

Project No. 151297
VIA E-MAIL AND ENVIROSTOR UPLOAD

October 16, 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, Third 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 third 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 third 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 third quarter of 2023 groundwater monitoring and pilot GETS operation from June through August 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 August 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 August 25, August 30, and August 31, 2023 (Figures 2 and 3; Table 2; Appendix A). During the third quarter monitoring event, well MW-34C was unable to be monitored due to an abandoned car on top of the well.

Groundwater samples were collected from August 10 through August 29th, 2023 (Appendix A). Analytical results are summarized in Table 3 and provided in Appendix B. Additional groundwater monitoring was conducted as part of routine operation and monitoring of the pilot GETS. A summary of the pilot GETS operation and monitoring is provided below. 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).

Quality Assurance /Quality Control

QA/QC samples collected in August 2023 consisted of trip blanks, field duplicates, equipment rinsate blanks, and laboratory split samples. Eurofins provided trip blanks. Field duplicate samples and laboratory split samples were collected for analysis of VOCs and 1,4-dioxane from monitoring wells MW-08, MW-30B, and MW-32B in August 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-08 08/24/2023	1,1-DCE	25	26	3.9	32	24.6	
	TCE	81	81	NA	75	7.7	
	1,4-dioxane	1.6	1.5	6.5	2.4	40	
MW-30B 08/25/2023	1,1-DCE	19	19	NA	25	27.3	
	TCE	71	72	1.4	77	8.1	
	1,4-dioxane	<0.39	<0.38	NA	1.2	101	E
MW-32B 08/28/2023	1,1-DCE	110	110	NA	100	9.5	
	TCE	37	40	7.8	38	2.7	
	1,4-dioxane	5.6	5.3	5.5	7.9	34.1	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-08, MW-30B, and MW-32B were within quality control criteria for 1,1-DCE and TCE. “Estimated” (E) qualifiers were assigned to 1,4-dioxane samples from MW-30B and MW-32B 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 August 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 August 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 control limits that are not applicable (4) 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.

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 from June through August 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 extraction from 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 third quarter of 2023, the pilot GETS was operational at approximately 94 percent of the available runtime, and approximately 5.5 million gallons of groundwater were treated and discharged to the sanitary sewer (Table 4). The pump in extraction well MW-29 went out on June 18 due to pump failure. A new pump and motor assembly were ordered, and installation was completed on July 19. The well resumed normal operation on July 24th. The average operational monthly discharge flow rate to the sanitary sewer from June to August 2023 was approximately 40 gpm. Since the startup of the pilot GETS, approximately 253 million gallons of groundwater have been treated at an average operational flow rate of 32.2 gpm through the end of August 2023 (Table 4).

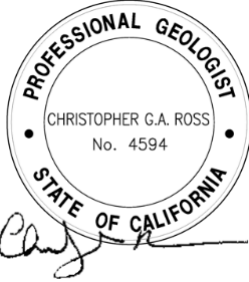
Current monthly and quarterly pilot GETS monitoring activities include collecting groundwater samples from extraction wells EW-02 and MW-29 in addition to collecting samples at treatment system sampling ports: Influent, Post-Particulate-Filter, Post-UV-Ox, Carbon-Breakthrough, and Carbon-Effluent (Tables 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 third 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 these sample results throughout the quarter were non-detect.

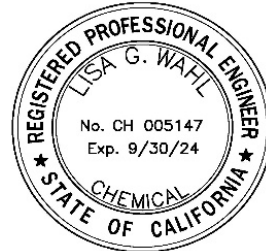
The pilot GETS continues to remove VOCs and 1,4-dioxane from extracted groundwater. During the third quarter of 2023, the pilot GETS removed approximately 1.2 pounds of VOCs and 0.6 pounds of 1,4-dioxane from extracted groundwater. Since the startup of the pilot GETS in July 2008, approximately 205 pounds of VOCs and 60 pounds of 1,4-dioxane have been removed from groundwater through August 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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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., 2023. Letter from C. Ross et. al. to S. Rounds, DTSC, re: Per- and Polyfluoroalkyl Substances (PFAS) Screening, Raytheon Company (Former Hughes Aircraft Company) Site, Fullerton, California. January 13, 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	8/30/2023	141.07	112.15	28.92	
EW-02	6/1/2023	132.97	108.84	24.13	Pilot GETS
EW-02	7/20/2023	132.97	109.38	23.59	Pilot GETS
EW-02	8/30/2023	132.97	111.12	21.85	Pilot GETS
MW-06	8/30/2023	184.7	147.03	37.67	
MW-08	8/30/2023	155.91	122.85	33.06	
MW-09	8/30/2023	180.1	144.45	35.65	
MW-13	8/30/2023	141.84	117.28	24.56	
MW-15	8/30/2023	144.95	120.66	24.29	
MW-16	8/25/2023	142.4	113.98	28.42	
MW-17	8/30/2023	142.7	117.18	25.52	
MW-18	8/30/2023	142.32	117.6	24.72	
MW-19	8/30/2023	142.06	117.05	25.01	
MW-20	8/30/2023	184.19	141	43.19	
MW-21	8/30/2023	141.18	107.39	33.79	
MW-22	8/30/2023	138.65	113.85	24.80	
MW-23	8/30/2023	137.33	114.18	23.15	
MW-24	8/25/2023	142.83	107.55	35.28	
MW-25	8/25/2023	142.64	109.45	33.19	
MW-26A	8/30/2023	137.04	112.36	24.68	
MW-26B	8/30/2023	137.05	112.65	24.40	
MW-26C	8/30/2023	137.22	109.86	27.36	
MW-27	8/30/2023	137.16	109.32	27.84	
MW-28	8/30/2023	140.77	113.55	27.22	
MW-29	6/1/2023	139.81	168.44	-28.63	Pilot GETS
MW-29	7/20/2023 ¹	139.81	111.85	27.96	Pilot GETS
MW-29	8/30/2023	139.81	159.05	-19.24	Pilot GETS
MW-30A	8/30/2023	129.44	103.06	26.38	
MW-30B	8/30/2023	129.39	100.84	28.55	
MW-31	8/25/2023	119.6	92.1	27.50	
MW-32A	8/30/2023	92.88	67.5	25.38	
MW-32B	8/30/2023	92.89	66.88	26.01	
MW-32C	8/30/2023	92.88	59.99	32.89	
MW-33	8/25/2023	83.19	58.78	24.41	
MW-34A	8/30/2023	153.25	135.91	17.34	
MW-34B	8/30/2023	153.11	127.45	25.66	
MW-34C	8/30/2023	NA	NA	NA	
MW-35A	8/31/2023	93.57	80.05	13.52	
MW-35B	8/31/2023	93.56	74.05	19.51	
MW-35C	8/31/2023	93.55	68.05	25.50	
MW-36	8/25/2023	86.65	63.04	23.61	
MW-37	8/30/2023	155.6	124.81	30.79	
MW-38	8/30/2023	154.9	141.25	13.65	
MW-39	8/25/2023	84.25	61.23	23.02	
MW-40	8/25/2023	123.4	94.05	29.35	
MW-41	8/30/2023	155.8	130.48	25.12	
MW-42	8/30/2023	82.8	59.66	23.14	
MW-43	8/25/2023	76.64	54.11	22.53	

Perch Zone Wells					
P-07	8/30/2023	110.61	142.31	31.70	
P-09	8/30/2023	120.7	183.86	63.16	

FOOTNOTES:

Extraction well water levels are actuals, does not account for drawdown.

¹ Well was not operating during O&M visit

btoc = below top of casing

msl = mean sea level

Pilot GETS = Pilot Groundwater Extraction and Treatment System On

Table 3. Prevalent Volatile Organic Compounds and 1,4-Dioxane in Groundwater

Well Identifier/ Sample Identifier	Date Sampled	Result Type	Benzene (5/1)	Carbon Tetrachloride (5/0.5)	Chloroform (80/80)	1,1-DCA (-/5)	1,2-DCA (5/0.5)	1,1-DCE (7/6)	cis-1,2-DCE (70/6)	PCE (5/5)	1,1,1-TCA (200/200)	1,1,2-TCA (5/5)	TCE (5/5)	TCFM (-/150)	Toluene (1,000/150)	1,4-Dioxane (3*/1**)
EW-01	8/23/2023	N	< 0.50	< 0.50	< 0.50	0.44 J	< 0.50	35	< 0.50	< 0.50	< 0.50	0.21 J	< 0.50	< 0.50	< 0.50	18
EW-01 Historical Ranges			< 0.50 - 2.0	< 0.50 - 0.53	< 0.50 - 1.2	< 0.50 - 16	< 0.50 - 4.0	< 0.50 - 1,600 E	< 0.50 - 0.52	< 0.50 - 4.3	< 0.50	< 0.50 - 10	< 0.50 - 3.3	< 0.50 - 0.61	< 0.50 - 4.6	< 2.0 - 990 E
EW-02	6/1/2023	N	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	8.2	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	3.9
EW-02	7/20/2023	N	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	10	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	4.5
EW-02	8/10/2023	N	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	8.9	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.5 *1, E	< 0.50	4.5
EW-02 Historical Ranges			< 0.50	< 0.50	< 0.50	< 0.50 - 1.5	< 0.50	2.3 - 160	< 0.50	< 0.50	< 0.50	< 0.50 - 0.59	< 0.50	< 0.50	< 0.50 - 0.85	< 2.0 - 48
MW-08	8/24/2023	N	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	25	3.4	< 0.50	< 0.50	< 0.50	81	< 0.50	< 0.50	1.6
MW-08	8/24/2023	FD	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	26	3.4	< 0.50	< 0.50	< 0.50	81	< 0.50	< 0.50	1.5
MW-08	8/24/2023	SPT	< 0.50	< 0.50	0.43 J	< 0.50	< 0.50	32	4.3	< 0.50	< 0.50	< 0.50	75	< 0.50	< 0.50	2.4
MW-08 Historical Ranges			< 0.50 - 0.95	< 0.50	< 0.50 - 0.86	< 0.50 - 5.1	< 0.50 - 0.99	< 0.50 - 500	< 0.50 - 13	< 0.50 - 2.6	< 0.50	< 0.50	< 0.50 - 480	< 0.50 - 1.0	< 0.50 - 2.3	< 0.20 - 130
MW-09	8/22/2023	N	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.37
MW-09 Historical Ranges			< 0.50	< 0.50	< 0.50	< 0.50 - 0.79	< 0.50	< 0.50 - 32	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50 - 0.96	< 0.50 - 5.3	< 0.50	< 0.2 - 52 E
MW-15	8/24/2023	N	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	4.3	< 0.50	< 0.50	< 0.50	< 0.50	0.64	2.7	< 0.50	--
MW-15 Historical Ranges			< 0.50	< 0.50	< 0.50 - 0.22 J	< 0.50	< 0.50	< 0.50 - 14	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50 - 7.8	< 0.50 - 20	< 0.50	< 0.50
MW-16	8/24/2023	N	< 10	< 10	< 10	< 10	< 10	420	< 10	< 10	< 10	< 10	< 10	< 10	< 10	50
MW-16 Historical Ranges			< 0.50	< 0.50 - 0.58	< 0.50 - 1.1	< 0.50 - 18	< 0.50 - 4.5	49 - 1,900	< 0.50 - 0.57	< 0.5 - 2.9	< 0.5 - 28 E	< 0.50 - 10	< 0.50 - 7.8	< 0.50	< 0.50	< 2.0 - 440
MW-18	8/23/2023	N	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	0.43 J	< 0.50	< 0.38
MW-18 Historical Ranges			< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50 - 0.51	< 0.50 - 1.2	< 0.5 - 0.12 J	< 0.50	< 0.50	< 0.50	< 0.50 - 6.3	< 0.50 - 0.82	< 0.2 - 7.7 E
MW-20	8/24/2023	N	< 0.50	< 0.50	1.9	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.39
MW-20 Historical Ranges			< 0.50	< 0.50	< 0.50 - 2.1	< 0.50	< 0.50	< 0.50 - 82	< 0.50	< 0.5 - 0.14 J	< 0.5 - 0.63	< 0.50	< 0.50	< 0.50 - 0.58	< 0.50 - 0.22 J	< 0.2 - 3.9
MW-21	8/23/2023	N	< 0.50	0.59	1.6	25	4.7	1500	1.3	5.4	< 0.50	14	12	< 0.50	< 0.50	520
MW-21 Historical Ranges			< 0.50	< 0.50 - 1.9	< 0.50 - 4.6	< 0.50 - 71	< 0.50 - 8.9	200 - 4,900	< 0.50 - 2.4	< 0.50 - 12	< 0.50 - 2.0	< 0.50 - 27	0.96 - 46	< 0.50 - 0.53	< 0.50	11 - 1,200
MW-26C	8/22/2023	N	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.39
MW-26C Historical Ranges			< 0.50	< 0.50	< 0.50	< 0.50 - 1.7	< 0.50	< 0.50 - 120	< 0.50	< 0.50 - 0.79	< 0.50	< 0.50 - 0.77	< 0.50	< 0.50	< 0.50 - 22	< 0.20 - 57
MW-28	8/24/2023	N	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.39
MW-28 Historical Ranges			< 0.50	< 0.50	< 0.50 - 0.20 J	< 0.50 - 0.94	< 0.50	< 0.50 - 76 E	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.20 - 19
MW-29	6/1/2023	N	< 0.50	< 0.50	< 0.50	0.98	< 0.50	85	< 0.50	< 0.50	< 0.50	< 0.50	1.2	< 0.50	< 0.50	45
MW-29	8/10/2023	N	< 0.50	< 0.50	< 0.50	0.84	< 0.50	83	< 0.50	< 0.50	< 0.50	< 0.50	1.2	< 0.5 *1, E	< 0.50	50
MW-29 Historical Ranges			< 0.50 - 0.57	< 0.50 - 1.8	< 0.50 - 0.80	< 0.50 - 9.2	< 0.50 - 1.4	85 - 900 E	< 0.50 - 0.61	< 0.50 - 6.6	< 0.50	< 0.50 - 2.3	< 0.50 - 8.3	< 0.50 - 2.2	< 0.50	26 BE - 301
MW-30A	8/25/2023	N	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.38
MW-30A Historical Ranges			< 0.50	< 0.50	< 0.50	< 0.50 - 2.9	< 0.50 - 0.67	< 0.50 - 270	< 0.50	< 0.50 - 0.58	< 0.50	< 0.50 - 1.1	< 0.50 - 1.9	< 0.50	< 0.50	< 0.20 - 95
MW-30B	8/25/2023	N	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	19	4	< 0.50	< 0.50	< 0.50	71	< 0.50	< 0.50	< 0.39
MW-30B	8/25/2023	FD	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	19	4	< 0.50	< 0.50	< 0.50	72	< 0.50	< 0.50	< 0.38
MW-30B	8/25/2023	SPT	< 0.50	< 0.50	0.53	< 0.50	< 0.50	25	4.7	< 0.50	< 0.50	< 0.50	77	< 0.50	< 0.50	1.2 E
MW-30B Historical Ranges			< 0.50	< 0.50	< 0.50 - 0.77	< 0.50 - 0.15 J	< 0.50 - 0.21 J	< 0.50 - 31 E	< 0.50 - 8.2	< 0.50 - 0.51	< 0.50	< 0.50	< 0.50 - 110	< 0.50	< 0.50 - 4.5	< 0.20 - 28 E
MW-31	8/25/2023	N	< 0.5 F1, E	< 0.5 F2, E	< 0.5 F1, E	0.56 F1, E	< 0.50	60	< 0.5 F1, E	< 0.5 F1 F2, E	< 0.5 F1 F2, E	< 0.50	5	< 0.5 F1, E	< 0.5 F1, E	4
MW-31 Historical Ranges			< 0.50	< 0.50 - 0.23 J	< 0.50 - 0.58	< 0.50 - 5.0	< 0.50 - 0.51	25 - 430	< 0.50 - 3.0 E	< 0.50 - 2.5	< 0.50	< 0.50 - 1.2	0.50 - 21	< 0.50	< 0.50 - 1.0	< 0.20 - 33 E
MW-32A	8/23/2023	N	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.39
MW-32A Historical Ranges			< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.20 - 1.6
MW-32B	8/28/2023	N	< 0.50	< 0.50	< 0.50	1	< 0.50	110	3.7	< 0.50	< 0.50	< 0.50	37	< 0.50	< 0.50	5.6
MW-32B	8/28/2023	FD	< 0.50	< 0.50	< 0.50	1.1	< 0.50	110	4	< 0.50	< 0.50	< 0.50	40	< 0.50	< 0.50	5.3
MW-32B	8/25/2023	SPT	< 0.50	< 0.50	< 0.50	1.2	< 0.50	100	4.8	< 0.50	< 0.50	< 0.50	38	< 0.50	< 0.50	7.9 E
MW-32B Historical Ranges			< 0.50	< 0.50	< 0.50	< 0.50 - 3.6	< 0.50	16 - 290	1.3 - 7.9	< 0.50	< 0.50	< 0.50	11-75	< 0.50	< 0.50 - 0.14 J	< 2.0 - 8.0
MW-32C	8/24/2023	N	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.39
MW-32C Historical Ranges			< 0.50	< 0.50	< 0.50 - 0.24 J	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50 - 0.56	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.20 - 1.0
MW-33	8/29/2023	N	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	3.1	< 0.50	< 0.50	< 0.50	< 0.50	0.55	< 0.50	< 0.50	< 0.37
MW-33 Historical Ranges			< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50 - 12	< 0.50	< 0.50 - 0.32 J	< 0.50	< 0.50	< 0.50 - 2.0	< 0.50	< 0.50 - 1.4	< 0.20 - 0.22
MW-34B	8/28/2023	N	< 0.50	< 0.50	< 0.5 F1, E	< 0.5 F1, E	< 0.50	24 F1, E	< 0.50	< 0.50	< 0.5 F1, E	< 0.50	< 0.50	< 0.5 F2 F1, E	< 0.50	8.4
MW-34B Historical Ranges			< 0.50	< 0.50	< 0.50 - 0.50	< 0.50 - 9.8	< 0.50 - 1.7	20 E - 1,100	< 0.50	< 0.50 - 0.54	< 0.50	< 0.50 - 2.6	< 0.50 - 2.1	< 0.50 - 2.6	< 0.50 - 2.6	< 2.0 E - 260
MW-35C	8/24/2023	N	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.38
MW-35C Historical Ranges			< 0.50	< 0.50	< 0.50 - 120	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.20 - 0.06 J
MW-36	8/28/2023	N	< 0.50	< 0.50	< 0.50	0.61	< 0.50	55	< 0.50	< 0.50	< 0.50	< 0.50	<			

Well Identifier/ Sample Identifier	Date Sampled	Result Type	Benzene (5/1)	Carbon Tetrachloride (5/0.5)	Chloroform (80/80)	1,1-DCA (~5)	1,2-DCA (5/0.5)	1,1-DCE (7/6)	cis-1,2-DCE (70/6)	PCE (5/5)	1,1,1-TCA (200/200)	1,1,2-TCA (5/5)	TCE (5/5)	TCFM (~150)	Toluene (1,000/150)	1,4-Dioxane (3*/1**)
MW-42 Historical Ranges			< 0.50	< 0.50	< 0.50	< 0.50 - 0.76	< 0.50	0.41 J - 53	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.20 - 2.5
MW-43	8/28/2023	N	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.38
MW-43 Historical Ranges			< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.20
RB-082323	8/23/2023	RB	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.38
RB-082423	8/24/2023	RB	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.37
TB-060123	6/1/2023	TB	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	--
TB-072023	7/20/2023	TB	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	--
TB-081023	8/10/2023	TB	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.5 *1, E	< 0.50	--
TB-082223	8/22/2023	TB	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	--
TB-082423A	8/24/2023	TB	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	--
TB-082423B	8/24/2023	SPT TB	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	--
TB-082523A	8/25/2023	TB	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	--
TB-082523B	8/25/2023	SPT TB	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	--

Footnotes:

All concentrations are in micrograms per liter

1,1-DCA = 1,1-Dichloroethane
1,2-DCA = 1,2-Dichloroethane
1,1-DCE = 1,1-Dichloroethene
cis-1,2-DCE = cis-1,2-Dichloroethene
PCE = Tetrachloroethene
1,1,1-TCA = 1,1,1-Trichloroethane
1,1,2-TCA = 1,1,2-Trichloroethane
TCE = Trichloroethene

TCFM = Trichlorofluoromethane
(<) = Less than; the value is the Limit of Detection for that compound
* = 1,4-Dioxane Action Level of 3 ug/l
** = California Notification Level for 1,4-Dioxane of 1 ug/l
F1 = MS and/or MSD recovery exceeds control limits
F2 = MS and/or MSD RPD exceeds control limits
H3 = Initial analysis within holding time. Reanalysis past holding time.
H6 = Sample analyzed past hold time due to unexpected instrument failure.

E = Data qualified as Estimated in accordance with quality control criteria.
U = Data qualified as Unusable in accordance with quality control criteria.
J = Estimated Value; analyte detected at less than the Reporting Limit and greater than or equal to the Method Detection Limit
NA = Not analyzed for constituent
Detection Limit changed, not identified as historic high
Historic high
Unusable historic high

N = Primary sample
FD = Field Duplicate
SPT = Split sample
TB = Trip blank sample
RB = Rinsate blank sample
*1 = LCS or LCSD RPF exceeds control limit
* = LCS and/or LCSD is outside acceptance
*+ = LCS and/or LCSD is outside acceptance

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
2008⁵	3,659,562	13.8	18.2	3,358	4,416	76%
2009⁶	5,787,848	11	18.1	5,319	8,760	61%
2010⁶	14,295,261	27.2	46.4	5,131	8,760	59%
2011⁶	20,456,899	38.9	45.8	7,442	8,760	85%
2012⁷	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%
Q2 2023	5,045,955	40.7	43.2	1,948	2,065	94%
June 2023	2,624,346	50.6	50.7	862	865	100%
July 2023	1,150,345	23.5	25.1	765	816	94%
August 2023	1,710,505	42.4	43.3	659	672	98%
Total Q3 2023	5,485,196	38.9	40	2,286	2,353	97%
Total Since Startup	253,367,337	32.2	39.8	106,046	130,994	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 aquifer

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

Q3 = Quarter 3

Table 5. Pilot Groundwater Extraction and Treatment System Sampling Schedule

				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)																				
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						
1,4-Dioxane	EPA 8270 Modified	1 L Amber	0.002	X					X					X	X								
1,4-Dioxane	EPA 8270 SIM	1 L Amber	0.0002			X					X					X	X	X					
Total Suspended Solids	SM2540D	1 L Poly	10													X							
Total Dissolved Solids	SM2540C	1 L Poly	10																X	X	X	X	
Selected Metals																							
Dissolved Metals (Iron, Manganese, Calcium, Sodium, Magnesium)	EPA 6010B	250 mL poly	QAPP ⁴	(a)															X	X			
Selenium	EPA 6010B	250 mL poly	QAPP ⁴																X	X			
Selected Inorganic Constituents																							
Hydroxide Alkalinity	SM2320B	1 L Poly	2.0	(a)												X	X			X	X		
Bicarbonate Alkalinity	SM2320B	1 L Poly	2.0	(a)												X	X			X	X		
Carbonate Alkalinity	SM2320B	1 L Poly	2.0	(a)												X	X			X	X		
Total Alkalinity	SM2320B	1 L Poly	2.0	(a)												X	X			X	X		
Bromate Evaluation																							
Bromate	EPA 317.0	125 mL Poly	0.0005			X					X				X		X						
Bromide	EPA 300.0	125 mL Poly	0.05	(a)						(a)					X	X							
Other Constituents/Compounds																							
Total Organic Carbon	SM5310B	2 - 40 mL VOA, H2SO4	3.0	(a)												X	X			X	X		
Anions (Chloride, Sulfate, Nitrate, Nitrite, and Phosphate)	EPA 300.0	1 L Poly	Varies	(a)																X	X	X	
Chemical Oxygen Demand	EPA 410.4	125 mL Amber, H2SO4	5.0	(a)																X	X	X	
UV Absorption (UVA) @254nm	EPA 415.3	125 mL Amber/ 8 oz Jar	N/A		(a)											X				X	X	X	

				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)																				
Field Parameters																							
Dissolve Oxygen (DO)	N/A	N/A	N/A	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X					
Electrical Conductance (EC)	N/A	N/A	N/A	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X					
Redox Potential	N/A	N/A	N/A	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X					
Temperature	N/A	N/A	N/A	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X					
pH	N/A	N/A	N/A	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X					
Turbidity	N/A	N/A	N/A	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X					
Flow-Meter	N/A	N/A	N/A	X				X	X				X	X	X			X					
Residual Hydrogen Peroxide	N/A	N/A	N/A			(a)	(a)	(a)			X	X	X				X	X	X				

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

NPDES = National Pollutant Discharge Elimination System

WDR = Waste Discharge Requirement

N/A = Not applicable

mL = Milliliter

VOA = Volatile organic analysis

HCl = Hydrochloric acid

H₂SO₄ = Sulfuric acid

nm = Nanometers

EPA = U.S. Environmental Protection Agency

SIM = Selected ion monitoring

SM = Standard Method

L = Liter

poly = High density polyethylene bottle

Amber = Amber glass bottle

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

Compound	Date	Units	MW-29	EW-02	INF	PF	POX	CBT	CEFF
1,1,2-Trichloroethane	6/1/2023	ug/l	< 0.50	< 0.50	< 0.50	--	< 0.50	< 0.50	< 0.50
1,1,2-Trichloroethane	7/20/2023	ug/l	--	< 0.50	< 0.50	--	< 0.50	< 0.50	< 0.50
1,1,2-Trichloroethane	8/10/2023	ug/l	< 0.50	< 0.50	< 0.50	--	< 0.50	< 0.50	< 0.50
1,1-Dichloroethane	6/1/2023	ug/l	0.98	< 0.50	< 0.50	--	< 0.50	< 0.50	< 1.0
1,1-Dichloroethane	7/20/2023	ug/l	--	< 0.50	< 0.50	--	< 0.50	< 0.50	< 0.50
1,1-Dichloroethane	8/10/2023	ug/l	0.84	< 0.50	< 0.50	--	< 0.50	< 0.50	< 0.50
1,1-Dichloroethene	6/1/2023	ug/l	85	8.2	28	--	< 0.50	< 0.50	< 0.50
1,1-Dichloroethene	7/20/2023	ug/l	--	10	10	--	< 0.50	< 0.50	< 0.50
1,1-Dichloroethene	8/10/2023	ug/l	83	8.9	25	--	< 0.50	< 0.50	< 0.50
1,2-Dichloroethane	6/1/2023	ug/l	< 0.50	< 0.50	< 0.50	--	< 0.50	< 0.50	< 0.50
1,2-Dichloroethane	7/20/2023	ug/l	--	< 0.50	< 0.50	--	< 0.50	< 0.50	< 0.50
1,2-Dichloroethane	8/10/2023	ug/l	< 0.50	< 0.50	< 0.50	--	< 0.50	< 0.50	< 0.50
1,4-Dioxane	6/1/2023	ug/l	45	3.9	15	--	< 0.37	< 0.37	< 0.37
1,4-Dioxane	7/20/2023	ug/l	--	4.5	4.6	--	< 0.37	< 0.37	< 0.37
1,4-Dioxane	8/10/2023	ug/l	50	4.5	14	--	< 0.37	< 0.37	< 0.37
Bromate	6/1/2023	ug/l	--	--	< 50	--	< 50	--	--
Bromate	7/20/2023	ug/l	--	--	< 50	--	< 50 F1, E	--	--
Bromate	8/10/2023	ug/l	--	--	< 100	--	< 100	--	--
Bromide	6/1/2023	mg/l	< 0.50	< 0.50	0.21	--	--	--	--
Bromide	7/20/2023	mg/l	--	0.19	0.18	--	--	--	--
Bromide	8/10/2023	mg/l	0.38	0.19	0.24	--	--	--	--
cis-1,2-Dichloroethene	6/1/2023	ug/l	< 0.50	< 0.50	< 0.50	--	< 0.50	< 0.50	< 1.0
cis-1,2-Dichloroethene	7/20/2023	ug/l	--	< 0.50	< 0.50	--	< 0.50	< 0.50	< 0.50
cis-1,2-Dichloroethene	8/10/2023	ug/l	< 0.50	< 0.50	< 0.50	--	< 0.50	< 0.50	< 0.50
Tetrachloroethene	6/1/2023	ug/l	< 0.50	< 0.50	< 0.50	--	< 0.50	< 0.50	< 1.0
Tetrachloroethene	7/20/2023	ug/l	--	< 0.50	< 0.50	--	< 0.50	< 0.50	< 0.50
Tetrachloroethene	8/10/2023	ug/l	< 0.50	< 0.50	< 0.50	--	< 0.50	< 0.50	< 0.50
Total Dissolved Solids	6/1/2023	mg/l	--	647	710	--	690	--	672
Total Suspended Solids	6/1/2023	mg/l	--	--	--	< 1.0	--	--	--
Total Suspended Solids	7/20/2023	mg/l	--	--	--	< 1.0	--	--	--
Total Suspended Solids	8/10/2023	mg/l	--	--	--	< 1.0	--	--	--
Trichloroethene	6/1/2023	ug/l	1.2	< 0.50	< 0.50	--	< 0.50	< 0.50	< 1.0
Trichloroethene	7/20/2023	ug/l	--	< 0.50	< 0.50	--	< 0.50	< 0.50	< 0.50
Trichloroethene	8/10/2023	ug/l	1.2	< 0.50	< 0.50	--	< 0.50	< 0.50	< 0.50

NOTES:

Detections are shown in BOLD type.

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

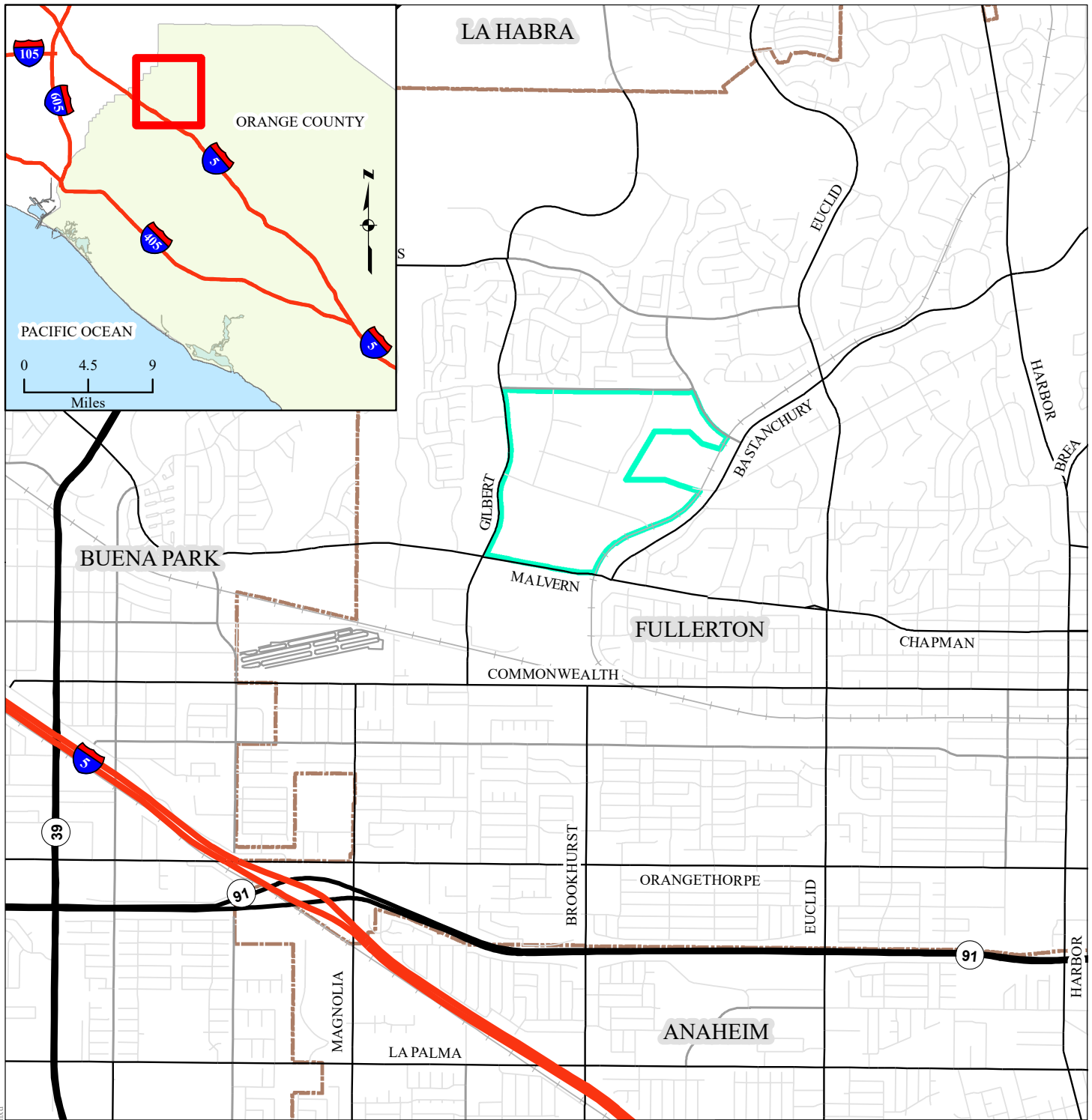
E = Data qualified as Estimated in accordance with quality control criteria.

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

F1 = MS and/or MSD recovery exceeds control limits

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

Q3 = Quarter 3



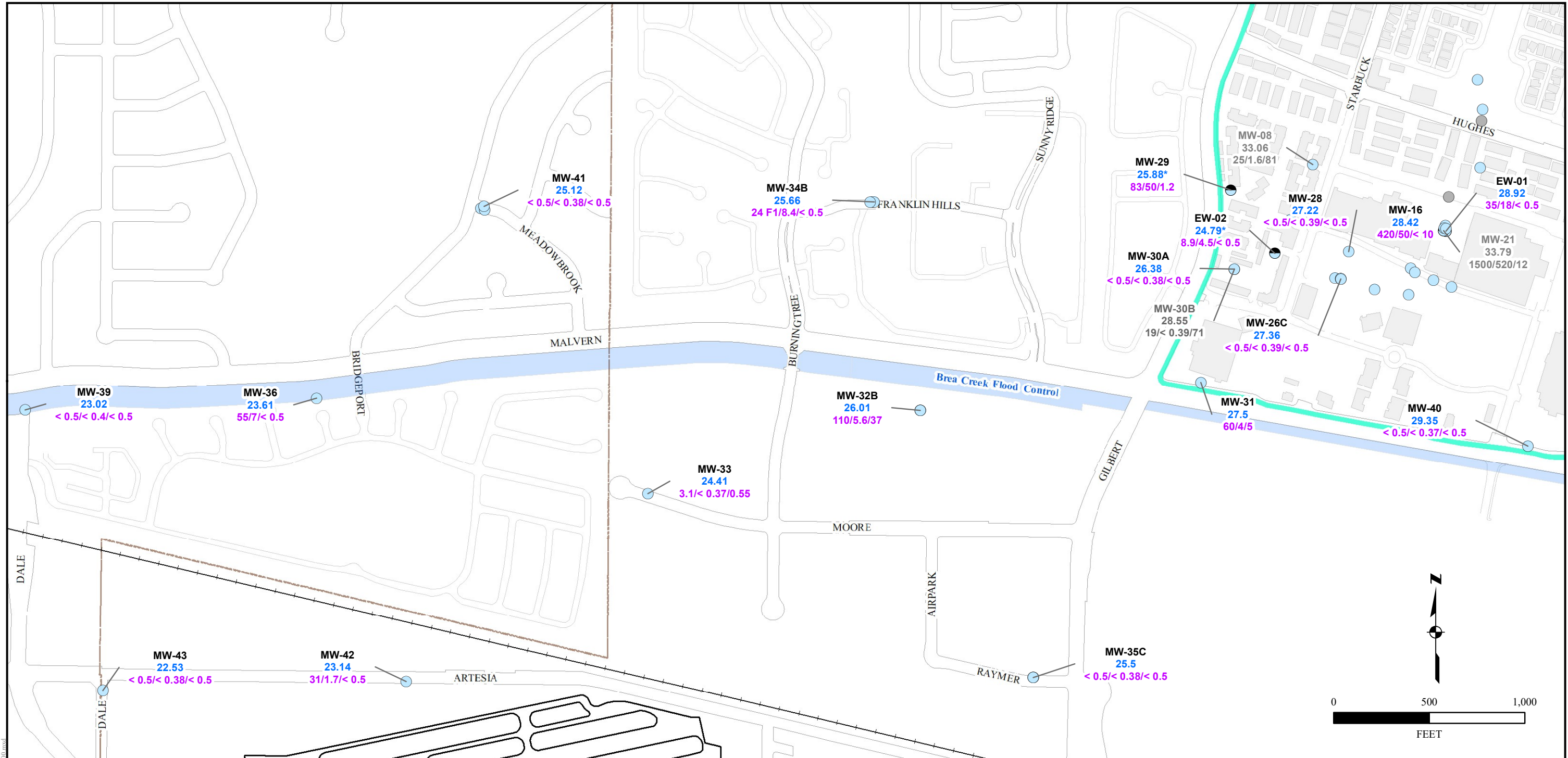
0 2,500 5,000
FEET

FIGURE 1: SITE LOCATION

DATA SUBMITTAL FOR GWM AND
GETS PILOT TESTING Q3 2023

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





Document Path: \\nas-sd\SD\GIS\151297\209_3023\MXD\REM_03\WL_FIG03_100.mxd

Well ID	
Water Level Elevation	
11DCE / 14-D / TCE	
Groundwater Monitor Well	Flood Control Channel Parcels
Groundwater Extraction Well	On Property Current Buildings
Perched Zone Piezometer	City Boundaries
	Former Hughes Aircraft Company Property
	Airport
	Railroads

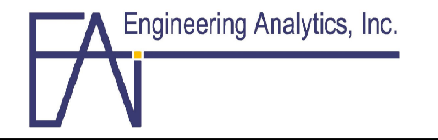
NOTES:
Greyed-out well IDs completed in Unit BC
Water level measurements are in feet mean sea level (ft msl)
Concentrations are in micrograms per liter

* = Well pumping during guaging event; estimated water level based on Thiem equation
< = Less than; the value is the Limit of Detection for that compound
E = Data qualified as estimated in accordance with quality control criteria
F1 = Matrix spike or matrix spike duplicates outside of control limits
GWM = Groundwater Monitoring
11DCE = 1,1-Dichloroethylene
14-D = 1,4-Dioxane
TCE = Trichloroethylene
Q3 = Quarter 3

FIGURE 3: WATER LEVEL AND WATER QUALITY UNIT B, AUGUST 2023

DATA SUBMITTAL FOR GWM AND GETS PILOT TESTING Q3 2023

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



APPENDIX A
GROUNDWATER SAMPLING FIELD FORMS

AUGUST 2023

SEMIANNUAL GROUNDWATER MONITORING
FIELD NOTEBOOK
LOW AND 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: August 2023

METHOD OF MEASUREMENT/SOUNDER IDENTIFIER: FLAT TAPE ELECTRIC SOUNDER # 575309

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)	May 2023 PREVIOUS DEPTH TO WATER (ft)	CHANGE IN WATER LEVEL ($\pm$ ft)	COMMENTS	INITIALS
P-07	08/30/23	1430	TOC	110.61	142.31	31.70	110.57	-0.04		MBT/JDL
P-09	08/30/23	1439	TOC	120.70	183.86	63.16	120.89	+0.19		ANW/ESS
MW-06	08/30/23	1443	TOC	147.03	184.70	37.67	147.61	+0.58		↓
MW-08	08/30/23	1457	TOC	122.85	155.91	33.06	124.96	+2.11		MBT/JDL
MW-09	08/30/23	1441	TOC	144.45	180.10	35.65	145.05	+0.60		↓
MW-13	08/30/23	1353	TOC	117.28	141.84	24.56	114.44	-2.84		ANW/ESS
MW-15	08/30/23	1451	TOC	120.66	144.95	24.29	123.41	+2.75		MBT/JDL
MW-16	08/25/23	1138	TOC	113.98	142.40	28.42	112.20	-1.78		AMK
MW-17	08/30/23	1407	TOC	117.18	142.70	25.52	114.35	-2.83		ANW/ESS
MW-18	08/30/23	1359	TOC	117.60	142.32	24.72	114.72	-2.88		↓
MW-19	08/30/23	1340	TOST	117.05	142.06	25.01	114.30	-2.75		↓
MW-20	08/30/23	1450	TOC	141.00	184.19	43.19	142.68	+1.68		↓
MW-21	08/30/23	1527	TOC	107.39	141.18	33.79	109.00	+1.61	Totalizer: NA Pumping? N	MBT/JDL
MW-22	08/30/23	1334	TOST	113.85	138.65	24.80	111.06	-2.79		ANW/ESS
MW-23	08/30/23	1302	TOST	114.18	137.33	23.15	111.28	-2.90		↓
MW-24	08/25/23	1120	TOST	107.55	142.83	35.28	107.54	-0.01		AMK
MW-25	08/25/23	1136	TOC	109.45	142.64	33.19	110.07	+0.62		AMK
MW-26A	08/30/23	1247	TOC	112.36	137.04	24.68	113.31	+0.95		ANW/ESS
MW-26B	08/30/23	1250	TOC	112.65	137.05	24.40	116.10	+3.45		↓
MW-26C	08/30/23	1255	TOC	109.86	137.22	27.36	107.54	-2.32		↓

msl = Mean sea level
ft = feet

STATIC WATER LEVEL DATA SHEET

MONTH/YEAR: August 2023

METHOD OF MEASUREMENT/SOUNDER IDENTIFIER: FLAT TAPE ELECTRIC SOUNDER # 575309

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)	May 2023 PREVIOUS DEPTH TO WATER (ft)	CHANGE IN WATER LEVEL (± ft)	COMMENTS	INITIALS
MW-27	08/30/23	1319	TOST	109.32	137.16	27.84	107.04	-2.28		ANW/ESS
MW-28	08/30/23	1238	TOST	113.55	140.77	27.22	111.47	-2.08		↓
MW-29	08/30/23	1539	TOST	159.05	139.81	-19.24	171.72	+12.67	Totalizer: 806832.0 Q=9.4	↓
MW-30A	08/30/23	1508	TOST	103.06	129.44	26.38	100.69	-2.37		MDT/JOL
MW-30B	08/30/23	1511	TOST	100.84	129.39	28.55	99.20	-1.64		↓
MW-31	08/25/23	0918	TOST	92.10	119.60	27.50	89.36	-2.74		AMK
MW-32A	08/30/23	0945	TOST	67.50	92.88	25.38	63.84	-3.66		ANW/ESS
MW-32B	08/30/23	0945	TOST	66.88	92.89	26.01	63.66	-3.22		↓
MW-32C	08/28/23	1010 0430	TOST	59.49 60.23	92.88	32.89 32.65	53.78	-6.21 -6.45	(NW)	AMK
MW-33	08/25/23	1026	TOST	58.78	83.19	24.41	55.21	-3.57		AMK
MW-34A	08/30/23	1646	TOST	135.91	153.25	17.34	132.73	-3.18		ANW/ESS
MW-34B	08/30/23	1046	TOST	127.45	153.11	25.66	125.21	-2.24		↓
MW-34C	08/30/23	1045	—	UTM	153.29	—	124.90	—	covered by car (abandoned?)	↓
MW-35A	08/31/23	1645	TOST	80.05	93.57	13.52	77.49	-2.56		ANW/MDT/JOL
MW-35B	08/31/23	1615	TOST	74.05	93.56	19.51	70.71	-3.34		↓
MW-35C	08/31/23	1612	TOST	68.05	93.55	25.50	64.24	-3.81		↓
MW-36	08/25/23	1052	TOST	63.04	86.65	23.61	59.68	-3.39	(NW)	AMK
MW-37	08/30/23	1124	TOST	124.81	155.60	30.79	124.10	-0.71		ANW/ESS
MW-38	08/25/23	1210 1348	TOST	141.25 61.23	154.90	13.65 23.02	137.95	-3.30 -9.73	(NW)	↓
MW-39	08/25/23	1340	TOST	44.05	84.25	29.35	57.70	-2.75	(NW)	AMK

msl = Mean sea level
ft = feet

61.23

23.02

-3.73

STATIC WATER LEVEL DATA SHEET

MONTH/YEAR: August 2023

 METHOD OF MEASUREMENT/SOUNDER IDENTIFIER: FLAT TAPE ELECTRIC SOUNDER # 575309

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)	May 2023 PREVIOUS DEPTH TO WATER (ft)	CHANGE IN WATER LEVEL (± ft)	COMMENTS	INITIALS
MW-40	08/25/23	1313	TOST	94.05	123.40	29.35	91.30	-2.75		AMK
MW-41	08/30/23	1100	TOST	130.48	155.80	25.12	128.59	-1.89		ANW
MW-42	08/30/23	0923	TOST	59.66	82.80	23.14	55.94	-3.72		ANW
MW-43	08/25/23	0950	TOST	54.11	78.64	22.53	50.35	-3.76		AMK
EW-01	08/30/23	1535	TOST	112.15	141.07	28.92	110.42	-1.73	SOUNDING TUBE TO 172.65 Totalizer: NA Pumping? N	MBT/JDL
EW-02	08/30/23	1505	TOST	111.12P	132.97	21.85	108.84	-2.28	Totalizer: 5144129 gal Q= 33.2	ANW/EGG

 msl = Mean sea level
 ft = feet

**AUGUST 2023 GROUNDWATER SAMPLE PLAN
TEAM 1**

QA/QC	Total VOC's	1,4-Dioxane	APROX. GALLONS	ESTIMATED TIME (minutes)	WELL IDENTIFIER	HYDROGEOLOGIC ZONE	AUGUST 2023 SAMPLING SCHEDULE	SAMPLE METHOD
	ND	ND	89	20	MW-28	Deep; B	VOCs; 1,4-Dioxane	Ded.240V
	ND	ND	190	21	MW-34C★	Deep; BC	VOCs; 1,4-Dioxane	Ded 240V
MS/MSD	ND	ND	228	30	MW-40	Deep; B	VOCs; 1,4-Dioxane	Ded 240V
	1	ND	168	24	MW-34A★	Deep; A	VOCs; 1,4-Dioxane	Ded 240V
MS/MSD	47	8.4	153	27	MW-34B	Deep; B	VOCs; 1,4-Dioxane (8270 MOD)	Ded 240V
	ND	ND	22	32	MW-09	Water Table; C	VOCs; 1,4-Dioxane	Redi-Flo2
MS/MSD	ND	ND	159	62	MW-18	Deep; A	VOCs; 1,4-Dioxane	Redi-Flo2
	ND	ND	155	66	MW-26C	Deep; B	VOCs; 1,4-Dioxane	Redi-Flo2
MS/MSD	2	ND	96	78	MW-20	Water Table; D	VOCs; 1,4-Dioxane	Redi-Flo2
	15	NA	24	21	MW-15	Water Table; AB	VOCs	Redi-Flo2
DUP/SPT	55	ND	22	26	MW-08	Water Table; BC	VOCs; 1,4-Dioxane	Redi-Flo2
	458	51	115	45	MW-16	Water Table; B	VOCs; 1,4-Dioxane (8270 MOD)	Redi-Flo2

NOTES

A **MS** and **MSD** (6x40ml VOA and 2x125mL amber) should be collected every day/ alternating 1,4-Dioxane methods as indicated.

1,4-Dioxane analysis method is 8270 SIM unless specified otherwise (if historical detect is > 5.0 ug/l MOD is used).

1 = Day - # refers to the day scheduled to sample and the corresponding dedicated pipestand to use: ND=1; 0-10=2; 10 - 100=3; >100=4

Wells with dedicated pumps should follow concentration order when possible.

MW-36 and MW-39 Gate Access Code: 3252

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

★ No samples were collected at MW-34A or MW-34C during this sampling event. Wells were inaccessible (covered by an abandoned car).

**AUGUST 2023 GROUNDWATER SAMPLE PLAN
TEAM 2**

QA/QC	Total VOC's	1,4-Dioxane	APROX. GALLONS	ESTIMATE D TIME (minutes)	WELL IDENTIFIER	HYDROGEOLOGIC ZONE	AUGUST 2023 SAMPLING SCHEDULE	SAMPLE METHOD
	15	7.2	159	16	EW-01	Deep; B	VOCs; 1,4-Dioxane (8270 MOD)	Dedicated
	1450	490	240	16	MW-21	Water Table; BC	VOCs; 1,4-Dioxane (8270 MOD)	Dedicated
	ND	ND	60	16	MW-30A	Deep; B	VOCs; 1,4-Dioxane	Ded.240V
	ND	ND	834	44	MW-39	Deep; B	VOCs; 1,4-Dioxane	Ded.240V
	ND	ND	647	63	MW-32A	Deep; AB	VOCs; 1,4-Dioxane	Ded.240V
	ND	ND	952	63	MW-43	Deep; B	VOCs; 1,4-Dioxane	Ded.240V
	ND	ND	892	71	MW-35C	Deep; B	VOCs; 1,4-Dioxane	Ded.240V
	ND	ND	960	99	MW-32C	Water Table; C	VOCs; 1,4-Dioxane	Ded.240V
	6	ND	837	82	MW-33	Deep; B	VOCs; 1,4-Dioxane	Ded.240V
	7	ND	146	30	MW-41	Deep; B	VOCs; 1,4-Dioxane	Ded.240V
	36	1	984	76	MW-36	Deep; B	VOCs; 1,4-Dioxane (8270 MOD)	Ded.240V
	37	ND	892	66	MW-42	Deep; B	VOCs; 1,4-Dioxane	Ded.240V
MS/MSD	44	ND	260	32	MW-31	Deep; B	VOCs; 1,4-Dioxane	Ded.240V
DUP/SPT	106	ND	125	23	MW-30B	Deep; BC	VOCs; 1,4-Dioxane	Ded.240V
DUP/SPT	138	3	892	83	MW-32B	Deep; B	VOCs; 1,4-Dioxane	Ded.240V

NOTE

1 = Day - # refers to the day scheduled to sample and the corresponding dedicated pipestand to use: ND=1; 0-10=2; 10 - 100=3; >100=4

A **MS** and **MSD** (6x40ml VOA and 2x125mL amber) should be collected every day/ alternating 1,4-Dioxane methods as indicated.

1,4-Dioxane analysis method is 8270 SIM unless specified otherwise (if historical detect is > 5.0 ug/l MOD is used).

Wells with dedicated pumps should follow concentration order when possible.

