18.35		ug/L		92	70 - 130
1,1-Dichloroethene	20.0	17.79		ug/L		89	50 - 150
1,2-Dichlorobenzene	20.0	22.68		ug/L		113	65 - 135
1,2-Dichloroethane	20.0	20.21		ug/L		101	70 - 130
1,2-Dichloropropane	20.0	20.22		ug/L		101	35 - 165
1,3-Dichlorobenzene	20.0	22.50		ug/L		112	70 - 130
1,4-Dichlorobenzene	20.0	21.47		ug/L		107	65 - 135
2-Chloroethyl vinyl ether	20.0	13.62		ug/L		68	1 - 225
Acrolein	40.0	33.80		ug/L		85	60 - 140
Acrylonitrile	20.0	19.25		ug/L		96	60 - 140
Benzene	20.0	20.44		ug/L		102	65 - 135
Bromodichloromethane	20.0	21.17		ug/L		106	65 - 135
Bromoform	20.0	22.23		ug/L		111	70 - 130
Bromomethane	20.0	11.76		ug/L		59	15 - 185
cis-1,2-Dichloroethene	20.0	20.00		ug/L		100	60 - 140
cis-1,3-Dichloropropene	20.0	20.16		ug/L		101	25 - 175
Carbon tetrachloride	20.0	19.01		ug/L		95	70 - 130
Chlorobenzene	20.0	21.73		ug/L		109	65 - 135
Chloroethane	20.0	14.76		ug/L		74	40 - 160
Chloroform	20.0	18.21		ug/L		91	70 - 135
Chloromethane	20.0	12.38		ug/L		62	1 - 205
Dibromochloromethane	20.0	23.10		ug/L		116	70 - 135
Ethylbenzene	20.0	22.00		ug/L		110	60 - 140
Methylene Chloride	20.0	17.55		ug/L		88	60 - 140
Methyl-t-Butyl Ether (MTBE)	20.0	19.17		ug/L		96	60 - 140
o-Xylene	20.0	22.43		ug/L		112	60 - 140
m,p-Xylene	40.0	45.05		ug/L		113	60 - 140
trans-1,2-Dichloroethene	20.0	18.74		ug/L		94	70 - 130
trans-1,3-Dichloropropene	20.0	23.12		ug/L		116	50 - 150
Tetrachloroethene	20.0	22.44		ug/L		112	70 - 130
Toluene	20.0	20.88		ug/L		104	70 - 130
Trichloroethene	20.0	20.84		ug/L		104	65 - 135
Trichlorofluoromethane	20.0	17.66		ug/L		88	50 - 150
Vinyl chloride	20.0	15.09		ug/L		75	5 - 195

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	98		60 - 140
4-Bromofluorobenzene (Surr)	101		60 - 140
Dibromofluoromethane	96		60 - 140
Toluene-d8 (Surr)	99		60 - 140

QC Sample Results

Client: Hargis + Associates, Inc.

Job ID: 570-140142-1

Project/Site: Raytheon Main GETS OCSD Quarterly Sample /
532.15

Method: 624.1 - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 570-333831/5