MW-36 and MW-39 Gate Access Code: 3252

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

GROUNDWATER SAMPLING INFORMATION

DATE: 08/23/2023

TASK: 532.30

WELL ID: EW-01

Time <u>1526</u> Static DTW (ft below reference point)	<u>112.22</u> SCREEN SV <u>41</u> SV <u>123</u>	Weather Conditions	Initials: <u>ANW/MBT/JDL</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>1530</u> Temp <u>89°F</u>	Begin Purge <u>1531</u> End Purge <u>1546</u>
Water Column (feet)	<u>69</u> Pump: Depth (ft bfp) <u>-</u> Type <u>-</u> Voltage <u>-</u> HP <u>-</u>	Skies <u>Clear</u>	Gallons Purged <u>143</u> SVs Purged <u>3.5</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 bfp) <u>112.81</u> Time <u>1544</u>

Time	Depth to Water	Volume Purged (Gallons)	Casing Volumes Purged	Temp. (°C)	pH	EC (S/cm)	O.R.P. (mV)	D.O. (mg/L)	Turbidity (NTU)	Pump Frequency Hz	COMMENTS
1531	112.22	0	0			BEGIN PURGE					
1533	112.73	20.5	0.5	25.7	7.41	1.50	59.4	8.03	6.32	-	Q ≈ 10 GPM
1536	112.72	41	1.0	25.1	7.38	1.49	57.1	6.83	2.95	-	
1538	112.80	61.5	1.5	24.6	7.41	1.50	60.9	11.74	1.52	-	
1540	112.78	82	2.0	22.9	7.40	1.49	59.9	6.27	1.38	-	
1542	112.80	102.5	2.5	24.1	7.35	1.49	56.3	8.54	1.64	-	
1544	112.81	123	3.0	23.7	7.35	1.49	56.4	7.98	1.57	-	COLLECT SAMPLE
1546	NM	143	3.5			END PURGE					

SAMPLE COLLECTION SAMPLE TIME <u>1545</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>

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: 08/ 24 /2023

TASK: 532.30

WELL ID: KW-08

Time <u>1242</u> Static DTW (ft below reference point) <u>123.10</u>	Casing Volume (CV) (gallons) <u>7</u> 3 CV (gallons) <u>21</u>	Weather Conditions	Initials: <u>ANW/MBT/JDL</u>
Casing Total Depth (ft below reference point) <u>166.1</u>	Purging Device <u>grundfos</u> Sampling Device <u>ded. tubing</u>	Time <u>1238</u> Temp. <u>79°F</u>	Begin Purge <u>1300</u> End Purge <u>1320</u>
Water Column (feet) <u>43</u>	Pump: Depth (ft brp) <u>163</u> Type <u>rediflo2</u> Voltage <u>120</u> HP <u>0.5</u>	Skies <u>clear</u>	Gallons Purged <u>22</u> CVs 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>7</u> From <u>SW</u>	DTW (ft brp) <u>124.40</u> Time <u>1319</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)		
1300	123.10	0	0			BEGIN PURGE					
1303	124.31	3.5	0.5	23.5	7.22	1.83	31.6	0.01	18.3	280	Q ≈ 1 GPM
1306	124.34	7	1.0	24.0	7.21	1.82	31.2	0.01	11.9	280	
1309	124.38	10.5	1.5	24.1	7.21	1.78	32.3	0.01	8.64	280	
1312	123.40	14	2.0	24.1	7.20	1.81	33.4	0.00	6.12	280	
1315	123.43	17.5	2.5	24.2	7.19	1.80	34.1	0.02	5.02	280	
1319	124.40	21	3.0	24.2	7.19	1.81	34.7	0.01	5.02	280	COLLECT SAMPLE
1320	NM	22	3.1			END PURGE					

SAMPLE COLLECTION SAMPLE TIME

1320

ANALYSIS QUANTITY TYPE

8260B VOCs 3+3+3+3 40 ml VOA X

8270C 1,4 dioxane 1+1+1 125 mL Amber X

8270 SIM 1,4 dioxane 1 1 L Amber X

8270 MOD 1,4 dioxane 1 1 L Amber

DUPLICATES SPLITS BLANKS Y N

If yes, complete appropriate forms.

AIR MONITORING PID/FID ppm: VAULT NA

BKGD NA

BREATHING ZONE NA

DISCHARGE WATER NA

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

collected duplicate sample MW-0800-20230824 @ 1325

collected split sample MW-08-20230824 @ 1330

collected rinsate blank RB-082423-20230824 @ 1335

GROUNDWATER SAMPLING INFORMATION

DATE: 08/ 22 /2023

TASK: 532.30

WELL ID: MW-09

Time <u>1035</u> Static DTW (ft below reference point) <u>144.61</u>	Casing Volume (CV) (gallons) <u>7.8</u> 3 CV (gallons) <u>23.4</u>	Weather Conditions		Initials: <u>ANW/MBT/JDL</u>
Casing Total Depth (ft below reference point) <u>192.20</u>	Purging Device <u>grundfos 1220T102</u> Sampling Device <u>ded. tubing</u>	Time <u>1027</u> Temp. <u>75°F</u>	Begin Purge <u>1217</u> End Purge <u>1244</u>	
Water Column (feet) <u>47.59</u>	Pump: Depth (ft brp) <u>~190</u> Type <u>MPI</u> Voltage <u>120</u> HP <u>0.5</u>	Skies <u>clear</u>	Gallons Purged <u>24.5</u> CVs Purged <u>1244</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>3</u> From <u>W</u>	DTW (ft brp) <u>145.45</u> Time <u>1241</u>	

Time	Depth to Water	Volume Purged (Gallons)	Casing Volumes Purged	...FIELD PARAMETERS...						Pump Frequency Hz	COMMENTS
				Temp. (°C)	pH	EC (µm S/cm)	O.R.P. (mV)	D.O. (mg/L)	Turbidity (NTU)		
1217	144.61	0	0	— BEGIN PURGE —							
1220	148.28	3.9	0.5	24.0	6.85	2.70	80.8	4.77	23.00	80	Q ≈ 1 GPM
1222	149.41	7.8	1.0	24.1	6.65	2.72	89.0	4.04	12.4	80	
1227	145.44	11.7	1.5	24.1	6.96	2.71	62.8	3.60	2.84	80	
1231	145.43	15.6	2.0	24.2	6.96	2.71	62.1	3.42	1.71	80	
1236	145.43	19.5	2.5	24.2	6.96	2.71	61.7	3.34	1.56	80	
1241	145.45	23.4	3.0	24.3	6.96	2.71	61.3	3.20	1.15	80	COLLECT SAMPLE
1244	NM	24.5	3.1	— END PURGE —							

SAMPLE COLLECTION SAMPLE TIME 1242

ANALYSIS	QUANTITY	TYPE
8260B VOCs	<u>3</u>	40 ml VOA <u>✓</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 (N)
If yes, complete appropriate forms.

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

GROUNDWATER SAMPLING INFORMATION

DATE: 08/ 24 /2023

TASK: 532.30

WELL ID: MW-15

Time <u>1400</u> Static DTW (ft below reference point)	<u>120.74</u>	Casing Volume (CV) (gallons) <u>8.00</u> 3 CV (gallons) <u>24.00</u>	Weather Conditions	Initials: <u>ANN/MBT/JDL</u>
Casing Total Depth (ft below reference point)	<u>170.30</u>	Purging Device <u>grundfos</u> Sampling Device <u>ded. tubing</u>	Time <u>1400</u> Temp. <u>82°F</u>	Begin Purge <u>1414</u> End Purge <u>1438</u>
Water Column (feet)	<u>50.00</u>	Pump: Depth (ft brp) <u>~167</u> Type <u>rediflo2</u> Voltage <u>120</u> HP <u>0.5</u>	Skies <u>clear</u>	Gallons Purged <u>25.5</u> CVs Purged <u>3.2</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) _____ From _____	DTW (ft brp) <u>121.55</u> Time <u>1432</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)		
1414	120.74	0	0	-----BEGIN PURGE-----							
1417	121.53	4	0.5	23.8	7.25	1.25	44.6	11.29	40.4	301	Q ≈ 1.50 gpm
1420	121.53	8	1.0	23.7	7.26	1.24	44.6	7.57	30.0	301	
1423	121.53	12	1.5	23.8	7.27	1.22	48.0	5.77	15.6	301	
1426	121.54	16	2.0	23.9	7.27	1.22	50.3	5.14	8.57	301	
1429	121.54	20	2.5	23.9	7.26	1.21	52.3	7.15	7.19	301	
1432	121.55	24	3.0	23.9	7.26	1.23	54.2	6.39	4.09	301	COLLECT SAMPLE
1433	NM	25.5	3.2	-----END PURGE-----							

SAMPLE COLLECTION SAMPLE TIME <u>1433</u>	
ANALYSIS	QUANTITY TYPE
8260B VOCs	<u>3</u> 40 ml VOA <u>X</u>
8270C 1,4 dioxane	125 mL 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: 08/24/2023

TASK: 532.30

WELL ID: MW-16

Time <u>1500</u> Static DTW (ft below reference point)	<u>113.92</u>	Casing Volume (CV) (gallons) <u>28</u> 3 CV (gallons) <u>117</u>	Weather Conditions	Initials: <u>ANW/MBT/JDL</u>
Casing Total Depth (ft below reference point)	<u>178.50</u>	Purging Device <u>grundfos</u> Sampling Device <u>ded. tubing</u>	Time <u>1510</u> Temp. <u>83°F</u>	Begin Purge <u>1513</u> End Purge <u>1627</u>
Water Column (feet)	<u>64.58</u>	Pump: Depth (ft brp) <u>175</u> Type <u>Red: F62</u> Voltage <u>120</u> HP <u>0.5</u>	Skies <u>Clear</u>	Gallons Purged <u>126</u> CVs Purged <u>3.2</u>
Casing Capacity (Diameter <u>4"</u>) (gallons per foot)	<u>0.60</u>	Monitor Well Recharge Rate: Slow Fast <u>X</u>	Wind (mph) <u>—</u> From <u>—</u>	DTW (ft brp) <u>115.90</u> Time <u>1621</u>

Time	Depth to Water	Volume Purged (Gallons)	Casing Volumes Purged	...FIELD PARAMETERS...						Pump Frequency Hz	COMMENTS
				Temp. (°C)	pH	EC (S/cm)	O.R.P. (mV)	D.O. (mg/L)	Turbidity (NTU)		
1513	113.92	0	0			BEGIN PURGE					
1516	115.60	19.5	0.5	23.6	7.40	1.08	38.0	4.53	1.89	320	Q = ^{1.50} ~~1.25~~ gpm
1529	115.61	39	1.0	23.6	7.44	1.13	40.9	3.97	0.71	320	
1542	115.61	58.5	^{1.5} ~~2.0~~	23.6	7.44	1.18	44.2	3.88	0.73	320	
1555	117.9	78	^{2.0} ~~2.5~~	23.6	7.43	1.21	46.9	4.31	1.04	320	
1608	115.91	97.5	2.5	23.6	7.41	1.26	55.7	4.70	^{1.07} ~~1.26~~	320	
1621	115.90	117	3.0	23.6	7.40	1.29	54.1	6.13	1.27	320	COLLECT SAMPLE
1627	NM	126	3.2			END PURGE					

SAMPLE COLLECTION		SAMPLE TIME	<u>1625</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: 08/13/2023

TASK: 532.30

WELL ID: MW-18

Time <u>1041</u> Static DTW (ft below reference point) <u>117.76</u>	Casing Volume (CV) (gallons) <u>50</u> 3 CV (gallons) <u>150</u>	Weather Conditions	Initials: <u>ANW/MBT/JOL</u>
Casing Total Depth (ft below reference point) <u>194.1</u>	Purging Device <u>grindstones rediflo2</u> Sampling Device <u>ded. tubing</u>	Time <u>1040</u> Temp. <u>79°F</u>	Begin Purge <u>1235</u> End Purge <u>1416</u>
Water Column (feet) <u>76.3</u>	Pump: Depth (ft brp) <u>192</u> Type <u>MPI</u> Voltage <u>120</u> HP <u>0.5</u>	Skies <u>clear</u>	Gallons Purged <u>156</u> CVs Purged <u>3.1</u>
Casing Capacity (Diameter <u>4"</u>) (gallons per foot) <u>0.66</u>	Monitor Well Recharge Rate: Slow _____ Fast <u>X</u>	Wind (mph) <u>4</u> From <u>SW</u>	DTW (ft brp) <u>136.64</u> Time <u>1412</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)		
1235	117.76	0	0			BEGIN	PURGE				
1251	UTM	25	0.5	23.5	7.23	0.493	73.2	0.00	8.36	320	Q ≈ ^{1.5} ~~1.75~~ GPM
1307	136.35	50	1.0	23.5	7.22	0.495	76.1	0.01	6.53	320	
1323	136.31	75	1.5	23.4	7.20	0.260	77.0	0.02	2.83	320	
1339	136.61	100	2.0	23.4	7.21	0.256	77.8	0.02	2.03	320	
1355	136.61	125	2.5	23.4	7.21	0.290	78.6	0.02	1.50	320	
1412	136.64	150	3.0	23.4	7.21	0.254	79.3	0.02	1.44	320	COLLECT SAMPLE
1416	NM	156	3.1			END	PURGE				

SAMPLE COLLECTION SAMPLE TIME 1415

ANALYSIS QUANTITY TYPE

8260B VOCs 3+6+3 40 ml VOA X8270C 1,4 dioxane 1+2+1 125 mL Amber X

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.

AIR MONITORING PID/FID ppm: VAULT NA

BKGD NA

BREATHING ZONE NA

DISCHARGE WATER NA

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

MS/MSD collectedcollected rinsate blank RB-082323-20230823 @ 1420

GROUNDWATER SAMPLING INFORMATION

DATE: 08/24/2023

TASK: 532.30

WELL ID: MW-20

Time <u>0840</u> Static DTW (ft below reference point) <u>141.29</u>	Casing Volume (CV) (gallons) <u>34</u> 3 CV (gallons) <u>102</u>	Weather Conditions	Initials: <u>ANW/MBT/JDL</u>
Casing Total Depth (ft below reference point) <u>198.2</u>	Purging Device <u>grundfos</u> Sampling Device <u>ded. tubing</u>	Time <u>0921</u> Temp. <u>68°F</u>	Begin Purge <u>0940</u> End Purge <u>1043</u>
Water Column (feet) <u>57</u> <u>47.33</u>	Pump: Depth (ft brp) <u>~185</u> Type <u>grundfos</u> Voltage <u>120</u> HP <u>0.5</u>	Skies <u>overcast</u>	Gallons Purged <u>103</u> CVs Purged <u>3.0</u>
Casing Capacity (Diameter <u>4"</u>) (gallons per foot) <u>0.60</u>	Monitor Well Recharge Rate: Slow _____ Fast <u>X</u>	Wind (mph) <u>-</u> From <u>-</u>	DTW (ft brp) <u>143.45</u> Time <u>1042</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)		
0900	141.29	0	0	----- BEGIN PURGE -----							
0917	143.32	17	0.5	23.9	7.33	1.24	28.4	0.08	4.11	310	Q ≈ 1 GPM
0934	143.37	34	1.0	24.4	7.29	1.28	27.7	0.06	2.11	310	
0951	143.41	51	1.5	24.4	7.39	1.21	28.9	0.05	1.39	310	
1008	143.43	68	2.0	24.4	7.53	1.21	30.7	0.03	1.05	310	
1025	143.45	85	2.5	24.3	7.54	1.23	31.9	0.04	0.74	310	
1042	143.45	102	3.0	24.2	7.54	1.28	32.7	0.04	0.73	310	COLLECT SAMPLE
1043	NM	103	3.0	-----		END PURGE		-----			

SAMPLE COLLECTION SAMPLE TIME 1042

ANALYSIS QUANTITY TYPE

8260B VOCs 3+6 40 ml VOA X

8270C 1,4 dioxane 1+2 125 mL Amber X

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.

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

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

MS/MSD collected

GROUNDWATER SAMPLING INFORMATION

DATE: 08/23/2023

TASK: 532.30

WELL ID: MW-21

Time <u>1447</u> Static DTW (ft below reference point)	<u>107.45</u> Screen SV	<u>SVs</u> <u>225</u>	Weather Conditions	Initials: <u>ANW/MBT/JDL</u>
Casing Total Depth (ft below reference point)	<u>232.1</u> Casing Volume (SV) (gallons)	<u>75</u> 3 SVs (gallons)	Time <u>1505</u> Temp. <u>89°F</u>	Begin Purge <u>1451</u> End Purge <u>1517</u>
Water Column (feet)	<u>124.6</u> Purging Device <u>ded. pump</u> Sampling Device <u>ded sample port</u>		Skies <u>clear</u>	Gallons Purged <u>309</u> SVs Purged <u>4.1</u>
Casing Capacity (Diameter <u>4</u> ") (gallons per foot)	<u>0.60</u> Pump: Depth (ft brp) - Type - Voltage - HP -		Wind (mph) - From -	DTW (ft brp) <u>129.83</u> Time <u>1513</u>
	Monitor Well Recharge Rate: Slow Fast <u>X</u>			

Time	Depth to Water	Volume Purged (Gallons)	Casing Volumes Purged	Screen Temp. (°C)	pH	EC (µS/cm)	O.R.P. (mV)	D.O. (mg/L)	Turbidity (NTU)	Pump Frequency Hz	COMMENTS
1451	107.45	0	0								BEGIN PURGE
1455	127.62	37.5	0.5	29.1	7.13	1.78	48.1	0.01	3.59	-	Q ≈ 21 GPM
1459	128.50	75	1.0	26.2	7.18	1.79	45.0	3.78	3.70	-	
1502	128.89	112.5	1.5	23.0	7.20	1.81	48.2	3.93	2.07	-	
1506	129.40	150	2.0	24.2	7.27	1.82	46.9	4.93	3.64	-	
1510	129.65	187.5	2.5	23.0	7.25	1.88	48.1	5.27	2.00		
1513	129.83	225	3.0	23.3	7.32	1.93	49.1	4.90	3.50		COLLECT SAMPLE
1517	NM	309	4.1								END PURGE

SAMPLE COLLECTION SAMPLE TIME

1515

AIR MONITORING PID/FID ppm: VAULT NA

BKGD NA

BREATHING ZONE NA

DISCHARGE WATER NA

ANALYSIS

QUANTITY

TYPE

8260B VOCs	3	40 ml VOA	X
8270C 1,4 dioxane	1	125 mL Amber	X
8270 SIM 1,4 dioxane		1 L Amber	
8270 MOD 1,4 dioxane		1 L Amber	

DUPLICATES / SPLITS / BLANKS?

Y

If yes, complete appropriate forms.

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

GROUNDWATER SAMPLING INFORMATION

DATE: 08/22/2023

TASK: 532.30

WELL ID: MW-26C

Time <u>1413</u> Static DTW (ft below reference point)	<u>109.97</u>	Casing Volume (CV) (gallons) <u>63</u>	3 CV (gallons) <u>189</u>	Weather Conditions		Initials: <u>ANW/MBT/JDL</u>
Casing Total Depth (ft below reference point)	<u>499</u>	Purging Device <u>grundfos redi-flo 2</u>	Sampling Device <u>ded. tubing</u>	Time <u>1405</u>	Temp. <u>86°F</u>	Begin Purge <u>1442</u> End Purge <u>1551</u>
Water Column (feet)	<u>389</u>	Pump: Depth (ft brp) <u>200</u> Type <u>MPI</u>	Voltage <u>120</u> HP <u>0.5</u>	Skies <u>clear</u>		Gallons Purged <u>197.3</u> CVs 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>-</u>	From <u>-</u>	DTW (ft brp) <u>110.71</u> Time <u>1548</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)		
1442	109.97	0	0			BEGIN PURGE					
1453	110.70	31.5	0.5	22.8	9.35	0.410	12.3	0.01	1.12	97	Q ≈ 2.75 GPM
1504	110.73	63.0	1.0	22.8	9.16	0.423	-18.1	0.03	1.05	97	
1515	110.73	94.5	1.5	22.8	7.93	0.82	-97.2	0.03	0.47	97	
1526	110.71	126.0	2.0	22.8	7.89	0.83	-107.9	1.89	1.01	97	
1537	110.72	157.5	2.5	22.8	7.85	0.83	-111.4	0.23	0.85	97	
1548	110.71	189	3.0	22.8	7.84	0.83	-110.5	0.24	0.77	97	COLLECT SAMPLE
1551	NM	197.3	3.1			END PURGE				97 (end)	

SAMPLE COLLECTION SAMPLE TIME <u>1550</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?	<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: 08/24/2023

TASK: 532.30

WELL ID: MW-28

Time <u>0833</u> Static DTW (ft below reference point)	<u>113.78</u>	Screen Volume (SV) (gallons) <u>27</u> 3 SV (gallons) <u>81</u>	Weather Conditions	Initials: <u>AMK/RES</u>
Casing Total Depth (ft below reference point)	<u>375</u>	Purging Device <u>ded pump</u> Sampling Device <u>ND pipestand</u>	Time <u>0833</u> Temp. <u>73</u>	Begin Purge <u>0845</u> End Purge <u>0900</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>Cloudy</u>	Gallons Purged <u>109</u> SVs Purged <u>40</u>
Casing Capacity (Diameter <u>4"</u>) (gallons per foot)	<u>0.6</u>	Monitor Well Recharge Rate: Slow <u>-</u> Fast <u>✓</u>	Wind (mph) <u>-</u> From <u>-</u>	DTW (ft brp) <u>122.58</u> Time <u>0856</u>

Time	Depth to Water	Volume Purged (Gallons)	Casing Volumes Purged	FIELD PARAMETERS						Pump Frequency Hz	COMMENTS
				Screen Temp. (°C)	pH	EC (µS/cm)	O.R.P. (mV)	D.O. (mg/L)	Turbidity (NTU)		
0845	113.78	0	0			BEGIN PURGE					
0847	122.15	13.5	0.5	21.6	7.26	1.01	192.0	3.33	0.11	-	Q ≈ 7 GPM
0849	122.35	27	1.0	21.5	7.36	1.01	179.3	3.03	0.86	-	
0850	122.26	40.5	1.5	21.5	7.37	1.00	179.2	2.87	0.08	-	
0852	122.57	54	2.0	21.5	7.39	0.99	167.4	2.96	0.05	-	
0854	122.57	67.5	2.5	21.6	7.41	0.99	162.3	3.19	0.22	-	
0856	122.58	81	3.0	21.6	7.42	0.99	162.4	3.29	0.16	-	collect samples
0900	NM	109	4.0			END PURGE					

SAMPLE COLLECTION SAMPLE TIME <u>0900</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>1</u> L Amber
8270 MOD 1,4 dioxane	<u>1</u> 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.)

GROUNDWATER SAMPLING INFORMATION
DATE: 08/25/2023

TASK: 532.30

WELL ID: MW-30A

Time <u>1309</u> Static DTW (ft below reference point)	102.90	Screen ~~Casing~~ Volume ^{SV} (gallons) <u>17.2</u> ^{SV} (gallons) <u>51.5</u>	Weather Conditions	Initials: <u>ANW/MBT/JDL</u>
Casing Total Depth (ft below reference point)	564	Purging Device <u>ded. pump</u> Sampling Device <u>ND piezometer</u>	Time <u>1310</u> Temp. <u>84°F</u>	Begin Purge <u>1316</u> End Purge <u>1330</u>
Water Column (feet)	44	Pump: Depth (ft brp) <u>520</u> Type <u>grnd fcs</u> Voltage <u>240</u> HP <u>-</u>	Skies <u>clear</u>	Gallons Purged <u>63.9</u> ^{SVs} Purged <u>3.7</u>
Casing Capacity (Diameter <u>3"</u>) (gallons per foot)	0.39	Monitor Well Recharge Rate: Slow _____ Fast <u>X</u>	Wind (mph) _____ From _____	DTW (ft brp) <u>104.80</u> Time <u>1327</u>

Time	Depth to Water	Volume Purged (Gallons)	Screen ~~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)		
1316	102.90	0	0								
1318	104.70	8.5	0.5	21.6	7.59	0.78	11.5	1.24	1.68	-	Q ≈ 5 GPM
1320	104.77	17.2	1.0	22.8	7.67	0.77	21.0	0.01	2.93	-	
1321	104.77	25.5	1.5	23.0	7.67	0.77	23.3	0.05	1.98	-	
1323	104.80	34.0	2.0	22.8	7.64	0.77	24.6	0.03	1.53	-	
1325	104.80	42.5	2.5	22.9	7.63	0.77	25.2	0.01	1.73	-	
1327	104.80	51.5	3.0	22.9	7.63	0.77	25.8	0.01	2.37	-	COLLECT SAMPLE
1330	NM	63.9	3.7								

SAMPLE COLLECTION SAMPLE TIME 1328
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 N
 If yes, complete appropriate forms.

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

GROUNDWATER SAMPLING INFORMATION
DATE: 08/25/2023

TASK: 532.30

WELL ID: MW-30 B

Time 1335 Static DTW (ft below reference point) 100.65	Screen Casing Volume (SV) (gallons) 37.4	SV (gallons) 112.3	Weather Conditions	Initials: ANW/JDL/MBJ
Casing Total Depth (ft below reference point) 616	Purging Device ded. pump	Sampling Device NO pipe sand	Time 1342 Temp 85°F	Begin Purge 1337 End Purge 1406
Water Column (feet) 96	Pump: Depth (ft brp) 520	Type grundfos Voltage 240 HP -	Skies clear	Gallons Purged 118 SVs Purged 3.2
Casing Capacity (Diameter 3") (gallons per foot) 0.39	Monitor Well Recharge Rate: Slow	Fast X	Wind (mph) -	From - DTW (ft brp) 127.99 Time 1405

Time	Depth to Water	Volume Purged (Gallons)	Casing Volumes Purged	Screen Temp. (°C)	FIELD PARAMETERS					Pump Frequency Hz	COMMENTS
					pH	EC (µm S/cm)	O.R.P. (mV)	D.O. (mg/L)	Turbidity (NTU)		
1337	100.65	0	0								BEGIN PURGE
1341	124.20	19	0.5	22.2	7.31	1.31	-78.1	0.05	6.64	-	Q ≈ 5 GPM
1345	125.37	38	1.0	22.4	7.24	1.32	-61.5	0.04	7.33	-	
1350	126.65	57	1.5	22.5	7.30	1.43	-28.7	0.01	9.10	-	
1355	127.40	76	2.0	22.3	7.35	1.35	-16.4	0.02	8.98	-	
1400	127.98	94	2.5	22.3	7.35	1.34	-5.8	0.01	8.99	-	
1405	127.99	112	3.0	22.8	7.35	1.33	-5.9	0.01	9.46	-	COLLECT SAMPLE
1406	NM	118	3.2				END	PURGE			

SAMPLE COLLECTION SAMPLE TIME 1405		
ANALYSIS	QUANTITY	TYPE
8260B VOCs	3+3+3	40 ml VOA X
8270C 1,4 dioxane	1+1	125 mL Amber X
8270 SIM 1,4 dioxane	1	1 L Amber X
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 duplicate sample MW-30B-20230825 @ 1415
 collected split sample MW-30B-20230825 @ 1410

GROUNDWATER SAMPLING INFORMATION

DATE: 08/25/2023

TASK: 532.30

WELL ID: MW-31

Time <u>1100</u> Static DTW (ft below reference point)	<u>92.07</u> Screen <u>SV</u> <u>81</u> <u>SV</u> <u>243</u> Casing Volume (gallons)	Weather Conditions	Initials: <u>ANW/MBT/JDL</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>1101</u> Temp. <u>76°F</u>	Begin Purge <u>1109</u> End Purge <u>1144</u>
Water Column (feet)	<u>54</u> Pump: Depth (ft brp) <u>942</u> Type <u>grundfos</u> Voltage <u>240</u> HP <u>-</u>	Skies <u>clear</u>	Gallons Purged <u>277</u> <u>SV</u> Purged <u>3.4</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>96.27</u> Time <u>1139</u>

Time	Depth to Water	Volume Purged (Gallons)	Casing Volumes Purged	Screen Temp. (°C)	pH	EC (µS/cm)	O.R.P. (mV)	D.O. (mg/L)	Turbidity (NTU)	Pump Frequency Hz	COMMENTS
1109	92.07	0	0			BEGIN PURGE					
1116	96.20	40.5	0.5	21.6	11.41	1.25	23.9	0.02	6.07	-	Q ≈ 8GPM
1120	96.36	81	1.0	21.4	7.56	1.49	25.5	2.01	11.2	-	
1124	96.23	121.5	1.5	22.5	7.55	1.27	25.4	2.13	10.90	-	
1130	96.26	162	2.0	21.8	7.55	1.18	25.4	2.25	7.90	-	
1134	96.29	202.5	2.5	21.8	7.55	1.13	25.9	3.10	5.71	-	
1139	96.27	243	3.0	~~24.2~~ 22.1	7.54	1.10	26.2	2.61	4.64	-	COLLECT SAMPLE
1144	NM	277.0	3.4			END PURGE					

SAMPLE COLLECTION SAMPLE TIME 1140

ANALYSIS	QUANTITY	TYPE
8260B VOCs	3+6	40 ml VOA X
8270C 1,4 dioxane	1+2	125 mL Amber X
8270 SIM 1,4 dioxane		1 L Amber
8270 MOD 1,4 dioxane		1 L Amber

DUPLICATES / SPLITS / BLANKS?

Y

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/MSD collected

GROUNDWATER SAMPLING INFORMATION

DATE: 08/23/2023

TASK: 532.30

WELL ID: MW-32A

Time <u>1305</u> Static DTW (ft below reference point) <u>68.11</u>	Screen Volume (SV) (gallons) <u>207</u> 3 SV (gallons) <u>621</u>	Weather Conditions	Initials: <u>AMK/RES</u>
Casing Total Depth (ft below reference point) <u>905</u>	Purging Device <u>ded. pump</u> Sampling Device <u>ND pipette</u>	Time <u>1307</u> Temp. <u>86</u>	Begin Purge <u>1339</u> End Purge <u>1447</u>
Water Column (Pump Set Depth to Screen) (feet) <u>345</u>	Pump: Depth (ft brp) <u>540</u> Type <u>grundfos</u> Voltage <u>240</u> HP <u>-</u>	Skies <u>clear</u>	Gallons Purged <u>701</u> SVs Purged <u>3.4</u>
Casing Capacity (Diameter <u>4"</u>) (gallons per foot) <u>0.6</u>	Monitor Well Recharge Rate: Slow <u>-</u> Fast <u>✓</u>	Wind (mph) <u>-</u> From <u>-</u>	DTW (ft brp) <u>69.24</u> Time <u>1439</u>

Time	Depth to Water	Volume Purged (Gallons)	Casing Volumes Purged	Screen Temp. (°C)	pH	EC (mS/cm)	O.R.P. (mV)	D.O. (mg/L)	Turbidity (NTU)	Pump Frequency Hz	COMMENTS
1339	68.11	0	0			BEGIN PURGE					Q ≈ 10 GPM
1349	69.18	104	0.5	21.2	7.60	1.01	64.7	2.77	0.33	-	
1359	69.05	207	1.0	21.2	7.57	1.01	41.3	1.74	1.95	-	
1410	69.17	310.5	1.5	21.9	7.48	1.00	53.9	1.79	0.30		
1418	69.14	414	2.0	21.2	7.44	0.99	55.7	1.99	0.21	-	
1428	69.20	518	2.5	21.2	7.45	0.99	60.18	1.86	0.31	-	
1439	69.24	621	3.0	21.2	7.44	0.98	69.49	1.79	0.25	-	collect sample
1447	NM	701	3.4			END PURGE					

SAMPLE COLLECTION	SAMPLE TIME	1445
ANALYSIS	QUANTITY	TYPE
8260B VOCs	3	40 ml VOA X
8270C 1,4 dioxane	1	125mL Amber X
8270 SIM 1,4 dioxane		1 L Amber
8270 MOD 1,4 dioxane		1 L Amber

DUPLICATES / SPLITS / BLANKS? Y

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: 08/28/23

TASK: 532.30

WELL ID: MW-32B

Time 1326 Static DTW (ft below reference point)	66.6	Screen Casing Volume (SV) (gallons) 263	3 SV (gallons) 790	Weather Conditions	Time 1319 Temp. 94°F	Initials: ANW/MBT/JDL 1432
Casing Total Depth (ft below reference point)	999	Purging Device ded. pump	Sampling Device 100-1000 pipestand	Skies clear	Begin Purge 1328 End Purge 1437	
Water Column (feet)	439	Pump: Depth (ft brp) 560 Type grundfos	Voltage 240 HP -	Wind (mph) - From -	Gallons Purged 839.6 SVs Purged 3.2	
Casing Capacity (Diameter 4") (gallons per foot)	0.60	Monitor Well Recharge Rate: Slow	Fast X		DTW (ft brp) 89.96 Time 1432	

Time	Depth to Water	Volume Purged (Gallons)	Casing Volumes Purged	Screen Temp. (°C)	pH	EC (mS/cm)	O.R.P. (mV)	D.O. (mg/L)	Turbidity (NTU)	Pump Frequency Hz	COMMENTS
1328	66.6	0	0			BEGIN PURGE					
1339	81.35	132	0.5	21.5	7.78	0.80	-179.5	6.09	3.98	-	Q ≈ 14 GPM
1350	88.35	263	1.0	22.1	7.80	0.69	-139.4	4.44	9.04	-	
1401	88.10	394	1.5	21.9	7.80	0.81	-61.3	3.97	11.4	-	
1412	89.49	526	2.0	22.0	7.71	0.95	-74.4	0.08	7.74	-	
1420	89.20	658	2.5	22.2	7.72	0.92	-75.1	0.03	11.2	-	
1432	89.96	790	3.0	21.6	7.72	0.96	-62.3	0.03	8.60	-	Sample Collected
1437	NM	839.6	3.2			End Purge					

SAMPLE COLLECTION ANALYSIS	SAMPLE TIME QUANTITY	TYPE
8260B VOCs	3+3+3	40 ml VOA x
8270C 1,4 dioxane	1+1	125 mL Amber x
8270 SIM 1,4 dioxane	1	1 L Amber x
8270 MOD 1,4 dioxane		1 L Amber

DUPLICATES ☒ SPLITS ☒ BLANKS? ☒ N

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

Duplicate sample MW-32B collected @ 1440
 Split sample MW-32B collected at @ 1445

GROUNDWATER SAMPLING INFORMATION

DATE: 08/ 24 /2023

TASK: 532.30

WELL ID: MW-326

Time <u>1315</u> Static DTW (ft below reference point)	<u>60.93</u>	Screen Volume (SV) (gallons) <u>318</u> 3 SV (gallons) <u>954</u>	Weather Conditions	Initials: <u>AMK / RES</u>
Casing Total Depth (ft below reference point)	<u>1090</u>	Purging Device <u>ded pump</u> Sampling Device <u>ND pipe stand</u>	Time <u>1330</u> Temp. <u>82</u>	Begin Purge <u>1335</u> End Purge <u>1450</u>
Water Column (Pump Set Depth to Screen) (feet)	<u>530</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>960</u> SVs Purged <u>3.02</u>
Casing Capacity (Diameter ") (gallons per foot)	<u>0.60</u>	Monitor Well Recharge Rate: Slow _____ Fast <u>✓</u>	Wind (mph) <u>-</u> From <u>-</u>	DTW (ft brp) <u>111.96</u> Time <u>1447</u>

Time	Depth to Water	Volume Purged (Gallons)	Casing Volumes Purged	FIELD PARAMETERS						Pump Frequency Hz	COMMENTS
				Screen Temp. (°C)	pH	EC (mS/cm)	O.R.P. (mV)	D.O. (mg/L)	Turbidity (NTU)		
1334	60.93	0	0								
1346	101.85	159	0.5	22.4	8.07	0.525	-106.0	1.40	0.25	-	Q ≈ 13 GPM
1357	105.83	318	1.0	21.3	8.10	0.520	-153.1	0.89	0.09	-	
1410	107.16	477	1.5	21.6	8.08	0.520	-86.8	0.61	2.54	-	
1423	107.19	636	2.0	21.9	8.05	0.523	-68.8	0.21	4.75	-	
1435	110.28	795	2.5	21.7	8.06	0.520	-88.1	0.26	0.78	-	
1447	111.96	954	3.0	21.6	8.05	0.520	-81.6	0.14	0.65	-	Samples collected
1450	NM	960	3.02								

SAMPLE COLLECTION SAMPLE TIME <u>1450</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>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: 08/ 29 /2023

TASK: 532.30

WELL ID: MW-33

Time <u>1431</u> Static DTW (ft below reference point) <u>58.40</u>	Screen Volume (SV) (gallons) <u>276</u> 3 SV (gallons) <u>828</u>	Weather Conditions Time <u>1427</u> Temp. <u>97°F</u>	Initials: <u>ANW/MBT/JDL/ESS</u>
Casing Total Depth (ft below reference point) <u>1020</u>	Purging Device <u>ded. pump</u> Sampling Device <u>0-10 pipestand</u>	Skies <u>clear</u>	Begin Purge <u>1431</u> End Purge <u>1539</u>
Water Column (Pump Set Depth to Screen) (feet) <u>460</u>	Pump: Depth (ft brp) <u>560</u> Type <u>grundfos</u> Voltage <u>240</u> HP <u>-</u>	Wind (mph) <u>-</u> From <u>-</u>	Gallons Purged <u>860.4</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>	DTW (ft brp) <u>60.00</u> Time <u>1536</u>	

Time	Depth to Water	Volume Purged (Gallons)	Casing Volumes Purged	FIELD PARAMETERS						Pump Frequency Hz	COMMENTS
				Screen Temp. (°C)	pH	EC (mS/cm)	O.R.P. (mV)	D.O. (mg/L)	Turbidity (NTU)		
1431	58.40	0	0								
											BEGIN PURGE
1442	59.96	138	0.5	21.1	7.64	0.67	27.2	7.79	1.83	-	Q ≈ 13 GPM
1453	60.00	276	1.0	21.2	7.79	0.67	72.6	6.08	1.21	-	
1504	59.96	414	1.5	21.1	7.59	0.68	90.2	4.48	1.08	-	
1516	60.06	552	2.0	21.2	7.62	0.68	87.5	4.80	1.48	-	
1526	60.07	690	2.5	21.0	7.58	0.68	83.7	0.43	1.15	-	
1536	60.00	828	3.0	21.1	7.58	0.68	84.5	0.85	1.58	-	COLLECT SAMPLE
1539	NM	860.4	3.1								END PURGE

SAMPLE COLLECTION SAMPLE TIME 1538

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		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.)

GROUNDWATER SAMPLING INFORMATION
DATE: 09/01/2023
TASK: 532.30
WELL ID: MW-34A

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

Time	Depth to Water	Volume Purged (Gallons)	Casing Volumes Purged	...FIELD PARAMETERS...						Pump Frequency Hz	COMMENTS
				Temp. (°)	pH	EC (S/cm)	O.R.P. (mV)	D.O. (mg/L)	Turbidity (NTU)		
											NO SAMPLE COLLECTED DURING AUG 2023 MONITORING EVENT
											WELL COVERED BY ABANDONED VEHICLE

SAMPLE COLLECTION SAMPLE TIME		
<u>ANALYSIS</u>	<u>QUANTITY</u>	<u>TYPE</u>
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? <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: 08/28/23

TASK: 532.30

WELL ID: MW-34B

Time <u>1116</u> Static DTW (ft below reference point) <u>127.39</u>	Screen <u>SV</u> Casing Volume (SV) (gallons) <u>46</u> 3 SV (gallons) <u>138</u>	Weather Conditions	Initials: <u>ANW/JDL/MBT</u>
Casing Total Depth (ft below reference point) <u>536</u>	Purging Device <u>dcd. pump</u> Sampling Device <u>10-100 pipe stand</u>	Time <u>1110</u> Temp. <u>87°F</u>	Begin Purge <u>1120</u> End Purge <u>1137</u>
Water Column (feet) <u>76</u>	Pump: Depth (ft brp) <u>400</u> Type <u>granitator</u> Voltage <u>240</u> HP <u>-</u>	Skies <u>clear</u>	Gallons Purged <u>178.4</u> SVs <u>3.9</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>129.20</u> Time <u>1134</u>

Time	Depth to Water	Volume Purged (Gallons)	Casing Volumes Purged	FIELD PARAMETERS						Pump Frequency Hz	COMMENTS
				Screen Temp. (°C)	pH	EC (mS/cm)	O.R.P. (mV)	D.O. (mg/L)	Turbidity (NTU)		
1120	127.39	0	0			BEGIN PURGE					(MBT)
1122	129.05	23	0.5	22.0	7.58	0.82	-17.1	19.27	12.65		2-11 12
1124	129.05	46	1.0	22.1	7.59	0.82	4.9	7.65	12.00		
1127	129.12	69	1.5	22.1	7.60	0.83	18.6	0.01	8.66		
1129	129.16	92	2.0	22.1	7.60	0.82	37.7	0.01	4.76		
1132	129.16	115	2.5	22.1	7.59	0.82	54.7	0.01	4.65		
1134	129.20	138	3.0	22.1	7.58	0.81	59.4	0.01	3.67		Collect sample
1137	NM	178.4	3.87 (MBT) 3.9			END PURGE					

SAMPLE COLLECTION SAMPLE TIME <u>1135</u>	
ANALYSIS	QUANTITY TYPE
8260B VOCs	<u>3+6</u> 40 ml VOA <u>X</u>
8270C 1,4 dioxane	<u>1+2</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.)

MS/MSD collected

GROUNDWATER SAMPLING INFORMATION
DATE: 09/01/2023
TASK: 532.30
WELL ID: MW-34C

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

Time	Depth to Water	Volume Purged (Gallons)	Casing Volumes Purged	FIELD PARAMETERS						Pump Frequency Hz	COMMENTS
				Temp. (°)	pH	EC (S/cm)	O.R.P. (mV)	D.O. (mg/L)	Turbidity (NTU)		
				NO	SAMPLE	COLLECTED	DURING	AUG 2023	MONITORING	EVENT	
				WELL	COVERED	BY	ABANDONED	VEHICLE			

SAMPLE COLLECTION SAMPLE TIME		
<u>ANALYSIS</u>	<u>QUANTITY</u>	<u>TYPE</u>
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.		

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: 08/ 24 /2023

TASK: 532.30

WELL ID: MW-35C

Time <u>1002</u> Static DTW (ft below reference point) <u>67.95</u>	Screen Volume (SV) (gallons) <u>288</u> 3 SV (gallons) <u>864</u>	Weather Conditions	Initials: <u>RES/AMK</u>
Casing Total Depth (ft below reference point) <u>1040</u>	Purging Device <u>ded pump</u> Sampling Device <u>ND pipe stand</u>	Time <u>1002</u> Temp. <u>76</u>	Begin Purge <u>1008</u> End Purge <u>1107</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>clear</u>	Gallons Purged <u>896</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>✓</u>	Wind (mph) <u>-</u> From <u>-</u>	DTW (ft brp) <u>73.15</u> Time <u>1105</u>

Time	Depth to Water	Volume Purged (Gallons)	Casing Volumes Purged	FIELD PARAMETERS						Pump Frequency Hz	COMMENTS
				Screen Temp. (°C)	pH	EC (mS/cm)	O.R.P. (mV)	D.O. (mg/L)	Turbidity (NTU)		
1008	67.95	0	0			BEGIN PURGE					
1014	72.69	148	0.5	20.5	7.60	~~2.07~~ 0.73 (AMK)	-14.6	1.42	2.28	-	Q ≈ 16 GPM
1024	72.69	296	1.0	20.6	7.56	0.76	-22.1	5.18	1.91	-	
1040	72.83	444	1.5	21.0	7.58	0.75	-26.9	3.09	3.22	-	
1049	73.05	592	2.0	20.7	7.58	0.75	-25.4	4.10	3.18	-	
1057	73.10	740	2.5	20.7	7.58	0.75	-19.1	3.76	4.27	-	
1105	73.15	~~807~~ 864 (AMK)	3.0	20.6	7.58	0.74	-18.2	3.61	6.94	-	Collect Samples
1107	NM	896	3.1			END PURGE					

SAMPLE COLLECTION SAMPLE TIME 1107

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

DUPLICATES / SPLITS / BLANKS? Y (N)

If yes, complete appropriate forms.

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: 08/ 28 /23

TASK: 532.30

WELL ID: ANW-36

Time <u>1540</u> Static DTW (ft below reference point)	62.90	Screen Casing Volume ^{SV} (gallons) <u>320</u>	3 ^{SV} (gallons) <u>961</u>	Weather Conditions	Initials: <u>ANW/MBT/JDL</u>
Casing Total Depth (ft below reference point)	994	Purging Device <u>ded. pump</u>	Sampling Device <u>10-100 pipestand</u>	Time <u>1537</u> Temp. <u>96°F</u>	Begin Purge <u>1542</u> End Purge <u>1702</u>
Water Column (feet)	534	Pump: Depth (ft brp) <u>460</u> Type <u>grindos</u> Voltage <u>240 HP</u>		Skies <u>clear</u>	Gallons Purged <u>982</u> ^{SV} Gals Purged <u>3.1</u>
Casing Capacity (Diameter <u>4"</u>) (gallons per foot)	0.60	Monitor Well Recharge Rate: Slow _____ Fast <u>X</u>		Wind (mph) _____ From _____	DTW (ft brp) <u>66.42</u> Time <u>1659</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)		
1542	62.90	0	0								BEGIN PURGE
1553	66.00	160	0.5	21.0	7.18	1.08	36.0	0.76	6.95	-	Q ≈ 12 GPM
1607	66.20	320	1.0	21.8	7.17	0.78	69.6	0.78	12.5	-	
1622	66.25	480	1.5	21.9	6.92	1.16	114.3	0.11	13.3	-	
1634	66.31	640	2.0	22.0	7.16	1.16	133.4	0.23	23.3	-	
1646	66.40	800	2.5	22.0	7.26	1.17	118.3	0.08	7.13	-	
1659	66.42	961	3.0	22.0	7.35	1.15	106.8	0.04	5.13	-	COLLECT SAMPLE
1702	NM	982	3.1								END PURGE

SAMPLE COLLECTION SAMPLE TIME <u>1700</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>

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: 08/ 23 /2023

TASK: 532.30

WELL ID: MW-39

Time <u>0933</u> Static DTW (ft below reference point) <u>61.6</u>	Screen Volume (SV) (gallons) <u>271</u> 3 SV (gallons) <u>814</u>	Weather Conditions	Initials: <u>ANW/AML/MBT/JDL</u>
Casing Total Depth (ft below reference point) <u>1012</u>	Purging Device <u>ded pump</u> Sampling Device <u>ND pipethead</u>	Time <u>0940</u> Temp. <u>74</u>	Begin Purge <u>0947</u> End Purge <u>1100</u>
Water Column (Pump Set Depth to Screen) (feet) <u>452</u>	Pump: Depth (ft brp) <u>560</u> Type <u>Grundfos</u> Voltage <u>740</u> HP <u>-</u>	Skies <u>clear</u>	Gallons Purged <u>891</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>73.44</u> Time <u>1054</u>

Time	Depth to Water	Volume Purged (Gallons)	Casing Volumes Purged	Screen Temp. (°C)	pH	EC (mS/cm)	O.R.P. (mV)	D.O. (mg/L)	Turbidity (NTU)	Pump Frequency Hz	COMMENTS
0947	61.6	0	0								BEGIN PURGE
0957	74.30	136	0.5	21.6	8.34	0.204	-152.0	5.00	0.82	-	Q ≈ 16 GPM
1009	72.60	241	1.0	21.8	8.56	0.413	-184.8	1.86	0.03	-	Troubleshoot generator issue, intermittent pauses in purging occurred
1027	73.51	406	1.5	22.5	8.40	0.426	-114.4	1.89	1.59	-	↓
1035	72.42	542	2.0	23.4	8.40	0.428	-77.0	1.79	1.12	-	
1045	73.45	678	2.5	23.2	8.37	0.429	-81.7	0.51	1.08	-	
1054	73.44	814	3.0	23.0	8.39	0.428	-79.7	0.46	1.11	-	Collect Sample
11:00	NM	891	3.3								END PURGE

 SAMPLE COLLECTION SAMPLE TIME 10:55
 ANALYSIS QUANTITY TYPE

8260B VOCs	<u>2</u>	40 ml VOA	<u>X</u>
8270C 1,4 dioxane	<u>1</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?
 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.)

GROUNDWATER SAMPLING INFORMATION
DATE: 08/ 29 /23

TASK: 532.30

WELL ID: MW-40

Time <u>0846</u> Static DTW (ft below reference point)	<u>93.63</u>	Screen <u>SV</u> Casing Volume (<u>SV</u>) (gallons) <u>67.1</u>	Screen <u>SV</u> Casing Volume (<u>SV</u>) (gallons) <u>202</u>	Weather Conditions	Initials: <u>ANW/MBT/JDL/ESS</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>0834</u> Temp. <u>71°F</u>	Begin Purge <u>0853</u> End Purge <u>0920</u>
Water Column (feet)	<u>50</u>	Pump: Depth (ft brp) <u>920</u> Type <u>grundfos</u> Voltage <u>240</u> HP <u>✓</u>		Skies <u>clear</u>	Gallons Purged <u>247.5</u> ^{SVs} Casing Purged <u>3.7</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>94.80</u> Time <u>0915</u>

Time	Depth to Water	Volume Purged (Gallons)	Casing Volumes Purged	FIELD PARAMETERS						Pump Frequency Hz	COMMENTS
				Screen Temp. (°C)	pH	EC (µS/cm)	O.R.P. (mV)	D.O. (mg/L)	Turbidity (NTU)		
0853	93.63	0	0	—	—	BEGIN PURGE	—	—	—	—	
0856	94.78	33.5	0.5	21.2	7.14	0.80	-165.8	0.70	1.39	—	Q ≈ 9 GPM
0859	94.80	67.5	1.0	22.1	7.59	0.80	-157.4	0.85	1.08	—	
0903	94.79	101.3	1.5	21.4	7.61	0.88	-130.3	0.44	1.40	—	
0907	94.79	135	2.0	21.4	7.58	0.88	-105.3	0.50	1.45	—	
0911	94.80	168.8	2.5	21.4	7.56	0.87	-101.0	0.48	1.33	—	
0915	94.80	202	3.0	21.5	7.58	0.87	-105.5	0.45	0.92	—	COLLECT SAMPLE
0920	NM	247.5	3.7	—	—	END PURGE	—	—	—	—	

SAMPLE COLLECTION SAMPLE TIME <u>0918</u>	
ANALYSIS	QUANTITY TYPE
8260B VOCs	<u>9</u> 40 ml VOA <u>X</u>
8270C 1,4 dioxane	<u>3</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>

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

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

MS/MSD collected

GROUNDWATER SAMPLING INFORMATION

DATE: 08/25/2023

TASK: 532.30

WELL ID: MW-41

Time <u>0926</u> Static DTW (ft below reference point)	<u>130.61</u>	Screen Casing Volume (SV) (gallons) <u>39</u>	SV (gallons) <u>117</u>	Weather Conditions	Initials: <u>ANW/MGT/JDL</u>
Casing Total Depth (ft below reference point)	<u>425.00</u>	Purging Device <u>ded pump</u>	Sampling Device <u>pipe stand</u>	Time <u>0930</u> Temp. <u>68°F</u>	Begin Purge <u>0940</u> End Purge <u>0957</u>
Water Column (feet)	<u>65.00</u>	Pump: Depth (ft brp) <u>360</u> Type <u>groundfos</u> Voltage <u>240</u> HP <u>-</u>		Skies <u>Clear</u>	Gallons Purged <u>141</u> SVs Purged <u>3.6</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>138.12</u> Time <u>0954</u>

Time	Depth to Water	Volume Purged (Gallons)	Casing Volumes Purged	Screen Temp. (°C)	pH	EC (mS/cm)	O.R.P. (mV)	D.O. (mg/L)	Turbidity (NTU)	Pump Frequency Hz	COMMENTS
0940	130.61	0	0			BEGIN PURGE					
0941	138.10	19.5	0.5	22.1	7.04	2.12	44.3	0.02	12.36	-	Q ≈ 8 GPM
0944	138.15	39	1.0	22.1	7.04	2.12	43.5	0.01	12.25	-	
0946	138.19	58.5	1.5	22.3	7.04	2.11	38.7	0.01	11.46	-	
0949	138.21	78	2.0	22.1	7.04	2.08	37.1	0.01	6.57	-	
0951	138.12	97.5	2.5	22.3	7.04	2.09	35.7	0.01	5.82	-	
0954	138.12	117	3.0	22.1	7.03	2.11	35.8	0.02	5.11	-	COLLECT SAMPLE
0957	139.1	141	3.6			END PURGE					

SAMPLE COLLECTION SAMPLE TIME 0955
ANALYSIS QUANTITY TYPE

8260B VOCs 3 40 ml VOA X
8270C 1,4 dioxane 1 125 ml. Amber X
8270 SIM 1,4 dioxane - 1 L Amber
8270 MOD 1,4 dioxane - 1 L Amber

DUPLICATES / SPLITS / BLANKS? Y
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: 08/ 29 /2023

TASK: 532.30

WELL ID: MW-42

Time <u>1050</u> Static DTW (ft below reference point) <u>59.34</u>	Screen Volume (SV) (gallons) <u>295</u> 3 SV (gallons) <u>885</u>	Weather Conditions Time <u>1045</u> Temp. <u>86°F</u>	Initials: <u>ANW/MBT/JDL/ESS</u>
Casing Total Depth (ft below reference point) <u>1052</u>	Purging Device <u>ded. pump</u> Sampling Device <u>10-100 pipestand</u>	Skies <u>clear</u>	Begin Purge <u>1052</u> End Purge <u>1151</u>
Water Column (Pump Set Depth to Screen) (feet) <u>492</u>	Pump: Depth (ft brp) <u>560</u> Type <u>groundfos</u> Voltage <u>240</u> HP <u>X</u>	Wind (mph) <u>-</u> From <u>-</u>	Gallons Purged <u>933.5</u> SVs 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>	DTW (ft brp) <u>66.57</u> Time <u>1149</u>	

Time	Depth to Water	Volume Purged (Gallons)	Casing Volumes Purged	FIELD PARAMETERS						Pump Frequency Hz	COMMENTS
				Screen Temp. (°C)	pH	EC (mS/cm)	O.R.P. (mV)	D.O. (mg/L)	Turbidity (NTU)		
1052	59.34	0	0			BEGIN PURGE					
1103	66.25	148	0.5	21.0	8.01	0.63	-59.8	5.58	1.07	-	Q ≈ 17 GPM
1111	66.21	295	1.0	21.8	8.06	0.63	-59.7	5.41	1.70	-	
1120	66.43	443	1.5	21.6	8.04	0.62	-59.8	4.92	1.58	-	
1130	66.48	590	2.0	21.7	8.01	0.61	-60.7	0.29	5.55	-	
1139	66.36	738	2.5	21.9	8.01	0.60	-60.1	0.70	7.82	-	
1149	66.57	885	3.0	23.4	7.98	0.60	-63.0	0.94	3.46	-	COLLECT SAMPLE
1151	NM	933.5	3.2			END PURGE					

SAMPLE COLLECTION SAMPLE TIME 1150

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		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.)

GROUNDWATER SAMPLING INFORMATION

DATE: 08/28/2023

TASK: 532.30

WELL ID: MW-43

Time <u>0833</u> Static DTW (ft below reference point) <u>54.03</u>	Screen Casing Volume <u>SV</u> (gallons) <u>291.6</u> 3 <u>SV</u> (gallons) <u>875</u>	Weather Conditions Time <u>0811</u> Temp. <u>71°F</u> Skies <u>clear</u> Wind (mph) <u>-</u> From <u>-</u>	Initials: <u>ANW/MBT/JDL</u> Begin Purge <u>0840</u> End Purge <u>0935</u> Gallons Purged <u>931.8</u> ^{SV} Purged <u>3.2</u> DTW (ft brp) <u>59.34</u> Time <u>0932</u>
Casing Total Depth (ft below reference point) <u>1046</u>	Purging Device <u>ded. pump</u> Sampling Device <u>NO Pipestand</u>		
Water Column (feet) <u>486</u>	Pump: Depth (ft brp) <u>560</u> Type <u>grundfos</u> Voltage <u>240</u> HP <u>0.5</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>		

Time	Depth to Water	Volume Purged (Gallons)	Casing Volumes Purged	Screen Temp. (°C)	pH	EC (mS/cm)	O.R.P. (mV)	D.O. (mg/L)	Turbidity (NTU)	Pump Frequency Hz	COMMENTS
0840	54.03	0	0	—	—	BEGIN	PURGE	—	—	—	
0848	NM	146	0.5	21.1	9.33	0.501	-153.6	5.94	4.06	-	Q ≈ 16 GPM
0856	59.02	291	1.0	22.5	8.39	0.477	-143.1	4.05	7.20	-	
0906	59.27	437	1.5	21.7	7.98	0.472	-53.9	0.08	3.91	-	
0914	59.35	583	2.0	21.7	7.96	0.472	-43.7	0.04	3.80	-	
0923	59.30	728	2.5	21.9	7.98	0.473	-58.9	0.57	3.93	-	
0932	59.34	875	3.0	~~21.8~~ 23.5 (N)	7.98	0.476	-15.3	0.06	4.40	-	COLLECT SAMPLE
0935	NM	931.8	3.2	—	—	END	PURGE	—	—	—	

SAMPLE COLLECTION SAMPLE TIME 0933

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 (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.)

Calibrated at Geotech's California South service

155 East Liberty Ave, Suite A

Anaheim, CA 92801

Fax: (714) 998-7382

YSI Pro Series Calibration Certificate

Unit Number: 5982

Serial Number: 17H103036

Calibration Date: 8/18/2023

Technician: Chapin Osbon

Installed Probes

Conductivity
PH

ORP

DO

Display is clear, and free of damage

Cable and accessories are free of damage

Firmware version is up to date.

Display Battery 2.93 V **Pass**

Spare Battery 3.2 V **Pass**

Cable Flex Test: **Pass**

Cable Length 4M

Cable Lot # 22.9

Cond Probe Lot # 17H100104

Bath Temp 28 °C

Meter Temp 27.9 °C

Variance 0.10 °C **Pass**

pH Probe Lot # 22C

ORP Probe Lot # 19A

DO Probe Lot # 21M100081

Cond

Calibration
1.413 mS

Reading
1.413 mS **Pass**

Buffer Lot #
3GA1014

Exp. Date
1/24 **Pass**

pH

Point Test
2 Point

Calibration
pH 7.00
pH 10.01

Reading
pH 7.00
pH 10.01

mV
-11.5 mV
-179.4 mV

Slope
167.9 **Pass**

Buffer Lot #
3GE0720
3GA1134

Exp. Date
5/25
1/25 **Pass**

ORP

Calibration
220 mV

Reading
220 mV **Pass**

Buffer Lot #
3GC681

Exp. Date
12/23 **Pass**

DO

Barometer
753.2 mmHg

Calibration
99.1 %

Reading
99.2 %

Variance
0.1% % **Pass**

Test Fluid
Water Saturated Air

Time: Min.
0

Sec.
15

Reading
1.9 % **Pass**

Nitrogen Lot #
166-402793619-1

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.

Calibrated at Geotech's California South service
155 East Liberty Ave, Suite A
Anaheim, CA 92801
Fax: (714) 998-7382

YSI Pro Series Calibration Certificate

Unit Number: 4108
Serial Number: 13E100082

Calibration Date: 8/18/2023
Technician: Chapin Osbon

<u>Installed Probes</u>		Display is clear, and free of damage			Cable Length		4M		pH Probe Lot #		23A	
Conductivity		Cable and accessories are free of damage			Cable Lot #		20D100248		ORP Probe Lot #		17M	
PH		Firmware version is up to date.			Cond Probe Lot #		18G100524		DO Probe Lot #		18E100639	
ORP		Display Battery		2.79 V	Pass	Bath Temp		28.4 °C				
DO		Spare Battery		3.2 V	Pass	Meter Temp		28.3 °C				
		Cable Flex Test:		Pass		Variance		0.10 °C		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		-2.8 mV		175.4		3GE0720		5/25
		pH 10.01		pH 10.01		-178.2 mV		Pass		3GA1134		1/25
												Pass
												Pass
ORP												
<u>Calibration</u>		<u>Reading</u>				<u>Buffer Lot #</u>		<u>Exp. Date</u>				
220 mV		220 mV		Pass		3GC681		12/23		Pass		
DO												
<u>Barometer</u>		<u>Calibration</u>		<u>Reading</u>		<u>Variance</u>				<u>Test Fluid</u>		
753.2 mmHg		99.1 %		99.2 %		0.1% %		Pass		Water Saturated Air		
Time:		<u>Min.</u>	<u>Sec.</u>	<u>Reading</u>						<u>Nitrogen Lot #</u>		
		0	42	2 %		Pass				166-402793619-1		

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

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

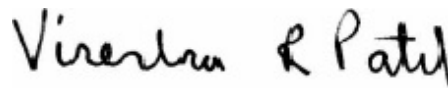
Eurofins Calscience

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.

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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

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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) (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.
Project/Site: Raytheon Main GETS OCSD Quarterly Sample /
532.15

Job ID: 570-140142-1

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)
570-140142-2	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

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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

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	%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	%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	%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	%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

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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
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14
- 15
- 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 Source: Eurofins Calscience

List Number: 1

Creator: Skinner, Alma D

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 6/9/2023 10:57:58 AM

JOB DESCRIPTION

Raytheon Main GETS uarterly/ 532.15

JOB NUMBER

570-140172-1

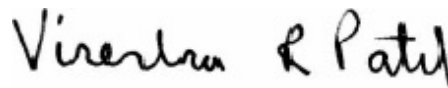
Eurofins Calscience

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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6/9/2023 10:57:58 AM

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Definitions/Glossary

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

Job ID: 570-140172-1

Qualifiers

HPLC/IC

Qualifier	Qualifier Description
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.
F1	MS and/or MSD recovery 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.

General Chemistry

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 Main GETS uarterly/ 532.15

Job ID: 570-140172-1

Job ID: 570-140172-1

Laboratory: Eurofins Calscience

Narrative

Job Narrative 570-140172-1

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 1.7° C.

Receipt Exceptions

The laboratory received 250ml HNO3 preserved plastic container instead of 250ml unpreserved plastic container for dissolved 6010 lab filtered analysis on the following sample: INF (570-140172-3). The laboratory used another available unpreserved aliquot/container.

The number of containers for the following samples did not match the information listed on the Chain-of-Custody (COC): MW-29 (570-140172-5). Received 5 containers, while the COC lists 6.

HPLC/IC

Method 300.0: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for Orthophosphate as P for analytical batch 570-333890 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 6010B: The matrix spike duplicate (MSD) recoveries of Selenium for preparation batch 570-333923 and analytical batch 570-334639 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

Method Filtration: The following samples were not filtered within 15 minutes of sample collection as required by the method: INF (570-140172-3), (570-140172-E-3 MS) and (570-140172-E-3 MSD) The samples were 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

Method 410.4: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for the following sample associated with preparation batch 570-334519 and analytical batch 570-334561 were outside control limits: (570-140217-A-1-B MS) and (570-140217-A-1-C MSD). The associated laboratory control sample (LCS) recovery met acceptance criteria.

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: 570-140172-1

Project/Site: Raytheon Main GETS uarterly/ 532.15

Client Sample ID: CEFF

Lab Sample ID: 570-140172-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Total Dissolved Solids	672		10.0		mg/L	1		SM 2540C	Total/NA

Client Sample ID: POX

Lab Sample ID: 570-140172-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Nitrate as N	4.0		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
Total Dissolved Solids	690		10.0		mg/L	1		SM 2540C	Total/NA

Client Sample ID: INF

Lab Sample ID: 570-140172-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Nitrate as N	4.0		0.10		mg/L	1		300.0	Total/NA
Chloride - DL	86		10		mg/L	10		300.0	Total/NA
Sulfate - DL	140		10		mg/L	10		300.0	Total/NA
Calcium	92.0		2.00		mg/L	1		6010B	Dissolved
Magnesium	27.4		0.500		mg/L	1		6010B	Dissolved
Sodium	68.5		2.00		mg/L	1		6010B	Dissolved
Alkalinity, Total (As CaCO3)	201		5.00		mg/L	1		SM 2320B	Total/NA
Bicarbonate (as CaCO3)	201		5.00		mg/L	1		SM 2320B	Total/NA
Total Dissolved Solids	710		10.0		mg/L	1		SM 2540C	Total/NA
Carbon, Total Organic	0.642		0.500		mg/L	1		SM 5310D	Total/NA

Client Sample ID: EW-02

Lab Sample ID: 570-140172-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	88		1.0		mg/L	1		300.0	Total/NA
Nitrate as N	3.2		0.10		mg/L	1		300.0	Total/NA
Sulfate - DL	140		10		mg/L	10		300.0	Total/NA
Alkalinity, Total (As CaCO3)	193		5.00		mg/L	1		SM 2320B	Total/NA
Bicarbonate (as CaCO3)	193		5.00		mg/L	1		SM 2320B	Total/NA
Total Dissolved Solids	647		10.0		mg/L	1		SM 2540C	Total/NA

Client Sample ID: MW-29

Lab Sample ID: 570-140172-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	130		10		mg/L	10		300.0	Total/NA
Sulfate	140		10		mg/L	10		300.0	Total/NA
Carbon, Total Organic	0.509		0.500		mg/L	1		SM 5310D	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 uarterly/ 532.15

Job ID: 570-140172-1

Method: EPA 300.0 - Anions, Ion Chromatography

Client Sample ID: POX
Date Collected: 06/01/23 10:45
Date Received: 06/01/23 14:25

Lab Sample ID: 570-140172-2
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrite as N	ND		0.10		mg/L			06/02/23 06:52	1
Nitrate as N	4.0		0.10		mg/L			06/02/23 06:52	1
Orthophosphate as P	ND	F1	0.10		mg/L			06/02/23 06:52	1

Client Sample ID: INF
Date Collected: 06/01/23 11:00
Date Received: 06/01/23 14:25

Lab Sample ID: 570-140172-3
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrite as N	ND		0.10		mg/L			06/02/23 07:08	1
Nitrate as N	4.0		0.10		mg/L			06/02/23 07:08	1
Orthophosphate as P	ND		0.10		mg/L			06/02/23 07:08	1

Client Sample ID: EW-02
Date Collected: 06/01/23 11:30
Date Received: 06/01/23 14:25

Lab Sample ID: 570-140172-4
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	88		1.0		mg/L			06/02/23 07:25	1
Nitrite as N	ND		0.10		mg/L			06/02/23 07:25	1
Nitrate as N	3.2		0.10		mg/L			06/02/23 07:25	1
Orthophosphate as P	ND		0.10		mg/L			06/02/23 07:25	1

Client Sample ID: MW-29
Date Collected: 06/01/23 12:10
Date Received: 06/01/23 14:25

Lab Sample ID: 570-140172-5
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	130		10		mg/L			06/05/23 11:14	10
Sulfate	140		10		mg/L			06/05/23 11:14	10

Client Sample Results

Client: Hargis + Associates, Inc.

Job ID: 570-140172-1

Project/Site: Raytheon Main GETS uarterly/ 532.15

Method: EPA 300.0 - Anions, Ion Chromatography - DL

Client Sample ID: POX

Date Collected: 06/01/23 10:45

Date Received: 06/01/23 14:25

Lab Sample ID: 570-140172-2

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	85		10		mg/L			06/02/23 09:23	10
Sulfate	140		10		mg/L			06/02/23 09:23	10

Client Sample ID: INF

Date Collected: 06/01/23 11:00

Date Received: 06/01/23 14:25

Lab Sample ID: 570-140172-3

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	86		10		mg/L			06/02/23 10:13	10
Sulfate	140		10		mg/L			06/02/23 10:13	10

Client Sample ID: EW-02

Date Collected: 06/01/23 11:30

Date Received: 06/01/23 14:25

Lab Sample ID: 570-140172-4

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	140		10		mg/L			06/02/23 10:30	10

Client Sample Results

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

Job ID: 570-140172-1

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

Client Sample ID: INF
Date Collected: 06/01/23 11:00
Date Received: 06/01/23 14:25

Lab Sample ID: 570-140172-3
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Selenium	ND		0.0500		mg/L		06/02/23 06:46	06/03/23 00:57	1

Client Sample ID: EW-02
Date Collected: 06/01/23 11:30
Date Received: 06/01/23 14:25

Lab Sample ID: 570-140172-4
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Selenium	ND		0.0500		mg/L		06/02/23 06:46	06/03/23 00:59	1

Client Sample Results

Client: Hargis + Associates, Inc.

Job ID: 570-140172-1

Project/Site: Raytheon Main GETS uarterly/ 532.15

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

Client Sample ID: INF

Date Collected: 06/01/23 11:00

Date Received: 06/01/23 14:25

Lab Sample ID: 570-140172-3

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	92.0		2.00		mg/L			06/06/23 20:04	1
Iron	ND		0.500		mg/L			06/06/23 20:04	1
Magnesium	27.4		0.500		mg/L			06/06/23 20:04	1
Manganese	ND		0.0500		mg/L			06/06/23 20:04	1
Selenium	ND		0.0500		mg/L			06/06/23 20:04	1
Sodium	68.5		2.00		mg/L			06/06/23 20:04	1

Client Sample Results

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

Job ID: 570-140172-1

General Chemistry

Client Sample ID: CEFF

Date Collected: 06/01/23 10:25

Date Received: 06/01/23 14:25

Lab Sample ID: 570-140172-1

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	672		10.0		mg/L			06/05/23 20:53	1

Client Sample ID: POX

Date Collected: 06/01/23 10:45

Date Received: 06/01/23 14:25

Lab Sample ID: 570-140172-2

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chemical Oxygen Demand (EPA 410.4)	ND		100		mg/L		06/05/23 12:32	06/05/23 15:16	1
Total Dissolved Solids (SM 2540C)	690		10.0		mg/L			06/05/23 20:53	1

Client Sample ID: INF

Date Collected: 06/01/23 11:00

Date Received: 06/01/23 14:25

Lab Sample ID: 570-140172-3

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chemical Oxygen Demand (EPA 410.4)	ND		100		mg/L		06/05/23 12:32	06/05/23 15:16	1
Alkalinity, Total (As CaCO3) (SM 2320B)	201		5.00		mg/L			06/08/23 19:56	1
Bicarbonate (as CaCO3) (SM 2320B)	201		5.00		mg/L			06/08/23 19:56	1
Carbonate (as CaCO3) (SM 2320B)	ND		5.00		mg/L			06/08/23 19:56	1
Hydroxide (as CaCO3) (SM 2320B)	ND		5.00		mg/L			06/08/23 19:56	1
Total Dissolved Solids (SM 2540C)	710		10.0		mg/L			06/05/23 20:53	1
Carbon, Total Organic (SM 5310D)	0.642		0.500		mg/L			06/03/23 00:38	1

Client Sample ID: EW-02

Date Collected: 06/01/23 11:30

Date Received: 06/01/23 14:25

Lab Sample ID: 570-140172-4

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chemical Oxygen Demand (EPA 410.4)	ND		100		mg/L		06/05/23 12:32	06/05/23 15:16	1
Alkalinity, Total (As CaCO3) (SM 2320B)	193		5.00		mg/L			06/08/23 20:03	1
Bicarbonate (as CaCO3) (SM 2320B)	193		5.00		mg/L			06/08/23 20:03	1
Carbonate (as CaCO3) (SM 2320B)	ND		5.00		mg/L			06/08/23 20:03	1
Hydroxide (as CaCO3) (SM 2320B)	ND		5.00		mg/L			06/08/23 20:03	1
Total Dissolved Solids (SM 2540C)	647		10.0		mg/L			06/05/23 20:53	1
Carbon, Total Organic (SM 5310D)	ND		0.500		mg/L			06/03/23 01:04	1

Client Sample ID: MW-29

Date Collected: 06/01/23 12:10

Date Received: 06/01/23 14:25

Lab Sample ID: 570-140172-5

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chemical Oxygen Demand (EPA 410.4)	ND		100		mg/L		06/05/23 12:32	06/05/23 15:16	1
Carbon, Total Organic (SM 5310D)	0.509		0.500		mg/L			06/03/23 01:30	1

QC Sample Results

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

Job ID: 570-140172-1

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 570-333890/5

Matrix: Water

Analysis Batch: 333890

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			06/02/23 05:53	1
Nitrate as N	ND		0.10		mg/L			06/02/23 05:53	1
Orthophosphate as P	ND		0.10		mg/L			06/02/23 05:53	1

Lab Sample ID: LCS 570-333890/6

Matrix: Water

Analysis Batch: 333890

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	2.493		mg/L		100	90 - 110
Nitrate as N	5.00	4.881		mg/L		98	90 - 110
Orthophosphate as P	2.50	2.671		mg/L		107	90 - 110

Lab Sample ID: LCSD 570-333890/7

Matrix: Water

Analysis Batch: 333890

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	2.481		mg/L		99	90 - 110	1	15
Nitrate as N	5.00	4.879		mg/L		98	90 - 110	0	15
Orthophosphate as P	2.50	2.712		mg/L		108	90 - 110	2	15

Lab Sample ID: 570-140172-2 MS

Matrix: Water

Analysis Batch: 333890

Client Sample ID: POX

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	2.519		mg/L		101	80 - 120
Nitrate as N	4.0		5.00	9.323		mg/L		107	80 - 120
Orthophosphate as P	ND	F1	2.50	3.713	F1	mg/L		149	80 - 120

Lab Sample ID: 570-140172-2 MSD

Matrix: Water

Analysis Batch: 333890

Client Sample ID: POX

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	2.593		mg/L		104	80 - 120	3	20
Nitrate as N	4.0		5.00	9.309		mg/L		107	80 - 120	0	20
Orthophosphate as P	ND	F1	2.50	4.035	F1	mg/L		161	80 - 120	8	20

Lab Sample ID: MB 570-333891/5

Matrix: Water

Analysis Batch: 333891

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			06/02/23 05:53	1
Sulfate	ND		1.0		mg/L			06/02/23 05:53	1

Eurofins Calscience

QC Sample Results

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

Job ID: 570-140172-1

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCS 570-333891/6

Matrix: Water

Analysis Batch: 333891

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	48.10		mg/L		96	90 - 110
Sulfate	50.0	48.37		mg/L		97	90 - 110

Lab Sample ID: LCSD 570-333891/7

Matrix: Water

Analysis Batch: 333891

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	48.08		mg/L		96	90 - 110	0	15
Sulfate	50.0	48.42		mg/L		97	90 - 110	0	15

Lab Sample ID: MB 570-334354/5

Matrix: Water

Analysis Batch: 334354

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			06/05/23 05:36	1
Sulfate	ND		1.0		mg/L			06/05/23 05:36	1

Lab Sample ID: LCS 570-334354/6

Matrix: Water

Analysis Batch: 334354

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	48.20		mg/L		96	90 - 110
Sulfate	50.0	48.62		mg/L		97	90 - 110

Lab Sample ID: LCSD 570-334354/7

Matrix: Water

Analysis Batch: 334354

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	48.20		mg/L		96	90 - 110	0	15
Sulfate	50.0	48.58		mg/L		97	90 - 110	0	15

Lab Sample ID: 570-140086-B-3 MS

Matrix: Water

Analysis Batch: 334354

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	ND		50.0	50.14		mg/L		100	80 - 120
Sulfate	ND		50.0	50.09		mg/L		100	80 - 120

Lab Sample ID: 570-140086-B-3 MSD

Matrix: Water

Analysis Batch: 334354

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	ND		50.0	50.32		mg/L		101	80 - 120	0	20
Sulfate	ND		50.0	50.27		mg/L		101	80 - 120	0	20

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QC Sample Results

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

Job ID: 570-140172-1

Method: 300.0 - Anions, Ion Chromatography - DL

Lab Sample ID: 570-140172-2 MS

Matrix: Water

Analysis Batch: 333891

Client Sample ID: POX

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride - DL	85		50.0	126.8		mg/L		84	80 - 120
Sulfate - DL	140		50.0	182.2		mg/L		86	80 - 120

Lab Sample ID: 570-140172-2 MSD

Matrix: Water

Analysis Batch: 333891

Client Sample ID: POX

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride - DL	85		50.0	126.0		mg/L		82	80 - 120	1	20
Sulfate - DL	140		50.0	181.5		mg/L		84	80 - 120	0	20

Method: 6010B - Metals (ICP)

Lab Sample ID: MB 570-333923/1-A

Matrix: Water

Analysis Batch: 334639

Client Sample ID: Method Blank

Prep Type: Total Recoverable

Prep Batch: 333923

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Selenium	ND		0.0500		mg/L		06/02/23 06:46	06/05/23 15:36	1

Lab Sample ID: LCS 570-333923/2-A

Matrix: Water

Analysis Batch: 334639

Client Sample ID: Lab Control Sample

Prep Type: Total Recoverable

Prep Batch: 333923

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Selenium	0.500	0.4773		mg/L		95	80 - 120

Lab Sample ID: LCSD 570-333923/3-A

Matrix: Water

Analysis Batch: 334639

Client Sample ID: Lab Control Sample Dup

Prep Type: Total Recoverable

Prep Batch: 333923

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Selenium	0.500	0.4924		mg/L		98	80 - 120	3	20

Lab Sample ID: 570-140111-J-6-B MS ^5

Matrix: Water

Analysis Batch: 334639

Client Sample ID: Matrix Spike

Prep Type: Total Recoverable

Prep Batch: 333923

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Selenium	ND	F1	0.500	0.4120		mg/L		82	79 - 127

Lab Sample ID: 570-140111-J-6-C MSD ^5

Matrix: Water

Analysis Batch: 334639

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total Recoverable

Prep Batch: 333923

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Selenium	ND	F1	0.500	0.3770	F1	mg/L		75	79 - 127	9	9

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QC Sample Results

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

Job ID: 570-140172-1

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

Lab Sample ID: 570-140111-A-6-A DU ^5

Matrix: Water

Analysis Batch: 334639

Client Sample ID: Duplicate

Prep Type: Total Recoverable

Prep Batch: 333923

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
Selenium	ND	F1	ND		mg/L		NC	9

Lab Sample ID: MB 570-334833/1-A

Matrix: Water

Analysis Batch: 335051

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			06/06/23 19:57	1
Iron	ND		0.500		mg/L			06/06/23 19:57	1
Magnesium	ND		0.500		mg/L			06/06/23 19:57	1
Manganese	ND		0.0500		mg/L			06/06/23 19:57	1
Selenium	ND		0.0500		mg/L			06/06/23 19:57	1
Sodium	ND		2.00		mg/L			06/06/23 19:57	1

Lab Sample ID: LCS 570-334833/2-A

Matrix: Water

Analysis Batch: 335051

Client Sample ID: Lab Control Sample

Prep Type: Dissolved

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Calcium	2.50	2.359		mg/L		94	80 - 120
Iron	0.500	0.4787	J	mg/L		96	80 - 120
Magnesium	2.50	2.368		mg/L		95	80 - 120
Manganese	0.500	0.4752		mg/L		95	80 - 120
Selenium	0.500	0.4358		mg/L		87	80 - 120
Sodium	5.00	4.807		mg/L		96	80 - 120

Lab Sample ID: LCSD 570-334833/3-A

Matrix: Water

Analysis Batch: 335051

Client Sample ID: Lab Control Sample Dup

Prep Type: Dissolved

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	Limit
Calcium	2.50	2.366		mg/L		95	80 - 120	0	20
Iron	0.500	0.4824	J	mg/L		96	80 - 120	1	20
Magnesium	2.50	2.360		mg/L		94	80 - 120	0	20
Manganese	0.500	0.4739		mg/L		95	80 - 120	0	20
Selenium	0.500	0.4403		mg/L		88	80 - 120	1	20
Sodium	5.00	4.812		mg/L		96	80 - 120	0	20

Lab Sample ID: 570-140172-3 MS

Matrix: Water

Analysis Batch: 335051

Client Sample ID: INF

Prep Type: Dissolved

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Calcium	92.0		2.50	91.85	4	mg/L		-8	77 - 113
Iron	ND		0.500	ND		mg/L		91	65 - 149
Magnesium	27.4		2.50	29.06	4	mg/L		66	56 - 140
Manganese	ND		0.500	0.4677		mg/L		94	86 - 116
Selenium	ND		0.500	0.4584		mg/L		92	79 - 127
Sodium	68.5		5.00	71.13	4	mg/L		53	73 - 127

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QC Sample Results

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

Job ID: 570-140172-1

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

Lab Sample ID: 570-140172-3 MSD

Matrix: Water

Analysis Batch: 335051

Client Sample ID: INF

Prep Type: Dissolved

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Calcium	92.0		2.50	93.25	4	mg/L		48	77 - 113	2	11
Iron	ND		0.500	ND		mg/L		92	65 - 149	1	21
Magnesium	27.4		2.50	29.39	4	mg/L		79	56 - 140	1	11
Manganese	ND		0.500	0.4655		mg/L		93	86 - 116	0	7
Selenium	ND		0.500	0.4603		mg/L		92	79 - 127	0	9
Sodium	68.5		5.00	72.26	4	mg/L		75	73 - 127	2	9

Method: 410.4 - COD

Lab Sample ID: MB 570-334519/3-A

Matrix: Water

Analysis Batch: 334561

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 334519

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chemical Oxygen Demand	ND		100		mg/L		06/05/23 12:32	06/05/23 15:16	1

Lab Sample ID: LCS 570-334519/4-A

Matrix: Water

Analysis Batch: 334561

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 334519

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chemical Oxygen Demand	205	207.6		mg/L		101	90 - 110

Lab Sample ID: LCSD 570-334519/5-A

Matrix: Water

Analysis Batch: 334561

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 334519

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chemical Oxygen Demand	205	207.6		mg/L		101	90 - 110	0	20

Lab Sample ID: 570-140217-A-1-B MS

Matrix: Water

Analysis Batch: 334561

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 334519

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Chemical Oxygen Demand	443	F1	205	525.5	F1	mg/L		40	90 - 110

Lab Sample ID: 570-140217-A-1-C MSD

Matrix: Water

Analysis Batch: 334561

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Prep Batch: 334519

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chemical Oxygen Demand	443	F1	205	532.6	F1	mg/L		44	90 - 110	1	20

QC Sample Results

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

Job ID: 570-140172-1

Method: SM 2320B - Alkalinity

Lab Sample ID: MB 570-335673/32

Matrix: Water

Analysis Batch: 335673

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			06/08/23 18:08	1
Bicarbonate (as CaCO3)	ND		5.00		mg/L			06/08/23 18:08	1
Carbonate (as CaCO3)	ND		5.00		mg/L			06/08/23 18:08	1
Hydroxide (as CaCO3)	ND		5.00		mg/L			06/08/23 18:08	1

Lab Sample ID: LCS 570-335673/30

Matrix: Water

Analysis Batch: 335673

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	87.06		mg/L		82	78 - 110

Lab Sample ID: LCSD 570-335673/31

Matrix: Water

Analysis Batch: 335673

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	92.14		mg/L		87	78 - 110	6	10

Lab Sample ID: 570-139962-B-1 DU

Matrix: Water

Analysis Batch: 335673

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)	119		120.8		mg/L		1	25
Bicarbonate (as CaCO3)	119		120.8		mg/L		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 570-334659/1

Matrix: Water

Analysis Batch: 334659

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			06/05/23 20:53	1

Lab Sample ID: LCS 570-334659/2

Matrix: Water

Analysis Batch: 334659

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	1026		mg/L		103	84 - 108

QC Sample Results

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

Job ID: 570-140172-1

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

Lab Sample ID: LCSD 570-334659/3

Matrix: Water

Analysis Batch: 334659

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	1056		mg/L		106	84 - 108	3	10

Lab Sample ID: 570-140363-B-1 DU

Matrix: Water

Analysis Batch: 334659

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	657		651.0		mg/L		0.9	10

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

Lab Sample ID: MB 570-334481/33

Matrix: Water

Analysis Batch: 334481

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			06/02/23 13:33	1

Lab Sample ID: LCS 570-334481/34

Matrix: Water

Analysis Batch: 334481

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	5.060		mg/L		101	85 - 115

Lab Sample ID: LCSD 570-334481/35

Matrix: Water

Analysis Batch: 334481

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	5.192		mg/L		103	85 - 115	3	20

Lab Sample ID: 570-140111-A-6 MS

Matrix: Water

Analysis Batch: 334481

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	3.88		5.03	9.193		mg/L		106	31 - 145

Lab Sample ID: 570-140111-A-6 MSD

Matrix: Water

Analysis Batch: 334481

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	3.88		5.03	9.236		mg/L		107	31 - 145	0	20

QC Association Summary

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

Job ID: 570-140172-1

HPLC/IC

Analysis Batch: 333890

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-140172-2	POX	Total/NA	Water	300.0	
570-140172-3	INF	Total/NA	Water	300.0	
570-140172-4	EW-02	Total/NA	Water	300.0	
MB 570-333890/5	Method Blank	Total/NA	Water	300.0	
LCS 570-333890/6	Lab Control Sample	Total/NA	Water	300.0	
LCSD 570-333890/7	Lab Control Sample Dup	Total/NA	Water	300.0	
570-140172-2 MS	POX	Total/NA	Water	300.0	
570-140172-2 MSD	POX	Total/NA	Water	300.0	

Analysis Batch: 333891

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-140172-2 - DL	POX	Total/NA	Water	300.0	
570-140172-3 - DL	INF	Total/NA	Water	300.0	
570-140172-4	EW-02	Total/NA	Water	300.0	
570-140172-4 - DL	EW-02	Total/NA	Water	300.0	
MB 570-333891/5	Method Blank	Total/NA	Water	300.0	
LCS 570-333891/6	Lab Control Sample	Total/NA	Water	300.0	
LCSD 570-333891/7	Lab Control Sample Dup	Total/NA	Water	300.0	
570-140172-2 MS - DL	POX	Total/NA	Water	300.0	
570-140172-2 MSD - DL	POX	Total/NA	Water	300.0	

Analysis Batch: 334354

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-140172-5	MW-29	Total/NA	Water	300.0	
MB 570-334354/5	Method Blank	Total/NA	Water	300.0	
LCS 570-334354/6	Lab Control Sample	Total/NA	Water	300.0	
LCSD 570-334354/7	Lab Control Sample Dup	Total/NA	Water	300.0	
570-140086-B-3 MS	Matrix Spike	Total/NA	Water	300.0	
570-140086-B-3 MSD	Matrix Spike Duplicate	Total/NA	Water	300.0	

Metals

Prep Batch: 333923

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-140172-3	INF	Total Recoverable	Water	3005A	
570-140172-4	EW-02	Total Recoverable	Water	3005A	
MB 570-333923/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 570-333923/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
LCSD 570-333923/3-A	Lab Control Sample Dup	Total Recoverable	Water	3005A	
570-140111-J-6-B MS ^5	Matrix Spike	Total Recoverable	Water	3005A	
570-140111-J-6-C MSD ^5	Matrix Spike Duplicate	Total Recoverable	Water	3005A	
570-140111-A-6-A DU ^5	Duplicate	Total Recoverable	Water	3005A	

Analysis Batch: 334385

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-140172-3	INF	Total Recoverable	Water	6010B	333923
570-140172-4	EW-02	Total Recoverable	Water	6010B	333923

Analysis Batch: 334639

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 570-333923/1-A	Method Blank	Total Recoverable	Water	6010B	333923

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QC Association Summary

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

Job ID: 570-140172-1

Metals (Continued)

Analysis Batch: 334639 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 570-333923/2-A	Lab Control Sample	Total Recoverable	Water	6010B	333923
LCSD 570-333923/3-A	Lab Control Sample Dup	Total Recoverable	Water	6010B	333923
570-140111-J-6-B MS ^5	Matrix Spike	Total Recoverable	Water	6010B	333923
570-140111-J-6-C MSD ^5	Matrix Spike Duplicate	Total Recoverable	Water	6010B	333923
570-140111-A-6-A DU ^5	Duplicate	Total Recoverable	Water	6010B	333923

Filtration Batch: 334833

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-140172-3	INF	Dissolved	Water	Filtration	
MB 570-334833/1-A	Method Blank	Dissolved	Water	Filtration	
LCS 570-334833/2-A	Lab Control Sample	Dissolved	Water	Filtration	
LCSD 570-334833/3-A	Lab Control Sample Dup	Dissolved	Water	Filtration	
570-140172-3 MS	INF	Dissolved	Water	Filtration	
570-140172-3 MSD	INF	Dissolved	Water	Filtration	

Analysis Batch: 335051

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-140172-3	INF	Dissolved	Water	6010B	334833
MB 570-334833/1-A	Method Blank	Dissolved	Water	6010B	334833
LCS 570-334833/2-A	Lab Control Sample	Dissolved	Water	6010B	334833
LCSD 570-334833/3-A	Lab Control Sample Dup	Dissolved	Water	6010B	334833
570-140172-3 MS	INF	Dissolved	Water	6010B	334833
570-140172-3 MSD	INF	Dissolved	Water	6010B	334833

General Chemistry

Analysis Batch: 334481

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-140172-3	INF	Total/NA	Water	SM 5310D	
570-140172-4	EW-02	Total/NA	Water	SM 5310D	
570-140172-5	MW-29	Total/NA	Water	SM 5310D	
MB 570-334481/33	Method Blank	Total/NA	Water	SM 5310D	
LCS 570-334481/34	Lab Control Sample	Total/NA	Water	SM 5310D	
LCSD 570-334481/35	Lab Control Sample Dup	Total/NA	Water	SM 5310D	
570-140111-A-6 MS	Matrix Spike	Total/NA	Water	SM 5310D	
570-140111-A-6 MSD	Matrix Spike Duplicate	Total/NA	Water	SM 5310D	

Prep Batch: 334519

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-140172-2	POX	Total/NA	Water	410.4	
570-140172-3	INF	Total/NA	Water	410.4	
570-140172-4	EW-02	Total/NA	Water	410.4	
570-140172-5	MW-29	Total/NA	Water	410.4	
MB 570-334519/3-A	Method Blank	Total/NA	Water	410.4	
LCS 570-334519/4-A	Lab Control Sample	Total/NA	Water	410.4	
LCSD 570-334519/5-A	Lab Control Sample Dup	Total/NA	Water	410.4	
570-140217-A-1-B MS	Matrix Spike	Total/NA	Water	410.4	
570-140217-A-1-C MSD	Matrix Spike Duplicate	Total/NA	Water	410.4	

QC Association Summary

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

Job ID: 570-140172-1

General Chemistry

Analysis Batch: 334561

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-140172-2	POX	Total/NA	Water	410.4	334519
570-140172-3	INF	Total/NA	Water	410.4	334519
570-140172-4	EW-02	Total/NA	Water	410.4	334519
570-140172-5	MW-29	Total/NA	Water	410.4	334519
MB 570-334519/3-A	Method Blank	Total/NA	Water	410.4	334519
LCS 570-334519/4-A	Lab Control Sample	Total/NA	Water	410.4	334519
LCSD 570-334519/5-A	Lab Control Sample Dup	Total/NA	Water	410.4	334519
570-140217-A-1-B MS	Matrix Spike	Total/NA	Water	410.4	334519
570-140217-A-1-C MSD	Matrix Spike Duplicate	Total/NA	Water	410.4	334519

Analysis Batch: 334659

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-140172-1	CEFF	Total/NA	Water	SM 2540C	
570-140172-2	POX	Total/NA	Water	SM 2540C	
570-140172-3	INF	Total/NA	Water	SM 2540C	
570-140172-4	EW-02	Total/NA	Water	SM 2540C	
MB 570-334659/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 570-334659/2	Lab Control Sample	Total/NA	Water	SM 2540C	
LCSD 570-334659/3	Lab Control Sample Dup	Total/NA	Water	SM 2540C	
570-140363-B-1 DU	Duplicate	Total/NA	Water	SM 2540C	

Analysis Batch: 335673

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-140172-3	INF	Total/NA	Water	SM 2320B	
570-140172-4	EW-02	Total/NA	Water	SM 2320B	
MB 570-335673/32	Method Blank	Total/NA	Water	SM 2320B	
LCS 570-335673/30	Lab Control Sample	Total/NA	Water	SM 2320B	
LCSD 570-335673/31	Lab Control Sample Dup	Total/NA	Water	SM 2320B	
570-139962-B-1 DU	Duplicate	Total/NA	Water	SM 2320B	

Lab Chronicle

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

Job ID: 570-140172-1

Client Sample ID: CEFF

Lab Sample ID: 570-140172-1

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	SM 2540C		1	100 mL	1000 mL	334659	06/05/23 20:53	ZL7L	EET CAL 4
Instrument ID: BAL100										

Client Sample ID: POX

Lab Sample ID: 570-140172-2

Date Collected: 06/01/23 10:45

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	300.0		1	4 mL	4 mL	333890	06/02/23 06:52	PS	EET CAL 4
Instrument ID: IC9										
Total/NA	Analysis	300.0	DL	10	4 mL	4 mL	333891	06/02/23 09:23	PS	EET CAL 4
Instrument ID: IC9										
Total/NA	Prep	410.4			2 mL	2 mL	334519	06/05/23 12:32	ZL4M	EET CAL 4
Total/NA	Analysis	410.4		1	2 mL	2 mL	334561	06/05/23 15:16	ZL4M	EET CAL 4
Instrument ID: UV10										
Total/NA	Analysis	SM 2540C		1	100 mL	1000 mL	334659	06/05/23 20:53	ZL7L	EET CAL 4
Instrument ID: BAL100										

Client Sample ID: INF

Lab Sample ID: 570-140172-3

Date Collected: 06/01/23 11:00

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	300.0		1	4 mL	4 mL	333890	06/02/23 07:08	PS	EET CAL 4
Instrument ID: IC9										
Total/NA	Analysis	300.0	DL	10	4 mL	4 mL	333891	06/02/23 10:13	PS	EET CAL 4
Instrument ID: IC9										
Dissolved	Filtration	Filtration			50 mL	50 mL	334833	06/06/23 12:19	JP8N	EET CAL 4
Dissolved	Analysis	6010B		1			335051	06/06/23 20:04	P1R	EET CAL 4
Instrument ID: ICP11										
Total Recoverable	Prep	3005A			50 mL	50 mL	333923	06/02/23 06:46	JP8N	EET CAL 4
Total Recoverable	Analysis	6010B		1			334385	06/03/23 00:57	K1UV	EET CAL 4
Instrument ID: ICP11										
Total/NA	Prep	410.4			2 mL	2 mL	334519	06/05/23 12:32	ZL4M	EET CAL 4
Total/NA	Analysis	410.4		1	2 mL	2 mL	334561	06/05/23 15:16	ZL4M	EET CAL 4
Instrument ID: UV10										
Total/NA	Analysis	SM 2320B		1	10 mL	10 mL	335673	06/08/23 19:56	UAPD	EET CAL 4
Instrument ID: ManSciMantech										
Total/NA	Analysis	SM 2540C		1	100 mL	1000 mL	334659	06/05/23 20:53	ZL7L	EET CAL 4
Instrument ID: BAL100										
Total/NA	Analysis	SM 5310D		1	40 mL	40 mL	334481	06/03/23 00:38	ZL4M	EET CAL 4
Instrument ID: TOC8										

Lab Chronicle

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

Job ID: 570-140172-1

Client Sample ID: EW-02

Date Collected: 06/01/23 11:30

Date Received: 06/01/23 14:25

Lab Sample ID: 570-140172-4

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	300.0		1	4 mL	4 mL	333890	06/02/23 07:25	PS	EET CAL 4
	Instrument ID: IC9									
Total/NA	Analysis	300.0		1	4 mL	4 mL	333891	06/02/23 07:25	PS	EET CAL 4
	Instrument ID: IC9									
Total/NA	Analysis	300.0	DL	10	4 mL	4 mL	333891	06/02/23 10:30	PS	EET CAL 4
	Instrument ID: IC9									
Total Recoverable	Prep	3005A			50 mL	50 mL	333923	06/02/23 06:46	JP8N	EET CAL 4
Total Recoverable	Analysis	6010B		1			334385	06/03/23 00:59	K1UV	EET CAL 4
	Instrument ID: ICP11									
Total/NA	Prep	410.4			2 mL	2 mL	334519	06/05/23 12:32	ZL4M	EET CAL 4
Total/NA	Analysis	410.4		1	2 mL	2 mL	334561	06/05/23 15:16	ZL4M	EET CAL 4
	Instrument ID: UV10									
Total/NA	Analysis	SM 2320B		1	10 mL	10 mL	335673	06/08/23 20:03	UAPD	EET CAL 4
	Instrument ID: ManSciMantech									
Total/NA	Analysis	SM 2540C		1	100 mL	1000 mL	334659	06/05/23 20:53	ZL7L	EET CAL 4
	Instrument ID: BAL100									
Total/NA	Analysis	SM 5310D		1	40 mL	40 mL	334481	06/03/23 01:04	ZL4M	EET CAL 4
	Instrument ID: TOC8									

Client Sample ID: MW-29

Date Collected: 06/01/23 12:10

Date Received: 06/01/23 14:25

Lab Sample ID: 570-140172-5

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	300.0		10	4 mL	4 mL	334354	06/05/23 11:14	PS	EET CAL 4
	Instrument ID: IC9									
Total/NA	Prep	410.4			2 mL	2 mL	334519	06/05/23 12:32	ZL4M	EET CAL 4
Total/NA	Analysis	410.4		1	2 mL	2 mL	334561	06/05/23 15:16	ZL4M	EET CAL 4
	Instrument ID: UV10									
Total/NA	Analysis	SM 5310D		1	40 mL	40 mL	334481	06/03/23 01:30	ZL4M	EET CAL 4
	Instrument ID: TOC8									

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.

Job ID: 570-140172-1

Project/Site: Raytheon Main GETS uarterly/ 532.15

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.

Job ID: 570-140172-1

Project/Site: Raytheon Main GETS uarterly/ 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
SM 5310D	Organic Carbon, Total (TOC)	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

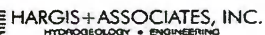
Sample Summary

Client: Hargis + Associates, Inc.

Project/Site: Raytheon Main GETS uarterly/ 532.15

Job ID: 570-140172-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
570-140172-1	CEFF	Water	06/01/23 10:25	06/01/23 14:25
570-140172-2	POX	Water	06/01/23 10:45	06/01/23 14:25
570-140172-3	INF	Water	06/01/23 11:00	06/01/23 14:25
570-140172-4	EW-02	Water	06/01/23 11:30	06/01/23 14:25
570-140172-5	MW-29	Water	06/01/23 12:10	06/01/23 14:25



Project Manager	Steve Netto
QA Manager	Ruben Sanchez
Phone	858.455.6500
Fax	858.455.6533

Date: 6/1/2023
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.

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6/9/2023

Login Sample Receipt Checklist

Client: Hargis + Associates, Inc.

Job Number: 570-140172-1

Login Number: 140172

List Source: Eurofins Calscience

List Number: 1

Creator: Patel, Jayesh

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.	False	Refer to Job Narrative for details.
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.	False	Improper containers received.
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 6/30/2023 8:43:30 AM

JOB DESCRIPTION

Raytheon Main GETS uarterly/ 532.15

JOB NUMBER

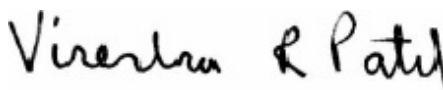
570-140172-2

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



Generated
6/30/2023 8:43:30 AM

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

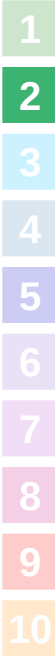


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Definitions/Glossary

Client: Hargis + Associates, Inc.

Job ID: 570-140172-2

Project/Site: Raytheon Main GETS uarterly/ 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 uarterly/ 532.15

Job ID: 570-140172-2

Job ID: 570-140172-2

Laboratory: Eurofins Calscience

Narrative

Job Narrative
570-140172-2

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 1.7° 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.

Detection Summary

Client: Hargis + Associates, Inc.

Job ID: 570-140172-2

Project/Site: Raytheon Main GETS uarterly/ 532.15

Client Sample ID: POX

Lab Sample ID: 570-140172-2

No Detections.

Client Sample ID: INF

Lab Sample ID: 570-140172-3

No Detections.

Client Sample ID: EW-02

Lab Sample ID: 570-140172-4

No Detections.

This Detection Summary does not include radiochemical test results.

Eurofins Calscience

Method Summary

Client: Hargis + Associates, Inc.

Job ID: 570-140172-2

Project/Site: Raytheon Main GETS uarterly/ 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.

Project/Site: Raytheon Main GETS uarterly/ 532.15

Job ID: 570-140172-2

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
570-140172-2	POX	Water	06/01/23 10:45	06/01/23 14:25
570-140172-3	INF	Water	06/01/23 11:00	06/01/23 14:25
570-140172-4	EW-02	Water	06/01/23 11:30	06/01/23 14:25

Work Orders: 3F02072

Project: 570-140172-2

Attn: Virendra Patel

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

Report Date: 6/25/2023

Received Date: 6/2/2023

Turnaround Time: Normal

Phones: (949) 261-1022

Fax: (949) 260-3297

P.O. #: 570-140172-2

Billing Code:

Dear Virendra Patel,

Enclosed are the results of analyses for samples received 6/02/23 with the Chain-of-Custody document. The samples were received in good condition, at 2.0 °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: POX (570-140172-2)		Sampled: 06/01/23 10:45 by Client						
3F02072-01 (Water)								
Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier	
Method: EPA 415.3			Instr: UVVIS04					
Batch ID: W3F0252		Preparation: _NONE (WETCHEM)		Prepared: 06/02/23 18:55			Analyst: ymt	
UV 254	ND		0.009	1/cm	1	06/02/23 19:30		
Sample: INF (570-140172-3)		Sampled: 06/01/23 11:00 by Client						
3F02072-02 (Water)								
Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier	
Method: EPA 415.3			Instr: UVVIS04					
Batch ID: W3F0252		Preparation: _NONE (WETCHEM)		Prepared: 06/02/23 18:55			Analyst: ymt	
UV 254	ND		0.009	1/cm	1	06/02/23 19:32		
Sample: EW-02 (570-140172-4)		Sampled: 06/01/23 11:30 by Client						
3F02072-03 (Water)								
Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier	
Method: EPA 415.3			Instr: UVVIS04					
Batch ID: W3F0252		Preparation: _NONE (WETCHEM)		Prepared: 06/02/23 18:55			Analyst: ymt	
UV 254	ND		0.009	1/cm	1	06/02/23 19:34		

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: W3F0252 - _NONE (WETCHEM)										
Blank (W3F0252-BLK1)				Prepared & Analyzed: 06/02/23						
UV 254	ND	0.009	1/cm							
LCS (W3F0252-BS1)				Prepared & Analyzed: 06/02/23						
UV 254	0.088	0.009	1/cm	0.0880		100	90-110			
Duplicate (W3F0252-DUP1)				Prepared & Analyzed: 06/02/23						
	Source: 3F02071-01									
UV 254	0.004	0.009	1/cm		0.004			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

31-02072

Ver: 06/08/2021/30/2023

ICOC No:
570-231126

Containers

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

Subcontract Method Instructions

Sample IDs	Method	Method Description	Method Comments
2, 3, 4	SUBCONTRACT	SUB (Specific Ultraviolet Absorption - 254nm)	2 day hold time, 250 mL amber required. Report non-client MS/MSD and/or Dup



Sample Receipt Checklist

WECK LABORATORIES, INC.

Weck WKO: **3F02072**

KO Logged by: Rey Edrosa

Samples Checked by: Rey Edrosa

Date/Time Received: 06/02/23 @ 13:18

of Samples: 03

Delivered by: Client

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	☒	☐	
	Samples received on ice?	☒	☐	
	Ice Type (Blue/Wet)	☒	☐	
	All samples intact?	☒	☐	
	Samples in proper containers?	☒	☐	
Sample Preservation Verification?	Sufficient sample volume?	☒	☐	
	Received within holding time?	☒	☐	
	Project Manager notified?	☐	☐	☒
	Sample labels checked for correct preservation?	☒	☐	☐
PM Comments	VOC Headspace: (No) none, If Yes (See comment)	☐	☐	☒
	524.2, 524.3, 624.1, 8260, 1666 P/T, LUFT			
	pH verified upon receipt?	☐	☐	☒
	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)	☐	☐	☒
	O&G pH <2 verified?	☐	☐	☐
	pH adjusted for O&G	☐	☐	☐
	Project Manager notified?	☐	☐	☒

Sample Receipt Checklist Prepared by:

Signature: Rey Edrosa

Date: 06/02/2023

6/30/2023

Login Sample Receipt Checklist

Client: Hargis + Associates, Inc.

Job Number: 570-140172-2

Login Number: 140172

List Source: Eurofins Calscience

List Number: 1

Creator: Patel, Jayesh

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.	False	Refer to Job Narrative for details.
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.	False	Improper containers received.
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 6/12/2023 7:59:10 AM

JOB DESCRIPTION

Raytheon / 532.15

JOB NUMBER

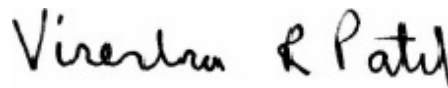
570-140214-1

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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Definitions/Glossary

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

Job ID: 570-140214-1

Qualifiers

General Chemistry

Qualifier	Qualifier Description
F3	Duplicate RPD exceeds the control limit

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: 570-140214-1

Job ID: 570-140214-1

Laboratory: Eurofins Calscience

Narrative

Job Narrative 570-140214-1

Comments

No additional comments.