Matrix: Water

Analysis Batch: 333831

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-Trichloroethane	20.0	17.86		ug/L		89	70 - 130	2	36
1,1,2,2-Tetrachloroethane	20.0	21.66		ug/L		108	60 - 140	3	61
1,1-Dichloroethane	20.0	18.35		ug/L		92	70 - 130	0	40
1,1-Dichloroethene	20.0	17.61		ug/L		88	50 - 150	1	32
1,2-Dichlorobenzene	20.0	21.41		ug/L		107	65 - 135	6	57
1,2-Dichloroethane	20.0	19.73		ug/L		99	70 - 130	2	49
1,2-Dichloropropane	20.0	19.91		ug/L		100	35 - 165	2	55
1,3-Dichlorobenzene	20.0	21.40		ug/L		107	70 - 130	5	43
1,4-Dichlorobenzene	20.0	21.00		ug/L		105	65 - 135	2	57
2-Chloroethyl vinyl ether	20.0	14.35		ug/L		72	1 - 225	5	71
Acrolein	40.0	32.69		ug/L		82	60 - 140	3	60
Acrylonitrile	20.0	18.71		ug/L		94	60 - 140	3	60
Benzene	20.0	20.21		ug/L		101	65 - 135	1	61
Bromodichloromethane	20.0	20.89		ug/L		104	65 - 135	1	56
Bromoform	20.0	21.34		ug/L		107	70 - 130	4	42
Bromomethane	20.0	11.95		ug/L		60	15 - 185	2	61
cis-1,2-Dichloroethene	20.0	19.37		ug/L		97	60 - 140	3	30
cis-1,3-Dichloropropene	20.0	20.01		ug/L		100	25 - 175	1	58
Carbon tetrachloride	20.0	18.62		ug/L		93	70 - 130	2	41
Chlorobenzene	20.0	20.75		ug/L		104	65 - 135	5	53
Chloroethane	20.0	15.75		ug/L		79	40 - 160	7	78
Chloroform	20.0	17.61		ug/L		88	70 - 135	3	30
Chloromethane	20.0	13.02		ug/L		65	1 - 205	5	60
Dibromochloromethane	20.0	21.87		ug/L		109	70 - 135	5	50
Ethylbenzene	20.0	21.23		ug/L		106	60 - 140	4	63
Methylene Chloride	20.0	17.09		ug/L		85	60 - 140	3	28
Methyl-t-Butyl Ether (MTBE)	20.0	18.57		ug/L		93	60 - 140	3	30
o-Xylene	20.0	21.39		ug/L		107	60 - 140	5	30
m,p-Xylene	40.0	44.31		ug/L		111	60 - 140	2	30
trans-1,2-Dichloroethene	20.0	18.60		ug/L		93	70 - 130	1	45
trans-1,3-Dichloropropene	20.0	22.50		ug/L		112	50 - 150	3	86
Tetrachloroethene	20.0	21.85		ug/L		109	70 - 130	3	39
Toluene	20.0	20.60		ug/L		103	70 - 130	1	41
Trichloroethene	20.0	20.30		ug/L		101	65 - 135	3	48
Trichlorofluoromethane	20.0	18.00		ug/L		90	50 - 150	2	84
Vinyl chloride	20.0	15.50		ug/L		78	5 - 195	3	66

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	97		60 - 140
4-Bromofluorobenzene (Surr)	101		60 - 140
Dibromofluoromethane	97		60 - 140
Toluene-d8 (Surr)	99		60 - 140

Eurofins Calscience

QC Sample Results

Client: Hargis + Associates, Inc.

Job ID: 570-140142-1

Project/Site: Raytheon Main GETS OCSD Quarterly Sample /
532.15

Method: 624.1 - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 570-333961/7

Matrix: Water

Analysis Batch: 333961

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dichlorodifluoromethane	ND		1.0		ug/L			06/02/23 11:18	1
Surrogate	MB %Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	99		60 - 140					06/02/23 11:18	1
4-Bromofluorobenzene (Surr)	97		60 - 140					06/02/23 11:18	1
Dibromofluoromethane	97		60 - 140					06/02/23 11:18	1
Toluene-d8 (Surr)	101		60 - 140					06/02/23 11:18	1

Lab Sample ID: LCS 570-333961/4

Matrix: Water

Analysis Batch: 333961

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Dichlorodifluoromethane	20.0	15.22		ug/L		76	60 - 140
Surrogate	LCS %Recovery	LCS Qualifier	Limits				
1,2-Dichloroethane-d4 (Surr)	96		60 - 140				
4-Bromofluorobenzene (Surr)	100		60 - 140				
Dibromofluoromethane	97		60 - 140				
Toluene-d8 (Surr)	100		60 - 140				