Receipt

The samples were received on 6/1/2023 2:24 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 2.1° 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 570-334306. 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 (570-140214-4) and INF (570-140214-6). 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

Method SM 2540D: The sample duplicate precision for the following sample associated with analytical batch 570-334089 was outside control limits: (570-140203-A-1 DU). Non-homogeneity of the sample matrix is suspected. The associated laboratory control sample / laboratory control sample duplicate (LCS/LCSD) precision met acceptance criteria.

No additional analytical or quality issues were noted, other than those described above or 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.
Project/Site: Raytheon / 532.15

Job ID: 570-140214-1

Client Sample ID: TB-060123

Lab Sample ID: 570-140214-1

No Detections.

Client Sample ID: CEFF

Lab Sample ID: 570-140214-2

No Detections.

Client Sample ID: CBT

Lab Sample ID: 570-140214-3

No Detections.

Client Sample ID: POX

Lab Sample ID: 570-140214-4

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

Client Sample ID: PF

Lab Sample ID: 570-140214-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Alkalinity, Total (As CaCO ₃)	201		5.00		mg/L	1		SM 2320B	Total/NA
Bicarbonate (as CaCO ₃)	201		5.00		mg/L	1		SM 2320B	Total/NA

Client Sample ID: INF

Lab Sample ID: 570-140214-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,4-Dioxane	15		1.0		ug/L	1		8260B SIM	Total/NA
1,1-Dichloroethene	28		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: 570-140214-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,4-Dioxane	3.9		1.0		ug/L	1		8260B SIM	Total/NA
1,1-Dichloroethene	8.2		0.50		ug/L	1		8260B	Total/NA

Client Sample ID: MW-29

Lab Sample ID: 570-140214-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,4-Dioxane	45		1.0		ug/L	1		8260B SIM	Total/NA
1,1,2-Trichloro-1,2,2-trifluoroethane	0.54		0.50		ug/L	1		8260B	Total/NA
1,1-Dichloroethane	0.98		0.50		ug/L	1		8260B	Total/NA
1,1-Dichloroethene	85		0.50		ug/L	1		8260B	Total/NA
Trichloroethene	1.2		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 / 532.15

Job ID: 570-140214-1

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

Client Sample ID: INF
Date Collected: 06/01/23 11:00
Date Received: 06/01/23 14:24

Lab Sample ID: 570-140214-6
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	15		1.0		ug/L			06/06/23 22:49	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,4-Dichlorobutane (Surr)	128		67 - 133					06/06/23 22:49	1

Client Sample ID: EW-02
Date Collected: 06/01/23 11:30
Date Received: 06/01/23 14:24

Lab Sample ID: 570-140214-7
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	3.9		1.0		ug/L			06/06/23 23:16	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,4-Dichlorobutane (Surr)	131		67 - 133					06/06/23 23:16	1

Client Sample ID: MW-29
Date Collected: 06/01/23 12:10
Date Received: 06/01/23 14:24

Lab Sample ID: 570-140214-8
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	45		1.0		ug/L			06/06/23 23:44	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,4-Dichlorobutane (Surr)	118		67 - 133					06/06/23 23:44	1

Client Sample Results

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

Job ID: 570-140214-1

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

Client Sample ID: TB-060123
Date Collected: 06/01/23 08:00
Date Received: 06/01/23 14:24

Lab Sample ID: 570-140214-1
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		0.50		ug/L			06/03/23 18:56	1
1,1,1-Trichloroethane	ND		0.50		ug/L			06/03/23 18:56	1
1,1,2,2-Tetrachloroethane	ND		0.50		ug/L			06/03/23 18:56	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.50		ug/L			06/03/23 18:56	1
1,1,2-Trichloroethane	ND		0.50		ug/L			06/03/23 18:56	1
1,1-Dichloroethane	ND		0.50		ug/L			06/03/23 18:56	1
1,1-Dichloroethene	ND		0.50		ug/L			06/03/23 18:56	1
1,1-Dichloropropene	ND		0.50		ug/L			06/03/23 18:56	1
1,2,3-Trichlorobenzene	ND		0.50		ug/L			06/03/23 18:56	1
1,2,3-Trichloropropane	ND		0.50		ug/L			06/03/23 18:56	1
1,2,4-Trichlorobenzene	ND		0.50		ug/L			06/03/23 18:56	1
1,2,4-Trimethylbenzene	ND		0.50		ug/L			06/03/23 18:56	1
1,2-Dibromo-3-Chloropropane	ND		1.0		ug/L			06/03/23 18:56	1
1,2-Dibromoethane	ND		0.50		ug/L			06/03/23 18:56	1
1,2-Dichlorobenzene	ND		0.50		ug/L			06/03/23 18:56	1
1,2-Dichloroethane	ND		0.50		ug/L			06/03/23 18:56	1
1,2-Dichloropropane	ND		0.50		ug/L			06/03/23 18:56	1
1,3,5-Trimethylbenzene	ND		0.50		ug/L			06/03/23 18:56	1
1,3-Dichlorobenzene	ND		0.50		ug/L			06/03/23 18:56	1
1,3-Dichloropropane	ND		0.50		ug/L			06/03/23 18:56	1
1,4-Dichlorobenzene	ND		0.50		ug/L			06/03/23 18:56	1
2,2-Dichloropropane	ND		0.50		ug/L			06/03/23 18:56	1
2-Butanone	ND		5.0		ug/L			06/03/23 18:56	1
2-Chlorotoluene	ND		0.50		ug/L			06/03/23 18:56	1
2-Hexanone	ND		6.0		ug/L			06/03/23 18:56	1
4-Chlorotoluene	ND		0.50		ug/L			06/03/23 18:56	1
4-Methyl-2-pentanone	ND		5.0		ug/L			06/03/23 18:56	1
Acetone	ND		8.0		ug/L			06/03/23 18:56	1
Benzene	ND		0.50		ug/L			06/03/23 18:56	1
Bromobenzene	ND		0.50		ug/L			06/03/23 18:56	1
Bromochloromethane	ND		1.0		ug/L			06/03/23 18:56	1
Bromodichloromethane	ND		0.50		ug/L			06/03/23 18:56	1
Bromoform	ND		0.50		ug/L			06/03/23 18:56	1
Bromomethane	ND		2.0		ug/L			06/03/23 18:56	1
cis-1,2-Dichloroethene	ND		0.50		ug/L			06/03/23 18:56	1
cis-1,3-Dichloropropene	ND		0.50		ug/L			06/03/23 18:56	1
Carbon disulfide	ND		1.0		ug/L			06/03/23 18:56	1
Carbon tetrachloride	ND		0.50		ug/L			06/03/23 18:56	1
Chlorobenzene	ND		0.50		ug/L			06/03/23 18:56	1
Chloroethane	ND		0.50		ug/L			06/03/23 18:56	1
Chloroform	ND		0.50		ug/L			06/03/23 18:56	1
Chloromethane	ND		1.0		ug/L			06/03/23 18:56	1
Dibromochloromethane	ND		0.50		ug/L			06/03/23 18:56	1
Dibromomethane	ND		0.50		ug/L			06/03/23 18:56	1
Dichlorodifluoromethane	ND		1.0		ug/L			06/03/23 18:56	1
Ethylbenzene	ND		0.50		ug/L			06/03/23 18:56	1
Isopropylbenzene	ND		0.50		ug/L			06/03/23 18:56	1
Methylene Chloride	ND		1.0		ug/L			06/03/23 18:56	1
Methyl-t-Butyl Ether (MTBE)	ND		0.50		ug/L			06/03/23 18:56	1

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Client Sample Results

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

Job ID: 570-140214-1

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

Client Sample ID: TB-060123
Date Collected: 06/01/23 08:00
Date Received: 06/01/23 14:24

Lab Sample ID: 570-140214-1
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	ND		1.0		ug/L			06/03/23 18:56	1
n-Butylbenzene	ND		0.50		ug/L			06/03/23 18:56	1
N-Propylbenzene	ND		0.50		ug/L			06/03/23 18:56	1
o-Xylene	ND		0.50		ug/L			06/03/23 18:56	1
m,p-Xylene	ND		1.0		ug/L			06/03/23 18:56	1
p-Isopropyltoluene	ND		0.50		ug/L			06/03/23 18:56	1
sec-Butylbenzene	ND		0.50		ug/L			06/03/23 18:56	1
Styrene	ND		0.50		ug/L			06/03/23 18:56	1
trans-1,2-Dichloroethene	ND		0.50		ug/L			06/03/23 18:56	1
trans-1,3-Dichloropropene	ND		0.50		ug/L			06/03/23 18:56	1
tert-Butylbenzene	ND		0.50		ug/L			06/03/23 18:56	1
Tetrachloroethene	ND		0.50		ug/L			06/03/23 18:56	1
Toluene	ND		0.50		ug/L			06/03/23 18:56	1
Trichloroethene	ND		0.50		ug/L			06/03/23 18:56	1
Trichlorofluoromethane	ND		0.50		ug/L			06/03/23 18:56	1
Vinyl acetate	ND		5.0		ug/L			06/03/23 18:56	1
Vinyl chloride	ND		0.50		ug/L			06/03/23 18:56	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	104		64 - 132		06/03/23 18:56	1
4-Bromofluorobenzene (Surr)	101		76 - 120		06/03/23 18:56	1
Dibromofluoromethane	99		80 - 120		06/03/23 18:56	1
Toluene-d8 (Surr)	98		80 - 120		06/03/23 18:56	1

Client Sample ID: CEFF
Date Collected: 06/01/23 10:25
Date Received: 06/01/23 14:24

Lab Sample ID: 570-140214-2
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		0.50		ug/L			06/03/23 19:20	1
1,1,1-Trichloroethane	ND		0.50		ug/L			06/03/23 19:20	1
1,1,2,2-Tetrachloroethane	ND		0.50		ug/L			06/03/23 19:20	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.50		ug/L			06/03/23 19:20	1
1,1,2-Trichloroethane	ND		0.50		ug/L			06/03/23 19:20	1
1,1-Dichloroethane	ND		0.50		ug/L			06/03/23 19:20	1
1,1-Dichloroethene	ND		0.50		ug/L			06/03/23 19:20	1
1,1-Dichloropropene	ND		0.50		ug/L			06/03/23 19:20	1
1,2,3-Trichlorobenzene	ND		0.50		ug/L			06/03/23 19:20	1
1,2,3-Trichloropropane	ND		0.50		ug/L			06/03/23 19:20	1
1,2,4-Trichlorobenzene	ND		0.50		ug/L			06/03/23 19:20	1
1,2,4-Trimethylbenzene	ND		0.50		ug/L			06/03/23 19:20	1
1,2-Dibromo-3-Chloropropane	ND		1.0		ug/L			06/03/23 19:20	1
1,2-Dibromoethane	ND		0.50		ug/L			06/03/23 19:20	1
1,2-Dichlorobenzene	ND		0.50		ug/L			06/03/23 19:20	1
1,2-Dichloroethane	ND		0.50		ug/L			06/03/23 19:20	1
1,2-Dichloropropane	ND		0.50		ug/L			06/03/23 19:20	1
1,3,5-Trimethylbenzene	ND		0.50		ug/L			06/03/23 19:20	1
1,3-Dichlorobenzene	ND		0.50		ug/L			06/03/23 19:20	1
1,3-Dichloropropane	ND		0.50		ug/L			06/03/23 19:20	1
1,4-Dichlorobenzene	ND		0.50		ug/L			06/03/23 19:20	1
2,2-Dichloropropane	ND		0.50		ug/L			06/03/23 19:20	1

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Client Sample Results

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

Job ID: 570-140214-1

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

Client Sample ID: CEFF

Date Collected: 06/01/23 10:25

Date Received: 06/01/23 14:24

Lab Sample ID: 570-140214-2

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Butanone	ND		5.0		ug/L			06/03/23 19:20	1
2-Chlorotoluene	ND		0.50		ug/L			06/03/23 19:20	1
2-Hexanone	ND		6.0		ug/L			06/03/23 19:20	1
4-Chlorotoluene	ND		0.50		ug/L			06/03/23 19:20	1
4-Methyl-2-pentanone	ND		5.0		ug/L			06/03/23 19:20	1
Acetone	ND		8.0		ug/L			06/03/23 19:20	1
Benzene	ND		0.50		ug/L			06/03/23 19:20	1
Bromobenzene	ND		0.50		ug/L			06/03/23 19:20	1
Bromochloromethane	ND		1.0		ug/L			06/03/23 19:20	1
Bromodichloromethane	ND		0.50		ug/L			06/03/23 19:20	1
Bromoform	ND		0.50		ug/L			06/03/23 19:20	1
Bromomethane	ND		2.0		ug/L			06/03/23 19:20	1
cis-1,2-Dichloroethene	ND		0.50		ug/L			06/03/23 19:20	1
cis-1,3-Dichloropropene	ND		0.50		ug/L			06/03/23 19:20	1
Carbon disulfide	ND		1.0		ug/L			06/03/23 19:20	1
Carbon tetrachloride	ND		0.50		ug/L			06/03/23 19:20	1
Chlorobenzene	ND		0.50		ug/L			06/03/23 19:20	1
Chloroethane	ND		0.50		ug/L			06/03/23 19:20	1
Chloroform	ND		0.50		ug/L			06/03/23 19:20	1
Chloromethane	ND		1.0		ug/L			06/03/23 19:20	1
Dibromochloromethane	ND		0.50		ug/L			06/03/23 19:20	1
Dibromomethane	ND		0.50		ug/L			06/03/23 19:20	1
Dichlorodifluoromethane	ND		1.0		ug/L			06/03/23 19:20	1
Ethylbenzene	ND		0.50		ug/L			06/03/23 19:20	1
Isopropylbenzene	ND		0.50		ug/L			06/03/23 19:20	1
Methylene Chloride	ND		1.0		ug/L			06/03/23 19:20	1
Methyl-t-Butyl Ether (MTBE)	ND		0.50		ug/L			06/03/23 19:20	1
Naphthalene	ND		1.0		ug/L			06/03/23 19:20	1
n-Butylbenzene	ND		0.50		ug/L			06/03/23 19:20	1
N-Propylbenzene	ND		0.50		ug/L			06/03/23 19:20	1
o-Xylene	ND		0.50		ug/L			06/03/23 19:20	1
m,p-Xylene	ND		1.0		ug/L			06/03/23 19:20	1
p-Isopropyltoluene	ND		0.50		ug/L			06/03/23 19:20	1
sec-Butylbenzene	ND		0.50		ug/L			06/03/23 19:20	1
Styrene	ND		0.50		ug/L			06/03/23 19:20	1
trans-1,2-Dichloroethene	ND		0.50		ug/L			06/03/23 19:20	1
trans-1,3-Dichloropropene	ND		0.50		ug/L			06/03/23 19:20	1
tert-Butylbenzene	ND		0.50		ug/L			06/03/23 19:20	1
Tetrachloroethene	ND		0.50		ug/L			06/03/23 19:20	1
Toluene	ND		0.50		ug/L			06/03/23 19:20	1
Trichloroethene	ND		0.50		ug/L			06/03/23 19:20	1
Trichlorofluoromethane	ND		0.50		ug/L			06/03/23 19:20	1
Vinyl acetate	ND		5.0		ug/L			06/03/23 19:20	1
Vinyl chloride	ND		0.50		ug/L			06/03/23 19:20	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	105		64 - 132		06/03/23 19:20	1
4-Bromofluorobenzene (Surr)	102		76 - 120		06/03/23 19:20	1
Dibromofluoromethane	100		80 - 120		06/03/23 19:20	1
Toluene-d8 (Surr)	97		80 - 120		06/03/23 19:20	1

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Client Sample Results

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

Job ID: 570-140214-1

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

Client Sample ID: CBT
Date Collected: 06/01/23 10:35
Date Received: 06/01/23 14:24

Lab Sample ID: 570-140214-3
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		0.50		ug/L			06/03/23 19:45	1
1,1,1-Trichloroethane	ND		0.50		ug/L			06/03/23 19:45	1
1,1,2,2-Tetrachloroethane	ND		0.50		ug/L			06/03/23 19:45	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.50		ug/L			06/03/23 19:45	1
1,1,2-Trichloroethane	ND		0.50		ug/L			06/03/23 19:45	1
1,1-Dichloroethane	ND		0.50		ug/L			06/03/23 19:45	1
1,1-Dichloroethene	ND		0.50		ug/L			06/03/23 19:45	1
1,1-Dichloropropene	ND		0.50		ug/L			06/03/23 19:45	1
1,2,3-Trichlorobenzene	ND		0.50		ug/L			06/03/23 19:45	1
1,2,3-Trichloropropane	ND		0.50		ug/L			06/03/23 19:45	1
1,2,4-Trichlorobenzene	ND		0.50		ug/L			06/03/23 19:45	1
1,2,4-Trimethylbenzene	ND		0.50		ug/L			06/03/23 19:45	1
1,2-Dibromo-3-Chloropropane	ND		1.0		ug/L			06/03/23 19:45	1
1,2-Dibromoethane	ND		0.50		ug/L			06/03/23 19:45	1
1,2-Dichlorobenzene	ND		0.50		ug/L			06/03/23 19:45	1
1,2-Dichloroethane	ND		0.50		ug/L			06/03/23 19:45	1
1,2-Dichloropropane	ND		0.50		ug/L			06/03/23 19:45	1
1,3,5-Trimethylbenzene	ND		0.50		ug/L			06/03/23 19:45	1
1,3-Dichlorobenzene	ND		0.50		ug/L			06/03/23 19:45	1
1,3-Dichloropropane	ND		0.50		ug/L			06/03/23 19:45	1
1,4-Dichlorobenzene	ND		0.50		ug/L			06/03/23 19:45	1
2,2-Dichloropropane	ND		0.50		ug/L			06/03/23 19:45	1
2-Butanone	ND		5.0		ug/L			06/03/23 19:45	1
2-Chlorotoluene	ND		0.50		ug/L			06/03/23 19:45	1
2-Hexanone	ND		6.0		ug/L			06/03/23 19:45	1
4-Chlorotoluene	ND		0.50		ug/L			06/03/23 19:45	1
4-Methyl-2-pentanone	ND		5.0		ug/L			06/03/23 19:45	1
Acetone	ND		8.0		ug/L			06/03/23 19:45	1
Benzene	ND		0.50		ug/L			06/03/23 19:45	1
Bromobenzene	ND		0.50		ug/L			06/03/23 19:45	1
Bromochloromethane	ND		1.0		ug/L			06/03/23 19:45	1
Bromodichloromethane	ND		0.50		ug/L			06/03/23 19:45	1
Bromoform	ND		0.50		ug/L			06/03/23 19:45	1
Bromomethane	ND		2.0		ug/L			06/03/23 19:45	1
cis-1,2-Dichloroethene	ND		0.50		ug/L			06/03/23 19:45	1
cis-1,3-Dichloropropene	ND		0.50		ug/L			06/03/23 19:45	1
Carbon disulfide	ND		1.0		ug/L			06/03/23 19:45	1
Carbon tetrachloride	ND		0.50		ug/L			06/03/23 19:45	1
Chlorobenzene	ND		0.50		ug/L			06/03/23 19:45	1
Chloroethane	ND		0.50		ug/L			06/03/23 19:45	1
Chloroform	ND		0.50		ug/L			06/03/23 19:45	1
Chloromethane	ND		1.0		ug/L			06/03/23 19:45	1
Dibromochloromethane	ND		0.50		ug/L			06/03/23 19:45	1
Dibromomethane	ND		0.50		ug/L			06/03/23 19:45	1
Dichlorodifluoromethane	ND		1.0		ug/L			06/03/23 19:45	1
Ethylbenzene	ND		0.50		ug/L			06/03/23 19:45	1
Isopropylbenzene	ND		0.50		ug/L			06/03/23 19:45	1
Methylene Chloride	ND		1.0		ug/L			06/03/23 19:45	1
Methyl-t-Butyl Ether (MTBE)	ND		0.50		ug/L			06/03/23 19:45	1

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Client Sample Results

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

Job ID: 570-140214-1

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

Client Sample ID: CBT
Date Collected: 06/01/23 10:35
Date Received: 06/01/23 14:24

Lab Sample ID: 570-140214-3
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	ND		1.0		ug/L			06/03/23 19:45	1
n-Butylbenzene	ND		0.50		ug/L			06/03/23 19:45	1
N-Propylbenzene	ND		0.50		ug/L			06/03/23 19:45	1
o-Xylene	ND		0.50		ug/L			06/03/23 19:45	1
m,p-Xylene	ND		1.0		ug/L			06/03/23 19:45	1
p-Isopropyltoluene	ND		0.50		ug/L			06/03/23 19:45	1
sec-Butylbenzene	ND		0.50		ug/L			06/03/23 19:45	1
Styrene	ND		0.50		ug/L			06/03/23 19:45	1
trans-1,2-Dichloroethene	ND		0.50		ug/L			06/03/23 19:45	1
trans-1,3-Dichloropropene	ND		0.50		ug/L			06/03/23 19:45	1
tert-Butylbenzene	ND		0.50		ug/L			06/03/23 19:45	1
Tetrachloroethene	ND		0.50		ug/L			06/03/23 19:45	1
Toluene	ND		0.50		ug/L			06/03/23 19:45	1
Trichloroethene	ND		0.50		ug/L			06/03/23 19:45	1
Trichlorofluoromethane	ND		0.50		ug/L			06/03/23 19:45	1
Vinyl acetate	ND		5.0		ug/L			06/03/23 19:45	1
Vinyl chloride	ND		0.50		ug/L			06/03/23 19:45	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	104		64 - 132		06/03/23 19:45	1
4-Bromofluorobenzene (Surr)	103		76 - 120		06/03/23 19:45	1
Dibromofluoromethane	102		80 - 120		06/03/23 19:45	1
Toluene-d8 (Surr)	99		80 - 120		06/03/23 19:45	1

Client Sample ID: POX
Date Collected: 06/01/23 10:45
Date Received: 06/01/23 14:24

Lab Sample ID: 570-140214-4
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		0.50		ug/L			06/03/23 20:10	1
1,1,1-Trichloroethane	ND		0.50		ug/L			06/03/23 20:10	1
1,1,2,2-Tetrachloroethane	ND		0.50		ug/L			06/03/23 20:10	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.50		ug/L			06/03/23 20:10	1
1,1,2-Trichloroethane	ND		0.50		ug/L			06/03/23 20:10	1
1,1-Dichloroethane	ND		0.50		ug/L			06/03/23 20:10	1
1,1-Dichloroethene	ND		0.50		ug/L			06/03/23 20:10	1
1,1-Dichloropropene	ND		0.50		ug/L			06/03/23 20:10	1
1,2,3-Trichlorobenzene	ND		0.50		ug/L			06/03/23 20:10	1
1,2,3-Trichloropropane	ND		0.50		ug/L			06/03/23 20:10	1
1,2,4-Trichlorobenzene	ND		0.50		ug/L			06/03/23 20:10	1
1,2,4-Trimethylbenzene	ND		0.50		ug/L			06/03/23 20:10	1
1,2-Dibromo-3-Chloropropane	ND		1.0		ug/L			06/03/23 20:10	1
1,2-Dibromoethane	ND		0.50		ug/L			06/03/23 20:10	1
1,2-Dichlorobenzene	ND		0.50		ug/L			06/03/23 20:10	1
1,2-Dichloroethane	ND		0.50		ug/L			06/03/23 20:10	1
1,2-Dichloropropane	ND		0.50		ug/L			06/03/23 20:10	1
1,3,5-Trimethylbenzene	ND		0.50		ug/L			06/03/23 20:10	1
1,3-Dichlorobenzene	ND		0.50		ug/L			06/03/23 20:10	1
1,3-Dichloropropane	ND		0.50		ug/L			06/03/23 20:10	1
1,4-Dichlorobenzene	ND		0.50		ug/L			06/03/23 20:10	1
2,2-Dichloropropane	ND		0.50		ug/L			06/03/23 20:10	1

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Client Sample Results

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

Job ID: 570-140214-1

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

Client Sample ID: POX
Date Collected: 06/01/23 10:45
Date Received: 06/01/23 14:24

Lab Sample ID: 570-140214-4
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Butanone	ND		5.0		ug/L			06/03/23 20:10	1
2-Chlorotoluene	ND		0.50		ug/L			06/03/23 20:10	1
2-Hexanone	ND		6.0		ug/L			06/03/23 20:10	1
4-Chlorotoluene	ND		0.50		ug/L			06/03/23 20:10	1
4-Methyl-2-pentanone	ND		5.0		ug/L			06/03/23 20:10	1
Acetone	ND		8.0		ug/L			06/03/23 20:10	1
Benzene	ND		0.50		ug/L			06/03/23 20:10	1
Bromobenzene	ND		0.50		ug/L			06/03/23 20:10	1
Bromochloromethane	ND		1.0		ug/L			06/03/23 20:10	1
Bromodichloromethane	ND		0.50		ug/L			06/03/23 20:10	1
Bromoform	ND		0.50		ug/L			06/03/23 20:10	1
Bromomethane	ND		2.0		ug/L			06/03/23 20:10	1
cis-1,2-Dichloroethene	ND		0.50		ug/L			06/03/23 20:10	1
cis-1,3-Dichloropropene	ND		0.50		ug/L			06/03/23 20:10	1
Carbon disulfide	ND		1.0		ug/L			06/03/23 20:10	1
Carbon tetrachloride	ND		0.50		ug/L			06/03/23 20:10	1
Chlorobenzene	ND		0.50		ug/L			06/03/23 20:10	1
Chloroethane	ND		0.50		ug/L			06/03/23 20:10	1
Chloroform	ND		0.50		ug/L			06/03/23 20:10	1
Chloromethane	ND		1.0		ug/L			06/03/23 20:10	1
Dibromochloromethane	ND		0.50		ug/L			06/03/23 20:10	1
Dibromomethane	ND		0.50		ug/L			06/03/23 20:10	1
Dichlorodifluoromethane	ND		1.0		ug/L			06/03/23 20:10	1
Ethylbenzene	ND		0.50		ug/L			06/03/23 20:10	1
Isopropylbenzene	ND		0.50		ug/L			06/03/23 20:10	1
Methylene Chloride	ND		1.0		ug/L			06/03/23 20:10	1
Methyl-t-Butyl Ether (MTBE)	ND		0.50		ug/L			06/03/23 20:10	1
Naphthalene	ND		1.0		ug/L			06/03/23 20:10	1
n-Butylbenzene	ND		0.50		ug/L			06/03/23 20:10	1
N-Propylbenzene	ND		0.50		ug/L			06/03/23 20:10	1
o-Xylene	ND		0.50		ug/L			06/03/23 20:10	1
m,p-Xylene	ND		1.0		ug/L			06/03/23 20:10	1
p-Isopropyltoluene	ND		0.50		ug/L			06/03/23 20:10	1
sec-Butylbenzene	ND		0.50		ug/L			06/03/23 20:10	1
Styrene	ND		0.50		ug/L			06/03/23 20:10	1
trans-1,2-Dichloroethene	ND		0.50		ug/L			06/03/23 20:10	1
trans-1,3-Dichloropropene	ND		0.50		ug/L			06/03/23 20:10	1
tert-Butylbenzene	ND		0.50		ug/L			06/03/23 20:10	1
Tetrachloroethene	ND		0.50		ug/L			06/03/23 20:10	1
Toluene	ND		0.50		ug/L			06/03/23 20:10	1
Trichloroethene	ND		0.50		ug/L			06/03/23 20:10	1
Trichlorofluoromethane	ND		0.50		ug/L			06/03/23 20:10	1
Vinyl acetate	ND		5.0		ug/L			06/03/23 20:10	1
Vinyl chloride	ND		0.50		ug/L			06/03/23 20:10	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	107		64 - 132		06/03/23 20:10	1
4-Bromofluorobenzene (Surr)	102		76 - 120		06/03/23 20:10	1
Dibromofluoromethane	102		80 - 120		06/03/23 20:10	1
Toluene-d8 (Surr)	97		80 - 120		06/03/23 20:10	1

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Client Sample Results

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

Job ID: 570-140214-1

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

Client Sample ID: INF

Date Collected: 06/01/23 11:00

Date Received: 06/01/23 14:24

Lab Sample ID: 570-140214-6

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		0.50		ug/L			06/03/23 20:35	1
1,1,1-Trichloroethane	ND		0.50		ug/L			06/03/23 20:35	1
1,1,2,2-Tetrachloroethane	ND		0.50		ug/L			06/03/23 20:35	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.50		ug/L			06/03/23 20:35	1
1,1,2-Trichloroethane	ND		0.50		ug/L			06/03/23 20:35	1
1,1-Dichloroethane	ND		0.50		ug/L			06/03/23 20:35	1
1,1-Dichloroethene	28		0.50		ug/L			06/03/23 20:35	1
1,1-Dichloropropene	ND		0.50		ug/L			06/03/23 20:35	1
1,2,3-Trichlorobenzene	ND		0.50		ug/L			06/03/23 20:35	1
1,2,3-Trichloropropane	ND		0.50		ug/L			06/03/23 20:35	1
1,2,4-Trichlorobenzene	ND		0.50		ug/L			06/03/23 20:35	1
1,2,4-Trimethylbenzene	ND		0.50		ug/L			06/03/23 20:35	1
1,2-Dibromo-3-Chloropropane	ND		1.0		ug/L			06/03/23 20:35	1
1,2-Dibromoethane	ND		0.50		ug/L			06/03/23 20:35	1
1,2-Dichlorobenzene	ND		0.50		ug/L			06/03/23 20:35	1
1,2-Dichloroethane	ND		0.50		ug/L			06/03/23 20:35	1
1,2-Dichloropropane	ND		0.50		ug/L			06/03/23 20:35	1
1,3,5-Trimethylbenzene	ND		0.50		ug/L			06/03/23 20:35	1
1,3-Dichlorobenzene	ND		0.50		ug/L			06/03/23 20:35	1
1,3-Dichloropropane	ND		0.50		ug/L			06/03/23 20:35	1
1,4-Dichlorobenzene	ND		0.50		ug/L			06/03/23 20:35	1
2,2-Dichloropropane	ND		0.50		ug/L			06/03/23 20:35	1
2-Butanone	ND		5.0		ug/L			06/03/23 20:35	1
2-Chlorotoluene	ND		0.50		ug/L			06/03/23 20:35	1
2-Hexanone	ND		6.0		ug/L			06/03/23 20:35	1
4-Chlorotoluene	ND		0.50		ug/L			06/03/23 20:35	1
4-Methyl-2-pentanone	ND		5.0		ug/L			06/03/23 20:35	1
Acetone	ND		8.0		ug/L			06/03/23 20:35	1
Benzene	ND		0.50		ug/L			06/03/23 20:35	1
Bromobenzene	ND		0.50		ug/L			06/03/23 20:35	1
Bromochloromethane	ND		1.0		ug/L			06/03/23 20:35	1
Bromodichloromethane	ND		0.50		ug/L			06/03/23 20:35	1
Bromoform	ND		0.50		ug/L			06/03/23 20:35	1
Bromomethane	ND		2.0		ug/L			06/03/23 20:35	1
cis-1,2-Dichloroethene	ND		0.50		ug/L			06/03/23 20:35	1
cis-1,3-Dichloropropene	ND		0.50		ug/L			06/03/23 20:35	1
Carbon disulfide	ND		1.0		ug/L			06/03/23 20:35	1
Carbon tetrachloride	ND		0.50		ug/L			06/03/23 20:35	1
Chlorobenzene	ND		0.50		ug/L			06/03/23 20:35	1
Chloroethane	ND		0.50		ug/L			06/03/23 20:35	1
Chloroform	ND		0.50		ug/L			06/03/23 20:35	1
Chloromethane	ND		1.0		ug/L			06/03/23 20:35	1
Dibromochloromethane	ND		0.50		ug/L			06/03/23 20:35	1
Dibromomethane	ND		0.50		ug/L			06/03/23 20:35	1
Dichlorodifluoromethane	ND		1.0		ug/L			06/03/23 20:35	1
Ethylbenzene	ND		0.50		ug/L			06/03/23 20:35	1
Isopropylbenzene	ND		0.50		ug/L			06/03/23 20:35	1
Methylene Chloride	ND		1.0		ug/L			06/03/23 20:35	1
Methyl-t-Butyl Ether (MTBE)	ND		0.50		ug/L			06/03/23 20:35	1

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Client Sample Results

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

Job ID: 570-140214-1

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

Client Sample ID: INF

Date Collected: 06/01/23 11:00

Date Received: 06/01/23 14:24

Lab Sample ID: 570-140214-6

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	ND		1.0		ug/L			06/03/23 20:35	1
n-Butylbenzene	ND		0.50		ug/L			06/03/23 20:35	1
N-Propylbenzene	ND		0.50		ug/L			06/03/23 20:35	1
o-Xylene	ND		0.50		ug/L			06/03/23 20:35	1
m,p-Xylene	ND		1.0		ug/L			06/03/23 20:35	1
p-Isopropyltoluene	ND		0.50		ug/L			06/03/23 20:35	1
sec-Butylbenzene	ND		0.50		ug/L			06/03/23 20:35	1
Styrene	ND		0.50		ug/L			06/03/23 20:35	1
trans-1,2-Dichloroethene	ND		0.50		ug/L			06/03/23 20:35	1
trans-1,3-Dichloropropene	ND		0.50		ug/L			06/03/23 20:35	1
tert-Butylbenzene	ND		0.50		ug/L			06/03/23 20:35	1
Tetrachloroethene	ND		0.50		ug/L			06/03/23 20:35	1
Toluene	ND		0.50		ug/L			06/03/23 20:35	1
Trichloroethene	ND		0.50		ug/L			06/03/23 20:35	1
Trichlorofluoromethane	ND		0.50		ug/L			06/03/23 20:35	1
Vinyl acetate	ND		5.0		ug/L			06/03/23 20:35	1
Vinyl chloride	ND		0.50		ug/L			06/03/23 20:35	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	106		64 - 132		06/03/23 20:35	1
4-Bromofluorobenzene (Surr)	102		76 - 120		06/03/23 20:35	1
Dibromofluoromethane	102		80 - 120		06/03/23 20:35	1
Toluene-d8 (Surr)	99		80 - 120		06/03/23 20:35	1

Client Sample ID: EW-02

Date Collected: 06/01/23 11:30

Date Received: 06/01/23 14:24

Lab Sample ID: 570-140214-7

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		0.50		ug/L			06/03/23 21:00	1
1,1,1-Trichloroethane	ND		0.50		ug/L			06/03/23 21:00	1
1,1,2,2-Tetrachloroethane	ND		0.50		ug/L			06/03/23 21:00	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.50		ug/L			06/03/23 21:00	1
1,1,2-Trichloroethane	ND		0.50		ug/L			06/03/23 21:00	1
1,1-Dichloroethane	ND		0.50		ug/L			06/03/23 21:00	1
1,1-Dichloroethene	8.2		0.50		ug/L			06/03/23 21:00	1
1,1-Dichloropropene	ND		0.50		ug/L			06/03/23 21:00	1
1,2,3-Trichlorobenzene	ND		0.50		ug/L			06/03/23 21:00	1
1,2,3-Trichloropropane	ND		0.50		ug/L			06/03/23 21:00	1
1,2,4-Trichlorobenzene	ND		0.50		ug/L			06/03/23 21:00	1
1,2,4-Trimethylbenzene	ND		0.50		ug/L			06/03/23 21:00	1
1,2-Dibromo-3-Chloropropane	ND		1.0		ug/L			06/03/23 21:00	1
1,2-Dibromoethane	ND		0.50		ug/L			06/03/23 21:00	1
1,2-Dichlorobenzene	ND		0.50		ug/L			06/03/23 21:00	1
1,2-Dichloroethane	ND		0.50		ug/L			06/03/23 21:00	1
1,2-Dichloropropane	ND		0.50		ug/L			06/03/23 21:00	1
1,3,5-Trimethylbenzene	ND		0.50		ug/L			06/03/23 21:00	1
1,3-Dichlorobenzene	ND		0.50		ug/L			06/03/23 21:00	1
1,3-Dichloropropane	ND		0.50		ug/L			06/03/23 21:00	1
1,4-Dichlorobenzene	ND		0.50		ug/L			06/03/23 21:00	1
2,2-Dichloropropane	ND		0.50		ug/L			06/03/23 21:00	1

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Client Sample Results

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

Job ID: 570-140214-1

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

Client Sample ID: EW-02
Date Collected: 06/01/23 11:30
Date Received: 06/01/23 14:24

Lab Sample ID: 570-140214-7
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Butanone	ND		5.0		ug/L			06/03/23 21:00	1
2-Chlorotoluene	ND		0.50		ug/L			06/03/23 21:00	1
2-Hexanone	ND		6.0		ug/L			06/03/23 21:00	1
4-Chlorotoluene	ND		0.50		ug/L			06/03/23 21:00	1
4-Methyl-2-pentanone	ND		5.0		ug/L			06/03/23 21:00	1
Acetone	ND		8.0		ug/L			06/03/23 21:00	1
Benzene	ND		0.50		ug/L			06/03/23 21:00	1
Bromobenzene	ND		0.50		ug/L			06/03/23 21:00	1
Bromochloromethane	ND		1.0		ug/L			06/03/23 21:00	1
Bromodichloromethane	ND		0.50		ug/L			06/03/23 21:00	1
Bromoform	ND		0.50		ug/L			06/03/23 21:00	1
Bromomethane	ND		2.0		ug/L			06/03/23 21:00	1
cis-1,2-Dichloroethene	ND		0.50		ug/L			06/03/23 21:00	1
cis-1,3-Dichloropropene	ND		0.50		ug/L			06/03/23 21:00	1
Carbon disulfide	ND		1.0		ug/L			06/03/23 21:00	1
Carbon tetrachloride	ND		0.50		ug/L			06/03/23 21:00	1
Chlorobenzene	ND		0.50		ug/L			06/03/23 21:00	1
Chloroethane	ND		0.50		ug/L			06/03/23 21:00	1
Chloroform	ND		0.50		ug/L			06/03/23 21:00	1
Chloromethane	ND		1.0		ug/L			06/03/23 21:00	1
Dibromochloromethane	ND		0.50		ug/L			06/03/23 21:00	1
Dibromomethane	ND		0.50		ug/L			06/03/23 21:00	1
Dichlorodifluoromethane	ND		1.0		ug/L			06/03/23 21:00	1
Ethylbenzene	ND		0.50		ug/L			06/03/23 21:00	1
Isopropylbenzene	ND		0.50		ug/L			06/03/23 21:00	1
Methylene Chloride	ND		1.0		ug/L			06/03/23 21:00	1
Methyl-t-Butyl Ether (MTBE)	ND		0.50		ug/L			06/03/23 21:00	1
Naphthalene	ND		1.0		ug/L			06/03/23 21:00	1
n-Butylbenzene	ND		0.50		ug/L			06/03/23 21:00	1
N-Propylbenzene	ND		0.50		ug/L			06/03/23 21:00	1
o-Xylene	ND		0.50		ug/L			06/03/23 21:00	1
m,p-Xylene	ND		1.0		ug/L			06/03/23 21:00	1
p-Isopropyltoluene	ND		0.50		ug/L			06/03/23 21:00	1
sec-Butylbenzene	ND		0.50		ug/L			06/03/23 21:00	1
Styrene	ND		0.50		ug/L			06/03/23 21:00	1
trans-1,2-Dichloroethene	ND		0.50		ug/L			06/03/23 21:00	1
trans-1,3-Dichloropropene	ND		0.50		ug/L			06/03/23 21:00	1
tert-Butylbenzene	ND		0.50		ug/L			06/03/23 21:00	1
Tetrachloroethene	ND		0.50		ug/L			06/03/23 21:00	1
Toluene	ND		0.50		ug/L			06/03/23 21:00	1
Trichloroethene	ND		0.50		ug/L			06/03/23 21:00	1
Trichlorofluoromethane	ND		0.50		ug/L			06/03/23 21:00	1
Vinyl acetate	ND		5.0		ug/L			06/03/23 21:00	1
Vinyl chloride	ND		0.50		ug/L			06/03/23 21:00	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	109		64 - 132		06/03/23 21:00	1
4-Bromofluorobenzene (Surr)	102		76 - 120		06/03/23 21:00	1
Dibromofluoromethane	103		80 - 120		06/03/23 21:00	1
Toluene-d8 (Surr)	99		80 - 120		06/03/23 21:00	1

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Client Sample Results

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

Job ID: 570-140214-1

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

Client Sample ID: MW-29
Date Collected: 06/01/23 12:10
Date Received: 06/01/23 14:24

Lab Sample ID: 570-140214-8
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		0.50		ug/L			06/03/23 21:25	1
1,1,1-Trichloroethane	ND		0.50		ug/L			06/03/23 21:25	1
1,1,2,2-Tetrachloroethane	ND		0.50		ug/L			06/03/23 21:25	1
1,1,2-Trichloro-1,2,2-trifluoroethane	0.54		0.50		ug/L			06/03/23 21:25	1
1,1,2-Trichloroethane	ND		0.50		ug/L			06/03/23 21:25	1
1,1-Dichloroethane	0.98		0.50		ug/L			06/03/23 21:25	1
1,1-Dichloroethene	85		0.50		ug/L			06/03/23 21:25	1
1,1-Dichloropropene	ND		0.50		ug/L			06/03/23 21:25	1
1,2,3-Trichlorobenzene	ND		0.50		ug/L			06/03/23 21:25	1
1,2,3-Trichloropropane	ND		0.50		ug/L			06/03/23 21:25	1
1,2,4-Trichlorobenzene	ND		0.50		ug/L			06/03/23 21:25	1
1,2,4-Trimethylbenzene	ND		0.50		ug/L			06/03/23 21:25	1
1,2-Dibromo-3-Chloropropane	ND		1.0		ug/L			06/03/23 21:25	1
1,2-Dibromoethane	ND		0.50		ug/L			06/03/23 21:25	1
1,2-Dichlorobenzene	ND		0.50		ug/L			06/03/23 21:25	1
1,2-Dichloroethane	ND		0.50		ug/L			06/03/23 21:25	1
1,2-Dichloropropane	ND		0.50		ug/L			06/03/23 21:25	1
1,3,5-Trimethylbenzene	ND		0.50		ug/L			06/03/23 21:25	1
1,3-Dichlorobenzene	ND		0.50		ug/L			06/03/23 21:25	1
1,3-Dichloropropane	ND		0.50		ug/L			06/03/23 21:25	1
1,4-Dichlorobenzene	ND		0.50		ug/L			06/03/23 21:25	1
2,2-Dichloropropane	ND		0.50		ug/L			06/03/23 21:25	1
2-Butanone	ND		5.0		ug/L			06/03/23 21:25	1
2-Chlorotoluene	ND		0.50		ug/L			06/03/23 21:25	1
2-Hexanone	ND		6.0		ug/L			06/03/23 21:25	1
4-Chlorotoluene	ND		0.50		ug/L			06/03/23 21:25	1
4-Methyl-2-pentanone	ND		5.0		ug/L			06/03/23 21:25	1
Acetone	ND		8.0		ug/L			06/03/23 21:25	1
Benzene	ND		0.50		ug/L			06/03/23 21:25	1
Bromobenzene	ND		0.50		ug/L			06/03/23 21:25	1
Bromochloromethane	ND		1.0		ug/L			06/03/23 21:25	1
Bromodichloromethane	ND		0.50		ug/L			06/03/23 21:25	1
Bromoform	ND		0.50		ug/L			06/03/23 21:25	1
Bromomethane	ND		2.0		ug/L			06/03/23 21:25	1
cis-1,2-Dichloroethene	ND		0.50		ug/L			06/03/23 21:25	1
cis-1,3-Dichloropropene	ND		0.50		ug/L			06/03/23 21:25	1
Carbon disulfide	ND		1.0		ug/L			06/03/23 21:25	1
Carbon tetrachloride	ND		0.50		ug/L			06/03/23 21:25	1
Chlorobenzene	ND		0.50		ug/L			06/03/23 21:25	1
Chloroethane	ND		0.50		ug/L			06/03/23 21:25	1
Chloroform	ND		0.50		ug/L			06/03/23 21:25	1
Chloromethane	ND		1.0		ug/L			06/03/23 21:25	1
Dibromochloromethane	ND		0.50		ug/L			06/03/23 21:25	1
Dibromomethane	ND		0.50		ug/L			06/03/23 21:25	1
Dichlorodifluoromethane	ND		1.0		ug/L			06/03/23 21:25	1
Ethylbenzene	ND		0.50		ug/L			06/03/23 21:25	1
Isopropylbenzene	ND		0.50		ug/L			06/03/23 21:25	1
Methylene Chloride	ND		1.0		ug/L			06/03/23 21:25	1
Methyl-t-Butyl Ether (MTBE)	ND		0.50		ug/L			06/03/23 21:25	1

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Client Sample Results

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

Job ID: 570-140214-1

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

Client Sample ID: MW-29

Date Collected: 06/01/23 12:10

Date Received: 06/01/23 14:24

Lab Sample ID: 570-140214-8

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	ND		1.0		ug/L			06/03/23 21:25	1
n-Butylbenzene	ND		0.50		ug/L			06/03/23 21:25	1
N-Propylbenzene	ND		0.50		ug/L			06/03/23 21:25	1
o-Xylene	ND		0.50		ug/L			06/03/23 21:25	1
m,p-Xylene	ND		1.0		ug/L			06/03/23 21:25	1
p-Isopropyltoluene	ND		0.50		ug/L			06/03/23 21:25	1
sec-Butylbenzene	ND		0.50		ug/L			06/03/23 21:25	1
Styrene	ND		0.50		ug/L			06/03/23 21:25	1
trans-1,2-Dichloroethene	ND		0.50		ug/L			06/03/23 21:25	1
trans-1,3-Dichloropropene	ND		0.50		ug/L			06/03/23 21:25	1
tert-Butylbenzene	ND		0.50		ug/L			06/03/23 21:25	1
Tetrachloroethene	ND		0.50		ug/L			06/03/23 21:25	1
Toluene	ND		0.50		ug/L			06/03/23 21:25	1
Trichloroethene	1.2		0.50		ug/L			06/03/23 21:25	1
Trichlorofluoromethane	ND		0.50		ug/L			06/03/23 21:25	1
Vinyl acetate	ND		5.0		ug/L			06/03/23 21:25	1
Vinyl chloride	ND		0.50		ug/L			06/03/23 21:25	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	105		64 - 132		06/03/23 21:25	1
4-Bromofluorobenzene (Surr)	102		76 - 120		06/03/23 21:25	1
Dibromofluoromethane	100		80 - 120		06/03/23 21:25	1
Toluene-d8 (Surr)	98		80 - 120		06/03/23 21:25	1

Client Sample Results

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

Job ID: 570-140214-1

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 14:24

Lab Sample ID: 570-140214-2

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 10:06	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,4-Dioxane-d8	40		21 - 120				06/05/23 08:14	06/07/23 10:06	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Nitrobenzene-d5	92		58 - 135				06/05/23 08:14	06/07/23 10:06	1

Client Sample ID: CBT

Date Collected: 06/01/23 10:35

Date Received: 06/01/23 14:24

Lab Sample ID: 570-140214-3

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 10:20	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,4-Dioxane-d8	37		21 - 120				06/05/23 08:14	06/07/23 10:20	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Nitrobenzene-d5	102		58 - 135				06/05/23 08:14	06/07/23 10:20	1

Client Sample ID: POX

Date Collected: 06/01/23 10:45

Date Received: 06/01/23 14:24

Lab Sample ID: 570-140214-4

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 10:35	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,4-Dioxane-d8	38		21 - 120				06/05/23 08:14	06/07/23 10:35	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Nitrobenzene-d5	97		58 - 135				06/05/23 08:14	06/07/23 10:35	1

Client Sample Results

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

Job ID: 570-140214-1

Method: EPA 300.0 - Anions, Ion Chromatography

Client Sample ID: INF					Lab Sample ID: 570-140214-6				
Date Collected: 06/01/23 11:00					Matrix: Water				
Date Received: 06/01/23 14:24									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromide	0.21		0.10		mg/L			06/05/23 14:34	1

Client Sample Results

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

Job ID: 570-140214-1

Method: EPA 300.0 - Anions, Ion Chromatography - DL

Client Sample ID: EW-02
Date Collected: 06/01/23 11:30
Date Received: 06/01/23 14:24

Lab Sample ID: 570-140214-7
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromide	ND		0.50		mg/L			06/06/23 19:04	5

Client Sample ID: MW-29
Date Collected: 06/01/23 12:10
Date Received: 06/01/23 14:24

Lab Sample ID: 570-140214-8
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromide	ND		0.50		mg/L			06/06/23 19:21	5

Client Sample Results

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

Job ID: 570-140214-1

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

Client Sample ID: POX
Date Collected: 06/01/23 10:45
Date Received: 06/01/23 14:24

Lab Sample ID: 570-140214-4
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromate	ND		50		ug/L			06/02/23 08:44	10
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Dichloroacetate (Surr)	104		90 - 115					06/02/23 08:44	10

Client Sample ID: INF
Date Collected: 06/01/23 11:00
Date Received: 06/01/23 14:24

Lab Sample ID: 570-140214-6
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromate	ND		50		ug/L			06/02/23 09:18	10
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Dichloroacetate (Surr)	108		90 - 115					06/02/23 09:18	10

Client Sample Results

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

Job ID: 570-140214-1

General Chemistry

Client Sample ID: POX
Date Collected: 06/01/23 10:45
Date Received: 06/01/23 14:24

Lab Sample ID: 570-140214-4
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity, Total (As CaCO3) (SM 2320B)	202		5.00		mg/L			06/09/23 15:05	1
Bicarbonate (as CaCO3) (SM 2320B)	202		5.00		mg/L			06/09/23 15:05	1
Carbonate (as CaCO3) (SM 2320B)	ND		5.00		mg/L			06/09/23 15:05	1
Hydroxide (as CaCO3) (SM 2320B)	ND		5.00		mg/L			06/09/23 15:05	1
Carbon, Total Organic (SM 5310D)	ND		0.500		mg/L			06/05/23 20:05	1

Client Sample ID: PF
Date Collected: 06/01/23 10:55
Date Received: 06/01/23 14:24

Lab Sample ID: 570-140214-5
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity, Total (As CaCO3) (SM 2320B)	201		5.00		mg/L			06/09/23 15:11	1
Bicarbonate (as CaCO3) (SM 2320B)	201		5.00		mg/L			06/09/23 15:11	1
Carbonate (as CaCO3) (SM 2320B)	ND		5.00		mg/L			06/09/23 15:11	1
Hydroxide (as CaCO3) (SM 2320B)	ND		5.00		mg/L			06/09/23 15:11	1
Total Suspended Solids (SM 2540D)	ND		1.00		mg/L			06/02/23 14:00	1
Carbon, Total Organic (SM 5310D)	ND		0.500		mg/L			06/05/23 20:25	1

Surrogate Summary

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

Job ID: 570-140214-1

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)
570-140214-1	TB-060123	104	101	99	98
570-140214-2	CEFF	105	102	100	97
570-140214-3	CBT	104	103	102	99
570-140214-4	POX	107	102	102	97
570-140214-6	INF	106	102	102	99
570-140214-7	EW-02	109	102	103	99
570-140214-8	MW-29	105	102	100	98
LCS 570-334306/4	Lab Control Sample	100	105	95	99
LCSD 570-334306/5	Lab Control Sample Dup	99	107	97	97
MB 570-334306/7	Method Blank	104	103	100	98

Surrogate Legend

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

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)
570-140210-A-6 MS	Matrix Spike	126
570-140210-A-6 MSD	Matrix Spike Duplicate	132
570-140214-6	INF	128
570-140214-7	EW-02	131
570-140214-8	MW-29	118
LCS 570-334952/4	Lab Control Sample	112
LCSD 570-334952/5	Lab Control Sample Dup	112
MB 570-334952/7	Method Blank	121

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

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	NBZ (58-135)
570-140214-2	CEFF	92
570-140214-3	CBT	102
570-140214-4	POX	97
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

Surrogate Summary

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

Job ID: 570-140214-1

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)
570-140214-4	POX	104
570-140214-4 MS	POX	108
570-140214-4 MSD	POX	107
570-140214-6	INF	108
LCS 570-333902/4	Lab Control Sample	110
LCSD 570-333902/5	Lab Control Sample Dup	109
MB 570-333902/6	Method Blank	109
MRL 570-333902/3	Lab Control Sample	110

Surrogate Legend

DCAA = Dichloroacetate (Surr)

Isotope Dilution Summary

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

Job ID: 570-140214-1

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)
570-140214-2	CEFF	40
570-140214-3	CBT	37
570-140214-4	POX	38
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.
Project/Site: Raytheon / 532.15

Job ID: 570-140214-1

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

Lab Sample ID: MB 570-334306/7

Matrix: Water

Analysis Batch: 334306

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			06/03/23 13:33	1
1,1,1-Trichloroethane	ND		0.50		ug/L			06/03/23 13:33	1
1,1,2,2-Tetrachloroethane	ND		0.50		ug/L			06/03/23 13:33	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.50		ug/L			06/03/23 13:33	1
1,1,2-Trichloroethane	ND		0.50		ug/L			06/03/23 13:33	1
1,1-Dichloroethane	ND		0.50		ug/L			06/03/23 13:33	1
1,1-Dichloroethene	ND		0.50		ug/L			06/03/23 13:33	1
1,1-Dichloropropene	ND		0.50		ug/L			06/03/23 13:33	1
1,2,3-Trichlorobenzene	ND		0.50		ug/L			06/03/23 13:33	1
1,2,3-Trichloropropane	ND		0.50		ug/L			06/03/23 13:33	1
1,2,4-Trichlorobenzene	ND		0.50		ug/L			06/03/23 13:33	1
1,2,4-Trimethylbenzene	ND		0.50		ug/L			06/03/23 13:33	1
1,2-Dibromo-3-Chloropropane	ND		1.0		ug/L			06/03/23 13:33	1
1,2-Dibromoethane	ND		0.50		ug/L			06/03/23 13:33	1
1,2-Dichlorobenzene	ND		0.50		ug/L			06/03/23 13:33	1
1,2-Dichloroethane	ND		0.50		ug/L			06/03/23 13:33	1
1,2-Dichloropropane	ND		0.50		ug/L			06/03/23 13:33	1
1,3,5-Trimethylbenzene	ND		0.50		ug/L			06/03/23 13:33	1
1,3-Dichlorobenzene	ND		0.50		ug/L			06/03/23 13:33	1
1,3-Dichloropropane	ND		0.50		ug/L			06/03/23 13:33	1
1,4-Dichlorobenzene	ND		0.50		ug/L			06/03/23 13:33	1
2,2-Dichloropropane	ND		0.50		ug/L			06/03/23 13:33	1
2-Butanone	ND		5.0		ug/L			06/03/23 13:33	1
2-Chlorotoluene	ND		0.50		ug/L			06/03/23 13:33	1
2-Hexanone	ND		6.0		ug/L			06/03/23 13:33	1
4-Chlorotoluene	ND		0.50		ug/L			06/03/23 13:33	1
4-Methyl-2-pentanone	ND		5.0		ug/L			06/03/23 13:33	1
Acetone	ND		8.0		ug/L			06/03/23 13:33	1
Benzene	ND		0.50		ug/L			06/03/23 13:33	1
Bromobenzene	ND		0.50		ug/L			06/03/23 13:33	1
Bromochloromethane	ND		1.0		ug/L			06/03/23 13:33	1
Bromodichloromethane	ND		0.50		ug/L			06/03/23 13:33	1
Bromoform	ND		0.50		ug/L			06/03/23 13:33	1
Bromomethane	ND		2.0		ug/L			06/03/23 13:33	1
cis-1,2-Dichloroethene	ND		0.50		ug/L			06/03/23 13:33	1
cis-1,3-Dichloropropene	ND		0.50		ug/L			06/03/23 13:33	1
Carbon disulfide	ND		1.0		ug/L			06/03/23 13:33	1
Carbon tetrachloride	ND		0.50		ug/L			06/03/23 13:33	1
Chlorobenzene	ND		0.50		ug/L			06/03/23 13:33	1
Chloroethane	ND		0.50		ug/L			06/03/23 13:33	1
Chloroform	ND		0.50		ug/L			06/03/23 13:33	1
Chloromethane	ND		1.0		ug/L			06/03/23 13:33	1
Dibromochloromethane	ND		0.50		ug/L			06/03/23 13:33	1
Dibromomethane	ND		0.50		ug/L			06/03/23 13:33	1
Dichlorodifluoromethane	ND		1.0		ug/L			06/03/23 13:33	1
Ethylbenzene	ND		0.50		ug/L			06/03/23 13:33	1
Isopropylbenzene	ND		0.50		ug/L			06/03/23 13:33	1
Methylene Chloride	ND		1.0		ug/L			06/03/23 13:33	1

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QC Sample Results

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

Job ID: 570-140214-1

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

Lab Sample ID: MB 570-334306/7

Matrix: Water

Analysis Batch: 334306

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			06/03/23 13:33	1
Naphthalene	ND		1.0		ug/L			06/03/23 13:33	1
n-Butylbenzene	ND		0.50		ug/L			06/03/23 13:33	1
N-Propylbenzene	ND		0.50		ug/L			06/03/23 13:33	1
o-Xylene	ND		0.50		ug/L			06/03/23 13:33	1
m,p-Xylene	ND		1.0		ug/L			06/03/23 13:33	1
p-Isopropyltoluene	ND		0.50		ug/L			06/03/23 13:33	1
sec-Butylbenzene	ND		0.50		ug/L			06/03/23 13:33	1
Styrene	ND		0.50		ug/L			06/03/23 13:33	1
trans-1,2-Dichloroethene	ND		0.50		ug/L			06/03/23 13:33	1
trans-1,3-Dichloropropene	ND		0.50		ug/L			06/03/23 13:33	1
tert-Butylbenzene	ND		0.50		ug/L			06/03/23 13:33	1
Tetrachloroethene	ND		0.50		ug/L			06/03/23 13:33	1
Toluene	ND		0.50		ug/L			06/03/23 13:33	1
Trichloroethene	ND		0.50		ug/L			06/03/23 13:33	1
Trichlorofluoromethane	ND		0.50		ug/L			06/03/23 13:33	1
Vinyl acetate	ND		5.0		ug/L			06/03/23 13:33	1
Vinyl chloride	ND		0.50		ug/L			06/03/23 13:33	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	104		64 - 132		06/03/23 13:33	1
4-Bromofluorobenzene (Surr)	103		76 - 120		06/03/23 13:33	1
Dibromofluoromethane	100		80 - 120		06/03/23 13:33	1
Toluene-d8 (Surr)	98		80 - 120		06/03/23 13:33	1

Lab Sample ID: LCS 570-334306/4

Matrix: Water

Analysis Batch: 334306

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	10.87		ug/L		109	80 - 125
1,1,1-Trichloroethane	10.0	10.03		ug/L		100	75 - 121
1,1,2,2-Tetrachloroethane	10.0	11.50		ug/L		115	80 - 120
1,1,2-Trichloro-1,2,2-trifluoroethane	10.0	8.168		ug/L		82	56 - 132
1,1,2-Trichloroethane	10.0	10.33		ug/L		103	80 - 121
1,1-Dichloroethane	10.0	10.78		ug/L		108	80 - 120
1,1-Dichloroethene	10.0	9.478		ug/L		95	80 - 126
1,1-Dichloropropene	10.0	10.02		ug/L		100	72 - 122
1,2,3-Trichlorobenzene	10.0	10.66		ug/L		107	80 - 125
1,2,3-Trichloropropane	10.0	10.64		ug/L		106	75 - 127
1,2,4-Trichlorobenzene	10.0	11.73		ug/L		117	80 - 124
1,2,4-Trimethylbenzene	10.0	10.86		ug/L		109	80 - 128
1,2-Dibromo-3-Chloropropane	10.0	10.70		ug/L		107	63 - 123
1,2-Dibromoethane	10.0	10.44		ug/L		104	80 - 125
1,2-Dichlorobenzene	10.0	10.47		ug/L		105	80 - 120
1,2-Dichloroethane	10.0	10.97		ug/L		110	76 - 130
1,2-Dichloropropane	10.0	11.07		ug/L		111	74 - 124
1,3,5-Trimethylbenzene	10.0	9.868		ug/L		99	80 - 122

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QC Sample Results

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

Job ID: 570-140214-1

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

Lab Sample ID: LCS 570-334306/4

Matrix: Water

Analysis Batch: 334306

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	10.47		ug/L		105	80 - 120
1,3-Dichloropropane	10.0	10.92		ug/L		109	80 - 121
1,4-Dichlorobenzene	10.0	10.33		ug/L		103	80 - 120
2,2-Dichloropropane	10.0	10.86		ug/L		109	79 - 131
2-Butanone	10.0	11.58		ug/L		116	48 - 145
2-Chlorotoluene	10.0	10.69		ug/L		107	80 - 120
2-Hexanone	10.0	12.48		ug/L		125	50 - 149
4-Chlorotoluene	10.0	10.64		ug/L		106	80 - 120
4-Methyl-2-pentanone	10.0	11.18		ug/L		112	63 - 120
Acetone	10.0	11.42		ug/L		114	45 - 139
Benzene	10.0	10.11		ug/L		101	80 - 120
Bromobenzene	10.0	10.43		ug/L		104	80 - 125
Bromochloromethane	10.0	10.03		ug/L		100	80 - 120
Bromodichloromethane	10.0	10.54		ug/L		105	73 - 131
Bromoform	10.0	11.43		ug/L		114	76 - 124
Bromomethane	10.0	7.876		ug/L		79	26 - 180
cis-1,2-Dichloroethene	10.0	10.27		ug/L		103	80 - 120
cis-1,3-Dichloropropene	10.0	10.17		ug/L		102	76 - 123
Carbon disulfide	10.0	9.983		ug/L		100	75 - 123
Carbon tetrachloride	10.0	10.29		ug/L		103	61 - 139
Chlorobenzene	10.0	10.39		ug/L		104	80 - 120
Chloroethane	10.0	10.49		ug/L		105	54 - 150
Chloroform	10.0	9.613		ug/L		96	80 - 120
Chloromethane	10.0	11.49		ug/L		115	28 - 151
Dibromochloromethane	10.0	10.85		ug/L		109	74 - 136
Dibromomethane	10.0	10.16		ug/L		102	80 - 122
Dichlorodifluoromethane	10.0	8.705		ug/L		87	27 - 154
Ethylbenzene	10.0	10.47		ug/L		105	80 - 126
Isopropylbenzene	10.0	10.69		ug/L		107	80 - 120
Methylene Chloride	10.0	10.13		ug/L		101	80 - 120
Methyl-t-Butyl Ether (MTBE)	10.0	10.55		ug/L		106	69 - 128
Naphthalene	10.0	10.46		ug/L		105	70 - 130
n-Butylbenzene	10.0	10.09		ug/L		101	78 - 127
N-Propylbenzene	10.0	10.96		ug/L		110	80 - 121
o-Xylene	10.0	10.36		ug/L		104	80 - 124
m,p-Xylene	20.0	21.58		ug/L		108	80 - 123
p-Isopropyltoluene	10.0	10.87		ug/L		109	80 - 128
sec-Butylbenzene	10.0	10.93		ug/L		109	80 - 125
Styrene	10.0	9.753		ug/L		98	80 - 121
trans-1,2-Dichloroethene	10.0	10.25		ug/L		103	79 - 120
trans-1,3-Dichloropropene	10.0	11.32		ug/L		113	80 - 126
tert-Butylbenzene	10.0	10.74		ug/L		107	80 - 121
Tetrachloroethene	10.0	11.11		ug/L		111	80 - 125
Toluene	10.0	10.09		ug/L		101	80 - 120
Trichloroethene	10.0	10.13		ug/L		101	77 - 124
Trichlorofluoromethane	10.0	6.829		ug/L		68	41 - 163
Vinyl acetate	10.0	11.09		ug/L		111	61 - 126
Vinyl chloride	10.0	9.130		ug/L		91	50 - 160

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QC Sample Results

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

Job ID: 570-140214-1

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

Lab Sample ID: LCS 570-334306/4

Matrix: Water

Analysis Batch: 334306

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

	LCS	LCS	
Surrogate	%Recovery	Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	100		64 - 132
4-Bromofluorobenzene (Surr)	105		76 - 120
Dibromofluoromethane	95		80 - 120
Toluene-d8 (Surr)	99		80 - 120

Lab Sample ID: LCSD 570-334306/5

Matrix: Water

Analysis Batch: 334306

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	11.18		ug/L		112	80 - 125	3	20
1,1,1-Trichloroethane	10.0	10.52		ug/L		105	75 - 121	5	20
1,1,2,2-Tetrachloroethane	10.0	11.03		ug/L		110	80 - 120	4	20
1,1,2-Trichloro-1,2,2-trifluoroethane	10.0	8.505		ug/L		85	56 - 132	4	22
1,1,2-Trichloroethane	10.0	10.76		ug/L		108	80 - 121	4	20
1,1-Dichloroethane	10.0	11.25		ug/L		112	80 - 120	4	20
1,1-Dichloroethene	10.0	9.988		ug/L		100	80 - 126	5	21
1,1-Dichloropropene	10.0	10.58		ug/L		106	72 - 122	5	20
1,2,3-Trichlorobenzene	10.0	10.83		ug/L		108	80 - 125	2	20
1,2,3-Trichloropropane	10.0	10.95		ug/L		109	75 - 127	3	20
1,2,4-Trichlorobenzene	10.0	12.13		ug/L		121	80 - 124	3	20
1,2,4-Trimethylbenzene	10.0	11.02		ug/L		110	80 - 128	1	20
1,2-Dibromo-3-Chloropropane	10.0	9.800		ug/L		98	63 - 123	9	20
1,2-Dibromoethane	10.0	10.74		ug/L		107	80 - 125	3	20
1,2-Dichlorobenzene	10.0	10.54		ug/L		105	80 - 120	1	20
1,2-Dichloroethane	10.0	11.02		ug/L		110	76 - 130	0	20
1,2-Dichloropropane	10.0	11.23		ug/L		112	74 - 124	1	20
1,3,5-Trimethylbenzene	10.0	10.45		ug/L		104	80 - 122	6	20
1,3-Dichlorobenzene	10.0	10.66		ug/L		107	80 - 120	2	20
1,3-Dichloropropane	10.0	11.23		ug/L		112	80 - 121	3	20
1,4-Dichlorobenzene	10.0	10.47		ug/L		105	80 - 120	1	20
2,2-Dichloropropane	10.0	11.28		ug/L		113	79 - 131	4	20
2-Butanone	10.0	12.12		ug/L		121	48 - 145	5	30
2-Chlorotoluene	10.0	11.16		ug/L		112	80 - 120	4	20
2-Hexanone	10.0	11.98		ug/L		120	50 - 149	4	29
4-Chlorotoluene	10.0	10.99		ug/L		110	80 - 120	3	20
4-Methyl-2-pentanone	10.0	11.01		ug/L		110	63 - 120	1	20
Acetone	10.0	10.27		ug/L		103	45 - 139	11	30
Benzene	10.0	10.63		ug/L		106	80 - 120	5	20
Bromobenzene	10.0	10.90		ug/L		109	80 - 125	4	20
Bromochloromethane	10.0	10.06		ug/L		101	80 - 120	0	20
Bromodichloromethane	10.0	10.69		ug/L		107	73 - 131	1	20
Bromoform	10.0	11.49		ug/L		115	76 - 124	1	20
Bromomethane	10.0	8.004		ug/L		80	26 - 180	2	20
cis-1,2-Dichloroethene	10.0	10.44		ug/L		104	80 - 120	2	20
cis-1,3-Dichloropropene	10.0	10.42		ug/L		104	76 - 123	2	20
Carbon disulfide	10.0	10.56		ug/L		106	75 - 123	6	20
Carbon tetrachloride	10.0	10.75		ug/L		108	61 - 139	4	20

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QC Sample Results

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

Job ID: 570-140214-1

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

Lab Sample ID: LCSD 570-334306/5

Matrix: Water

Analysis Batch: 334306

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	10.73		ug/L		107	80 - 120	3	20
Chloroethane	10.0	10.44		ug/L		104	54 - 150	0	25
Chloroform	10.0	9.839		ug/L		98	80 - 120	2	20
Chloromethane	10.0	12.06		ug/L		121	28 - 151	5	20
Dibromochloromethane	10.0	11.08		ug/L		111	74 - 136	2	20
Dibromomethane	10.0	10.44		ug/L		104	80 - 122	3	20
Dichlorodifluoromethane	10.0	9.401		ug/L		94	27 - 154	8	21
Ethylbenzene	10.0	11.08		ug/L		111	80 - 126	6	20
Isopropylbenzene	10.0	11.20		ug/L		112	80 - 120	5	20
Methylene Chloride	10.0	10.38		ug/L		104	80 - 120	2	20
Methyl-t-Butyl Ether (MTBE)	10.0	10.69		ug/L		107	69 - 128	1	20
Naphthalene	10.0	10.51		ug/L		105	70 - 130	1	20
n-Butylbenzene	10.0	10.41		ug/L		104	78 - 127	3	20
N-Propylbenzene	10.0	11.59		ug/L		116	80 - 121	6	20
o-Xylene	10.0	10.75		ug/L		108	80 - 124	4	20
m,p-Xylene	20.0	22.61		ug/L		113	80 - 123	5	20
p-Isopropyltoluene	10.0	11.47		ug/L		115	80 - 128	5	20
sec-Butylbenzene	10.0	11.70		ug/L		117	80 - 125	7	20
Styrene	10.0	10.12		ug/L		101	80 - 121	4	20
trans-1,2-Dichloroethene	10.0	10.68		ug/L		107	79 - 120	4	20
trans-1,3-Dichloropropene	10.0	11.53		ug/L		115	80 - 126	2	20
tert-Butylbenzene	10.0	11.10		ug/L		111	80 - 121	3	20
Tetrachloroethene	10.0	11.71		ug/L		117	80 - 125	5	20
Toluene	10.0	10.48		ug/L		105	80 - 120	4	20
Trichloroethene	10.0	10.52		ug/L		105	77 - 124	4	20
Trichlorofluoromethane	10.0	7.238		ug/L		72	41 - 163	6	21
Vinyl acetate	10.0	11.09		ug/L		111	61 - 126	0	24
Vinyl chloride	10.0	9.690		ug/L		97	50 - 160	6	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	99		64 - 132
4-Bromofluorobenzene (Surr)	107		76 - 120
Dibromofluoromethane	97		80 - 120
Toluene-d8 (Surr)	97		80 - 120

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

Lab Sample ID: MB 570-334952/7

Matrix: Water

Analysis Batch: 334952

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			06/06/23 21:24	1
Surrogate	MB %Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,4-Dichlorobutane (Surr)	121		67 - 133					06/06/23 21:24	1

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QC Sample Results

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

Job ID: 570-140214-1

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

Lab Sample ID: LCS 570-334952/4

Matrix: Water

Analysis Batch: 334952

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
1,4-Dioxane			20.0	17.63		ug/L		88	75 - 120		
Surrogate			LCS %Recovery	LCS Qualifier	Limits						
1,4-Dichlorobutane (Surr)			112		67 - 133						

Lab Sample ID: LCSD 570-334952/5

Matrix: Water

Analysis Batch: 334952

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analysis Data: 05-10-2022											
Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
1,4-Dioxane			20.0	17.38		ug/L	-	87	75 - 120	1	20
Surrogate	LCSD %Recovery	LCSD Qualifier	Limits								
1,4-Dichlorobutane (Surr)	112		67 - 133								

Lab Sample ID: 570-140210-A-6 MS

Matrix: Water

Analysis Batch: 334952

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		
1,4-Dioxane	66		500	491.9		ug/L		85	75 - 120		
Surrogate	MS %Recovery	MS Qualifier	Limits								
1,4-Dichlorobutane (Surr)	126		67 - 133								

Lab Sample ID: 570-140210-A-6 MSD

Matrix: Water

Analysis Batch: 334952

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
1,4-Dioxane	66		500	562.9		ug/L		99	75 - 120	13	20
Surrogate	MSD %Recovery	MSD Qualifier	Limits								
1,4-Dichlorobutane (Surr)	132		67 - 133								

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	%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

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QC Sample Results

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

Job ID: 570-140214-1

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

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
1,4-Dioxane	20.0	15.92		ug/L		80	63 - 144
Isotope Dilution	LCS %Recovery	LCS Qualifier	Limits				
1,4-Dioxane-d8	36		21 - 120				
Surrogate	LCS %Recovery	LCS Qualifier	Limits				
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

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
1,4-Dioxane	20.0	15.05		ug/L		75	63 - 144	6	20
Isotope Dilution	LCSD %Recovery	LCSD Qualifier	Limits						
1,4-Dioxane-d8	37		21 - 120						
Surrogate	LCSD %Recovery	LCSD Qualifier	Limits						
Nitrobenzene-d5	89		58 - 135						

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 570-334359/5
Matrix: Water
Analysis Batch: 334359

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			06/05/23 08:39	1

Lab Sample ID: LCS 570-334359/6
Matrix: Water
Analysis Batch: 334359

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	5.106		mg/L		102	90 - 110

QC Sample Results

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

Job ID: 570-140214-1

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCSD 570-334359/7

Matrix: Water

Analysis Batch: 334359

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	4.992		mg/L		100	90 - 110	2	15

Lab Sample ID: 570-140262-B-1 MS

Matrix: Water

Analysis Batch: 334359

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	RPD	RPD Limit
Bromide	ND		5.00	4.683		mg/L		94	80 - 120		

Lab Sample ID: 570-140262-B-1 MSD

Matrix: Water

Analysis Batch: 334359

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	4.753		mg/L		95	80 - 120	1	20

Lab Sample ID: MB 570-334702/5

Matrix: Water

Analysis Batch: 334702

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			06/06/23 11:24	1

Lab Sample ID: LCS 570-334702/6

Matrix: Water

Analysis Batch: 334702

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Bromide	5.00	4.874		mg/L		97	90 - 110		

Lab Sample ID: LCSD 570-334702/7

Matrix: Water

Analysis Batch: 334702

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	4.881		mg/L		98	90 - 110	0	15

Lab Sample ID: 570-140599-C-1 MS

Matrix: Water

Analysis Batch: 334702

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	RPD	RPD Limit
Bromide	ND		5.00	4.499		mg/L		90	80 - 120		

Lab Sample ID: 570-140599-C-1 MSD

Matrix: Water

Analysis Batch: 334702

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	4.515		mg/L		90	80 - 120	0	20

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QC Sample Results

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

Job ID: 570-140214-1

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

Lab Sample ID: MB 570-333902/6

Matrix: Water

Analysis Batch: 333902

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			06/02/23 04:47	1
Surrogate	MB %Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
Dichloroacetate (Surr)	109		90 - 115					06/02/23 04:47	1

Lab Sample ID: LCS 570-333902/4

Matrix: Water

Analysis Batch: 333902

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	26.64		ug/L		107	75 - 125	
Surrogate	LCS %Recovery	LCS Qualifier	Limits					
Dichloroacetate (Surr)	110		90 - 115					

Lab Sample ID: LCSD 570-333902/5

Matrix: Water

Analysis Batch: 333902

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	26.88		ug/L		108	75 - 125	1	20
Surrogate	LCSD %Recovery	LCSD Qualifier	Limits						
Dichloroacetate (Surr)	109		90 - 115						

Lab Sample ID: MRL 570-333902/3

Matrix: Water

Analysis Batch: 333902

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	5.087		ug/L		102	50 - 150	
Surrogate	MRL %Recovery	MRL Qualifier	Limits					
Dichloroacetate (Surr)	110		90 - 115					

Lab Sample ID: 570-140214-4 MS

Matrix: Water

Analysis Batch: 333902

Client Sample ID: POX

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Bromate	ND		50.0	ND		ug/L		97	75 - 125
Surrogate	MS %Recovery	MS Qualifier	Limits						
Dichloroacetate (Surr)	108		90 - 115						

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QC Sample Results

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

Job ID: 570-140214-1

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

Lab Sample ID: 570-140214-4 MSD

Matrix: Water

Analysis Batch: 333902

Client Sample ID: POX

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		50.0	ND		ug/L		91	75 - 125	7	20
Surrogate	MSD %Recovery	MSD Qualifier	Limits								
Dichloroacetate (Surr)	107		90 - 115								

Method: SM 2320B - Alkalinity

Lab Sample ID: MB 570-336067/33

Matrix: Water

Analysis Batch: 336067

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			06/09/23 14:37	1
Bicarbonate (as CaCO3)	ND		5.00		mg/L			06/09/23 14:37	1
Carbonate (as CaCO3)	ND		5.00		mg/L			06/09/23 14:37	1
Hydroxide (as CaCO3)	ND		5.00		mg/L			06/09/23 14:37	1

Lab Sample ID: MB 570-336067/5

Matrix: Water

Analysis Batch: 336067

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			06/09/23 11:37	1
Bicarbonate (as CaCO3)	ND		5.00		mg/L			06/09/23 11:37	1
Carbonate (as CaCO3)	ND		5.00		mg/L			06/09/23 11:37	1
Hydroxide (as CaCO3)	ND		5.00		mg/L			06/09/23 11:37	1

Lab Sample ID: LCS 570-336067/31

Matrix: Water

Analysis Batch: 336067

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	93.33		mg/L		88	78 - 110

Lab Sample ID: LCSD 570-336067/32

Matrix: Water

Analysis Batch: 336067

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	92.99		mg/L		88	78 - 110	0	10

Lab Sample ID: 570-140121-A-1 DU

Matrix: Water

Analysis Batch: 336067

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)	242		243.4		mg/L		0.5	25
Bicarbonate (as CaCO3)	242		243.4		mg/L		0.5	25
Carbonate (as CaCO3)	ND		ND		mg/L		NC	25

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QC Sample Results

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

Job ID: 570-140214-1

Method: SM 2320B - Alkalinity (Continued)

Lab Sample ID: 570-140121-A-1 DU

Matrix: Water

Analysis Batch: 336067

Client Sample ID: Duplicate

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
Hydroxide (as CaCO ₃)	ND		ND		mg/L		NC	25

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

Lab Sample ID: MB 570-334089/1

Matrix: Water

Analysis Batch: 334089

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			06/02/23 14:00	1

Lab Sample ID: LCS 570-334089/2

Matrix: Water

Analysis Batch: 334089

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	83.00		mg/L		83	77 - 116

Lab Sample ID: LCSD 570-334089/3

Matrix: Water

Analysis Batch: 334089

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	Limit
Total Suspended Solids	100	81.00		mg/L		81	77 - 116	2	10

Lab Sample ID: 570-140203-A-1 DU

Matrix: Water

Analysis Batch: 334089

Client Sample ID: Duplicate

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
Total Suspended Solids	11600		14700	F3	mg/L		24	10

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

Lab Sample ID: MB 570-334842/4

Matrix: Water

Analysis Batch: 334842

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			06/05/23 16:31	1

Lab Sample ID: LCS 570-334842/5

Matrix: Water

Analysis Batch: 334842

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	5.447		mg/L		108	85 - 115

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QC Sample Results

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

Job ID: 570-140214-1

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

Lab Sample ID: LCSD 570-334842/6

Matrix: Water

Analysis Batch: 334842

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	5.447		mg/L		108	85 - 115	0	20

Lab Sample ID: 570-140209-F-5 MS ^10

Matrix: Water

Analysis Batch: 334842

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	42.0		50.3	92.06		mg/L		100	31 - 145		

Lab Sample ID: 570-140209-F-5 MSD ^10

Matrix: Water

Analysis Batch: 334842

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	42.0		50.3	90.99		mg/L		97	31 - 145	1	20

QC Association Summary

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

Job ID: 570-140214-1

GC/MS VOA

Analysis Batch: 334306

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-140214-1	TB-060123	Total/NA	Water	8260B	
570-140214-2	CEFF	Total/NA	Water	8260B	
570-140214-3	CBT	Total/NA	Water	8260B	
570-140214-4	POX	Total/NA	Water	8260B	
570-140214-6	INF	Total/NA	Water	8260B	
570-140214-7	EW-02	Total/NA	Water	8260B	
570-140214-8	MW-29	Total/NA	Water	8260B	
MB 570-334306/7	Method Blank	Total/NA	Water	8260B	
LCS 570-334306/4	Lab Control Sample	Total/NA	Water	8260B	
LCSD 570-334306/5	Lab Control Sample Dup	Total/NA	Water	8260B	

Analysis Batch: 334952

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-140214-6	INF	Total/NA	Water	8260B SIM	
570-140214-7	EW-02	Total/NA	Water	8260B SIM	
570-140214-8	MW-29	Total/NA	Water	8260B SIM	
MB 570-334952/7	Method Blank	Total/NA	Water	8260B SIM	
LCS 570-334952/4	Lab Control Sample	Total/NA	Water	8260B SIM	
LCSD 570-334952/5	Lab Control Sample Dup	Total/NA	Water	8260B SIM	
570-140210-A-6 MS	Matrix Spike	Total/NA	Water	8260B SIM	
570-140210-A-6 MSD	Matrix Spike Duplicate	Total/NA	Water	8260B SIM	

GC/MS Semi VOA

Prep Batch: 334393

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-140214-2	CEFF	Total/NA	Water	3510C	
570-140214-3	CBT	Total/NA	Water	3510C	
570-140214-4	POX	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
570-140214-2	CEFF	Total/NA	Water	8270C SIM ID	334393
570-140214-3	CBT	Total/NA	Water	8270C SIM ID	334393
570-140214-4	POX	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

HPLC/IC

Analysis Batch: 333902

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-140214-4	POX	Total/NA	Water	300.1	
570-140214-6	INF	Total/NA	Water	300.1	
MB 570-333902/6	Method Blank	Total/NA	Water	300.1	
LCS 570-333902/4	Lab Control Sample	Total/NA	Water	300.1	
LCSD 570-333902/5	Lab Control Sample Dup	Total/NA	Water	300.1	
MRL 570-333902/3	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: 570-140214-1

HPLC/IC (Continued)

Analysis Batch: 333902 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-140214-4 MS	POX	Total/NA	Water	300.1	
570-140214-4 MSD	POX	Total/NA	Water	300.1	

Analysis Batch: 334359

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-140214-6	INF	Total/NA	Water	300.0	
MB 570-334359/5	Method Blank	Total/NA	Water	300.0	
LCS 570-334359/6	Lab Control Sample	Total/NA	Water	300.0	
LCSD 570-334359/7	Lab Control Sample Dup	Total/NA	Water	300.0	
570-140262-B-1 MS	Matrix Spike	Total/NA	Water	300.0	
570-140262-B-1 MSD	Matrix Spike Duplicate	Total/NA	Water	300.0	

Analysis Batch: 334702

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-140214-7 - DL	EW-02	Total/NA	Water	300.0	
570-140214-8 - DL	MW-29	Total/NA	Water	300.0	
MB 570-334702/5	Method Blank	Total/NA	Water	300.0	
LCS 570-334702/6	Lab Control Sample	Total/NA	Water	300.0	
LCSD 570-334702/7	Lab Control Sample Dup	Total/NA	Water	300.0	
570-140599-C-1 MS	Matrix Spike	Total/NA	Water	300.0	
570-140599-C-1 MSD	Matrix Spike Duplicate	Total/NA	Water	300.0	

General Chemistry

Analysis Batch: 334089

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-140214-5	PF	Total/NA	Water	SM 2540D	
MB 570-334089/1	Method Blank	Total/NA	Water	SM 2540D	
LCS 570-334089/2	Lab Control Sample	Total/NA	Water	SM 2540D	
LCSD 570-334089/3	Lab Control Sample Dup	Total/NA	Water	SM 2540D	
570-140203-A-1 DU	Duplicate	Total/NA	Water	SM 2540D	

Analysis Batch: 334842

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-140214-4	POX	Total/NA	Water	SM 5310D	
570-140214-5	PF	Total/NA	Water	SM 5310D	
MB 570-334842/4	Method Blank	Total/NA	Water	SM 5310D	
LCS 570-334842/5	Lab Control Sample	Total/NA	Water	SM 5310D	
LCSD 570-334842/6	Lab Control Sample Dup	Total/NA	Water	SM 5310D	
570-140209-F-5 MS ^10	Matrix Spike	Total/NA	Water	SM 5310D	
570-140209-F-5 MSD ^10	Matrix Spike Duplicate	Total/NA	Water	SM 5310D	

Analysis Batch: 336067

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-140214-4	POX	Total/NA	Water	SM 2320B	
570-140214-5	PF	Total/NA	Water	SM 2320B	
MB 570-336067/33	Method Blank	Total/NA	Water	SM 2320B	
MB 570-336067/5	Method Blank	Total/NA	Water	SM 2320B	
LCS 570-336067/31	Lab Control Sample	Total/NA	Water	SM 2320B	
LCSD 570-336067/32	Lab Control Sample Dup	Total/NA	Water	SM 2320B	
570-140121-A-1 DU	Duplicate	Total/NA	Water	SM 2320B	

Eurofins Calscience

Lab Chronicle

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

Job ID: 570-140214-1

Client Sample ID: TB-060123

Lab Sample ID: 570-140214-1

Date Collected: 06/01/23 08:00

Matrix: Water

Date Received: 06/01/23 14:24

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	334306	06/03/23 18:56	N1A	EET CAL 4
Instrument ID: GCMSUU										

Client Sample ID: CEFF

Lab Sample ID: 570-140214-2

Date Collected: 06/01/23 10:25

Matrix: Water

Date Received: 06/01/23 14:24

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	334306	06/03/23 19:20	N1A	EET CAL 4
Instrument ID: GCMSUU										
Total/NA	Prep	3510C			135.3 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 10:06	UFLE	EET CAL 4
Instrument ID: GCMSDDD										

Client Sample ID: CBT

Lab Sample ID: 570-140214-3

Date Collected: 06/01/23 10:35

Matrix: Water

Date Received: 06/01/23 14:24

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	334306	06/03/23 19:45	N1A	EET CAL 4
Instrument ID: GCMSUU										
Total/NA	Prep	3510C			134.1 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 10:20	UFLE	EET CAL 4
Instrument ID: GCMSDDD										

Client Sample ID: POX

Lab Sample ID: 570-140214-4

Date Collected: 06/01/23 10:45

Matrix: Water

Date Received: 06/01/23 14:24

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	334306	06/03/23 20:10	N1A	EET CAL 4
Instrument ID: GCMSUU										
Total/NA	Prep	3510C			134.9 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 10:35	UFLE	EET CAL 4
Instrument ID: GCMSDDD										
Total/NA	Analysis	300.1		10	4 mL	4 mL	333902	06/02/23 08:44	YO8L	EET CAL 4
Instrument ID: IC32										
Total/NA	Analysis	SM 2320B		1	10 mL	10 mL	336067	06/09/23 15:05	UAPD	EET CAL 4
Instrument ID: ManSciMantech										
Total/NA	Analysis	SM 5310D		1	40 mL	40 mL	334842	06/05/23 20:05	ZL4M	EET CAL 4
Instrument ID: TOC12										

Lab Chronicle

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

Job ID: 570-140214-1

Client Sample ID: PF

Lab Sample ID: 570-140214-5

Date Collected: 06/01/23 10:55

Matrix: Water

Date Received: 06/01/23 14:24

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	336067	06/09/23 15:11	UAPD	EET CAL 4
Total/NA	Analysis	SM 2540D Instrument ID: BAL71		1	1000 mL	1000 mL	334089	06/02/23 14:00	UAPD	EET CAL 4
Total/NA	Analysis	SM 5310D Instrument ID: TOC12		1	40 mL	40 mL	334842	06/05/23 20:25	ZL4M	EET CAL 4

Client Sample ID: INF

Lab Sample ID: 570-140214-6

Date Collected: 06/01/23 11:00

Matrix: Water

Date Received: 06/01/23 14:24

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	334306	06/03/23 20:35	N1A	EET CAL 4
Total/NA	Analysis	8260B SIM Instrument ID: GCMSFFF		1	25 mL	25 mL	334952	06/06/23 22:49	VYF4	EET CAL 4
Total/NA	Analysis	300.0 Instrument ID: IC7		1	4 mL	4 mL	334359	06/05/23 14:34	PS	EET CAL 4
Total/NA	Analysis	300.1 Instrument ID: IC32		10	4 mL	4 mL	333902	06/02/23 09:18	YO8L	EET CAL 4

Client Sample ID: EW-02

Lab Sample ID: 570-140214-7

Date Collected: 06/01/23 11:30

Matrix: Water

Date Received: 06/01/23 14:24

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	334306	06/03/23 21:00	N1A	EET CAL 4
Total/NA	Analysis	8260B SIM Instrument ID: GCMSFFF		1	25 mL	25 mL	334952	06/06/23 23:16	VYF4	EET CAL 4
Total/NA	Analysis	300.0 Instrument ID: IC10	DL	5	4 mL	4 mL	334702	06/06/23 19:04	PS	EET CAL 4

Client Sample ID: MW-29

Lab Sample ID: 570-140214-8

Date Collected: 06/01/23 12:10

Matrix: Water

Date Received: 06/01/23 14:24

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	334306	06/03/23 21:25	N1A	EET CAL 4
Total/NA	Analysis	8260B SIM Instrument ID: GCMSFFF		1	25 mL	25 mL	334952	06/06/23 23:44	VYF4	EET CAL 4
Total/NA	Analysis	300.0 Instrument ID: IC10	DL	5	4 mL	4 mL	334702	06/06/23 19:21	PS	EET CAL 4

Eurofins Calscience

Lab Chronicle

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

Job ID: 570-140214-1

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: 570-140214-1

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: 570-140214-1

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: 570-140214-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
570-140214-1	TB-060123	Water	06/01/23 08:00	06/01/23 14:24
570-140214-2	CEFF	Water	06/01/23 10:25	06/01/23 14:24
570-140214-3	CBT	Water	06/01/23 10:35	06/01/23 14:24
570-140214-4	POX	Water	06/01/23 10:45	06/01/23 14:24
570-140214-5	PF	Water	06/01/23 10:55	06/01/23 14:24
570-140214-6	INF	Water	06/01/23 11:00	06/01/23 14:24
570-140214-7	EW-02	Water	06/01/23 11:30	06/01/23 14:24
570-140214-8	MW-29	Water	06/01/23 12:10	06/01/23 14:24

140214


 Date: 6/1/2023
 Page 1 of 1

 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:				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)	Ethylenediamine	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	1,4-Dioxane by EPA 8270C 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-060123	6/1/2023	8:00		X	X				X	2						X																				
2	CEFF	6/1/2023	10:25	X		X				X	3						1	X								X	X										
3	CBT	6/1/2023	10:35	X		X				X	3						1	X								X	X										
4	POX	6/1/2023	10:45	X		X		X	X	X	6	1	1				1	X	X		X	X				X	X										
5	PF	6/1/2023	10:55	X					X	X	3		1	1	1					X	X	X	X														
6	INF	6/1/2023	11:00	X		X	X		X	X	6	1	1				X	X	X					X				X									
7	EW-02	6/1/2023	11:30	X		X			X	X	6		1				X	X						X			X										
8	MW-29	6/1/2023	12:10	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: <u>47</u>																				
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																															
<u>[Signature]</u> HHA		<u>6-1-23</u> <u>14:24</u>		<u>ML</u> EC		<u>6/1/23</u> <u>14:24</u>																															

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.

1.9/2.1 SCG

Temperature on receipt



570-140214 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: 570-140214-1

Login Number: 140214

List Number: 1

Creator: Patel, Jayesh

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 6/30/2023 7:43:11 AM

JOB DESCRIPTION

Raytheon / 532.15

JOB NUMBER

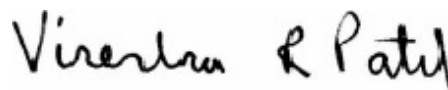
570-140214-2

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



Generated
6/30/2023 7:43:11 AM

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: 570-140214-2

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: 570-140214-2

Job ID: 570-140214-2

Laboratory: Eurofins Calscience

Narrative

Job Narrative
570-140214-2

Comments

No additional comments.

Receipt

The samples were received on 6/1/2023 2:24 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 2.1° 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: 570-140214-2

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: 570-140214-2

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
570-140214-5	PF	Water	06/01/23 10:55	06/01/23 14:24

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Work Orders: 3F02071

Project: 570-140214-1

Attn: Virendra Patel

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

Report Date: 6/25/2023

Received Date: 6/2/2023

Turnaround Time: Normal

Phones: (949) 261-1022

Fax: (949) 260-3297

P.O. #: 570-140214-1

Billing Code:

Dear Virendra Patel,

Enclosed are the results of analyses for samples received 6/02/23 with the Chain-of-Custody document. The samples were received in good condition, at 2.0 °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 (570-140214-5)		Sampled: 06/01/23 10:55 by Client						
3F02071-01 (Water)								
Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier	
Method: EPA 415.3			Instr: UVVIS04					
Batch ID: W3F0252		Preparation: _NONE (WETCHEM)			Prepared: 06/02/23 18:55		Analyst: ymt	
UV 254	ND		0.009	1/cm	1	06/02/23 19:28		

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: W3F0252 - _NONE (WETCHEM)										
Blank (W3F0252-BLK1)				Prepared & Analyzed: 06/02/23						
UV 254	ND	0.009	1/cm							
LCS (W3F0252-BS1)				Prepared & Analyzed: 06/02/23						
UV 254	0.088	0.009	1/cm	0.0880		100	90-110			
Duplicate (W3F0252-DUP1)				Prepared & Analyzed: 06/02/23						
	Source: 3F02071-01									
UV 254	0.004	0.009	1/cm		0.004			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.

Chain of Custody Record



3F0207

[illegible]

ICOC No:
570-231195

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



Sample Receipt Checklist

6/30/2023

WECK LABORATORIES, INC.

Weck WKO: **3F02071**

KO Logged by: Rey Edrosa

Samples Checked by: Rey Edrosa

Date/Time Received: 06/02/23 @ 13:18

of Samples: 01

Delivered by: Client

Task	Yes	No	N/A	Comments
COC present at receipt?	☒	☐		
COC properly completed?	☒	☐		
COC matches sample labels?	☒	☐		
Project Manager notified?	☐	☐	☒	
Sample Temperature	☒	☐		
Samples received on ice?	☒	☐		
Ice Type (Blue/Wet)				
All samples intact?	☒	☐		
Samples in proper containers?	☒	☐		
Sufficient sample volume?	☒	☐		
Received within holding time?	☒	☐		
Project Manager notified?	☐	☐	☒	
Sample labels checked for correct preservation?	☒	☐	☐	
VOC Headspace: (No) none, If Yes (See comment)	☐	☐	☒	☐ <6mm/Pea size?
524.2, 524.3, 624.1, 8260, 1666 P/T, LUFT				
pH verified upon receipt?	☐	☐	☒	
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)	☐	☐	☒	
O&G pH <2 verified?	☐	☐	☐	
pH adjusted for O&G	☐	☐	☐	
Project Manager notified?	☐	☐	☒	

Sample Receipt Checklist Prepared by:

Signature: Rey Edrosa

Date: 06/02/2023

PM Comments

140214


 Date: 6/1/2023
 Page 1 of 1

 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)	Ethylenediamine	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	VOGs 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	1,4-Dioxane by EPA 8270C 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-060123	6/1/2023	8:00		X	X				X	2						X									X												
2	CEFF	6/1/2023	10:25	X		X				X	3					1	X									X	X											
3	CBT	6/1/2023	10:35	X		X				X	3					1	X									X	X											
4	POX	6/1/2023	10:45	X		X		X	X	X	6	1	1			1	X	X		X	X					X	X											
5	PF	6/1/2023	10:55	X					X	X	3		1	1	1					X	X	X	X															
6	INF	6/1/2023	11:00	X		X	X		X	X	6	1	1			X	X	X						X				X										
7	EW-02	6/1/2023	11:30	X		X			X	X	6		1			X	X						X			X												
8	MW-29	6/1/2023	12:10	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: <u>47</u>										
Relinquished By: / Company:		Date / Time		Received By: / Company		Date / Time																																
<u>[Signature]</u> HHA		<u>6-1-23</u> <u>14:24</u>		<u>ML</u> EC		<u>6/1/23</u> <u>14:24</u>																																
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

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

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.

1.9/2.1 SCG

Temperature on receipt



570-140214 Chain of Custody

Login Sample Receipt Checklist

Client: Hargis + Associates, Inc.

Job Number: 570-140214-2

Login Number: 140214

List Source: Eurofins Calscience

List Number: 1

Creator: Patel, Jayesh

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 / 532.15

JOB NUMBER

570-145746-1

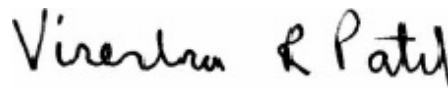
Eurofins Calscience

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
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Definitions/Glossary

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

Job ID: 570-145746-1

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

Glossary

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

Case Narrative

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

Job ID: 570-145746-1

Job ID: 570-145746-1

Laboratory: Eurofins Calscience

Narrative

Job Narrative 570-145746-1

Comments

No additional comments.

Receipt

The samples were received on 7/20/2023 1:38 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 2.9° 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 570-347570.

Method 8260B: The RPD of the laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) for analytical batch 570-347570 recovered outside control limits for the following analyte: Ethanol.

Method 8260B: The initial calibration verification (ICV) result for batch 570-347570 was above the upper control limit for Bromomethane. Sample results were non-detects, and have been reported as qualified data. (CCVIS 570-347570/3)

Method 8260B SIM: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with analytical batch 570-347660. 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 matrix spike / matrix spike duplicate (MS/MSD) recoveries for the following sample for the bromate analyte associated with analytical batch 570-348511 were outside control limits: (570-145746-G-4 MS) and (570-145746-G-4 MSD). The associated laboratory control sample (LCS) recovery 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

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 570-348152.
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: 570-145746-1

Client Sample ID: TB-072023

Lab Sample ID: 570-145746-1

No Detections.

Client Sample ID: CEFF

Lab Sample ID: 570-145746-2

No Detections.

Client Sample ID: CBT

Lab Sample ID: 570-145746-3

No Detections.