Lab Sample ID: LCSD 570-333961/5

Matrix: Water

Analysis Batch: 333961

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
Dichlorodifluoromethane	20.0	17.18		ug/L		86	60 - 140	12	30
Surrogate	LCSD %Recovery	LCSD Qualifier	Limits						
1,2-Dichloroethane-d4 (Surr)	94		60 - 140						
4-Bromofluorobenzene (Surr)	98		60 - 140						
Dibromofluoromethane	96		60 - 140						
Toluene-d8 (Surr)	100		60 - 140						

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

Lab Sample ID: MB 570-334393/1-A

Matrix: Water

Analysis Batch: 335117

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 334393

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	ND		0.50		ug/L		06/05/23 08:14	06/07/23 09:07	1
Isotope Dilution	MB %Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,4-Dioxane-d8	53		21 - 120				06/05/23 08:14	06/07/23 09:07	1

Eurofins Calscience

QC Sample Results

Client: Hargis + Associates, Inc.

Job ID: 570-140142-1

Project/Site: Raytheon Main GETS OCSD Quarterly Sample /
532.15

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

Lab Sample ID: MB 570-334393/1-A

Matrix: Water

Analysis Batch: 335117

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 334393

	<i>MB</i>	<i>MB</i>				
<i>Surrogate</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
Nitrobenzene-d5	82		58 - 135	06/05/23 08:14	06/07/23 09:07	1

Lab Sample ID: LCS 570-334393/2-A

Matrix: Water

Analysis Batch: 335117

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 334393

<i>Analyte</i>			<i>Spike Added</i>	<i>LCS Result</i>	<i>LCS Qualifier</i>	<i>Unit</i>	<i>D</i>	<i>%Rec</i>	<i>%Rec Limits</i>	
1,4-Dioxane			20.0	15.92		ug/L		80	63 - 144	
<i>Isotope Dilution</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>							
1,4-Dioxane-d8	36		21 - 120							
<i>Surrogate</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>							
Nitrobenzene-d5	93		58 - 135							

Lab Sample ID: LCSD 570-334393/3-A

Matrix: Water

Analysis Batch: 335117

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 334393

<i>Analyte</i>			<i>Spike Added</i>	<i>LCSD Result</i>	<i>LCSD Qualifier</i>	<i>Unit</i>	<i>D</i>	<i>%Rec</i>	<i>%Rec Limits</i>	<i>RPD</i>	<i>RPD Limit</i>
1,4-Dioxane			20.0	15.05		ug/L		75	63 - 144	6	20
<i>Isotope Dilution</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>								
1,4-Dioxane-d8	37		21 - 120								
<i>Surrogate</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>								
Nitrobenzene-d5	89		58 - 135								

QC Association Summary

Client: Hargis + Associates, Inc.

Job ID: 570-140142-1

Project/Site: Raytheon Main GETS OCSD Quarterly Sample /
532.15

GC/MS VOA

Analysis Batch: 333831

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-140142-1	TB-060123	Total/NA	Water	624.1	
570-140142-2	CEFF	Total/NA	Water	624.1	
MB 570-333831/7	Method Blank	Total/NA	Water	624.1	
LCS 570-333831/4	Lab Control Sample	Total/NA	Water	624.1	
LCSD 570-333831/5	Lab Control Sample Dup	Total/NA	Water	624.1	

Analysis Batch: 333961

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-140142-1 - RA	TB-060123	Total/NA	Water	624.1	
570-140142-2 - RA	CEFF	Total/NA	Water	624.1	
MB 570-333961/7	Method Blank	Total/NA	Water	624.1	
LCS 570-333961/4	Lab Control Sample	Total/NA	Water	624.1	
LCSD 570-333961/5	Lab Control Sample Dup	Total/NA	Water	624.1	

GC/MS Semi VOA

Prep Batch: 334393

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-140142-2	CEFF	Total/NA	Water	3510C	
MB 570-334393/1-A	Method Blank	Total/NA	Water	3510C	
LCS 570-334393/2-A	Lab Control Sample	Total/NA	Water	3510C	
LCSD 570-334393/3-A	Lab Control Sample Dup	Total/NA	Water	3510C	