Client Sample ID: POX

Lab Sample ID: 570-145746-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Alkalinity, Total (As CaCO ₃)	198		5.00		mg/L	1		SM 2320B	Total/NA
Bicarbonate (as CaCO ₃)	198		5.00		mg/L	1		SM 2320B	Total/NA

Client Sample ID: PF

Lab Sample ID: 570-145746-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Alkalinity, Total (As CaCO ₃)	199		5.00		mg/L	1		SM 2320B	Total/NA
Bicarbonate (as CaCO ₃)	199		5.00		mg/L	1		SM 2320B	Total/NA

Client Sample ID: INF

Lab Sample ID: 570-145746-6

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	10		0.50		ug/L	1		8260B	Total/NA
Bromide	0.18		0.10		mg/L	1		300.0	Total/NA

Client Sample ID: EW-02

Lab Sample ID: 570-145746-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,4-Dioxane	4.5		1.0		ug/L	1		8260B SIM	Total/NA
1,1-Dichloroethene	10		0.50		ug/L	1		8260B	Total/NA
Bromide	0.19		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: 570-145746-1

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

Client Sample ID: INF
Date Collected: 07/20/23 09:15
Date Received: 07/20/23 13:38

Lab Sample ID: 570-145746-6
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	4.6		1.0		ug/L			07/21/23 20:28	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,4-Dichlorobutane (Surr)	95		67 - 133					07/21/23 20:28	1

Client Sample ID: EW-02
Date Collected: 07/20/23 09:45
Date Received: 07/20/23 13:38

Lab Sample ID: 570-145746-7
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	4.5		1.0		ug/L			07/21/23 20:58	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,4-Dichlorobutane (Surr)	98		67 - 133					07/21/23 20:58	1

Client Sample Results

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

Job ID: 570-145746-1

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

Client Sample ID: TB-072023
Date Collected: 07/20/23 08:00
Date Received: 07/20/23 13:38

Lab Sample ID: 570-145746-1
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		0.50		ug/L			07/21/23 08:56	1
1,1,1-Trichloroethane	ND		0.50		ug/L			07/21/23 08:56	1
1,1,2,2-Tetrachloroethane	ND		0.50		ug/L			07/21/23 08:56	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.50		ug/L			07/21/23 08:56	1
1,1,2-Trichloroethane	ND		0.50		ug/L			07/21/23 08:56	1
1,1-Dichloroethane	ND		0.50		ug/L			07/21/23 08:56	1
1,1-Dichloroethene	ND		0.50		ug/L			07/21/23 08:56	1
1,1-Dichloropropene	ND		0.50		ug/L			07/21/23 08:56	1
1,2,3-Trichlorobenzene	ND		0.50		ug/L			07/21/23 08:56	1
1,2,3-Trichloropropane	ND		0.50		ug/L			07/21/23 08:56	1
1,2,4-Trichlorobenzene	ND		0.50		ug/L			07/21/23 08:56	1
1,2,4-Trimethylbenzene	ND		0.50		ug/L			07/21/23 08:56	1
1,2-Dibromo-3-Chloropropane	ND		1.0		ug/L			07/21/23 08:56	1
1,2-Dibromoethane	ND		0.50		ug/L			07/21/23 08:56	1
1,2-Dichlorobenzene	ND		0.50		ug/L			07/21/23 08:56	1
1,2-Dichloroethane	ND		0.50		ug/L			07/21/23 08:56	1
1,2-Dichloropropane	ND		0.50		ug/L			07/21/23 08:56	1
1,3,5-Trimethylbenzene	ND		0.50		ug/L			07/21/23 08:56	1
1,3-Dichlorobenzene	ND		0.50		ug/L			07/21/23 08:56	1
1,3-Dichloropropane	ND		0.50		ug/L			07/21/23 08:56	1
1,4-Dichlorobenzene	ND		0.50		ug/L			07/21/23 08:56	1
2,2-Dichloropropane	ND		0.50		ug/L			07/21/23 08:56	1
2-Butanone	ND		5.0		ug/L			07/21/23 08:56	1
2-Chlorotoluene	ND		0.50		ug/L			07/21/23 08:56	1
2-Hexanone	ND		6.0		ug/L			07/21/23 08:56	1
4-Chlorotoluene	ND		0.50		ug/L			07/21/23 08:56	1
4-Methyl-2-pentanone	ND		5.0		ug/L			07/21/23 08:56	1
Acetone	ND		8.0		ug/L			07/21/23 08:56	1
Benzene	ND		0.50		ug/L			07/21/23 08:56	1
Bromobenzene	ND		0.50		ug/L			07/21/23 08:56	1
Bromochloromethane	ND		1.0		ug/L			07/21/23 08:56	1
Bromodichloromethane	ND		0.50		ug/L			07/21/23 08:56	1
Bromoform	ND		0.50		ug/L			07/21/23 08:56	1
Bromomethane	ND		2.0		ug/L			07/21/23 08:56	1
cis-1,2-Dichloroethene	ND		0.50		ug/L			07/21/23 08:56	1
cis-1,3-Dichloropropene	ND		0.50		ug/L			07/21/23 08:56	1
Carbon disulfide	ND		1.0		ug/L			07/21/23 08:56	1
Carbon tetrachloride	ND		0.50		ug/L			07/21/23 08:56	1
Chlorobenzene	ND		0.50		ug/L			07/21/23 08:56	1
Chloroethane	ND		0.50		ug/L			07/21/23 08:56	1
Chloroform	ND		0.50		ug/L			07/21/23 08:56	1
Chloromethane	ND		1.0		ug/L			07/21/23 08:56	1
Dibromochloromethane	ND		0.50		ug/L			07/21/23 08:56	1
Dibromomethane	ND		0.50		ug/L			07/21/23 08:56	1
Dichlorodifluoromethane	ND		1.0		ug/L			07/21/23 08:56	1
Di-isopropyl ether (DIPE)	ND		0.50		ug/L			07/21/23 08:56	1
Ethanol	ND	*1	50		ug/L			07/21/23 08:56	1
Ethylbenzene	ND		0.50		ug/L			07/21/23 08:56	1
Ethyl-t-butyl ether (ETBE)	ND		0.50		ug/L			07/21/23 08:56	1

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Client Sample Results

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

Job ID: 570-145746-1

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

Client Sample ID: TB-072023
Date Collected: 07/20/23 08:00
Date Received: 07/20/23 13:38

Lab Sample ID: 570-145746-1
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Isopropylbenzene	ND		0.50		ug/L			07/21/23 08:56	1
Methylene Chloride	ND		1.0		ug/L			07/21/23 08:56	1
Methyl-t-Butyl Ether (MTBE)	ND		0.50		ug/L			07/21/23 08:56	1
Naphthalene	ND		1.0		ug/L			07/21/23 08:56	1
n-Butylbenzene	ND		0.50		ug/L			07/21/23 08:56	1
N-Propylbenzene	ND		0.50		ug/L			07/21/23 08:56	1
o-Xylene	ND		0.50		ug/L			07/21/23 08:56	1
m,p-Xylene	ND		1.0		ug/L			07/21/23 08:56	1
p-Isopropyltoluene	ND		0.50		ug/L			07/21/23 08:56	1
sec-Butylbenzene	ND		0.50		ug/L			07/21/23 08:56	1
Styrene	ND		0.50		ug/L			07/21/23 08:56	1
trans-1,2-Dichloroethene	ND		0.50		ug/L			07/21/23 08:56	1
trans-1,3-Dichloropropene	ND		0.50		ug/L			07/21/23 08:56	1
Tert-amyl-methyl ether (TAME)	ND		0.50		ug/L			07/21/23 08:56	1
tert-Butyl alcohol (TBA)	ND		5.0		ug/L			07/21/23 08:56	1
tert-Butylbenzene	ND		0.50		ug/L			07/21/23 08:56	1
Tetrachloroethene	ND		0.50		ug/L			07/21/23 08:56	1
Toluene	ND		0.50		ug/L			07/21/23 08:56	1
Trichloroethene	ND		0.50		ug/L			07/21/23 08:56	1
Trichlorofluoromethane	ND		0.50		ug/L			07/21/23 08:56	1
Vinyl acetate	ND		5.0		ug/L			07/21/23 08:56	1
Vinyl chloride	ND		0.50		ug/L			07/21/23 08:56	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	91		64 - 132					07/21/23 08:56	1
4-Bromofluorobenzene (Surr)	101		76 - 120					07/21/23 08:56	1
Dibromofluoromethane (Surr)	96		80 - 120					07/21/23 08:56	1
Toluene-d8 (Surr)	95		80 - 120					07/21/23 08:56	1

Client Sample ID: CEFF
Date Collected: 07/20/23 08:45
Date Received: 07/20/23 13:38

Lab Sample ID: 570-145746-2
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		0.50		ug/L			07/21/23 11:54	1
1,1,1-Trichloroethane	ND		0.50		ug/L			07/21/23 11:54	1
1,1,2,2-Tetrachloroethane	ND		0.50		ug/L			07/21/23 11:54	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.50		ug/L			07/21/23 11:54	1
1,1,2-Trichloroethane	ND		0.50		ug/L			07/21/23 11:54	1
1,1-Dichloroethane	ND		0.50		ug/L			07/21/23 11:54	1
1,1-Dichloroethene	ND		0.50		ug/L			07/21/23 11:54	1
1,1-Dichloropropene	ND		0.50		ug/L			07/21/23 11:54	1
1,2,3-Trichlorobenzene	ND		0.50		ug/L			07/21/23 11:54	1
1,2,3-Trichloropropane	ND		0.50		ug/L			07/21/23 11:54	1
1,2,4-Trichlorobenzene	ND		0.50		ug/L			07/21/23 11:54	1
1,2,4-Trimethylbenzene	ND		0.50		ug/L			07/21/23 11:54	1
1,2-Dibromo-3-Chloropropane	ND		1.0		ug/L			07/21/23 11:54	1
1,2-Dibromoethane	ND		0.50		ug/L			07/21/23 11:54	1
1,2-Dichlorobenzene	ND		0.50		ug/L			07/21/23 11:54	1
1,2-Dichloroethane	ND		0.50		ug/L			07/21/23 11:54	1
1,2-Dichloropropane	ND		0.50		ug/L			07/21/23 11:54	1

Eurofins Calscience

Client Sample Results

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

Job ID: 570-145746-1

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

Client Sample ID: CEFF

Date Collected: 07/20/23 08:45

Date Received: 07/20/23 13:38

Lab Sample ID: 570-145746-2

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	ND		0.50		ug/L			07/21/23 11:54	1
1,3-Dichlorobenzene	ND		0.50		ug/L			07/21/23 11:54	1
1,3-Dichloropropane	ND		0.50		ug/L			07/21/23 11:54	1
1,4-Dichlorobenzene	ND		0.50		ug/L			07/21/23 11:54	1
2,2-Dichloropropane	ND		0.50		ug/L			07/21/23 11:54	1
2-Butanone	ND		5.0		ug/L			07/21/23 11:54	1
2-Chlorotoluene	ND		0.50		ug/L			07/21/23 11:54	1
2-Hexanone	ND		6.0		ug/L			07/21/23 11:54	1
4-Chlorotoluene	ND		0.50		ug/L			07/21/23 11:54	1
4-Methyl-2-pentanone	ND		5.0		ug/L			07/21/23 11:54	1
Acetone	ND		8.0		ug/L			07/21/23 11:54	1
Benzene	ND		0.50		ug/L			07/21/23 11:54	1
Bromobenzene	ND		0.50		ug/L			07/21/23 11:54	1
Bromochloromethane	ND		1.0		ug/L			07/21/23 11:54	1
Bromodichloromethane	ND		0.50		ug/L			07/21/23 11:54	1
Bromoform	ND		0.50		ug/L			07/21/23 11:54	1
Bromomethane	ND		2.0		ug/L			07/21/23 11:54	1
cis-1,2-Dichloroethene	ND		0.50		ug/L			07/21/23 11:54	1
cis-1,3-Dichloropropene	ND		0.50		ug/L			07/21/23 11:54	1
Carbon disulfide	ND		1.0		ug/L			07/21/23 11:54	1
Carbon tetrachloride	ND		0.50		ug/L			07/21/23 11:54	1
Chlorobenzene	ND		0.50		ug/L			07/21/23 11:54	1
Chloroethane	ND		0.50		ug/L			07/21/23 11:54	1
Chloroform	ND		0.50		ug/L			07/21/23 11:54	1
Chloromethane	ND		1.0		ug/L			07/21/23 11:54	1
Dibromochloromethane	ND		0.50		ug/L			07/21/23 11:54	1
Dibromomethane	ND		0.50		ug/L			07/21/23 11:54	1
Dichlorodifluoromethane	ND		1.0		ug/L			07/21/23 11:54	1
Di-isopropyl ether (DIPE)	ND		0.50		ug/L			07/21/23 11:54	1
Ethanol	ND	*1	50		ug/L			07/21/23 11:54	1
Ethylbenzene	ND		0.50		ug/L			07/21/23 11:54	1
Ethyl-t-butyl ether (ETBE)	ND		0.50		ug/L			07/21/23 11:54	1
Isopropylbenzene	ND		0.50		ug/L			07/21/23 11:54	1
Methylene Chloride	ND		1.0		ug/L			07/21/23 11:54	1
Methyl-t-Butyl Ether (MTBE)	ND		0.50		ug/L			07/21/23 11:54	1
Naphthalene	ND		1.0		ug/L			07/21/23 11:54	1
n-Butylbenzene	ND		0.50		ug/L			07/21/23 11:54	1
N-Propylbenzene	ND		0.50		ug/L			07/21/23 11:54	1
o-Xylene	ND		0.50		ug/L			07/21/23 11:54	1
m,p-Xylene	ND		1.0		ug/L			07/21/23 11:54	1
p-Isopropyltoluene	ND		0.50		ug/L			07/21/23 11:54	1
sec-Butylbenzene	ND		0.50		ug/L			07/21/23 11:54	1
Styrene	ND		0.50		ug/L			07/21/23 11:54	1
trans-1,2-Dichloroethene	ND		0.50		ug/L			07/21/23 11:54	1
trans-1,3-Dichloropropene	ND		0.50		ug/L			07/21/23 11:54	1
Tert-amyl-methyl ether (TAME)	ND		0.50		ug/L			07/21/23 11:54	1
tert-Butyl alcohol (TBA)	ND		5.0		ug/L			07/21/23 11:54	1
tert-Butylbenzene	ND		0.50		ug/L			07/21/23 11:54	1
Tetrachloroethene	ND		0.50		ug/L			07/21/23 11:54	1

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Client Sample Results

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

Job ID: 570-145746-1

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

Client Sample ID: CEFF

Date Collected: 07/20/23 08:45

Date Received: 07/20/23 13:38

Lab Sample ID: 570-145746-2

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Toluene	ND		0.50		ug/L			07/21/23 11:54	1
Trichloroethene	ND		0.50		ug/L			07/21/23 11:54	1
Trichlorofluoromethane	ND		0.50		ug/L			07/21/23 11:54	1
Vinyl acetate	ND		5.0		ug/L			07/21/23 11:54	1
Vinyl chloride	ND		0.50		ug/L			07/21/23 11:54	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	90		64 - 132		07/21/23 11:54	1
4-Bromofluorobenzene (Surr)	100		76 - 120		07/21/23 11:54	1
Dibromofluoromethane (Surr)	90		80 - 120		07/21/23 11:54	1
Toluene-d8 (Surr)	98		80 - 120		07/21/23 11:54	1

Client Sample ID: CBT

Date Collected: 07/20/23 08:50

Date Received: 07/20/23 13:38

Lab Sample ID: 570-145746-3

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		0.50		ug/L			07/21/23 12:19	1
1,1,1-Trichloroethane	ND		0.50		ug/L			07/21/23 12:19	1
1,1,2,2-Tetrachloroethane	ND		0.50		ug/L			07/21/23 12:19	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.50		ug/L			07/21/23 12:19	1
1,1,2-Trichloroethane	ND		0.50		ug/L			07/21/23 12:19	1
1,1-Dichloroethane	ND		0.50		ug/L			07/21/23 12:19	1
1,1-Dichloroethene	ND		0.50		ug/L			07/21/23 12:19	1
1,1-Dichloropropene	ND		0.50		ug/L			07/21/23 12:19	1
1,2,3-Trichlorobenzene	ND		0.50		ug/L			07/21/23 12:19	1
1,2,3-Trichloropropane	ND		0.50		ug/L			07/21/23 12:19	1
1,2,4-Trichlorobenzene	ND		0.50		ug/L			07/21/23 12:19	1
1,2,4-Trimethylbenzene	ND		0.50		ug/L			07/21/23 12:19	1
1,2-Dibromo-3-Chloropropane	ND		1.0		ug/L			07/21/23 12:19	1
1,2-Dibromoethane	ND		0.50		ug/L			07/21/23 12:19	1
1,2-Dichlorobenzene	ND		0.50		ug/L			07/21/23 12:19	1
1,2-Dichloroethane	ND		0.50		ug/L			07/21/23 12:19	1
1,2-Dichloropropane	ND		0.50		ug/L			07/21/23 12:19	1
1,3,5-Trimethylbenzene	ND		0.50		ug/L			07/21/23 12:19	1
1,3-Dichlorobenzene	ND		0.50		ug/L			07/21/23 12:19	1
1,3-Dichloropropane	ND		0.50		ug/L			07/21/23 12:19	1
1,4-Dichlorobenzene	ND		0.50		ug/L			07/21/23 12:19	1
2,2-Dichloropropane	ND		0.50		ug/L			07/21/23 12:19	1
2-Butanone	ND		5.0		ug/L			07/21/23 12:19	1
2-Chlorotoluene	ND		0.50		ug/L			07/21/23 12:19	1
2-Hexanone	ND		6.0		ug/L			07/21/23 12:19	1
4-Chlorotoluene	ND		0.50		ug/L			07/21/23 12:19	1
4-Methyl-2-pentanone	ND		5.0		ug/L			07/21/23 12:19	1
Acetone	ND		8.0		ug/L			07/21/23 12:19	1
Benzene	ND		0.50		ug/L			07/21/23 12:19	1
Bromobenzene	ND		0.50		ug/L			07/21/23 12:19	1
Bromochloromethane	ND		1.0		ug/L			07/21/23 12:19	1
Bromodichloromethane	ND		0.50		ug/L			07/21/23 12:19	1
Bromoform	ND		0.50		ug/L			07/21/23 12:19	1
Bromomethane	ND		2.0		ug/L			07/21/23 12:19	1

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Client Sample Results

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

Job ID: 570-145746-1

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

Client Sample ID: CBT
Date Collected: 07/20/23 08:50
Date Received: 07/20/23 13:38

Lab Sample ID: 570-145746-3
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	ND		0.50		ug/L			07/21/23 12:19	1
cis-1,3-Dichloropropene	ND		0.50		ug/L			07/21/23 12:19	1
Carbon disulfide	ND		1.0		ug/L			07/21/23 12:19	1
Carbon tetrachloride	ND		0.50		ug/L			07/21/23 12:19	1
Chlorobenzene	ND		0.50		ug/L			07/21/23 12:19	1
Chloroethane	ND		0.50		ug/L			07/21/23 12:19	1
Chloroform	ND		0.50		ug/L			07/21/23 12:19	1
Chloromethane	ND		1.0		ug/L			07/21/23 12:19	1
Dibromochloromethane	ND		0.50		ug/L			07/21/23 12:19	1
Dibromomethane	ND		0.50		ug/L			07/21/23 12:19	1
Dichlorodifluoromethane	ND		1.0		ug/L			07/21/23 12:19	1
Di-isopropyl ether (DIPE)	ND		0.50		ug/L			07/21/23 12:19	1
Ethanol	ND	*1	50		ug/L			07/21/23 12:19	1
Ethylbenzene	ND		0.50		ug/L			07/21/23 12:19	1
Ethyl-t-butyl ether (ETBE)	ND		0.50		ug/L			07/21/23 12:19	1
Isopropylbenzene	ND		0.50		ug/L			07/21/23 12:19	1
Methylene Chloride	ND		1.0		ug/L			07/21/23 12:19	1
Methyl-t-Butyl Ether (MTBE)	ND		0.50		ug/L			07/21/23 12:19	1
Naphthalene	ND		1.0		ug/L			07/21/23 12:19	1
n-Butylbenzene	ND		0.50		ug/L			07/21/23 12:19	1
N-Propylbenzene	ND		0.50		ug/L			07/21/23 12:19	1
o-Xylene	ND		0.50		ug/L			07/21/23 12:19	1
m,p-Xylene	ND		1.0		ug/L			07/21/23 12:19	1
p-Isopropyltoluene	ND		0.50		ug/L			07/21/23 12:19	1
sec-Butylbenzene	ND		0.50		ug/L			07/21/23 12:19	1
Styrene	ND		0.50		ug/L			07/21/23 12:19	1
trans-1,2-Dichloroethene	ND		0.50		ug/L			07/21/23 12:19	1
trans-1,3-Dichloropropene	ND		0.50		ug/L			07/21/23 12:19	1
Tert-amyl-methyl ether (TAME)	ND		0.50		ug/L			07/21/23 12:19	1
tert-Butyl alcohol (TBA)	ND		5.0		ug/L			07/21/23 12:19	1
tert-Butylbenzene	ND		0.50		ug/L			07/21/23 12:19	1
Tetrachloroethene	ND		0.50		ug/L			07/21/23 12:19	1
Toluene	ND		0.50		ug/L			07/21/23 12:19	1
Trichloroethene	ND		0.50		ug/L			07/21/23 12:19	1
Trichlorofluoromethane	ND		0.50		ug/L			07/21/23 12:19	1
Vinyl acetate	ND		5.0		ug/L			07/21/23 12:19	1
Vinyl chloride	ND		0.50		ug/L			07/21/23 12:19	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	91		64 - 132		07/21/23 12:19	1
4-Bromofluorobenzene (Surr)	103		76 - 120		07/21/23 12:19	1
Dibromofluoromethane (Surr)	93		80 - 120		07/21/23 12:19	1
Toluene-d8 (Surr)	96		80 - 120		07/21/23 12:19	1

Client Sample ID: POX
Date Collected: 07/20/23 09:00
Date Received: 07/20/23 13:38

Lab Sample ID: 570-145746-4
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		0.50		ug/L			07/21/23 12:45	1
1,1,1-Trichloroethane	ND		0.50		ug/L			07/21/23 12:45	1

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Client Sample Results

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

Job ID: 570-145746-1

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

Client Sample ID: POX
Date Collected: 07/20/23 09:00
Date Received: 07/20/23 13:38

Lab Sample ID: 570-145746-4
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane	ND		0.50		ug/L			07/21/23 12:45	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.50		ug/L			07/21/23 12:45	1
1,1,2-Trichloroethane	ND		0.50		ug/L			07/21/23 12:45	1
1,1-Dichloroethane	ND		0.50		ug/L			07/21/23 12:45	1
1,1-Dichloroethene	ND		0.50		ug/L			07/21/23 12:45	1
1,1-Dichloropropene	ND		0.50		ug/L			07/21/23 12:45	1
1,2,3-Trichlorobenzene	ND		0.50		ug/L			07/21/23 12:45	1
1,2,3-Trichloropropane	ND		0.50		ug/L			07/21/23 12:45	1
1,2,4-Trichlorobenzene	ND		0.50		ug/L			07/21/23 12:45	1
1,2,4-Trimethylbenzene	ND		0.50		ug/L			07/21/23 12:45	1
1,2-Dibromo-3-Chloropropane	ND		1.0		ug/L			07/21/23 12:45	1
1,2-Dibromoethane	ND		0.50		ug/L			07/21/23 12:45	1
1,2-Dichlorobenzene	ND		0.50		ug/L			07/21/23 12:45	1
1,2-Dichloroethane	ND		0.50		ug/L			07/21/23 12:45	1
1,2-Dichloropropane	ND		0.50		ug/L			07/21/23 12:45	1
1,3,5-Trimethylbenzene	ND		0.50		ug/L			07/21/23 12:45	1
1,3-Dichlorobenzene	ND		0.50		ug/L			07/21/23 12:45	1
1,3-Dichloropropane	ND		0.50		ug/L			07/21/23 12:45	1
1,4-Dichlorobenzene	ND		0.50		ug/L			07/21/23 12:45	1
2,2-Dichloropropane	ND		0.50		ug/L			07/21/23 12:45	1
2-Butanone	ND		5.0		ug/L			07/21/23 12:45	1
2-Chlorotoluene	ND		0.50		ug/L			07/21/23 12:45	1
2-Hexanone	ND		6.0		ug/L			07/21/23 12:45	1
4-Chlorotoluene	ND		0.50		ug/L			07/21/23 12:45	1
4-Methyl-2-pentanone	ND		5.0		ug/L			07/21/23 12:45	1
Acetone	ND		8.0		ug/L			07/21/23 12:45	1
Benzene	ND		0.50		ug/L			07/21/23 12:45	1
Bromobenzene	ND		0.50		ug/L			07/21/23 12:45	1
Bromochloromethane	ND		1.0		ug/L			07/21/23 12:45	1
Bromodichloromethane	ND		0.50		ug/L			07/21/23 12:45	1
Bromoform	ND		0.50		ug/L			07/21/23 12:45	1
Bromomethane	ND		2.0		ug/L			07/21/23 12:45	1
cis-1,2-Dichloroethene	ND		0.50		ug/L			07/21/23 12:45	1
cis-1,3-Dichloropropene	ND		0.50		ug/L			07/21/23 12:45	1
Carbon disulfide	ND		1.0		ug/L			07/21/23 12:45	1
Carbon tetrachloride	ND		0.50		ug/L			07/21/23 12:45	1
Chlorobenzene	ND		0.50		ug/L			07/21/23 12:45	1
Chloroethane	ND		0.50		ug/L			07/21/23 12:45	1
Chloroform	ND		0.50		ug/L			07/21/23 12:45	1
Chloromethane	ND		1.0		ug/L			07/21/23 12:45	1
Dibromochloromethane	ND		0.50		ug/L			07/21/23 12:45	1
Dibromomethane	ND		0.50		ug/L			07/21/23 12:45	1
Dichlorodifluoromethane	ND		1.0		ug/L			07/21/23 12:45	1
Di-isopropyl ether (DIPE)	ND		0.50		ug/L			07/21/23 12:45	1
Ethanol	ND	*1	50		ug/L			07/21/23 12:45	1
Ethylbenzene	ND		0.50		ug/L			07/21/23 12:45	1
Ethyl-t-butyl ether (ETBE)	ND		0.50		ug/L			07/21/23 12:45	1
Isopropylbenzene	ND		0.50		ug/L			07/21/23 12:45	1
Methylene Chloride	ND		1.0		ug/L			07/21/23 12:45	1

Eurofins Calscience

Client Sample Results

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

Job ID: 570-145746-1

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

Client Sample ID: POX
Date Collected: 07/20/23 09:00
Date Received: 07/20/23 13:38

Lab Sample ID: 570-145746-4
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl-t-Butyl Ether (MTBE)	ND		0.50		ug/L			07/21/23 12:45	1
Naphthalene	ND		1.0		ug/L			07/21/23 12:45	1
n-Butylbenzene	ND		0.50		ug/L			07/21/23 12:45	1
N-Propylbenzene	ND		0.50		ug/L			07/21/23 12:45	1
o-Xylene	ND		0.50		ug/L			07/21/23 12:45	1
m,p-Xylene	ND		1.0		ug/L			07/21/23 12:45	1
p-Isopropyltoluene	ND		0.50		ug/L			07/21/23 12:45	1
sec-Butylbenzene	ND		0.50		ug/L			07/21/23 12:45	1
Styrene	ND		0.50		ug/L			07/21/23 12:45	1
trans-1,2-Dichloroethene	ND		0.50		ug/L			07/21/23 12:45	1
trans-1,3-Dichloropropene	ND		0.50		ug/L			07/21/23 12:45	1
Tert-amyl-methyl ether (TAME)	ND		0.50		ug/L			07/21/23 12:45	1
tert-Butyl alcohol (TBA)	ND		5.0		ug/L			07/21/23 12:45	1
tert-Butylbenzene	ND		0.50		ug/L			07/21/23 12:45	1
Tetrachloroethene	ND		0.50		ug/L			07/21/23 12:45	1
Toluene	ND		0.50		ug/L			07/21/23 12:45	1
Trichloroethene	ND		0.50		ug/L			07/21/23 12:45	1
Trichlorofluoromethane	ND		0.50		ug/L			07/21/23 12:45	1
Vinyl acetate	ND		5.0		ug/L			07/21/23 12:45	1
Vinyl chloride	ND		0.50		ug/L			07/21/23 12:45	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	92		64 - 132		07/21/23 12:45	1
4-Bromofluorobenzene (Surr)	102		76 - 120		07/21/23 12:45	1
Dibromofluoromethane (Surr)	91		80 - 120		07/21/23 12:45	1
Toluene-d8 (Surr)	100		80 - 120		07/21/23 12:45	1

Client Sample ID: INF
Date Collected: 07/20/23 09:15
Date Received: 07/20/23 13:38

Lab Sample ID: 570-145746-6
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		0.50		ug/L			07/21/23 13:10	1
1,1,1-Trichloroethane	ND		0.50		ug/L			07/21/23 13:10	1
1,1,2,2-Tetrachloroethane	ND		0.50		ug/L			07/21/23 13:10	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.50		ug/L			07/21/23 13:10	1
1,1,2-Trichloroethane	ND		0.50		ug/L			07/21/23 13:10	1
1,1-Dichloroethane	ND		0.50		ug/L			07/21/23 13:10	1
1,1-Dichloroethene	10		0.50		ug/L			07/21/23 13:10	1
1,1-Dichloropropene	ND		0.50		ug/L			07/21/23 13:10	1
1,2,3-Trichlorobenzene	ND		0.50		ug/L			07/21/23 13:10	1
1,2,3-Trichloropropane	ND		0.50		ug/L			07/21/23 13:10	1
1,2,4-Trichlorobenzene	ND		0.50		ug/L			07/21/23 13:10	1
1,2,4-Trimethylbenzene	ND		0.50		ug/L			07/21/23 13:10	1
1,2-Dibromo-3-Chloropropane	ND		1.0		ug/L			07/21/23 13:10	1
1,2-Dibromoethane	ND		0.50		ug/L			07/21/23 13:10	1
1,2-Dichlorobenzene	ND		0.50		ug/L			07/21/23 13:10	1
1,2-Dichloroethane	ND		0.50		ug/L			07/21/23 13:10	1
1,2-Dichloropropane	ND		0.50		ug/L			07/21/23 13:10	1
1,3,5-Trimethylbenzene	ND		0.50		ug/L			07/21/23 13:10	1
1,3-Dichlorobenzene	ND		0.50		ug/L			07/21/23 13:10	1

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Client Sample Results

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

Job ID: 570-145746-1

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

Client Sample ID: INF

Date Collected: 07/20/23 09:15

Date Received: 07/20/23 13:38

Lab Sample ID: 570-145746-6

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3-Dichloropropane	ND		0.50		ug/L			07/21/23 13:10	1
1,4-Dichlorobenzene	ND		0.50		ug/L			07/21/23 13:10	1
2,2-Dichloropropane	ND		0.50		ug/L			07/21/23 13:10	1
2-Butanone	ND		5.0		ug/L			07/21/23 13:10	1
2-Chlorotoluene	ND		0.50		ug/L			07/21/23 13:10	1
2-Hexanone	ND		6.0		ug/L			07/21/23 13:10	1
4-Chlorotoluene	ND		0.50		ug/L			07/21/23 13:10	1
4-Methyl-2-pentanone	ND		5.0		ug/L			07/21/23 13:10	1
Acetone	ND		8.0		ug/L			07/21/23 13:10	1
Benzene	ND		0.50		ug/L			07/21/23 13:10	1
Bromobenzene	ND		0.50		ug/L			07/21/23 13:10	1
Bromochloromethane	ND		1.0		ug/L			07/21/23 13:10	1
Bromodichloromethane	ND		0.50		ug/L			07/21/23 13:10	1
Bromoform	ND		0.50		ug/L			07/21/23 13:10	1
Bromomethane	ND		2.0		ug/L			07/21/23 13:10	1
cis-1,2-Dichloroethene	ND		0.50		ug/L			07/21/23 13:10	1
cis-1,3-Dichloropropene	ND		0.50		ug/L			07/21/23 13:10	1
Carbon disulfide	ND		1.0		ug/L			07/21/23 13:10	1
Carbon tetrachloride	ND		0.50		ug/L			07/21/23 13:10	1
Chlorobenzene	ND		0.50		ug/L			07/21/23 13:10	1
Chloroethane	ND		0.50		ug/L			07/21/23 13:10	1
Chloroform	ND		0.50		ug/L			07/21/23 13:10	1
Chloromethane	ND		1.0		ug/L			07/21/23 13:10	1
Dibromochloromethane	ND		0.50		ug/L			07/21/23 13:10	1
Dibromomethane	ND		0.50		ug/L			07/21/23 13:10	1
Dichlorodifluoromethane	ND		1.0		ug/L			07/21/23 13:10	1
Di-isopropyl ether (DIPE)	ND		0.50		ug/L			07/21/23 13:10	1
Ethanol	ND	*1	50		ug/L			07/21/23 13:10	1
Ethylbenzene	ND		0.50		ug/L			07/21/23 13:10	1
Ethyl-t-butyl ether (ETBE)	ND		0.50		ug/L			07/21/23 13:10	1
Isopropylbenzene	ND		0.50		ug/L			07/21/23 13:10	1
Methylene Chloride	ND		1.0		ug/L			07/21/23 13:10	1
Methyl-t-Butyl Ether (MTBE)	ND		0.50		ug/L			07/21/23 13:10	1
Naphthalene	ND		1.0		ug/L			07/21/23 13:10	1
n-Butylbenzene	ND		0.50		ug/L			07/21/23 13:10	1
N-Propylbenzene	ND		0.50		ug/L			07/21/23 13:10	1
o-Xylene	ND		0.50		ug/L			07/21/23 13:10	1
m,p-Xylene	ND		1.0		ug/L			07/21/23 13:10	1
p-Isopropyltoluene	ND		0.50		ug/L			07/21/23 13:10	1
sec-Butylbenzene	ND		0.50		ug/L			07/21/23 13:10	1
Styrene	ND		0.50		ug/L			07/21/23 13:10	1
trans-1,2-Dichloroethene	ND		0.50		ug/L			07/21/23 13:10	1
trans-1,3-Dichloropropene	ND		0.50		ug/L			07/21/23 13:10	1
Tert-amyl-methyl ether (TAME)	ND		0.50		ug/L			07/21/23 13:10	1
tert-Butyl alcohol (TBA)	ND		5.0		ug/L			07/21/23 13:10	1
tert-Butylbenzene	ND		0.50		ug/L			07/21/23 13:10	1
Tetrachloroethene	ND		0.50		ug/L			07/21/23 13:10	1
Toluene	ND		0.50		ug/L			07/21/23 13:10	1
Trichloroethene	ND		0.50		ug/L			07/21/23 13:10	1

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Client Sample Results

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

Job ID: 570-145746-1

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

Client Sample ID: INF

Date Collected: 07/20/23 09:15

Date Received: 07/20/23 13:38

Lab Sample ID: 570-145746-6

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Trichlorofluoromethane	ND		0.50		ug/L			07/21/23 13:10	1
Vinyl acetate	ND		5.0		ug/L			07/21/23 13:10	1
Vinyl chloride	ND		0.50		ug/L			07/21/23 13:10	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	93		64 - 132					07/21/23 13:10	1
4-Bromofluorobenzene (Surr)	100		76 - 120					07/21/23 13:10	1
Dibromofluoromethane (Surr)	93		80 - 120					07/21/23 13:10	1
Toluene-d8 (Surr)	98		80 - 120					07/21/23 13:10	1

Client Sample ID: EW-02

Date Collected: 07/20/23 09:45

Date Received: 07/20/23 13:38

Lab Sample ID: 570-145746-7

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		0.50		ug/L			07/21/23 13:35	1
1,1,1-Trichloroethane	ND		0.50		ug/L			07/21/23 13:35	1
1,1,2,2-Tetrachloroethane	ND		0.50		ug/L			07/21/23 13:35	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.50		ug/L			07/21/23 13:35	1
1,1,2-Trichloroethane	ND		0.50		ug/L			07/21/23 13:35	1
1,1-Dichloroethane	ND		0.50		ug/L			07/21/23 13:35	1
1,1-Dichloroethene	10		0.50		ug/L			07/21/23 13:35	1
1,1-Dichloropropene	ND		0.50		ug/L			07/21/23 13:35	1
1,2,3-Trichlorobenzene	ND		0.50		ug/L			07/21/23 13:35	1
1,2,3-Trichloropropane	ND		0.50		ug/L			07/21/23 13:35	1
1,2,4-Trichlorobenzene	ND		0.50		ug/L			07/21/23 13:35	1
1,2,4-Trimethylbenzene	ND		0.50		ug/L			07/21/23 13:35	1
1,2-Dibromo-3-Chloropropane	ND		1.0		ug/L			07/21/23 13:35	1
1,2-Dibromoethane	ND		0.50		ug/L			07/21/23 13:35	1
1,2-Dichlorobenzene	ND		0.50		ug/L			07/21/23 13:35	1
1,2-Dichloroethane	ND		0.50		ug/L			07/21/23 13:35	1
1,2-Dichloropropane	ND		0.50		ug/L			07/21/23 13:35	1
1,3,5-Trimethylbenzene	ND		0.50		ug/L			07/21/23 13:35	1
1,3-Dichlorobenzene	ND		0.50		ug/L			07/21/23 13:35	1
1,3-Dichloropropane	ND		0.50		ug/L			07/21/23 13:35	1
1,4-Dichlorobenzene	ND		0.50		ug/L			07/21/23 13:35	1
2,2-Dichloropropane	ND		0.50		ug/L			07/21/23 13:35	1
2-Butanone	ND		5.0		ug/L			07/21/23 13:35	1
2-Chlorotoluene	ND		0.50		ug/L			07/21/23 13:35	1
2-Hexanone	ND		6.0		ug/L			07/21/23 13:35	1
4-Chlorotoluene	ND		0.50		ug/L			07/21/23 13:35	1
4-Methyl-2-pentanone	ND		5.0		ug/L			07/21/23 13:35	1
Acetone	ND		8.0		ug/L			07/21/23 13:35	1
Benzene	ND		0.50		ug/L			07/21/23 13:35	1
Bromobenzene	ND		0.50		ug/L			07/21/23 13:35	1
Bromochloromethane	ND		1.0		ug/L			07/21/23 13:35	1
Bromodichloromethane	ND		0.50		ug/L			07/21/23 13:35	1
Bromoform	ND		0.50		ug/L			07/21/23 13:35	1
Bromomethane	ND		2.0		ug/L			07/21/23 13:35	1
cis-1,2-Dichloroethene	ND		0.50		ug/L			07/21/23 13:35	1
cis-1,3-Dichloropropene	ND		0.50		ug/L			07/21/23 13:35	1

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Client Sample Results

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

Job ID: 570-145746-1

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

Client Sample ID: EW-02
Date Collected: 07/20/23 09:45
Date Received: 07/20/23 13:38

Lab Sample ID: 570-145746-7
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon disulfide	ND		1.0		ug/L			07/21/23 13:35	1
Carbon tetrachloride	ND		0.50		ug/L			07/21/23 13:35	1
Chlorobenzene	ND		0.50		ug/L			07/21/23 13:35	1
Chloroethane	ND		0.50		ug/L			07/21/23 13:35	1
Chloroform	ND		0.50		ug/L			07/21/23 13:35	1
Chloromethane	ND		1.0		ug/L			07/21/23 13:35	1
Dibromochloromethane	ND		0.50		ug/L			07/21/23 13:35	1
Dibromomethane	ND		0.50		ug/L			07/21/23 13:35	1
Dichlorodifluoromethane	ND		1.0		ug/L			07/21/23 13:35	1
Di-isopropyl ether (DIPE)	ND		0.50		ug/L			07/21/23 13:35	1
Ethanol	ND	*1	50		ug/L			07/21/23 13:35	1
Ethylbenzene	ND		0.50		ug/L			07/21/23 13:35	1
Ethyl-t-butyl ether (ETBE)	ND		0.50		ug/L			07/21/23 13:35	1
Isopropylbenzene	ND		0.50		ug/L			07/21/23 13:35	1
Methylene Chloride	ND		1.0		ug/L			07/21/23 13:35	1
Methyl-t-Butyl Ether (MTBE)	ND		0.50		ug/L			07/21/23 13:35	1
Naphthalene	ND		1.0		ug/L			07/21/23 13:35	1
n-Butylbenzene	ND		0.50		ug/L			07/21/23 13:35	1
N-Propylbenzene	ND		0.50		ug/L			07/21/23 13:35	1
o-Xylene	ND		0.50		ug/L			07/21/23 13:35	1
m,p-Xylene	ND		1.0		ug/L			07/21/23 13:35	1
p-Isopropyltoluene	ND		0.50		ug/L			07/21/23 13:35	1
sec-Butylbenzene	ND		0.50		ug/L			07/21/23 13:35	1
Styrene	ND		0.50		ug/L			07/21/23 13:35	1
trans-1,2-Dichloroethene	ND		0.50		ug/L			07/21/23 13:35	1
trans-1,3-Dichloropropene	ND		0.50		ug/L			07/21/23 13:35	1
Tert-amyl-methyl ether (TAME)	ND		0.50		ug/L			07/21/23 13:35	1
tert-Butyl alcohol (TBA)	ND		5.0		ug/L			07/21/23 13:35	1
tert-Butylbenzene	ND		0.50		ug/L			07/21/23 13:35	1
Tetrachloroethene	ND		0.50		ug/L			07/21/23 13:35	1
Toluene	ND		0.50		ug/L			07/21/23 13:35	1
Trichloroethene	ND		0.50		ug/L			07/21/23 13:35	1
Trichlorofluoromethane	ND		0.50		ug/L			07/21/23 13:35	1
Vinyl acetate	ND		5.0		ug/L			07/21/23 13:35	1
Vinyl chloride	ND		0.50		ug/L			07/21/23 13:35	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	91		64 - 132					07/21/23 13:35	1
4-Bromofluorobenzene (Surr)	101		76 - 120					07/21/23 13:35	1
Dibromofluoromethane (Surr)	94		80 - 120					07/21/23 13:35	1
Toluene-d8 (Surr)	98		80 - 120					07/21/23 13:35	1

Client Sample Results

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

Job ID: 570-145746-1

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

Client Sample ID: CEFF
Date Collected: 07/20/23 08:45
Date Received: 07/20/23 13:38

Lab Sample ID: 570-145746-2
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	ND		0.37		ug/L		07/24/23 08:26	07/24/23 21:04	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,4-Dioxane-d8	50		21 - 120				07/24/23 08:26	07/24/23 21:04	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Nitrobenzene-d5	107		58 - 135				07/24/23 08:26	07/24/23 21:04	1

Client Sample ID: CBT
Date Collected: 07/20/23 08:50
Date Received: 07/20/23 13:38

Lab Sample ID: 570-145746-3
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	ND		0.37		ug/L		07/24/23 08:26	07/24/23 21:18	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,4-Dioxane-d8	40		21 - 120				07/24/23 08:26	07/24/23 21:18	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Nitrobenzene-d5	91		58 - 135				07/24/23 08:26	07/24/23 21:18	1

Client Sample ID: POX
Date Collected: 07/20/23 09:00
Date Received: 07/20/23 13:38

Lab Sample ID: 570-145746-4
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	ND		0.37		ug/L		07/24/23 08:26	07/24/23 21:33	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,4-Dioxane-d8	49		21 - 120				07/24/23 08:26	07/24/23 21:33	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Nitrobenzene-d5	108		58 - 135				07/24/23 08:26	07/24/23 21:33	1

Client Sample Results

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

Job ID: 570-145746-1

Method: EPA 300.0 - Anions, Ion Chromatography

Client Sample ID: INF
Date Collected: 07/20/23 09:15
Date Received: 07/20/23 13:38

Lab Sample ID: 570-145746-6
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromide	0.18		0.10		mg/L			07/25/23 07:38	1

Client Sample ID: EW-02
Date Collected: 07/20/23 09:45
Date Received: 07/20/23 13:38

Lab Sample ID: 570-145746-7
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromide	0.19		0.10		mg/L			07/25/23 07:55	1

Client Sample Results

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

Job ID: 570-145746-1

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

Client Sample ID: POX
Date Collected: 07/20/23 09:00
Date Received: 07/20/23 13:38

Lab Sample ID: 570-145746-4
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromate	ND	F1	50		ug/L			07/25/23 11:37	10
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Dichloroacetate (Surr)	96		90 - 115					07/25/23 11:37	10

Client Sample ID: INF
Date Collected: 07/20/23 09:15
Date Received: 07/20/23 13:38

Lab Sample ID: 570-145746-6
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromate	ND		50		ug/L			07/25/23 12:10	10
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Dichloroacetate (Surr)	97		90 - 115					07/25/23 12:10	10

Client Sample Results

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

Job ID: 570-145746-1

General Chemistry

Client Sample ID: POX
Date Collected: 07/20/23 09:00
Date Received: 07/20/23 13:38

Lab Sample ID: 570-145746-4
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity, Total (As CaCO3) (SM 2320B)	198		5.00		mg/L			07/26/23 22:07	1
Bicarbonate (as CaCO3) (SM 2320B)	198		5.00		mg/L			07/26/23 22:07	1
Carbonate (as CaCO3) (SM 2320B)	ND		5.00		mg/L			07/26/23 22:07	1
Hydroxide (as CaCO3) (SM 2320B)	ND		5.00		mg/L			07/26/23 22:07	1
Carbon, Total Organic (SM 5310D)	ND		0.500		mg/L			07/24/23 21:17	1

Client Sample ID: PF
Date Collected: 07/20/23 09:05
Date Received: 07/20/23 13:38

Lab Sample ID: 570-145746-5
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity, Total (As CaCO3) (SM 2320B)	199		5.00		mg/L			07/26/23 22:14	1
Bicarbonate (as CaCO3) (SM 2320B)	199		5.00		mg/L			07/26/23 22:14	1
Carbonate (as CaCO3) (SM 2320B)	ND		5.00		mg/L			07/26/23 22:14	1
Hydroxide (as CaCO3) (SM 2320B)	ND		5.00		mg/L			07/26/23 22:14	1
Total Suspended Solids (SM 2540D)	ND		1.00		mg/L			07/21/23 12:45	1
Carbon, Total Organic (SM 5310D)	ND		0.500		mg/L			07/24/23 21:36	1

Surrogate Summary

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

Job ID: 570-145746-1

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)
570-145746-1	TB-072023	91	101	96	95
570-145746-2	CEFF	90	100	90	98
570-145746-3	CBT	91	103	93	96
570-145746-4	POX	92	102	91	100
570-145746-6	INF	93	100	93	98
570-145746-7	EW-02	91	101	94	98
LCS 570-347570/4	Lab Control Sample	97	96	91	100
LCSD 570-347570/5	Lab Control Sample Dup	99	98	95	99
MB 570-347570/7	Method Blank	96	103	96	95

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)			
570-145746-6	INF	95			
570-145746-7	EW-02	98			
LCS 570-347660/4	Lab Control Sample	98			
LCSD 570-347660/5	Lab Control Sample Dup	95			
MB 570-347660/7	Method Blank	100			

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)			
570-145746-2	CEFF	107			
570-145746-3	CBT	91			
570-145746-4	POX	108			
LCS 570-348152/2-A	Lab Control Sample	96			
LCSD 570-348152/3-A	Lab Control Sample Dup	98			
MB 570-348152/1-A	Method Blank	75			

Surrogate Legend

NBZ = Nitrobenzene-d5

Surrogate Summary

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

Job ID: 570-145746-1

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)
570-145746-4	POX	96
570-145746-4 MS	POX	98
570-145746-4 MSD	POX	95
570-145746-6	INF	97
LCS 570-348511/4	Lab Control Sample	99
LCSD 570-348511/5	Lab Control Sample Dup	99
MB 570-348511/6	Method Blank	99
MRL 570-348511/3	Lab Control Sample	98

Surrogate Legend

DCAA = Dichloroacetate (Surr)

Isotope Dilution Summary

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

Job ID: 570-145746-1

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)
570-145746-2	CEFF	50
570-145746-3	CBT	40
570-145746-4	POX	49
LCS 570-348152/2-A	Lab Control Sample	40
LCSD 570-348152/3-A	Lab Control Sample Dup	38
MB 570-348152/1-A	Method Blank	49

Surrogate Legend

DXE = 1,4-Dioxane-d8

QC Sample Results

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

Job ID: 570-145746-1

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

Lab Sample ID: MB 570-347570/7

Matrix: Water

Analysis Batch: 347570

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			07/21/23 08:31	1
1,1,1-Trichloroethane	ND		0.50		ug/L			07/21/23 08:31	1
1,1,2,2-Tetrachloroethane	ND		0.50		ug/L			07/21/23 08:31	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.50		ug/L			07/21/23 08:31	1
1,1,2-Trichloroethane	ND		0.50		ug/L			07/21/23 08:31	1
1,1-Dichloroethane	ND		0.50		ug/L			07/21/23 08:31	1
1,1-Dichloroethene	ND		0.50		ug/L			07/21/23 08:31	1
1,1-Dichloropropene	ND		0.50		ug/L			07/21/23 08:31	1
1,2,3-Trichlorobenzene	ND		0.50		ug/L			07/21/23 08:31	1
1,2,3-Trichloropropane	ND		0.50		ug/L			07/21/23 08:31	1
1,2,4-Trichlorobenzene	ND		0.50		ug/L			07/21/23 08:31	1
1,2,4-Trimethylbenzene	ND		0.50		ug/L			07/21/23 08:31	1
1,2-Dibromo-3-Chloropropane	ND		1.0		ug/L			07/21/23 08:31	1
1,2-Dibromoethane	ND		0.50		ug/L			07/21/23 08:31	1
1,2-Dichlorobenzene	ND		0.50		ug/L			07/21/23 08:31	1
1,2-Dichloroethane	ND		0.50		ug/L			07/21/23 08:31	1
1,2-Dichloropropane	ND		0.50		ug/L			07/21/23 08:31	1
1,3,5-Trimethylbenzene	ND		0.50		ug/L			07/21/23 08:31	1
1,3-Dichlorobenzene	ND		0.50		ug/L			07/21/23 08:31	1
1,3-Dichloropropane	ND		0.50		ug/L			07/21/23 08:31	1
1,4-Dichlorobenzene	ND		0.50		ug/L			07/21/23 08:31	1
2,2-Dichloropropane	ND		0.50		ug/L			07/21/23 08:31	1
2-Butanone	ND		5.0		ug/L			07/21/23 08:31	1
2-Chlorotoluene	ND		0.50		ug/L			07/21/23 08:31	1
2-Hexanone	ND		6.0		ug/L			07/21/23 08:31	1
4-Chlorotoluene	ND		0.50		ug/L			07/21/23 08:31	1
4-Methyl-2-pentanone	ND		5.0		ug/L			07/21/23 08:31	1
Acetone	ND		8.0		ug/L			07/21/23 08:31	1
Benzene	ND		0.50		ug/L			07/21/23 08:31	1
Bromobenzene	ND		0.50		ug/L			07/21/23 08:31	1
Bromochloromethane	ND		1.0		ug/L			07/21/23 08:31	1
Bromodichloromethane	ND		0.50		ug/L			07/21/23 08:31	1
Bromoform	ND		0.50		ug/L			07/21/23 08:31	1
Bromomethane	ND		2.0		ug/L			07/21/23 08:31	1
cis-1,2-Dichloroethene	ND		0.50		ug/L			07/21/23 08:31	1
cis-1,3-Dichloropropene	ND		0.50		ug/L			07/21/23 08:31	1
Carbon disulfide	ND		1.0		ug/L			07/21/23 08:31	1
Carbon tetrachloride	ND		0.50		ug/L			07/21/23 08:31	1
Chlorobenzene	ND		0.50		ug/L			07/21/23 08:31	1
Chloroethane	ND		0.50		ug/L			07/21/23 08:31	1
Chloroform	ND		0.50		ug/L			07/21/23 08:31	1
Chloromethane	ND		1.0		ug/L			07/21/23 08:31	1
Dibromochloromethane	ND		0.50		ug/L			07/21/23 08:31	1
Dibromomethane	ND		0.50		ug/L			07/21/23 08:31	1
Dichlorodifluoromethane	ND		1.0		ug/L			07/21/23 08:31	1
Di-isopropyl ether (DIPE)	ND		0.50		ug/L			07/21/23 08:31	1
Ethanol	ND		50		ug/L			07/21/23 08:31	1
Ethylbenzene	ND		0.50		ug/L			07/21/23 08:31	1

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QC Sample Results

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

Job ID: 570-145746-1

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

Lab Sample ID: MB 570-347570/7

Matrix: Water

Analysis Batch: 347570

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			07/21/23 08:31	1
Isopropylbenzene	ND		0.50		ug/L			07/21/23 08:31	1
Methylene Chloride	ND		1.0		ug/L			07/21/23 08:31	1
Methyl-t-Butyl Ether (MTBE)	ND		0.50		ug/L			07/21/23 08:31	1
Naphthalene	ND		1.0		ug/L			07/21/23 08:31	1
n-Butylbenzene	ND		0.50		ug/L			07/21/23 08:31	1
N-Propylbenzene	ND		0.50		ug/L			07/21/23 08:31	1
o-Xylene	ND		0.50		ug/L			07/21/23 08:31	1
m,p-Xylene	ND		1.0		ug/L			07/21/23 08:31	1
p-Isopropyltoluene	ND		0.50		ug/L			07/21/23 08:31	1
sec-Butylbenzene	ND		0.50		ug/L			07/21/23 08:31	1
Styrene	ND		0.50		ug/L			07/21/23 08:31	1
trans-1,2-Dichloroethene	ND		0.50		ug/L			07/21/23 08:31	1
trans-1,3-Dichloropropene	ND		0.50		ug/L			07/21/23 08:31	1
Tert-amyl-methyl ether (TAME)	ND		0.50		ug/L			07/21/23 08:31	1
tert-Butyl alcohol (TBA)	ND		5.0		ug/L			07/21/23 08:31	1
tert-Butylbenzene	ND		0.50		ug/L			07/21/23 08:31	1
Tetrachloroethene	ND		0.50		ug/L			07/21/23 08:31	1
Toluene	ND		0.50		ug/L			07/21/23 08:31	1
Trichloroethene	ND		0.50		ug/L			07/21/23 08:31	1
Trichlorofluoromethane	ND		0.50		ug/L			07/21/23 08:31	1
Vinyl acetate	ND		5.0		ug/L			07/21/23 08:31	1
Vinyl chloride	ND		0.50		ug/L			07/21/23 08:31	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	96		64 - 132		07/21/23 08:31	1
4-Bromofluorobenzene (Surr)	103		76 - 120		07/21/23 08:31	1
Dibromofluoromethane (Surr)	96		80 - 120		07/21/23 08:31	1
Toluene-d8 (Surr)	95		80 - 120		07/21/23 08:31	1

Lab Sample ID: LCS 570-347570/4

Matrix: Water

Analysis Batch: 347570

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	10.83		ug/L		108	80 - 126
1,2-Dibromoethane	10.0	10.18		ug/L		102	80 - 125
1,2-Dichlorobenzene	10.0	10.38		ug/L		104	80 - 120
1,2-Dichloroethane	10.0	9.975		ug/L		100	76 - 130
Benzene	10.0	10.65		ug/L		106	80 - 120
Carbon tetrachloride	10.0	10.38		ug/L		104	61 - 139
Chlorobenzene	10.0	10.63		ug/L		106	80 - 120
Di-isopropyl ether (DIPE)	10.0	9.354		ug/L		94	65 - 145
Ethanol	100	66.28		ug/L		66	20 - 180
Ethylbenzene	10.0	10.29		ug/L		103	80 - 126
Ethyl-t-butyl ether (ETBE)	10.0	9.587		ug/L		96	76 - 125
Methyl-t-Butyl Ether (MTBE)	10.0	9.739		ug/L		97	69 - 128
o-Xylene	10.0	9.800		ug/L		98	80 - 124

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QC Sample Results

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

Job ID: 570-145746-1

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

Lab Sample ID: LCS 570-347570/4

Matrix: Water

Analysis Batch: 347570

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	20.43		ug/L		102	80 - 123
Tert-amyl-methyl ether (TAME)	10.0	10.30		ug/L		103	78 - 133
tert-Butyl alcohol (TBA)	50.0	43.26		ug/L		87	68 - 133
Toluene	10.0	10.84		ug/L		108	80 - 120
Trichloroethene	10.0	10.79		ug/L		108	77 - 124
Vinyl chloride	10.0	9.511		ug/L		95	50 - 160

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	97		64 - 132
4-Bromofluorobenzene (Surr)	96		76 - 120
Dibromofluoromethane (Surr)	91		80 - 120
Toluene-d8 (Surr)	100		80 - 120

Lab Sample ID: LCSD 570-347570/5

Matrix: Water

Analysis Batch: 347570

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	10.36		ug/L		104	80 - 126	4	21
1,2-Dibromoethane	10.0	10.19		ug/L		102	80 - 125	0	20
1,2-Dichlorobenzene	10.0	10.54		ug/L		105	80 - 120	2	20
1,2-Dichloroethane	10.0	9.895		ug/L		99	76 - 130	1	20
Benzene	10.0	10.41		ug/L		104	80 - 120	2	20
Carbon tetrachloride	10.0	10.02		ug/L		100	61 - 139	4	20
Chlorobenzene	10.0	10.33		ug/L		103	80 - 120	3	20
Di-isopropyl ether (DIPE)	10.0	9.125		ug/L		91	65 - 145	2	20
Ethanol	100	91.48	*1	ug/L		91	20 - 180	32	30
Ethylbenzene	10.0	10.09		ug/L		101	80 - 126	2	20
Ethyl-t-butyl ether (ETBE)	10.0	9.078		ug/L		91	76 - 125	5	20
Methyl-t-Butyl Ether (MTBE)	10.0	9.424		ug/L		94	69 - 128	3	20
o-Xylene	10.0	9.708		ug/L		97	80 - 124	1	20
m,p-Xylene	20.0	19.89		ug/L		99	80 - 123	3	20
Tert-amyl-methyl ether (TAME)	10.0	9.972		ug/L		100	78 - 133	3	20
tert-Butyl alcohol (TBA)	50.0	43.30		ug/L		87	68 - 133	0	21
Toluene	10.0	10.48		ug/L		105	80 - 120	3	20
Trichloroethene	10.0	10.81		ug/L		108	77 - 124	0	20
Vinyl chloride	10.0	9.223		ug/L		92	50 - 160	3	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	99		64 - 132
4-Bromofluorobenzene (Surr)	98		76 - 120
Dibromofluoromethane (Surr)	95		80 - 120
Toluene-d8 (Surr)	99		80 - 120

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QC Sample Results

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

Job ID: 570-145746-1

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

Lab Sample ID: MB 570-347660/7

Matrix: Water

Analysis Batch: 347660

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			07/21/23 15:26	1
Surrogate	MB %Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,4-Dichlorobutane (Surr)	100		67 - 133					07/21/23 15:26	1

Lab Sample ID: LCS 570-347660/4

Matrix: Water

Analysis Batch: 347660

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	19.36		ug/L		97	75 - 120
Surrogate	LCS %Recovery	LCS Qualifier	Limits				
1,4-Dichlorobutane (Surr)	98		67 - 133				

Lab Sample ID: LCSD 570-347660/5

Matrix: Water

Analysis Batch: 347660

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	20.34		ug/L		102	75 - 120	5	20
Surrogate	LCSD %Recovery	LCSD Qualifier	Limits						
1,4-Dichlorobutane (Surr)	95		67 - 133						

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

Lab Sample ID: MB 570-348152/1-A

Matrix: Water

Analysis Batch: 348321

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 348152

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	ND		0.50		ug/L		07/24/23 08:26	07/24/23 20:21	1
Isotope Dilution	MB %Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,4-Dioxane-d8	49		21 - 120				07/24/23 08:26	07/24/23 20:21	1
Surrogate	MB %Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
Nitrobenzene-d5	75		58 - 135				07/24/23 08:26	07/24/23 20:21	1

Lab Sample ID: LCS 570-348152/2-A

Matrix: Water

Analysis Batch: 348321

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 348152

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
1,4-Dioxane	20.0	19.55		ug/L		98	63 - 144

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QC Sample Results

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

Job ID: 570-145746-1

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: 570-146074-L-1 MSD

Matrix: Water

Analysis Batch: 348529

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	0.13		5.00	5.040		mg/L		98	80 - 120	1	20

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

Lab Sample ID: MB 570-348511/6

Matrix: Water

Analysis Batch: 348511

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			07/25/23 06:32	1
Surrogate	%Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
Dichloroacetate (Surr)	99		90 - 115					07/25/23 06:32	1

Lab Sample ID: LCS 570-348511/4

Matrix: Water

Analysis Batch: 348511

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	25.20		ug/L		101	75 - 125		
Surrogate	%Recovery	LCS Qualifier	Limits						
Dichloroacetate (Surr)	99		90 - 115						

Lab Sample ID: LCSD 570-348511/5

Matrix: Water

Analysis Batch: 348511

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	23.75		ug/L		95	75 - 125	6	20
Surrogate	%Recovery	LCSD Qualifier	Limits						
Dichloroacetate (Surr)	99		90 - 115						

Lab Sample ID: MRL 570-348511/3

Matrix: Water

Analysis Batch: 348511

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	4.588	J	ug/L		92	50 - 150		
Surrogate	%Recovery	MRL Qualifier	Limits						
Dichloroacetate (Surr)	98		90 - 115						

QC Sample Results

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

Job ID: 570-145746-1

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

Lab Sample ID: 570-145746-4 MS

Matrix: Water

Analysis Batch: 348511

Client Sample ID: POX

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Bromate	ND	F1	100	59.61	F1	ug/L		60	75 - 125		
Surrogate	MS %Recovery	MS Qualifier	Limits								
Dichloroacetate (Surr)	98		90 - 115								

Lab Sample ID: 570-145746-4 MSD

Matrix: Water

Analysis Batch: 348511

Client Sample ID: POX

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	54.78	F1	ug/L		55	75 - 125	8	20
Surrogate	MSD %Recovery	MSD Qualifier	Limits								
Dichloroacetate (Surr)	95		90 - 115								

Method: SM 2320B - Alkalinity

Lab Sample ID: MB 570-349503/4

Matrix: Water

Analysis Batch: 349503

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			07/26/23 20:27	1
Bicarbonate (as CaCO3)	ND		5.00		mg/L			07/26/23 20:27	1
Carbonate (as CaCO3)	ND		5.00		mg/L			07/26/23 20:27	1
Hydroxide (as CaCO3)	ND		5.00		mg/L			07/26/23 20:27	1

Lab Sample ID: LCS 570-349503/2

Matrix: Water

Analysis Batch: 349503

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	97.00		mg/L		92	78 - 110		

Lab Sample ID: LCSD 570-349503/3

Matrix: Water

Analysis Batch: 349503

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	106.9		mg/L		101	78 - 110	10	10

Lab Sample ID: 570-144619-C-1 DU

Matrix: Water

Analysis Batch: 349503

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)	68.6		68.24		mg/L		0.5	25
Bicarbonate (as CaCO3)	68.6		68.24		mg/L		0.5	25
Carbonate (as CaCO3)	ND		ND		mg/L		NC	25

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QC Sample Results

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

Job ID: 570-145746-1

Method: SM 2320B - Alkalinity (Continued)

Lab Sample ID: 570-144619-C-1 DU

Matrix: Water

Analysis Batch: 349503

Client Sample ID: Duplicate

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
Hydroxide (as CaCO ₃)	ND		ND		mg/L		NC	25

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

Lab Sample ID: MB 570-347751/1

Matrix: Water

Analysis Batch: 347751

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			07/21/23 12:45	1

Lab Sample ID: LCS 570-347751/2

Matrix: Water

Analysis Batch: 347751

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	104.0		mg/L		104	77 - 116

Lab Sample ID: LCSD 570-347751/3

Matrix: Water

Analysis Batch: 347751

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	Limit
Total Suspended Solids	100	95.00		mg/L		95	77 - 116	9	10

Lab Sample ID: 570-145811-M-1 DU

Matrix: Water

Analysis Batch: 347751

Client Sample ID: Duplicate

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
Total Suspended Solids	54.0		56.60		mg/L		5	10

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

Lab Sample ID: MB 570-348662/3

Matrix: Water

Analysis Batch: 348662

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			07/24/23 13:12	1

Lab Sample ID: LCS 570-348662/4

Matrix: Water

Analysis Batch: 348662

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	5.494		mg/L		109	85 - 115

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QC Sample Results

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

Job ID: 570-145746-1

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

Lab Sample ID: LCSD 570-348662/5

Matrix: Water

Analysis Batch: 348662

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	5.367		mg/L		107	85 - 115	2	20

Lab Sample ID: 550-204872-A-1 MS

Matrix: Water

Analysis Batch: 348662

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	ND		5.03	6.317		mg/L		118	31 - 145		

Lab Sample ID: 550-204872-A-1 MSD

Matrix: Water

Analysis Batch: 348662

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	ND		5.03	5.978		mg/L		111	31 - 145	6	20

QC Association Summary

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

Job ID: 570-145746-1

GC/MS VOA

Analysis Batch: 347570

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-145746-1	TB-072023	Total/NA	Water	8260B	
570-145746-2	CEFF	Total/NA	Water	8260B	
570-145746-3	CBT	Total/NA	Water	8260B	
570-145746-4	POX	Total/NA	Water	8260B	
570-145746-6	INF	Total/NA	Water	8260B	
570-145746-7	EW-02	Total/NA	Water	8260B	
MB 570-347570/7	Method Blank	Total/NA	Water	8260B	
LCS 570-347570/4	Lab Control Sample	Total/NA	Water	8260B	
LCSD 570-347570/5	Lab Control Sample Dup	Total/NA	Water	8260B	

Analysis Batch: 347660

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-145746-6	INF	Total/NA	Water	8260B SIM	
570-145746-7	EW-02	Total/NA	Water	8260B SIM	
MB 570-347660/7	Method Blank	Total/NA	Water	8260B SIM	
LCS 570-347660/4	Lab Control Sample	Total/NA	Water	8260B SIM	
LCSD 570-347660/5	Lab Control Sample Dup	Total/NA	Water	8260B SIM	

GC/MS Semi VOA

Prep Batch: 348152

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-145746-2	CEFF	Total/NA	Water	3510C	
570-145746-3	CBT	Total/NA	Water	3510C	
570-145746-4	POX	Total/NA	Water	3510C	
MB 570-348152/1-A	Method Blank	Total/NA	Water	3510C	
LCS 570-348152/2-A	Lab Control Sample	Total/NA	Water	3510C	
LCSD 570-348152/3-A	Lab Control Sample Dup	Total/NA	Water	3510C	

Analysis Batch: 348321

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-145746-2	CEFF	Total/NA	Water	8270C SIM ID	348152
570-145746-3	CBT	Total/NA	Water	8270C SIM ID	348152
570-145746-4	POX	Total/NA	Water	8270C SIM ID	348152
MB 570-348152/1-A	Method Blank	Total/NA	Water	8270C SIM ID	348152
LCS 570-348152/2-A	Lab Control Sample	Total/NA	Water	8270C SIM ID	348152
LCSD 570-348152/3-A	Lab Control Sample Dup	Total/NA	Water	8270C SIM ID	348152

HPLC/IC

Analysis Batch: 348511

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-145746-4	POX	Total/NA	Water	300.1	
570-145746-6	INF	Total/NA	Water	300.1	
MB 570-348511/6	Method Blank	Total/NA	Water	300.1	
LCS 570-348511/4	Lab Control Sample	Total/NA	Water	300.1	
LCSD 570-348511/5	Lab Control Sample Dup	Total/NA	Water	300.1	
MRL 570-348511/3	Lab Control Sample	Total/NA	Water	300.1	
570-145746-4 MS	POX	Total/NA	Water	300.1	
570-145746-4 MSD	POX	Total/NA	Water	300.1	

QC Association Summary

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

Job ID: 570-145746-1

HPLC/IC

Analysis Batch: 348529

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-145746-6	INF	Total/NA	Water	300.0	
570-145746-7	EW-02	Total/NA	Water	300.0	
MB 570-348529/5	Method Blank	Total/NA	Water	300.0	
LCS 570-348529/6	Lab Control Sample	Total/NA	Water	300.0	
LCSD 570-348529/7	Lab Control Sample Dup	Total/NA	Water	300.0	
570-146074-L-1 MS	Matrix Spike	Total/NA	Water	300.0	
570-146074-L-1 MSD	Matrix Spike Duplicate	Total/NA	Water	300.0	

General Chemistry

Analysis Batch: 347751

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-145746-5	PF	Total/NA	Water	SM 2540D	
MB 570-347751/1	Method Blank	Total/NA	Water	SM 2540D	
LCS 570-347751/2	Lab Control Sample	Total/NA	Water	SM 2540D	
LCSD 570-347751/3	Lab Control Sample Dup	Total/NA	Water	SM 2540D	
570-145811-M-1 DU	Duplicate	Total/NA	Water	SM 2540D	

Analysis Batch: 348662

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-145746-4	POX	Total/NA	Water	SM 5310D	
570-145746-5	PF	Total/NA	Water	SM 5310D	
MB 570-348662/3	Method Blank	Total/NA	Water	SM 5310D	
LCS 570-348662/4	Lab Control Sample	Total/NA	Water	SM 5310D	
LCSD 570-348662/5	Lab Control Sample Dup	Total/NA	Water	SM 5310D	
550-204872-A-1 MS	Matrix Spike	Total/NA	Water	SM 5310D	
550-204872-A-1 MSD	Matrix Spike Duplicate	Total/NA	Water	SM 5310D	

Analysis Batch: 349503

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-145746-4	POX	Total/NA	Water	SM 2320B	
570-145746-5	PF	Total/NA	Water	SM 2320B	
MB 570-349503/4	Method Blank	Total/NA	Water	SM 2320B	
LCS 570-349503/2	Lab Control Sample	Total/NA	Water	SM 2320B	
LCSD 570-349503/3	Lab Control Sample Dup	Total/NA	Water	SM 2320B	
570-144619-C-1 DU	Duplicate	Total/NA	Water	SM 2320B	

Lab Chronicle

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

Job ID: 570-145746-1

Client Sample ID: TB-072023

Lab Sample ID: 570-145746-1

Date Collected: 07/20/23 08:00

Matrix: Water

Date Received: 07/20/23 13:38

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	347570	07/21/23 08:56	N5PD	EET CAL 4
Instrument ID: GCMSWW										

Client Sample ID: CEFF

Lab Sample ID: 570-145746-2

Date Collected: 07/20/23 08:45

Matrix: Water

Date Received: 07/20/23 13:38

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	347570	07/21/23 11:54	N5PD	EET CAL 4
Instrument ID: GCMSWW										
Total/NA	Prep	3510C			134.9 mL	10 mL	348152	07/24/23 08:26	RY4P	EET CAL 4
Total/NA	Analysis	8270C SIM ID		1	1 mL	1 mL	348321	07/24/23 21:04	ULLI	EET CAL 4
Instrument ID: GCMSDDD										

Client Sample ID: CBT

Lab Sample ID: 570-145746-3

Date Collected: 07/20/23 08:50

Matrix: Water

Date Received: 07/20/23 13:38

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	347570	07/21/23 12:19	N5PD	EET CAL 4
Instrument ID: GCMSWW										
Total/NA	Prep	3510C			135 mL	10 mL	348152	07/24/23 08:26	RY4P	EET CAL 4
Total/NA	Analysis	8270C SIM ID		1	1 mL	1 mL	348321	07/24/23 21:18	ULLI	EET CAL 4
Instrument ID: GCMSDDD										

Client Sample ID: POX

Lab Sample ID: 570-145746-4

Date Collected: 07/20/23 09:00

Matrix: Water

Date Received: 07/20/23 13:38

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	347570	07/21/23 12:45	N5PD	EET CAL 4
Instrument ID: GCMSWW										
Total/NA	Prep	3510C			133.9 mL	10 mL	348152	07/24/23 08:26	RY4P	EET CAL 4
Total/NA	Analysis	8270C SIM ID		1	1 mL	1 mL	348321	07/24/23 21:33	ULLI	EET CAL 4
Instrument ID: GCMSDDD										
Total/NA	Analysis	300.1		10	4 mL	4 mL	348511	07/25/23 11:37	YO8L	EET CAL 4
Instrument ID: IC32										
Total/NA	Analysis	SM 2320B		1	10 mL	10 mL	349503	07/26/23 22:07	ZL4M	EET CAL 4
Instrument ID: ManSciMantech										
Total/NA	Analysis	SM 5310D		1	40 mL	40 mL	348662	07/24/23 21:17	ZL4M	EET CAL 4
Instrument ID: TOC12										

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Lab Chronicle

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

Job ID: 570-145746-1

Client Sample ID: PF

Date Collected: 07/20/23 09:05

Date Received: 07/20/23 13:38

Lab Sample ID: 570-145746-5

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 Instrument ID: ManSciMantech		1	10 mL	10 mL	349503	07/26/23 22:14	ZL4M	EET CAL 4
Total/NA	Analysis	SM 2540D Instrument ID: BAL71		1	1000 mL	1000 mL	347751	07/21/23 12:45	UWCT	EET CAL 4
Total/NA	Analysis	SM 5310D Instrument ID: TOC12		1	40 mL	40 mL	348662	07/24/23 21:36	ZL4M	EET CAL 4

Client Sample ID: INF

Date Collected: 07/20/23 09:15

Date Received: 07/20/23 13:38

Lab Sample ID: 570-145746-6

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	8260B Instrument ID: GCMSWW		1	20 mL	20 mL	347570	07/21/23 13:10	N5PD	EET CAL 4
Total/NA	Analysis	8260B SIM Instrument ID: GCMSFFF		1	25 mL	25 mL	347660	07/21/23 20:28	UJHB	EET CAL 4
Total/NA	Analysis	300.0 Instrument ID: IC10		1	4 mL	4 mL	348529	07/25/23 07:38	UIP1	EET CAL 4
Total/NA	Analysis	300.1 Instrument ID: IC32		10	4 mL	4 mL	348511	07/25/23 12:10	YO8L	EET CAL 4

Client Sample ID: EW-02

Date Collected: 07/20/23 09:45

Date Received: 07/20/23 13:38

Lab Sample ID: 570-145746-7

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	8260B Instrument ID: GCMSWW		1	20 mL	20 mL	347570	07/21/23 13:35	N5PD	EET CAL 4
Total/NA	Analysis	8260B SIM Instrument ID: GCMSFFF		1	25 mL	25 mL	347660	07/21/23 20:58	UJHB	EET CAL 4
Total/NA	Analysis	300.0 Instrument ID: IC10		1	4 mL	4 mL	348529	07/25/23 07:55	UIP1	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 / 532.15

Job ID: 570-145746-1

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: 570-145746-1

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: 570-145746-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
570-145746-1	TB-072023	Water	07/20/23 08:00	07/20/23 13:38
570-145746-2	CEFF	Water	07/20/23 08:45	07/20/23 13:38
570-145746-3	CBT	Water	07/20/23 08:50	07/20/23 13:38
570-145746-4	POX	Water	07/20/23 09:00	07/20/23 13:38
570-145746-5	PF	Water	07/20/23 09:05	07/20/23 13:38
570-145746-6	INF	Water	07/20/23 09:15	07/20/23 13:38
570-145746-7	EW-02	Water	07/20/23 09:45	07/20/23 13:38

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:				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)	Ethylendiamine	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	1,4-Dioxane by EPA 8270C 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-072023	7/20/2023	8:00		X	X				X	2						X								X																																																														
2	CEFF	7/20/2023	8:45	X	X	X				X	3					1	X							X	X																																																														
3	CBT	7/20/2023	8:50	X	X	X				X	3					1	X							X	X																																																														
4	POX	7/20/2023	9:00	X	X	X	X	X	X	X	6	1		1		1	X	X		X	X			X	X																																																														
5	PF	7/20/2023	9:05	X				X	X	X	3		1	1	1				X	X	X	X																																																																	
6	INF	7/20/2023	9:15	X	X	X			X	X	6	1		1			X	X	X				X				X																																																												
7	EW-02	7/20/2023	9:45	X	X				X	X	6			1			X	X					X		X																																																														
RES	MW-29	7/20/2023		X	X				X	X	6			1			X	X					X		X																																																														
Total number of containers per analysis:				38												2												1												5												1												3												Total No. of Containers: 47											
Relinquished By: / Company:				Date / Time				Received By: / Company				Date / Time																																																																											
Hargis + Associates, Inc.				7/20/23				Steve Netto				7/20/23																																																																											
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.



570-145746 Chain of Custody

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

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: 570-145746-1

Login Number: 145746

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	

ANALYTICAL REPORT

PREPARED FOR

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

Generated 8/4/2023 1:51:11 PM

JOB DESCRIPTION

Raytheon / 532.15

JOB NUMBER

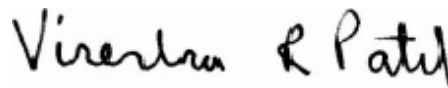
570-145746-2

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.
Project/Site: Raytheon / 532.15

Job ID: 570-145746-2

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: 570-145746-2

Job ID: 570-145746-2

Laboratory: Eurofins Calscience

Narrative

Job Narrative
570-145746-2

Comments

No additional comments.

Receipt

The samples were received on 7/20/2023 1:38 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 2.9° 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: 570-145746-2

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: 570-145746-2

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
570-145746-5	PF	Water	07/20/23 09:05	07/20/23 13:38

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9

Work Orders: 3G24027

Project: 570-145746-5, Raytheon/532.15, 57003509

Attn: Virendra Patel

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

Report Date: 8/04/2023

Received Date: 7/22/2023

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 7/22/23 with the Chain-of-Custody document. The samples were received in good condition, at 0.9 °C and on ice. All analyses met the method criteria except as noted in the case narrative or in the report with data qualifiers.

Sample Results

Sample: PF (570-145746-5)		Sampled: 07/20/23 9:05 by Client						
3G24027-01 (Water)								
Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier	
Method: EPA 415.3			Instr: UVVIS04					
Batch ID: W3G1925	Preparation: _NONE (WETCHEM)		Prepared: 07/25/23 17:45				Analyst: ymt	
UV 254	ND		0.009	1/cm	1	07/25/23 19:15	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: W3G1925 - _NONE (WETCHEM)										
Blank (W3G1925-BLK1)				Prepared & Analyzed: 07/25/23						
UV 254	ND	0.009	1/cm							
LCS (W3G1925-BS1)				Prepared & Analyzed: 07/25/23						
UV 254	0.086	0.009	1/cm	0.0880		98	90-110			
Duplicate (W3G1925-DUP1)				Prepared & Analyzed: 07/25/23						
UV 254	0.016	0.009	1/cm		0.016			0	10	
Duplicate (W3G1925-DUP2)				Prepared & Analyzed: 07/25/23						
UV 254	0.118	0.009	1/cm		0.118			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:



Ryan J. Gasio
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

Chain of Custody Record



Environment Testing

3G24027

[illegible]

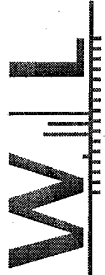
ICOC No:
570-254879

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



WECK LABORATORIES, INC.

Sample Receipt Checklist

Week WKO: **3G24027**

Date/Time Received: **07/22/23 @ 10:03**

WKO Logged by: Jerico Bolotano

of Samples: 01

Samples Checked by: Jerico Bolotano

Delivered by: Client

Task	Yes	No	N/A	Comments
COC				
COC present at receipt?	☒	☐		
COC properly completed?	☒	☐		
COC matches sample labels?	☒	☐		
Project Manager notified about COC discrepancy?	☐	☐	☒	
Sample Temperature				
Samples received on ice?	☒	☐		0.9°C
Ice Type (Blue/Wet)				Blue
All samples intact?	☒	☐		
Samples in proper containers?	☒	☐		
Sufficient sample volume?	☒	☐		
Samples intact?	☒	☐		
Received within holding time?	☐	☒		
Project Manager notified about receipt info?	☒	☐	☐	
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# 3032426
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# 06282201
O&G pH <2 verified?	☐	☐	☐	pH paper Lot#
pH adjusted for O&G	☐	☐	☐	pH Reading:
				Acid Lot#
				Amt added:
Project Manager notified about sample preservation?	☐	☐	☐	

PM Comments

Sample Receipt Checklist Completed by:

Signature: Jerico Bolotano

Date: 07/24/23

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:				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)	Ethylendiamine	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	1,4-Dioxane by EPA 8270C 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-072023	7/20/2023	8:00		X	X				X	2						X									X											
2	CEFF	7/20/2023	8:45	X	X	X				X	3					1	X								X	X											
3	CBT	7/20/2023	8:50	X	X	X				X	3					1	X								X	X											
4	POX	7/20/2023	9:00	X	X	X	X	X	X	X	6	1	1	1	1	X	X		X	X					X	X											
5	PF	7/20/2023	9:05	X				X	X	X	3	1	1	1					X	X	X	X															
6	INF	7/20/2023	9:15	X	X	X			X	X	6	1	1			X	X	X					X				X										
7	EW-02	7/20/2023	9:45	X	X				X	X	6		1			X	X						X		X												
RES	MW-29	7/20/2023		X	X				X	X	6		1			X	X						X		X												
Total number of containers per analysis:				38												Total No. of Containers: 47																					
Relinquished By: / Company:				Date / Time				Received By: / Company				Date / Time																									
Hargis + Associates, Inc.				7/20/23				Steve Netto				7/20/23																									
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

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

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.



570-145746 Chain of Custody

Login Sample Receipt Checklist

Client: Hargis + Associates, Inc.

Job Number: 570-145746-2

Login Number: 145746

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	

ANALYTICAL REPORT

PREPARED FOR

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

Generated 8/17/2023 5:21:27 PM

JOB DESCRIPTION

Raytheon / 532.15

JOB NUMBER

570-148149-1

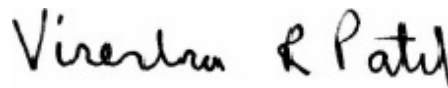
Eurofins Calscience

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



Generated
8/17/2023 5:21:27 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: 570-148149-1

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
*1	LCS/LCSD RPD exceeds control limits.

HPLC/IC

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

Glossary

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

Case Narrative

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

Job ID: 570-148149-1

Job ID: 570-148149-1

Laboratory: Eurofins Calscience

Narrative

Job Narrative 570-148149-1

Comments

No additional comments.

Receipt

The samples were received on 8/10/2023 1:08 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 2.9° C.

GC/MS VOA

Method 8260B: The RPD of the laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) for analytical batch 570-354419 recovered outside control limits for the following analytes: Vinyl chloride, Dichlorodifluoromethane and Trichlorofluoromethane. Laboratory control sample / laboratory control sample duplicate (LCS/LCSD) percent recovery is in control for affected analytes.

Method 8260B: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with analytical batch 570-354419.

Method 8260B: The lot test of the laboratory trip blank water associated with job 570-148149 LOT # 230801 indicated no detection above the method detection limit (MDL) for the following analyte: Acetone.

Method 8260B SIM: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with analytical batch 570-354055. 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 570-354768. 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 (570-148149-4) and INF (570-148149-6). Elevated reporting limits (RLs) are provided.

Method 300.0: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for Sulfate for analytical batch 570-354007 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: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with preparation batch 570-354249. The laboratory control sample (LCS) was performed in duplicate (LCSD) to provide precision data for this batch.

Method 8270C_S I M

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

Case Narrative

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

Job ID: 570-148149-1

Job ID: 570-148149-1 (Continued)

Laboratory: Eurofins Calscience (Continued)

VOA Prep

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

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Detection Summary

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

Job ID: 570-148149-1

Client Sample ID: TB-081023

Lab Sample ID: 570-148149-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acetone	9.3		8.0		ug/L	1		8260B	Total/NA

Client Sample ID: CEFF

Lab Sample ID: 570-148149-2

No Detections.

Client Sample ID: CBT

Lab Sample ID: 570-148149-3

No Detections.

Client Sample ID: POX

Lab Sample ID: 570-148149-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Alkalinity, Total (As CaCO ₃)	205		5.00		mg/L	1		SM 2320B	Total/NA
Bicarbonate (as CaCO ₃)	205		5.00		mg/L	1		SM 2320B	Total/NA

Client Sample ID: PF

Lab Sample ID: 570-148149-5

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: 570-148149-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,4-Dioxane	14		1.0		ug/L	1		8260B SIM	Total/NA
1,1-Dichloroethene	25		0.50		ug/L	1		8260B	Total/NA
Bromide	0.24		0.10		mg/L	1		300.0	Total/NA

Client Sample ID: EW-02

Lab Sample ID: 570-148149-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,4-Dioxane	4.5		1.0		ug/L	1		8260B SIM	Total/NA
1,1-Dichloroethene	8.9		0.50		ug/L	1		8260B	Total/NA
Bromide	0.19		0.10		mg/L	1		300.0	Total/NA

Client Sample ID: MW-29

Lab Sample ID: 570-148149-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,4-Dioxane	50		1.0		ug/L	1		8260B SIM	Total/NA
1,1-Dichloroethane	0.84		0.50		ug/L	1		8260B	Total/NA
1,1-Dichloroethene	83		0.50		ug/L	1		8260B	Total/NA
Trichloroethene	1.2		0.50		ug/L	1		8260B	Total/NA
Bromide	0.38		0.10		mg/L	1		300.0	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: 570-148149-1

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

Client Sample ID: INF
Date Collected: 08/10/23 10:30
Date Received: 08/10/23 13:08

Lab Sample ID: 570-148149-6
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	14		1.0		ug/L			08/11/23 17:36	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,4-Dichlorobutane (Surr)	121		67 - 133					08/11/23 17:36	1

Client Sample ID: EW-02
Date Collected: 08/10/23 10:45
Date Received: 08/10/23 13:08

Lab Sample ID: 570-148149-7
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	4.5		1.0		ug/L			08/15/23 19:51	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,4-Dichlorobutane (Surr)	101		67 - 133					08/15/23 19:51	1

Client Sample ID: MW-29
Date Collected: 08/10/23 11:00
Date Received: 08/10/23 13:08

Lab Sample ID: 570-148149-8
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	50		1.0		ug/L			08/11/23 18:29	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,4-Dichlorobutane (Surr)	114		67 - 133					08/11/23 18:29	1

Client Sample Results

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

Job ID: 570-148149-1

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

Client Sample ID: TB-081023
Date Collected: 08/10/23 08:00
Date Received: 08/10/23 13:08

Lab Sample ID: 570-148149-1
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		0.50		ug/L			08/12/23 14:06	1
1,1,1-Trichloroethane	ND		0.50		ug/L			08/12/23 14:06	1
1,1,2,2-Tetrachloroethane	ND		0.50		ug/L			08/12/23 14:06	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.50		ug/L			08/12/23 14:06	1
1,1,2-Trichloroethane	ND		0.50		ug/L			08/12/23 14:06	1
1,1-Dichloroethane	ND		0.50		ug/L			08/12/23 14:06	1
1,1-Dichloroethene	ND		0.50		ug/L			08/12/23 14:06	1
1,1-Dichloropropene	ND		0.50		ug/L			08/12/23 14:06	1
1,2,3-Trichlorobenzene	ND		0.50		ug/L			08/12/23 14:06	1
1,2,3-Trichloropropane	ND		0.50		ug/L			08/12/23 14:06	1
1,2,4-Trichlorobenzene	ND		0.50		ug/L			08/12/23 14:06	1
1,2,4-Trimethylbenzene	ND		0.50		ug/L			08/12/23 14:06	1
1,2-Dibromo-3-Chloropropane	ND		1.0		ug/L			08/12/23 14:06	1
1,2-Dibromoethane	ND		0.50		ug/L			08/12/23 14:06	1
1,2-Dichlorobenzene	ND		0.50		ug/L			08/12/23 14:06	1
1,2-Dichloroethane	ND		0.50		ug/L			08/12/23 14:06	1
1,2-Dichloropropane	ND		0.50		ug/L			08/12/23 14:06	1
1,3,5-Trimethylbenzene	ND		0.50		ug/L			08/12/23 14:06	1
1,3-Dichlorobenzene	ND		0.50		ug/L			08/12/23 14:06	1
1,3-Dichloropropane	ND		0.50		ug/L			08/12/23 14:06	1
1,4-Dichlorobenzene	ND		0.50		ug/L			08/12/23 14:06	1
2,2-Dichloropropane	ND		0.50		ug/L			08/12/23 14:06	1
2-Butanone	ND		5.0		ug/L			08/12/23 14:06	1
2-Chlorotoluene	ND		0.50		ug/L			08/12/23 14:06	1
2-Hexanone	ND		6.0		ug/L			08/12/23 14:06	1
4-Chlorotoluene	ND		0.50		ug/L			08/12/23 14:06	1
4-Methyl-2-pentanone	ND		5.0		ug/L			08/12/23 14:06	1
Acetone	9.3		8.0		ug/L			08/12/23 14:06	1
Benzene	ND		0.50		ug/L			08/12/23 14:06	1
Bromobenzene	ND		0.50		ug/L			08/12/23 14:06	1
Bromochloromethane	ND		1.0		ug/L			08/12/23 14:06	1
Bromodichloromethane	ND		0.50		ug/L			08/12/23 14:06	1
Bromoform	ND		0.50		ug/L			08/12/23 14:06	1
Bromomethane	ND		2.0		ug/L			08/12/23 14:06	1
cis-1,2-Dichloroethene	ND		0.50		ug/L			08/12/23 14:06	1
cis-1,3-Dichloropropene	ND		0.50		ug/L			08/12/23 14:06	1
Carbon disulfide	ND		1.0		ug/L			08/12/23 14:06	1
Carbon tetrachloride	ND		0.50		ug/L			08/12/23 14:06	1
Chlorobenzene	ND		0.50		ug/L			08/12/23 14:06	1
Chloroethane	ND		0.50		ug/L			08/12/23 14:06	1
Chloroform	ND		0.50		ug/L			08/12/23 14:06	1
Chloromethane	ND		1.0		ug/L			08/12/23 14:06	1
Dibromochloromethane	ND		0.50		ug/L			08/12/23 14:06	1
Dibromomethane	ND		0.50		ug/L			08/12/23 14:06	1
Dichlorodifluoromethane	ND	*1	1.0		ug/L			08/12/23 14:06	1
Di-isopropyl ether (DIPE)	ND		0.50		ug/L			08/12/23 14:06	1
Ethanol	ND		50		ug/L			08/12/23 14:06	1
Ethylbenzene	ND		0.50		ug/L			08/12/23 14:06	1
Ethyl-t-butyl ether (ETBE)	ND		0.50		ug/L			08/12/23 14:06	1

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Client Sample Results

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

Job ID: 570-148149-1

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

Client Sample ID: TB-081023
Date Collected: 08/10/23 08:00
Date Received: 08/10/23 13:08

Lab Sample ID: 570-148149-1
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Isopropylbenzene	ND		0.50		ug/L			08/12/23 14:06	1
Methylene Chloride	ND		1.0		ug/L			08/12/23 14:06	1
Methyl-t-Butyl Ether (MTBE)	ND		0.50		ug/L			08/12/23 14:06	1
Naphthalene	ND		1.0		ug/L			08/12/23 14:06	1
n-Butylbenzene	ND		0.50		ug/L			08/12/23 14:06	1
N-Propylbenzene	ND		0.50		ug/L			08/12/23 14:06	1
o-Xylene	ND		0.50		ug/L			08/12/23 14:06	1
m,p-Xylene	ND		1.0		ug/L			08/12/23 14:06	1
p-Isopropyltoluene	ND		0.50		ug/L			08/12/23 14:06	1
sec-Butylbenzene	ND		0.50		ug/L			08/12/23 14:06	1
Styrene	ND		0.50		ug/L			08/12/23 14:06	1
trans-1,2-Dichloroethene	ND		0.50		ug/L			08/12/23 14:06	1
trans-1,3-Dichloropropene	ND		0.50		ug/L			08/12/23 14:06	1
Tert-amyl-methyl ether (TAME)	ND		0.50		ug/L			08/12/23 14:06	1
tert-Butyl alcohol (TBA)	ND		5.0		ug/L			08/12/23 14:06	1
tert-Butylbenzene	ND		0.50		ug/L			08/12/23 14:06	1
Tetrachloroethene	ND		0.50		ug/L			08/12/23 14:06	1
Toluene	ND		0.50		ug/L			08/12/23 14:06	1
Trichloroethene	ND		0.50		ug/L			08/12/23 14:06	1
Trichlorofluoromethane	ND	*1	0.50		ug/L			08/12/23 14:06	1
Vinyl acetate	ND		5.0		ug/L			08/12/23 14:06	1
Vinyl chloride	ND	*1	0.50		ug/L			08/12/23 14:06	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	97		64 - 132		08/12/23 14:06	1
4-Bromofluorobenzene (Surr)	95		76 - 120		08/12/23 14:06	1
Dibromofluoromethane (Surr)	97		80 - 120		08/12/23 14:06	1
Toluene-d8 (Surr)	99		80 - 120		08/12/23 14:06	1

Client Sample ID: CEFF
Date Collected: 08/10/23 10:00
Date Received: 08/10/23 13:08

Lab Sample ID: 570-148149-2
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		0.50		ug/L			08/12/23 14:34	1
1,1,1-Trichloroethane	ND		0.50		ug/L			08/12/23 14:34	1
1,1,2,2-Tetrachloroethane	ND		0.50		ug/L			08/12/23 14:34	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.50		ug/L			08/12/23 14:34	1
1,1,2-Trichloroethane	ND		0.50		ug/L			08/12/23 14:34	1
1,1-Dichloroethane	ND		0.50		ug/L			08/12/23 14:34	1
1,1-Dichloroethene	ND		0.50		ug/L			08/12/23 14:34	1
1,1-Dichloropropene	ND		0.50		ug/L			08/12/23 14:34	1
1,2,3-Trichlorobenzene	ND		0.50		ug/L			08/12/23 14:34	1
1,2,3-Trichloropropane	ND		0.50		ug/L			08/12/23 14:34	1
1,2,4-Trichlorobenzene	ND		0.50		ug/L			08/12/23 14:34	1
1,2,4-Trimethylbenzene	ND		0.50		ug/L			08/12/23 14:34	1
1,2-Dibromo-3-Chloropropane	ND		1.0		ug/L			08/12/23 14:34	1
1,2-Dibromoethane	ND		0.50		ug/L			08/12/23 14:34	1
1,2-Dichlorobenzene	ND		0.50		ug/L			08/12/23 14:34	1
1,2-Dichloroethane	ND		0.50		ug/L			08/12/23 14:34	1
1,2-Dichloropropane	ND		0.50		ug/L			08/12/23 14:34	1

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Client Sample Results

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

Job ID: 570-148149-1

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

Client Sample ID: CEFF
Date Collected: 08/10/23 10:00
Date Received: 08/10/23 13:08

Lab Sample ID: 570-148149-2
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	ND		0.50		ug/L			08/12/23 14:34	1
1,3-Dichlorobenzene	ND		0.50		ug/L			08/12/23 14:34	1
1,3-Dichloropropane	ND		0.50		ug/L			08/12/23 14:34	1
1,4-Dichlorobenzene	ND		0.50		ug/L			08/12/23 14:34	1
2,2-Dichloropropane	ND		0.50		ug/L			08/12/23 14:34	1
2-Butanone	ND		5.0		ug/L			08/12/23 14:34	1
2-Chlorotoluene	ND		0.50		ug/L			08/12/23 14:34	1
2-Hexanone	ND		6.0		ug/L			08/12/23 14:34	1
4-Chlorotoluene	ND		0.50		ug/L			08/12/23 14:34	1
4-Methyl-2-pentanone	ND		5.0		ug/L			08/12/23 14:34	1
Acetone	ND		8.0		ug/L			08/12/23 14:34	1
Benzene	ND		0.50		ug/L			08/12/23 14:34	1
Bromobenzene	ND		0.50		ug/L			08/12/23 14:34	1
Bromochloromethane	ND		1.0		ug/L			08/12/23 14:34	1
Bromodichloromethane	ND		0.50		ug/L			08/12/23 14:34	1
Bromoform	ND		0.50		ug/L			08/12/23 14:34	1
Bromomethane	ND		2.0		ug/L			08/12/23 14:34	1
cis-1,2-Dichloroethene	ND		0.50		ug/L			08/12/23 14:34	1
cis-1,3-Dichloropropene	ND		0.50		ug/L			08/12/23 14:34	1
Carbon disulfide	ND		1.0		ug/L			08/12/23 14:34	1
Carbon tetrachloride	ND		0.50		ug/L			08/12/23 14:34	1
Chlorobenzene	ND		0.50		ug/L			08/12/23 14:34	1
Chloroethane	ND		0.50		ug/L			08/12/23 14:34	1
Chloroform	ND		0.50		ug/L			08/12/23 14:34	1
Chloromethane	ND		1.0		ug/L			08/12/23 14:34	1
Dibromochloromethane	ND		0.50		ug/L			08/12/23 14:34	1
Dibromomethane	ND		0.50		ug/L			08/12/23 14:34	1
Dichlorodifluoromethane	ND	*1	1.0		ug/L			08/12/23 14:34	1
Di-isopropyl ether (DIPE)	ND		0.50		ug/L			08/12/23 14:34	1
Ethanol	ND		50		ug/L			08/12/23 14:34	1
Ethylbenzene	ND		0.50		ug/L			08/12/23 14:34	1
Ethyl-t-butyl ether (ETBE)	ND		0.50		ug/L			08/12/23 14:34	1
Isopropylbenzene	ND		0.50		ug/L			08/12/23 14:34	1
Methylene Chloride	ND		1.0		ug/L			08/12/23 14:34	1
Methyl-t-Butyl Ether (MTBE)	ND		0.50		ug/L			08/12/23 14:34	1
Naphthalene	ND		1.0		ug/L			08/12/23 14:34	1
n-Butylbenzene	ND		0.50		ug/L			08/12/23 14:34	1
N-Propylbenzene	ND		0.50		ug/L			08/12/23 14:34	1
o-Xylene	ND		0.50		ug/L			08/12/23 14:34	1
m,p-Xylene	ND		1.0		ug/L			08/12/23 14:34	1
p-Isopropyltoluene	ND		0.50		ug/L			08/12/23 14:34	1
sec-Butylbenzene	ND		0.50		ug/L			08/12/23 14:34	1
Styrene	ND		0.50		ug/L			08/12/23 14:34	1
trans-1,2-Dichloroethene	ND		0.50		ug/L			08/12/23 14:34	1
trans-1,3-Dichloropropene	ND		0.50		ug/L			08/12/23 14:34	1
Tert-amyl-methyl ether (TAME)	ND		0.50		ug/L			08/12/23 14:34	1
tert-Butyl alcohol (TBA)	ND		5.0		ug/L			08/12/23 14:34	1
tert-Butylbenzene	ND		0.50		ug/L			08/12/23 14:34	1
Tetrachloroethene	ND		0.50		ug/L			08/12/23 14:34	1

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Client Sample Results

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

Job ID: 570-148149-1

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

Client Sample ID: CEFF

Date Collected: 08/10/23 10:00

Date Received: 08/10/23 13:08

Lab Sample ID: 570-148149-2

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Toluene	ND		0.50		ug/L			08/12/23 14:34	1
Trichloroethene	ND		0.50		ug/L			08/12/23 14:34	1
Trichlorofluoromethane	ND	*1	0.50		ug/L			08/12/23 14:34	1
Vinyl acetate	ND		5.0		ug/L			08/12/23 14:34	1
Vinyl chloride	ND	*1	0.50		ug/L			08/12/23 14:34	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	94		64 - 132		08/12/23 14:34	1
4-Bromofluorobenzene (Surr)	96		76 - 120		08/12/23 14:34	1
Dibromofluoromethane (Surr)	94		80 - 120		08/12/23 14:34	1
Toluene-d8 (Surr)	99		80 - 120		08/12/23 14:34	1

Client Sample ID: CBT

Date Collected: 08/10/23 10:05

Date Received: 08/10/23 13:08

Lab Sample ID: 570-148149-3

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		0.50		ug/L			08/12/23 15:03	1
1,1,1-Trichloroethane	ND		0.50		ug/L			08/12/23 15:03	1
1,1,2,2-Tetrachloroethane	ND		0.50		ug/L			08/12/23 15:03	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.50		ug/L			08/12/23 15:03	1
1,1,2-Trichloroethane	ND		0.50		ug/L			08/12/23 15:03	1
1,1-Dichloroethane	ND		0.50		ug/L			08/12/23 15:03	1
1,1-Dichloroethene	ND		0.50		ug/L			08/12/23 15:03	1
1,1-Dichloropropene	ND		0.50		ug/L			08/12/23 15:03	1
1,2,3-Trichlorobenzene	ND		0.50		ug/L			08/12/23 15:03	1
1,2,3-Trichloropropane	ND		0.50		ug/L			08/12/23 15:03	1
1,2,4-Trichlorobenzene	ND		0.50		ug/L			08/12/23 15:03	1
1,2,4-Trimethylbenzene	ND		0.50		ug/L			08/12/23 15:03	1
1,2-Dibromo-3-Chloropropane	ND		1.0		ug/L			08/12/23 15:03	1
1,2-Dibromoethane	ND		0.50		ug/L			08/12/23 15:03	1
1,2-Dichlorobenzene	ND		0.50		ug/L			08/12/23 15:03	1
1,2-Dichloroethane	ND		0.50		ug/L			08/12/23 15:03	1
1,2-Dichloropropane	ND		0.50		ug/L			08/12/23 15:03	1
1,3,5-Trimethylbenzene	ND		0.50		ug/L			08/12/23 15:03	1
1,3-Dichlorobenzene	ND		0.50		ug/L			08/12/23 15:03	1
1,3-Dichloropropane	ND		0.50		ug/L			08/12/23 15:03	1
1,4-Dichlorobenzene	ND		0.50		ug/L			08/12/23 15:03	1
2,2-Dichloropropane	ND		0.50		ug/L			08/12/23 15:03	1
2-Butanone	ND		5.0		ug/L			08/12/23 15:03	1
2-Chlorotoluene	ND		0.50		ug/L			08/12/23 15:03	1
2-Hexanone	ND		6.0		ug/L			08/12/23 15:03	1
4-Chlorotoluene	ND		0.50		ug/L			08/12/23 15:03	1
4-Methyl-2-pentanone	ND		5.0		ug/L			08/12/23 15:03	1
Acetone	ND		8.0		ug/L			08/12/23 15:03	1
Benzene	ND		0.50		ug/L			08/12/23 15:03	1
Bromobenzene	ND		0.50		ug/L			08/12/23 15:03	1
Bromochloromethane	ND		1.0		ug/L			08/12/23 15:03	1
Bromodichloromethane	ND		0.50		ug/L			08/12/23 15:03	1
Bromoform	ND		0.50		ug/L			08/12/23 15:03	1
Bromomethane	ND		2.0		ug/L			08/12/23 15:03	1

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Client Sample Results

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

Job ID: 570-148149-1

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

Client Sample ID: CBT
Date Collected: 08/10/23 10:05
Date Received: 08/10/23 13:08

Lab Sample ID: 570-148149-3
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	ND		0.50		ug/L			08/12/23 15:03	1
cis-1,3-Dichloropropene	ND		0.50		ug/L			08/12/23 15:03	1
Carbon disulfide	ND		1.0		ug/L			08/12/23 15:03	1
Carbon tetrachloride	ND		0.50		ug/L			08/12/23 15:03	1
Chlorobenzene	ND		0.50		ug/L			08/12/23 15:03	1
Chloroethane	ND		0.50		ug/L			08/12/23 15:03	1
Chloroform	ND		0.50		ug/L			08/12/23 15:03	1
Chloromethane	ND		1.0		ug/L			08/12/23 15:03	1
Dibromochloromethane	ND		0.50		ug/L			08/12/23 15:03	1
Dibromomethane	ND		0.50		ug/L			08/12/23 15:03	1
Dichlorodifluoromethane	ND	*1	1.0		ug/L			08/12/23 15:03	1
Di-isopropyl ether (DIPE)	ND		0.50		ug/L			08/12/23 15:03	1
Ethanol	ND		50		ug/L			08/12/23 15:03	1
Ethylbenzene	ND		0.50		ug/L			08/12/23 15:03	1
Ethyl-t-butyl ether (ETBE)	ND		0.50		ug/L			08/12/23 15:03	1
Isopropylbenzene	ND		0.50		ug/L			08/12/23 15:03	1
Methylene Chloride	ND		1.0		ug/L			08/12/23 15:03	1
Methyl-t-Butyl Ether (MTBE)	ND		0.50		ug/L			08/12/23 15:03	1
Naphthalene	ND		1.0		ug/L			08/12/23 15:03	1
n-Butylbenzene	ND		0.50		ug/L			08/12/23 15:03	1
N-Propylbenzene	ND		0.50		ug/L			08/12/23 15:03	1
o-Xylene	ND		0.50		ug/L			08/12/23 15:03	1
m,p-Xylene	ND		1.0		ug/L			08/12/23 15:03	1
p-Isopropyltoluene	ND		0.50		ug/L			08/12/23 15:03	1
sec-Butylbenzene	ND		0.50		ug/L			08/12/23 15:03	1
Styrene	ND		0.50		ug/L			08/12/23 15:03	1
trans-1,2-Dichloroethene	ND		0.50		ug/L			08/12/23 15:03	1
trans-1,3-Dichloropropene	ND		0.50		ug/L			08/12/23 15:03	1
Tert-amyl-methyl ether (TAME)	ND		0.50		ug/L			08/12/23 15:03	1
tert-Butyl alcohol (TBA)	ND		5.0		ug/L			08/12/23 15:03	1
tert-Butylbenzene	ND		0.50		ug/L			08/12/23 15:03	1
Tetrachloroethene	ND		0.50		ug/L			08/12/23 15:03	1
Toluene	ND		0.50		ug/L			08/12/23 15:03	1
Trichloroethene	ND		0.50		ug/L			08/12/23 15:03	1
Trichlorofluoromethane	ND	*1	0.50		ug/L			08/12/23 15:03	1
Vinyl acetate	ND		5.0		ug/L			08/12/23 15:03	1
Vinyl chloride	ND	*1	0.50		ug/L			08/12/23 15:03	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	96		64 - 132		08/12/23 15:03	1
4-Bromofluorobenzene (Surr)	92		76 - 120		08/12/23 15:03	1
Dibromofluoromethane (Surr)	95		80 - 120		08/12/23 15:03	1
Toluene-d8 (Surr)	98		80 - 120		08/12/23 15:03	1

Client Sample ID: POX
Date Collected: 08/10/23 10:10
Date Received: 08/10/23 13:08

Lab Sample ID: 570-148149-4
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		0.50		ug/L			08/12/23 15:31	1
1,1,1-Trichloroethane	ND		0.50		ug/L			08/12/23 15:31	1

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Client Sample Results

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

Job ID: 570-148149-1

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

Client Sample ID: POX
Date Collected: 08/10/23 10:10
Date Received: 08/10/23 13:08

Lab Sample ID: 570-148149-4
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane	ND		0.50		ug/L			08/12/23 15:31	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.50		ug/L			08/12/23 15:31	1
1,1,2-Trichloroethane	ND		0.50		ug/L			08/12/23 15:31	1
1,1-Dichloroethane	ND		0.50		ug/L			08/12/23 15:31	1
1,1-Dichloroethene	ND		0.50		ug/L			08/12/23 15:31	1
1,1-Dichloropropene	ND		0.50		ug/L			08/12/23 15:31	1
1,2,3-Trichlorobenzene	ND		0.50		ug/L			08/12/23 15:31	1
1,2,3-Trichloropropane	ND		0.50		ug/L			08/12/23 15:31	1
1,2,4-Trichlorobenzene	ND		0.50		ug/L			08/12/23 15:31	1
1,2,4-Trimethylbenzene	ND		0.50		ug/L			08/12/23 15:31	1
1,2-Dibromo-3-Chloropropane	ND		1.0		ug/L			08/12/23 15:31	1
1,2-Dibromoethane	ND		0.50		ug/L			08/12/23 15:31	1
1,2-Dichlorobenzene	ND		0.50		ug/L			08/12/23 15:31	1
1,2-Dichloroethane	ND		0.50		ug/L			08/12/23 15:31	1
1,2-Dichloropropane	ND		0.50		ug/L			08/12/23 15:31	1
1,3,5-Trimethylbenzene	ND		0.50		ug/L			08/12/23 15:31	1
1,3-Dichlorobenzene	ND		0.50		ug/L			08/12/23 15:31	1
1,3-Dichloropropane	ND		0.50		ug/L			08/12/23 15:31	1
1,4-Dichlorobenzene	ND		0.50		ug/L			08/12/23 15:31	1
2,2-Dichloropropane	ND		0.50		ug/L			08/12/23 15:31	1
2-Butanone	ND		5.0		ug/L			08/12/23 15:31	1
2-Chlorotoluene	ND		0.50		ug/L			08/12/23 15:31	1
2-Hexanone	ND		6.0		ug/L			08/12/23 15:31	1
4-Chlorotoluene	ND		0.50		ug/L			08/12/23 15:31	1
4-Methyl-2-pentanone	ND		5.0		ug/L			08/12/23 15:31	1
Acetone	ND		8.0		ug/L			08/12/23 15:31	1
Benzene	ND		0.50		ug/L			08/12/23 15:31	1
Bromobenzene	ND		0.50		ug/L			08/12/23 15:31	1
Bromochloromethane	ND		1.0		ug/L			08/12/23 15:31	1
Bromodichloromethane	ND		0.50		ug/L			08/12/23 15:31	1
Bromoform	ND		0.50		ug/L			08/12/23 15:31	1
Bromomethane	ND		2.0		ug/L			08/12/23 15:31	1
cis-1,2-Dichloroethene	ND		0.50		ug/L			08/12/23 15:31	1
cis-1,3-Dichloropropene	ND		0.50		ug/L			08/12/23 15:31	1
Carbon disulfide	ND		1.0		ug/L			08/12/23 15:31	1
Carbon tetrachloride	ND		0.50		ug/L			08/12/23 15:31	1
Chlorobenzene	ND		0.50		ug/L			08/12/23 15:31	1
Chloroethane	ND		0.50		ug/L			08/12/23 15:31	1
Chloroform	ND		0.50		ug/L			08/12/23 15:31	1
Chloromethane	ND		1.0		ug/L			08/12/23 15:31	1
Dibromochloromethane	ND		0.50		ug/L			08/12/23 15:31	1
Dibromomethane	ND		0.50		ug/L			08/12/23 15:31	1
Dichlorodifluoromethane	ND *1		1.0		ug/L			08/12/23 15:31	1
Di-isopropyl ether (DIPE)	ND		0.50		ug/L			08/12/23 15:31	1
Ethanol	ND		50		ug/L			08/12/23 15:31	1
Ethylbenzene	ND		0.50		ug/L			08/12/23 15:31	1
Ethyl-t-butyl ether (ETBE)	ND		0.50		ug/L			08/12/23 15:31	1
Isopropylbenzene	ND		0.50		ug/L			08/12/23 15:31	1
Methylene Chloride	ND		1.0		ug/L			08/12/23 15:31	1