Analysis Batch: 335117

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-140142-2	CEFF	Total/NA	Water	8270C SIM ID	334393
MB 570-334393/1-A	Method Blank	Total/NA	Water	8270C SIM ID	334393
LCS 570-334393/2-A	Lab Control Sample	Total/NA	Water	8270C SIM ID	334393
LCSD 570-334393/3-A	Lab Control Sample Dup	Total/NA	Water	8270C SIM ID	334393

Lab Chronicle

Client: Hargis + Associates, Inc.
Project/Site: Raytheon Main GETS OCSD Quarterly Sample /
532.15

Job ID: 570-140142-1

Client Sample ID: TB-060123

Lab Sample ID: 570-140142-1

Date Collected: 06/01/23 08:00

Matrix: Water

Date Received: 06/01/23 14:25

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	624.1		1	5 mL	5 mL	333831	06/01/23 22:30	N1A	EET CAL 4
		Instrument ID: GCMSQQ								
Total/NA	Analysis	624.1	RA	1	5 mL	5 mL	333961	06/02/23 12:01	A1W	EET CAL 4
		Instrument ID: GCMSQQ								

Client Sample ID: CEFF

Lab Sample ID: 570-140142-2

Date Collected: 06/01/23 10:25

Matrix: Water

Date Received: 06/01/23 14:25

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	624.1		1	5 mL	5 mL	333831	06/02/23 00:35	N1A	EET CAL 4
		Instrument ID: GCMSQQ								
Total/NA	Analysis	624.1	RA	1	5 mL	5 mL	333961	06/02/23 12:22	A1W	EET CAL 4
		Instrument ID: GCMSQQ								
Total/NA	Prep	3510C			135.1 mL	10 mL	334393	06/05/23 08:14	RY4P	EET CAL 4
Total/NA	Analysis	8270C SIM ID		1	1 mL	1 mL	335117	06/07/23 09:51	UFLE	EET CAL 4
		Instrument ID: GCMSDDD								

Laboratory References:

EET CAL 4 = Eurofins Calscience Tustin, 2841 Dow Avenue, Tustin, CA 92780, TEL (714)895-5494

Accreditation/Certification Summary

Client: Hargis + Associates, Inc.
Project/Site: Raytheon Main GETS OCSD Quarterly Sample /
532.15

Job ID: 570-140142-1

Laboratory: Eurofins Calscience

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Oregon	NELAP	4175	02-02-24

1
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16

Method Summary

Client: Hargis + Associates, Inc.

Job ID: 570-140142-1

Project/Site: Raytheon Main GETS OCSD Quarterly Sample /
532.15

Method	Method Description	Protocol	Laboratory
624.1	Volatile Organic Compounds (GC/MS)	EPA	EET CAL 4
8270C SIM ID	Semivolatile Organic Compounds (GC/MS SIM / Isotope Dilution)	SW846	EET CAL 4
3510C	Liquid-Liquid Extraction (Separatory Funnel)	SW846	EET CAL 4

Protocol References:

EPA = US Environmental Protection Agency

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

Laboratory References:

EET CAL 4 = Eurofins Calscience Tustin, 2841 Dow Avenue, Tustin, CA 92780, TEL (714)895-5494

Sample Summary

Client: Hargis + Associates, Inc.

Job ID: 570-140142-1

Project/Site: Raytheon Main GETS OCSD Quarterly Sample /
532.15

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
570-140142-1	TB-060123	Water	06/01/23 08:00	06/01/23 14:25
570-140142-2	CEFF	Water	06/01/23 10:25	06/01/23 14:25

Login Sample Receipt Checklist

Client: Hargis + Associates, Inc.

Job Number: 570-140142-1

Login Number: 140142

List Number: 1

Creator: Skinner, Alma D

List Source: Eurofins Calscience

Question	Answer	Comment
Radioactivity wasn't checked or is $\leq$ 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 $<6\text{mm}$ (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	