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Client Sample Results

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

Job ID: 570-148149-1

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

Client Sample ID: POX
Date Collected: 08/10/23 10:10
Date Received: 08/10/23 13:08

Lab Sample ID: 570-148149-4
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl-t-Butyl Ether (MTBE)	ND		0.50		ug/L			08/12/23 15:31	1
Naphthalene	ND		1.0		ug/L			08/12/23 15:31	1
n-Butylbenzene	ND		0.50		ug/L			08/12/23 15:31	1
N-Propylbenzene	ND		0.50		ug/L			08/12/23 15:31	1
o-Xylene	ND		0.50		ug/L			08/12/23 15:31	1
m,p-Xylene	ND		1.0		ug/L			08/12/23 15:31	1
p-Isopropyltoluene	ND		0.50		ug/L			08/12/23 15:31	1
sec-Butylbenzene	ND		0.50		ug/L			08/12/23 15:31	1
Styrene	ND		0.50		ug/L			08/12/23 15:31	1
trans-1,2-Dichloroethene	ND		0.50		ug/L			08/12/23 15:31	1
trans-1,3-Dichloropropene	ND		0.50		ug/L			08/12/23 15:31	1
Tert-amyl-methyl ether (TAME)	ND		0.50		ug/L			08/12/23 15:31	1
tert-Butyl alcohol (TBA)	ND		5.0		ug/L			08/12/23 15:31	1
tert-Butylbenzene	ND		0.50		ug/L			08/12/23 15:31	1
Tetrachloroethene	ND		0.50		ug/L			08/12/23 15:31	1
Toluene	ND		0.50		ug/L			08/12/23 15:31	1
Trichloroethene	ND		0.50		ug/L			08/12/23 15:31	1
Trichlorofluoromethane	ND	*1	0.50		ug/L			08/12/23 15:31	1
Vinyl acetate	ND		5.0		ug/L			08/12/23 15:31	1
Vinyl chloride	ND	*1	0.50		ug/L			08/12/23 15:31	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	95		64 - 132		08/12/23 15:31	1
4-Bromofluorobenzene (Surr)	95		76 - 120		08/12/23 15:31	1
Dibromofluoromethane (Surr)	93		80 - 120		08/12/23 15:31	1
Toluene-d8 (Surr)	98		80 - 120		08/12/23 15:31	1

Client Sample ID: INF
Date Collected: 08/10/23 10:30
Date Received: 08/10/23 13:08

Lab Sample ID: 570-148149-6
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		0.50		ug/L			08/12/23 15:59	1
1,1,1-Trichloroethane	ND		0.50		ug/L			08/12/23 15:59	1
1,1,2,2-Tetrachloroethane	ND		0.50		ug/L			08/12/23 15:59	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.50		ug/L			08/12/23 15:59	1
1,1,2-Trichloroethane	ND		0.50		ug/L			08/12/23 15:59	1
1,1-Dichloroethane	ND		0.50		ug/L			08/12/23 15:59	1
1,1-Dichloroethene	25		0.50		ug/L			08/12/23 15:59	1
1,1-Dichloropropene	ND		0.50		ug/L			08/12/23 15:59	1
1,2,3-Trichlorobenzene	ND		0.50		ug/L			08/12/23 15:59	1
1,2,3-Trichloropropane	ND		0.50		ug/L			08/12/23 15:59	1
1,2,4-Trichlorobenzene	ND		0.50		ug/L			08/12/23 15:59	1
1,2,4-Trimethylbenzene	ND		0.50		ug/L			08/12/23 15:59	1
1,2-Dibromo-3-Chloropropane	ND		1.0		ug/L			08/12/23 15:59	1
1,2-Dibromoethane	ND		0.50		ug/L			08/12/23 15:59	1
1,2-Dichlorobenzene	ND		0.50		ug/L			08/12/23 15:59	1
1,2-Dichloroethane	ND		0.50		ug/L			08/12/23 15:59	1
1,2-Dichloropropane	ND		0.50		ug/L			08/12/23 15:59	1
1,3,5-Trimethylbenzene	ND		0.50		ug/L			08/12/23 15:59	1
1,3-Dichlorobenzene	ND		0.50		ug/L			08/12/23 15:59	1

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Client Sample Results

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

Job ID: 570-148149-1

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

Client Sample ID: INF

Date Collected: 08/10/23 10:30

Date Received: 08/10/23 13:08

Lab Sample ID: 570-148149-6

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3-Dichloropropane	ND		0.50		ug/L			08/12/23 15:59	1
1,4-Dichlorobenzene	ND		0.50		ug/L			08/12/23 15:59	1
2,2-Dichloropropane	ND		0.50		ug/L			08/12/23 15:59	1
2-Butanone	ND		5.0		ug/L			08/12/23 15:59	1
2-Chlorotoluene	ND		0.50		ug/L			08/12/23 15:59	1
2-Hexanone	ND		6.0		ug/L			08/12/23 15:59	1
4-Chlorotoluene	ND		0.50		ug/L			08/12/23 15:59	1
4-Methyl-2-pentanone	ND		5.0		ug/L			08/12/23 15:59	1
Acetone	ND		8.0		ug/L			08/12/23 15:59	1
Benzene	ND		0.50		ug/L			08/12/23 15:59	1
Bromobenzene	ND		0.50		ug/L			08/12/23 15:59	1
Bromochloromethane	ND		1.0		ug/L			08/12/23 15:59	1
Bromodichloromethane	ND		0.50		ug/L			08/12/23 15:59	1
Bromoform	ND		0.50		ug/L			08/12/23 15:59	1
Bromomethane	ND		2.0		ug/L			08/12/23 15:59	1
cis-1,2-Dichloroethene	ND		0.50		ug/L			08/12/23 15:59	1
cis-1,3-Dichloropropene	ND		0.50		ug/L			08/12/23 15:59	1
Carbon disulfide	ND		1.0		ug/L			08/12/23 15:59	1
Carbon tetrachloride	ND		0.50		ug/L			08/12/23 15:59	1
Chlorobenzene	ND		0.50		ug/L			08/12/23 15:59	1
Chloroethane	ND		0.50		ug/L			08/12/23 15:59	1
Chloroform	ND		0.50		ug/L			08/12/23 15:59	1
Chloromethane	ND		1.0		ug/L			08/12/23 15:59	1
Dibromochloromethane	ND		0.50		ug/L			08/12/23 15:59	1
Dibromomethane	ND		0.50		ug/L			08/12/23 15:59	1
Dichlorodifluoromethane	ND	*1	1.0		ug/L			08/12/23 15:59	1
Di-isopropyl ether (DIPE)	ND		0.50		ug/L			08/12/23 15:59	1
Ethanol	ND		50		ug/L			08/12/23 15:59	1
Ethylbenzene	ND		0.50		ug/L			08/12/23 15:59	1
Ethyl-t-butyl ether (ETBE)	ND		0.50		ug/L			08/12/23 15:59	1
Isopropylbenzene	ND		0.50		ug/L			08/12/23 15:59	1
Methylene Chloride	ND		1.0		ug/L			08/12/23 15:59	1
Methyl-t-Butyl Ether (MTBE)	ND		0.50		ug/L			08/12/23 15:59	1
Naphthalene	ND		1.0		ug/L			08/12/23 15:59	1
n-Butylbenzene	ND		0.50		ug/L			08/12/23 15:59	1
N-Propylbenzene	ND		0.50		ug/L			08/12/23 15:59	1
o-Xylene	ND		0.50		ug/L			08/12/23 15:59	1
m,p-Xylene	ND		1.0		ug/L			08/12/23 15:59	1
p-Isopropyltoluene	ND		0.50		ug/L			08/12/23 15:59	1
sec-Butylbenzene	ND		0.50		ug/L			08/12/23 15:59	1
Styrene	ND		0.50		ug/L			08/12/23 15:59	1
trans-1,2-Dichloroethene	ND		0.50		ug/L			08/12/23 15:59	1
trans-1,3-Dichloropropene	ND		0.50		ug/L			08/12/23 15:59	1
Tert-amyl-methyl ether (TAME)	ND		0.50		ug/L			08/12/23 15:59	1
tert-Butyl alcohol (TBA)	ND		5.0		ug/L			08/12/23 15:59	1
tert-Butylbenzene	ND		0.50		ug/L			08/12/23 15:59	1
Tetrachloroethene	ND		0.50		ug/L			08/12/23 15:59	1
Toluene	ND		0.50		ug/L			08/12/23 15:59	1
Trichloroethene	ND		0.50		ug/L			08/12/23 15:59	1

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Client Sample Results

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

Job ID: 570-148149-1

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

Client Sample ID: INF

Date Collected: 08/10/23 10:30

Date Received: 08/10/23 13:08

Lab Sample ID: 570-148149-6

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Trichlorofluoromethane	ND	*1	0.50		ug/L			08/12/23 15:59	1
Vinyl acetate	ND		5.0		ug/L			08/12/23 15:59	1
Vinyl chloride	ND	*1	0.50		ug/L			08/12/23 15:59	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	96		64 - 132					08/12/23 15:59	1
4-Bromofluorobenzene (Surr)	94		76 - 120					08/12/23 15:59	1
Dibromofluoromethane (Surr)	95		80 - 120					08/12/23 15:59	1
Toluene-d8 (Surr)	98		80 - 120					08/12/23 15:59	1

Client Sample ID: EW-02

Date Collected: 08/10/23 10:45

Date Received: 08/10/23 13:08

Lab Sample ID: 570-148149-7

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		0.50		ug/L			08/12/23 16:28	1
1,1,1-Trichloroethane	ND		0.50		ug/L			08/12/23 16:28	1
1,1,2,2-Tetrachloroethane	ND		0.50		ug/L			08/12/23 16:28	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.50		ug/L			08/12/23 16:28	1
1,1,2-Trichloroethane	ND		0.50		ug/L			08/12/23 16:28	1
1,1-Dichloroethane	ND		0.50		ug/L			08/12/23 16:28	1
1,1-Dichloroethene	8.9		0.50		ug/L			08/12/23 16:28	1
1,1-Dichloropropene	ND		0.50		ug/L			08/12/23 16:28	1
1,2,3-Trichlorobenzene	ND		0.50		ug/L			08/12/23 16:28	1
1,2,3-Trichloropropane	ND		0.50		ug/L			08/12/23 16:28	1
1,2,4-Trichlorobenzene	ND		0.50		ug/L			08/12/23 16:28	1
1,2,4-Trimethylbenzene	ND		0.50		ug/L			08/12/23 16:28	1
1,2-Dibromo-3-Chloropropane	ND		1.0		ug/L			08/12/23 16:28	1
1,2-Dibromoethane	ND		0.50		ug/L			08/12/23 16:28	1
1,2-Dichlorobenzene	ND		0.50		ug/L			08/12/23 16:28	1
1,2-Dichloroethane	ND		0.50		ug/L			08/12/23 16:28	1
1,2-Dichloropropane	ND		0.50		ug/L			08/12/23 16:28	1
1,3,5-Trimethylbenzene	ND		0.50		ug/L			08/12/23 16:28	1
1,3-Dichlorobenzene	ND		0.50		ug/L			08/12/23 16:28	1
1,3-Dichloropropane	ND		0.50		ug/L			08/12/23 16:28	1
1,4-Dichlorobenzene	ND		0.50		ug/L			08/12/23 16:28	1
2,2-Dichloropropane	ND		0.50		ug/L			08/12/23 16:28	1
2-Butanone	ND		5.0		ug/L			08/12/23 16:28	1
2-Chlorotoluene	ND		0.50		ug/L			08/12/23 16:28	1
2-Hexanone	ND		6.0		ug/L			08/12/23 16:28	1
4-Chlorotoluene	ND		0.50		ug/L			08/12/23 16:28	1
4-Methyl-2-pentanone	ND		5.0		ug/L			08/12/23 16:28	1
Acetone	ND		8.0		ug/L			08/12/23 16:28	1
Benzene	ND		0.50		ug/L			08/12/23 16:28	1
Bromobenzene	ND		0.50		ug/L			08/12/23 16:28	1
Bromochloromethane	ND		1.0		ug/L			08/12/23 16:28	1
Bromodichloromethane	ND		0.50		ug/L			08/12/23 16:28	1
Bromoform	ND		0.50		ug/L			08/12/23 16:28	1
Bromomethane	ND		2.0		ug/L			08/12/23 16:28	1
cis-1,2-Dichloroethene	ND		0.50		ug/L			08/12/23 16:28	1
cis-1,3-Dichloropropene	ND		0.50		ug/L			08/12/23 16:28	1

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Client Sample Results

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

Job ID: 570-148149-1

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

Client Sample ID: EW-02
Date Collected: 08/10/23 10:45
Date Received: 08/10/23 13:08

Lab Sample ID: 570-148149-7
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon disulfide	ND		1.0		ug/L			08/12/23 16:28	1
Carbon tetrachloride	ND		0.50		ug/L			08/12/23 16:28	1
Chlorobenzene	ND		0.50		ug/L			08/12/23 16:28	1
Chloroethane	ND		0.50		ug/L			08/12/23 16:28	1
Chloroform	ND		0.50		ug/L			08/12/23 16:28	1
Chloromethane	ND		1.0		ug/L			08/12/23 16:28	1
Dibromochloromethane	ND		0.50		ug/L			08/12/23 16:28	1
Dibromomethane	ND		0.50		ug/L			08/12/23 16:28	1
Dichlorodifluoromethane	ND	*1	1.0		ug/L			08/12/23 16:28	1
Di-isopropyl ether (DIPE)	ND		0.50		ug/L			08/12/23 16:28	1
Ethanol	ND		50		ug/L			08/12/23 16:28	1
Ethylbenzene	ND		0.50		ug/L			08/12/23 16:28	1
Ethyl-t-butyl ether (ETBE)	ND		0.50		ug/L			08/12/23 16:28	1
Isopropylbenzene	ND		0.50		ug/L			08/12/23 16:28	1
Methylene Chloride	ND		1.0		ug/L			08/12/23 16:28	1
Methyl-t-Butyl Ether (MTBE)	ND		0.50		ug/L			08/12/23 16:28	1
Naphthalene	ND		1.0		ug/L			08/12/23 16:28	1
n-Butylbenzene	ND		0.50		ug/L			08/12/23 16:28	1
N-Propylbenzene	ND		0.50		ug/L			08/12/23 16:28	1
o-Xylene	ND		0.50		ug/L			08/12/23 16:28	1
m,p-Xylene	ND		1.0		ug/L			08/12/23 16:28	1
p-Isopropyltoluene	ND		0.50		ug/L			08/12/23 16:28	1
sec-Butylbenzene	ND		0.50		ug/L			08/12/23 16:28	1
Styrene	ND		0.50		ug/L			08/12/23 16:28	1
trans-1,2-Dichloroethene	ND		0.50		ug/L			08/12/23 16:28	1
trans-1,3-Dichloropropene	ND		0.50		ug/L			08/12/23 16:28	1
Tert-amyl-methyl ether (TAME)	ND		0.50		ug/L			08/12/23 16:28	1
tert-Butyl alcohol (TBA)	ND		5.0		ug/L			08/12/23 16:28	1
tert-Butylbenzene	ND		0.50		ug/L			08/12/23 16:28	1
Tetrachloroethene	ND		0.50		ug/L			08/12/23 16:28	1
Toluene	ND		0.50		ug/L			08/12/23 16:28	1
Trichloroethene	ND		0.50		ug/L			08/12/23 16:28	1
Trichlorofluoromethane	ND	*1	0.50		ug/L			08/12/23 16:28	1
Vinyl acetate	ND		5.0		ug/L			08/12/23 16:28	1
Vinyl chloride	ND	*1	0.50		ug/L			08/12/23 16:28	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	96		64 - 132					08/12/23 16:28	1
4-Bromofluorobenzene (Surr)	93		76 - 120					08/12/23 16:28	1
Dibromofluoromethane (Surr)	96		80 - 120					08/12/23 16:28	1
Toluene-d8 (Surr)	98		80 - 120					08/12/23 16:28	1

Client Sample ID: MW-29
Date Collected: 08/10/23 11:00
Date Received: 08/10/23 13:08

Lab Sample ID: 570-148149-8
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		0.50		ug/L			08/12/23 16:56	1
1,1,1-Trichloroethane	ND		0.50		ug/L			08/12/23 16:56	1
1,1,2,2-Tetrachloroethane	ND		0.50		ug/L			08/12/23 16:56	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.50		ug/L			08/12/23 16:56	1

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Client Sample Results

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

Job ID: 570-148149-1

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

Client Sample ID: MW-29

Date Collected: 08/10/23 11:00

Date Received: 08/10/23 13:08

Lab Sample ID: 570-148149-8

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2-Trichloroethane	ND		0.50		ug/L			08/12/23 16:56	1
1,1-Dichloroethane	0.84		0.50		ug/L			08/12/23 16:56	1
1,1-Dichloroethene	83		0.50		ug/L			08/12/23 16:56	1
1,1-Dichloropropene	ND		0.50		ug/L			08/12/23 16:56	1
1,2,3-Trichlorobenzene	ND		0.50		ug/L			08/12/23 16:56	1
1,2,3-Trichloropropane	ND		0.50		ug/L			08/12/23 16:56	1
1,2,4-Trichlorobenzene	ND		0.50		ug/L			08/12/23 16:56	1
1,2,4-Trimethylbenzene	ND		0.50		ug/L			08/12/23 16:56	1
1,2-Dibromo-3-Chloropropane	ND		1.0		ug/L			08/12/23 16:56	1
1,2-Dibromoethane	ND		0.50		ug/L			08/12/23 16:56	1
1,2-Dichlorobenzene	ND		0.50		ug/L			08/12/23 16:56	1
1,2-Dichloroethane	ND		0.50		ug/L			08/12/23 16:56	1
1,2-Dichloropropane	ND		0.50		ug/L			08/12/23 16:56	1
1,3,5-Trimethylbenzene	ND		0.50		ug/L			08/12/23 16:56	1
1,3-Dichlorobenzene	ND		0.50		ug/L			08/12/23 16:56	1
1,3-Dichloropropane	ND		0.50		ug/L			08/12/23 16:56	1
1,4-Dichlorobenzene	ND		0.50		ug/L			08/12/23 16:56	1
2,2-Dichloropropane	ND		0.50		ug/L			08/12/23 16:56	1
2-Butanone	ND		5.0		ug/L			08/12/23 16:56	1
2-Chlorotoluene	ND		0.50		ug/L			08/12/23 16:56	1
2-Hexanone	ND		6.0		ug/L			08/12/23 16:56	1
4-Chlorotoluene	ND		0.50		ug/L			08/12/23 16:56	1
4-Methyl-2-pentanone	ND		5.0		ug/L			08/12/23 16:56	1
Acetone	ND		8.0		ug/L			08/12/23 16:56	1
Benzene	ND		0.50		ug/L			08/12/23 16:56	1
Bromobenzene	ND		0.50		ug/L			08/12/23 16:56	1
Bromochloromethane	ND		1.0		ug/L			08/12/23 16:56	1
Bromodichloromethane	ND		0.50		ug/L			08/12/23 16:56	1
Bromoform	ND		0.50		ug/L			08/12/23 16:56	1
Bromomethane	ND		2.0		ug/L			08/12/23 16:56	1
cis-1,2-Dichloroethene	ND		0.50		ug/L			08/12/23 16:56	1
cis-1,3-Dichloropropene	ND		0.50		ug/L			08/12/23 16:56	1
Carbon disulfide	ND		1.0		ug/L			08/12/23 16:56	1
Carbon tetrachloride	ND		0.50		ug/L			08/12/23 16:56	1
Chlorobenzene	ND		0.50		ug/L			08/12/23 16:56	1
Chloroethane	ND		0.50		ug/L			08/12/23 16:56	1
Chloroform	ND		0.50		ug/L			08/12/23 16:56	1
Chloromethane	ND		1.0		ug/L			08/12/23 16:56	1
Dibromochloromethane	ND		0.50		ug/L			08/12/23 16:56	1
Dibromomethane	ND		0.50		ug/L			08/12/23 16:56	1
Dichlorodifluoromethane	ND *1		1.0		ug/L			08/12/23 16:56	1
Di-isopropyl ether (DIPE)	ND		0.50		ug/L			08/12/23 16:56	1
Ethanol	ND		50		ug/L			08/12/23 16:56	1
Ethylbenzene	ND		0.50		ug/L			08/12/23 16:56	1
Ethyl-t-butyl ether (ETBE)	ND		0.50		ug/L			08/12/23 16:56	1
Isopropylbenzene	ND		0.50		ug/L			08/12/23 16:56	1
Methylene Chloride	ND		1.0		ug/L			08/12/23 16:56	1
Methyl-t-Butyl Ether (MTBE)	ND		0.50		ug/L			08/12/23 16:56	1
Naphthalene	ND		1.0		ug/L			08/12/23 16:56	1

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Client Sample Results

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

Job ID: 570-148149-1

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

Client Sample ID: MW-29

Date Collected: 08/10/23 11:00

Date Received: 08/10/23 13:08

Lab Sample ID: 570-148149-8

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
n-Butylbenzene	ND		0.50		ug/L			08/12/23 16:56	1
N-Propylbenzene	ND		0.50		ug/L			08/12/23 16:56	1
o-Xylene	ND		0.50		ug/L			08/12/23 16:56	1
m,p-Xylene	ND		1.0		ug/L			08/12/23 16:56	1
p-Isopropyltoluene	ND		0.50		ug/L			08/12/23 16:56	1
sec-Butylbenzene	ND		0.50		ug/L			08/12/23 16:56	1
Styrene	ND		0.50		ug/L			08/12/23 16:56	1
trans-1,2-Dichloroethene	ND		0.50		ug/L			08/12/23 16:56	1
trans-1,3-Dichloropropene	ND		0.50		ug/L			08/12/23 16:56	1
Tert-amyl-methyl ether (TAME)	ND		0.50		ug/L			08/12/23 16:56	1
tert-Butyl alcohol (TBA)	ND		5.0		ug/L			08/12/23 16:56	1
tert-Butylbenzene	ND		0.50		ug/L			08/12/23 16:56	1
Tetrachloroethene	ND		0.50		ug/L			08/12/23 16:56	1
Toluene	ND		0.50		ug/L			08/12/23 16:56	1
Trichloroethene	1.2		0.50		ug/L			08/12/23 16:56	1
Trichlorofluoromethane	ND	*1	0.50		ug/L			08/12/23 16:56	1
Vinyl acetate	ND		5.0		ug/L			08/12/23 16:56	1
Vinyl chloride	ND	*1	0.50		ug/L			08/12/23 16:56	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	96		64 - 132		08/12/23 16:56	1
4-Bromofluorobenzene (Surr)	92		76 - 120		08/12/23 16:56	1
Dibromofluoromethane (Surr)	94		80 - 120		08/12/23 16:56	1
Toluene-d8 (Surr)	98		80 - 120		08/12/23 16:56	1

Client Sample Results

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

Job ID: 570-148149-1

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

Client Sample ID: CEFF
Date Collected: 08/10/23 10:00
Date Received: 08/10/23 13:08

Lab Sample ID: 570-148149-2
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	ND		0.37		ug/L		08/11/23 14:40	08/14/23 15:43	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,4-Dioxane-d8	26		21 - 120				08/11/23 14:40	08/14/23 15:43	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Nitrobenzene-d5	81		58 - 135				08/11/23 14:40	08/14/23 15:43	1

Client Sample ID: CBT
Date Collected: 08/10/23 10:05
Date Received: 08/10/23 13:08

Lab Sample ID: 570-148149-3
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	ND		0.37		ug/L		08/11/23 14:40	08/14/23 15:59	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,4-Dioxane-d8	23		21 - 120				08/11/23 14:40	08/14/23 15:59	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Nitrobenzene-d5	103		58 - 135				08/11/23 14:40	08/14/23 15:59	1

Client Sample ID: POX
Date Collected: 08/10/23 10:10
Date Received: 08/10/23 13:08

Lab Sample ID: 570-148149-4
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	ND		0.37		ug/L		08/11/23 14:40	08/14/23 16:14	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,4-Dioxane-d8	26		21 - 120				08/11/23 14:40	08/14/23 16:14	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Nitrobenzene-d5	77		58 - 135				08/11/23 14:40	08/14/23 16:14	1

Client Sample Results

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

Job ID: 570-148149-1

Method: EPA 300.0 - Anions, Ion Chromatography

Client Sample ID: INF
Date Collected: 08/10/23 10:30
Date Received: 08/10/23 13:08

Lab Sample ID: 570-148149-6
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromide	0.24		0.10		mg/L			08/11/23 07:21	1

Client Sample ID: EW-02
Date Collected: 08/10/23 10:45
Date Received: 08/10/23 13:08

Lab Sample ID: 570-148149-7
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromide	0.19		0.10		mg/L			08/11/23 07:38	1

Client Sample ID: MW-29
Date Collected: 08/10/23 11:00
Date Received: 08/10/23 13:08

Lab Sample ID: 570-148149-8
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromide	0.38		0.10		mg/L			08/11/23 07:54	1

Client Sample Results

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

Job ID: 570-148149-1

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

Client Sample ID: POX
Date Collected: 08/10/23 10:10
Date Received: 08/10/23 13:08

Lab Sample ID: 570-148149-4
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromate	ND		100		ug/L			08/11/23 16:53	20
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Dichloroacetate (Surr)	99		90 - 115					08/11/23 16:53	20

Client Sample ID: INF
Date Collected: 08/10/23 10:30
Date Received: 08/10/23 13:08

Lab Sample ID: 570-148149-6
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromate	ND		100		ug/L			08/11/23 17:27	20
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Dichloroacetate (Surr)	99		90 - 115					08/11/23 17:27	20

Client Sample Results

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

Job ID: 570-148149-1

General Chemistry

Client Sample ID: POX
Date Collected: 08/10/23 10:10
Date Received: 08/10/23 13:08

Lab Sample ID: 570-148149-4
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity, Total (As CaCO3) (SM 2320B)	205		5.00		mg/L			08/11/23 16:45	1
Bicarbonate (as CaCO3) (SM 2320B)	205		5.00		mg/L			08/11/23 16:45	1
Carbonate (as CaCO3) (SM 2320B)	ND		5.00		mg/L			08/11/23 16:45	1
Hydroxide (as CaCO3) (SM 2320B)	ND		5.00		mg/L			08/11/23 16:45	1
Carbon, Total Organic (SM 5310D)	ND		0.500		mg/L			08/12/23 00:32	1

Client Sample ID: PF
Date Collected: 08/10/23 10:20
Date Received: 08/10/23 13:08

Lab Sample ID: 570-148149-5
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity, Total (As CaCO3) (SM 2320B)	206		5.00		mg/L			08/11/23 16:52	1
Bicarbonate (as CaCO3) (SM 2320B)	206		5.00		mg/L			08/11/23 16:52	1
Carbonate (as CaCO3) (SM 2320B)	ND		5.00		mg/L			08/11/23 16:52	1
Hydroxide (as CaCO3) (SM 2320B)	ND		5.00		mg/L			08/11/23 16:52	1
Total Suspended Solids (SM 2540D)	ND		1.00		mg/L			08/14/23 14:50	1
Carbon, Total Organic (SM 5310D)	ND		0.500		mg/L			08/12/23 00:52	1

Surrogate Summary

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

Job ID: 570-148149-1

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)
570-148149-1	TB-081023	97	95	97	99
570-148149-2	CEFF	94	96	94	99
570-148149-3	CBT	96	92	95	98
570-148149-4	POX	95	95	93	98
570-148149-6	INF	96	94	95	98
570-148149-7	EW-02	96	93	96	98
570-148149-8	MW-29	96	92	94	98
LCS 570-354419/4	Lab Control Sample	91	101	96	100
LCSD 570-354419/7	Lab Control Sample Dup	91	100	96	100
MB 570-354419/11	Method Blank	95	94	94	99

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)			
570-147820-B-3 MS	Matrix Spike	98			
570-147820-B-3 MSD	Matrix Spike Duplicate	107			
570-148149-6	INF	121			
570-148149-7	EW-02	101			
570-148149-8	MW-29	114			
LCS 570-354055/4	Lab Control Sample	105			
LCS 570-354970/4	Lab Control Sample	95			
LCSD 570-354055/5	Lab Control Sample Dup	124			
LCSD 570-354970/5	Lab Control Sample Dup	100			
MB 570-354055/7	Method Blank	105			
MB 570-354970/7	Method Blank	120			

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)			
570-148149-2	CEFF	81			
570-148149-3	CBT	103			
570-148149-4	POX	77			
LCS 570-354249/2-A	Lab Control Sample	59			
LCSD 570-354249/3-A	Lab Control Sample Dup	72			
MB 570-354249/1-A	Method Blank	104			

Surrogate Legend

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Surrogate Summary

Client: Hargis + Associates, Inc.
Project/Site: Raytheon / 532.15
NBZ = Nitrobenzene-d5

Job ID: 570-148149-1

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)
570-148149-4	POX	99
570-148149-4 MS	POX	100
570-148149-4 MSD	POX	100
570-148149-6	INF	99
LCS 570-354016/5	Lab Control Sample	102
LCSD 570-354016/6	Lab Control Sample Dup	99
MB 570-354016/4	Method Blank	101
MRL 570-354016/3	Lab Control Sample	100

Surrogate Legend

DCAA = Dichloroacetate (Surr)

Isotope Dilution Summary

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

Job ID: 570-148149-1

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)
570-148149-2	CEFF	26
570-148149-3	CBT	23
570-148149-4	POX	26
LCS 570-354249/2-A	Lab Control Sample	46
LCSD 570-354249/3-A	Lab Control Sample Dup	47
MB 570-354249/1-A	Method Blank	35

Surrogate Legend

DXE = 1,4-Dioxane-d8

QC Sample Results

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

Job ID: 570-148149-1

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

Lab Sample ID: MB 570-354419/11

Matrix: Water

Analysis Batch: 354419

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			08/12/23 13:09	1
1,1,1-Trichloroethane	ND		0.50		ug/L			08/12/23 13:09	1
1,1,2,2-Tetrachloroethane	ND		0.50		ug/L			08/12/23 13:09	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.50		ug/L			08/12/23 13:09	1
1,1,2-Trichloroethane	ND		0.50		ug/L			08/12/23 13:09	1
1,1-Dichloroethane	ND		0.50		ug/L			08/12/23 13:09	1
1,1-Dichloroethene	ND		0.50		ug/L			08/12/23 13:09	1
1,1-Dichloropropene	ND		0.50		ug/L			08/12/23 13:09	1
1,2,3-Trichlorobenzene	ND		0.50		ug/L			08/12/23 13:09	1
1,2,3-Trichloropropane	ND		0.50		ug/L			08/12/23 13:09	1
1,2,4-Trichlorobenzene	ND		0.50		ug/L			08/12/23 13:09	1
1,2,4-Trimethylbenzene	ND		0.50		ug/L			08/12/23 13:09	1
1,2-Dibromo-3-Chloropropane	ND		1.0		ug/L			08/12/23 13:09	1
1,2-Dibromoethane	ND		0.50		ug/L			08/12/23 13:09	1
1,2-Dichlorobenzene	ND		0.50		ug/L			08/12/23 13:09	1
1,2-Dichloroethane	ND		0.50		ug/L			08/12/23 13:09	1
1,2-Dichloropropane	ND		0.50		ug/L			08/12/23 13:09	1
1,3,5-Trimethylbenzene	ND		0.50		ug/L			08/12/23 13:09	1
1,3-Dichlorobenzene	ND		0.50		ug/L			08/12/23 13:09	1
1,3-Dichloropropane	ND		0.50		ug/L			08/12/23 13:09	1
1,4-Dichlorobenzene	ND		0.50		ug/L			08/12/23 13:09	1
2,2-Dichloropropane	ND		0.50		ug/L			08/12/23 13:09	1
2-Butanone	ND		5.0		ug/L			08/12/23 13:09	1
2-Chlorotoluene	ND		0.50		ug/L			08/12/23 13:09	1
2-Hexanone	ND		6.0		ug/L			08/12/23 13:09	1
4-Chlorotoluene	ND		0.50		ug/L			08/12/23 13:09	1
4-Methyl-2-pentanone	ND		5.0		ug/L			08/12/23 13:09	1
Acetone	ND		8.0		ug/L			08/12/23 13:09	1
Benzene	ND		0.50		ug/L			08/12/23 13:09	1
Bromobenzene	ND		0.50		ug/L			08/12/23 13:09	1
Bromochloromethane	ND		1.0		ug/L			08/12/23 13:09	1
Bromodichloromethane	ND		0.50		ug/L			08/12/23 13:09	1
Bromoform	ND		0.50		ug/L			08/12/23 13:09	1
Bromomethane	ND		2.0		ug/L			08/12/23 13:09	1
cis-1,2-Dichloroethene	ND		0.50		ug/L			08/12/23 13:09	1
cis-1,3-Dichloropropene	ND		0.50		ug/L			08/12/23 13:09	1
Carbon disulfide	ND		1.0		ug/L			08/12/23 13:09	1
Carbon tetrachloride	ND		0.50		ug/L			08/12/23 13:09	1
Chlorobenzene	ND		0.50		ug/L			08/12/23 13:09	1
Chloroethane	ND		0.50		ug/L			08/12/23 13:09	1
Chloroform	ND		0.50		ug/L			08/12/23 13:09	1
Chloromethane	ND		1.0		ug/L			08/12/23 13:09	1
Dibromochloromethane	ND		0.50		ug/L			08/12/23 13:09	1
Dibromomethane	ND		0.50		ug/L			08/12/23 13:09	1
Dichlorodifluoromethane	ND		1.0		ug/L			08/12/23 13:09	1
Di-isopropyl ether (DIPE)	ND		0.50		ug/L			08/12/23 13:09	1
Ethanol	ND		50		ug/L			08/12/23 13:09	1
Ethylbenzene	ND		0.50		ug/L			08/12/23 13:09	1

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QC Sample Results

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

Job ID: 570-148149-1

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

Lab Sample ID: MB 570-354419/11

Matrix: Water

Analysis Batch: 354419

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			08/12/23 13:09	1
Isopropylbenzene	ND		0.50		ug/L			08/12/23 13:09	1
Methylene Chloride	ND		1.0		ug/L			08/12/23 13:09	1
Methyl-t-Butyl Ether (MTBE)	ND		0.50		ug/L			08/12/23 13:09	1
Naphthalene	ND		1.0		ug/L			08/12/23 13:09	1
n-Butylbenzene	ND		0.50		ug/L			08/12/23 13:09	1
N-Propylbenzene	ND		0.50		ug/L			08/12/23 13:09	1
o-Xylene	ND		0.50		ug/L			08/12/23 13:09	1
m,p-Xylene	ND		1.0		ug/L			08/12/23 13:09	1
p-Isopropyltoluene	ND		0.50		ug/L			08/12/23 13:09	1
sec-Butylbenzene	ND		0.50		ug/L			08/12/23 13:09	1
Styrene	ND		0.50		ug/L			08/12/23 13:09	1
trans-1,2-Dichloroethene	ND		0.50		ug/L			08/12/23 13:09	1
trans-1,3-Dichloropropene	ND		0.50		ug/L			08/12/23 13:09	1
Tert-amyl-methyl ether (TAME)	ND		0.50		ug/L			08/12/23 13:09	1
tert-Butyl alcohol (TBA)	ND		5.0		ug/L			08/12/23 13:09	1
tert-Butylbenzene	ND		0.50		ug/L			08/12/23 13:09	1
Tetrachloroethene	ND		0.50		ug/L			08/12/23 13:09	1
Toluene	ND		0.50		ug/L			08/12/23 13:09	1
Trichloroethene	ND		0.50		ug/L			08/12/23 13:09	1
Trichlorofluoromethane	ND		0.50		ug/L			08/12/23 13:09	1
Vinyl acetate	ND		5.0		ug/L			08/12/23 13:09	1
Vinyl chloride	ND		0.50		ug/L			08/12/23 13:09	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	95		64 - 132		08/12/23 13:09	1
4-Bromofluorobenzene (Surr)	94		76 - 120		08/12/23 13:09	1
Dibromofluoromethane (Surr)	94		80 - 120		08/12/23 13:09	1
Toluene-d8 (Surr)	99		80 - 120		08/12/23 13:09	1

Lab Sample ID: LCS 570-354419/4

Matrix: Water

Analysis Batch: 354419

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	8.004		ug/L		80	80 - 126
1,2-Dibromoethane	10.0	9.801		ug/L		98	80 - 125
1,2-Dichlorobenzene	10.0	9.779		ug/L		98	80 - 120
1,2-Dichloroethane	10.0	9.132		ug/L		91	76 - 130
Benzene	10.0	9.414		ug/L		94	80 - 120
Carbon tetrachloride	10.0	8.568		ug/L		86	61 - 139
Chlorobenzene	10.0	9.911		ug/L		99	80 - 120
Di-isopropyl ether (DIPE)	10.0	8.666		ug/L		87	65 - 145
Ethanol	100	99.74		ug/L		100	20 - 180
Ethylbenzene	10.0	9.762		ug/L		98	80 - 126
Ethyl-t-butyl ether (ETBE)	10.0	8.631		ug/L		86	76 - 125
Methyl-t-Butyl Ether (MTBE)	10.0	8.543		ug/L		85	69 - 128
o-Xylene	10.0	9.960		ug/L		100	80 - 124

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QC Sample Results

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

Job ID: 570-148149-1

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

Lab Sample ID: LCS 570-354419/4

Matrix: Water

Analysis Batch: 354419

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	20.51		ug/L		103	80 - 123
Tert-amyl-methyl ether (TAME)	10.0	9.556		ug/L		96	78 - 133
tert-Butyl alcohol (TBA)	50.0	47.42		ug/L		95	68 - 133
Toluene	10.0	9.449		ug/L		94	80 - 120
Trichloroethene	10.0	8.897		ug/L		89	77 - 124
Vinyl chloride	10.0	6.530		ug/L		65	50 - 160

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	91		64 - 132
4-Bromofluorobenzene (Surr)	101		76 - 120
Dibromofluoromethane (Surr)	96		80 - 120
Toluene-d8 (Surr)	100		80 - 120

Lab Sample ID: LCSD 570-354419/7

Matrix: Water

Analysis Batch: 354419

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	8.301		ug/L		83	80 - 126	4	21
1,2-Dibromoethane	10.0	9.546		ug/L		95	80 - 125	3	20
1,2-Dichlorobenzene	10.0	9.821		ug/L		98	80 - 120	0	20
1,2-Dichloroethane	10.0	8.729		ug/L		87	76 - 130	5	20
Benzene	10.0	9.445		ug/L		94	80 - 120	0	20
Carbon tetrachloride	10.0	8.866		ug/L		89	61 - 139	3	20
Chlorobenzene	10.0	9.945		ug/L		99	80 - 120	0	20
Di-isopropyl ether (DIPE)	10.0	8.917		ug/L		89	65 - 145	3	20
Ethanol	100	100.1		ug/L		100	20 - 180	0	30
Ethylbenzene	10.0	9.931		ug/L		99	80 - 126	2	20
Ethyl-t-butyl ether (ETBE)	10.0	8.634		ug/L		86	76 - 125	0	20
Methyl-t-Butyl Ether (MTBE)	10.0	8.244		ug/L		82	69 - 128	4	20
o-Xylene	10.0	10.19		ug/L		102	80 - 124	2	20
m,p-Xylene	20.0	20.80		ug/L		104	80 - 123	1	20
Tert-amyl-methyl ether (TAME)	10.0	9.019		ug/L		90	78 - 133	6	20
tert-Butyl alcohol (TBA)	50.0	43.81		ug/L		88	68 - 133	8	21
Toluene	10.0	9.575		ug/L		96	80 - 120	1	20
Trichloroethene	10.0	8.863		ug/L		89	77 - 124	0	20
Vinyl chloride	10.0	8.465	*1	ug/L		85	50 - 160	26	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	91		64 - 132
4-Bromofluorobenzene (Surr)	100		76 - 120
Dibromofluoromethane (Surr)	96		80 - 120
Toluene-d8 (Surr)	100		80 - 120

QC Sample Results

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

Job ID: 570-148149-1

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

Lab Sample ID: MB 570-354055/7

Matrix: Water

Analysis Batch: 354055

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			08/11/23 11:33	1
Surrogate	MB %Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,4-Dichlorobutane (Surr)	105		67 - 133					08/11/23 11:33	1

Lab Sample ID: LCS 570-354055/4

Matrix: Water

Analysis Batch: 354055

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	17.93		ug/L		90	75 - 120	
Surrogate	LCS %Recovery	LCS Qualifier	Limits					
1,4-Dichlorobutane (Surr)	105		67 - 133					

Lab Sample ID: LCSD 570-354055/5

Matrix: Water

Analysis Batch: 354055

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	17.79		ug/L		89	75 - 120	1	20
Surrogate	LCSD %Recovery	LCSD Qualifier	Limits						
1,4-Dichlorobutane (Surr)	124		67 - 133						

Lab Sample ID: MB 570-354970/7

Matrix: Water

Analysis Batch: 354970

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			08/15/23 12:47	1
Surrogate	MB %Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,4-Dichlorobutane (Surr)	120		67 - 133					08/15/23 12:47	1

Lab Sample ID: LCS 570-354970/4

Matrix: Water

Analysis Batch: 354970

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	19.18		ug/L		96	75 - 120	
Surrogate	LCS %Recovery	LCS Qualifier	Limits					
1,4-Dichlorobutane (Surr)	95		67 - 133					

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QC Sample Results

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

Job ID: 570-148149-1

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

Lab Sample ID: LCSD 570-354970/5

Matrix: Water

Analysis Batch: 354970

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	19.50		ug/L		98	75 - 120	2	20
Surrogate	LCSD %Recovery	LCSD Qualifier	Limits						
1,4-Dichlorobutane (Surr)	100		67 - 133						

Lab Sample ID: 570-147820-B-3 MS

Matrix: Water

Analysis Batch: 354970

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	RPD	RPD Limit
1,4-Dioxane	ND		20.0	18.84		ug/L		94	75 - 120		
Surrogate	MS %Recovery	MS Qualifier	Limits								
1,4-Dichlorobutane (Surr)	98		67 - 133								

Lab Sample ID: 570-147820-B-3 MSD

Matrix: Water

Analysis Batch: 354970

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
1,4-Dioxane	ND		20.0	16.68		ug/L		83	75 - 120	12	20
Surrogate	MSD %Recovery	MSD Qualifier	Limits								
1,4-Dichlorobutane (Surr)	107		67 - 133								

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

Lab Sample ID: MB 570-354249/1-A

Matrix: Water

Analysis Batch: 354499

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 354249

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	ND		0.50		ug/L		08/11/23 14:40	08/14/23 13:40	1
Isotope Dilution	MB %Recovery	MB Qualifier	Limits						
1,4-Dioxane-d8	35		21 - 120						
Surrogate	MB %Recovery	MB Qualifier	Limits						
Nitrobenzene-d5	104		58 - 135						

Lab Sample ID: LCS 570-354249/2-A

Matrix: Water

Analysis Batch: 354499

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 354249

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
1,4-Dioxane	20.0	20.26		ug/L		101	63 - 144		

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QC Sample Results

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

Job ID: 570-148149-1

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

				LCS		LCS																			
Isotope Dilution		%Recovery		Qualifier		Limits																			
1,4-Dioxane-d8		46				21 - 120																			
				LCS		LCS																			
Surrogate		%Recovery		Qualifier		Limits																			
Nitrobenzene-d5		59				58 - 135																			
Lab Sample ID: LCSD 570-354249/3-A													Client Sample ID: Lab Control Sample Dup												
Matrix: Water													Prep Type: Total/NA												
Analysis Batch: 354499													Prep Batch: 354249												
Analyte				Spike Added		LCSD Result		LCSD Qualifier		Unit		D		%Rec		%Rec Limits		RPD		RPD Limit					
1,4-Dioxane				20.0		19.80				ug/L				99		63 - 144		2		20					
				LCSD		LCSD																			
Isotope Dilution		%Recovery		Qualifier		Limits																			
1,4-Dioxane-d8		47				21 - 120																			
				LCSD		LCSD																			
Surrogate		%Recovery		Qualifier		Limits																			
Nitrobenzene-d5		72				58 - 135																			

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 570-354007/5						Client Sample ID: Method Blank					
Matrix: Water						Prep Type: Total/NA					
Analysis Batch: 354007											
Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac		
Bromide	ND		0.10		mg/L			08/11/23 04:59	1		
Lab Sample ID: LCS 570-354007/6						Client Sample ID: Lab Control Sample					
Matrix: Water						Prep Type: Total/NA					
Analysis Batch: 354007											
Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Bromide			5.00	4.894		mg/L		98	90 - 110		
Lab Sample ID: LCSD 570-354007/7						Client Sample ID: Lab Control Sample Dup					
Matrix: Water						Prep Type: Total/NA					
Analysis Batch: 354007											
Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Bromide			5.00	4.927		mg/L		99	90 - 110	1	15
Lab Sample ID: 570-148149-6 MS						Client Sample ID: INF					
Matrix: Water						Prep Type: Total/NA					
Analysis Batch: 354007											
Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Bromide	0.24		5.00	5.092		mg/L		97	80 - 120		

QC Sample Results

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

Job ID: 570-148149-1

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: 570-148149-6 MSD

Matrix: Water

Analysis Batch: 354007

Client Sample ID: INF

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Bromide	0.24		5.00	5.193		mg/L		99	80 - 120	2	20

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

Lab Sample ID: MB 570-354016/4

Matrix: Water

Analysis Batch: 354016

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			08/11/23 06:09	1
Surrogate	%Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
Dichloroacetate (Surr)	101		90 - 115					08/11/23 06:09	1

Lab Sample ID: LCS 570-354016/5

Matrix: Water

Analysis Batch: 354016

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	24.36		ug/L		97	75 - 125		
Surrogate	%Recovery	LCS Qualifier	Limits								
Dichloroacetate (Surr)	102		90 - 115								

Lab Sample ID: LCSD 570-354016/6

Matrix: Water

Analysis Batch: 354016

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	24.74		ug/L		99	75 - 125	2	20
Surrogate	%Recovery	LCSD Qualifier	Limits								
Dichloroacetate (Surr)	99		90 - 115								

Lab Sample ID: MRL 570-354016/3

Matrix: Water

Analysis Batch: 354016

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	4.467	J	ug/L		89	50 - 150		
Surrogate	%Recovery	MRL Qualifier	Limits								
Dichloroacetate (Surr)	100		90 - 115								

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QC Sample Results

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

Job ID: 570-148149-1

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

Lab Sample ID: 570-148149-4 MS

Matrix: Water

Analysis Batch: 354016

Client Sample ID: POX

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Bromate	ND		100	ND		ug/L		93	75 - 125		
Surrogate	MS %Recovery	MS Qualifier	Limits								
Dichloroacetate (Surr)	100		90 - 115								

Lab Sample ID: 570-148149-4 MSD

Matrix: Water

Analysis Batch: 354016

Client Sample ID: POX

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	ND		ug/L		89	75 - 125	4	20
Surrogate	MSD %Recovery	MSD Qualifier	Limits								
Dichloroacetate (Surr)	100		90 - 115								

Method: SM 2320B - Alkalinity

Lab Sample ID: MB 570-354621/10

Matrix: Water

Analysis Batch: 354621

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			08/11/23 14:38	1
Bicarbonate (as CaCO3)	ND		5.00		mg/L			08/11/23 14:38	1
Carbonate (as CaCO3)	ND		5.00		mg/L			08/11/23 14:38	1
Hydroxide (as CaCO3)	ND		5.00		mg/L			08/11/23 14:38	1

Lab Sample ID: LCS 570-354621/8

Matrix: Water

Analysis Batch: 354621

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	95.10		mg/L		90	78 - 110		

Lab Sample ID: LCSD 570-354621/9

Matrix: Water

Analysis Batch: 354621

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	95.20		mg/L		90	78 - 110	0	10

Lab Sample ID: 570-148040-B-4 DU

Matrix: Water

Analysis Batch: 354621

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)	137		136.5		mg/L		0.2	25
Bicarbonate (as CaCO3)	137		136.5		mg/L		0.2	25
Carbonate (as CaCO3)	ND		ND		mg/L		NC	25

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QC Sample Results

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

Job ID: 570-148149-1

Method: SM 2320B - Alkalinity (Continued)

Lab Sample ID: 570-148040-B-4 DU

Matrix: Water

Analysis Batch: 354621

Client Sample ID: Duplicate

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
Hydroxide (as CaCO ₃)	ND		ND		mg/L		NC	25

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

Lab Sample ID: MB 570-354741/1

Matrix: Water

Analysis Batch: 354741

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			08/14/23 14:50	1

Lab Sample ID: LCS 570-354741/2

Matrix: Water

Analysis Batch: 354741

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	106.0		mg/L		106	77 - 116

Lab Sample ID: LCSD 570-354741/3

Matrix: Water

Analysis Batch: 354741

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	Limit
Total Suspended Solids	100	107.0		mg/L		107	77 - 116	1	10

Lab Sample ID: 570-148032-B-1 DU

Matrix: Water

Analysis Batch: 354741

Client Sample ID: Duplicate

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
Total Suspended Solids	124		121.4		mg/L		2	10

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

Lab Sample ID: MB 570-354655/4

Matrix: Water

Analysis Batch: 354655

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			08/11/23 16:06	1

Lab Sample ID: LCS 570-354655/5

Matrix: Water

Analysis Batch: 354655

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	5.096		mg/L		101	85 - 115

Eurofins Calscience

QC Sample Results

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

Job ID: 570-148149-1

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

Lab Sample ID: LCSD 570-354655/6

Matrix: Water

Analysis Batch: 354655

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	5.069		mg/L		101	85 - 115	1	20

Lab Sample ID: 570-148267-A-1 MS

Matrix: Water

Analysis Batch: 354655

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	2.98		5.03	7.795		mg/L		96	31 - 145		

Lab Sample ID: 570-148267-A-1 MSD

Matrix: Water

Analysis Batch: 354655

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	2.98		5.03	8.016		mg/L		100	31 - 145	3	20

QC Association Summary

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

Job ID: 570-148149-1

GC/MS VOA

Analysis Batch: 354055

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-148149-6	INF	Total/NA	Water	8260B SIM	
570-148149-8	MW-29	Total/NA	Water	8260B SIM	
MB 570-354055/7	Method Blank	Total/NA	Water	8260B SIM	
LCS 570-354055/4	Lab Control Sample	Total/NA	Water	8260B SIM	
LCSD 570-354055/5	Lab Control Sample Dup	Total/NA	Water	8260B SIM	

Analysis Batch: 354419

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-148149-1	TB-081023	Total/NA	Water	8260B	
570-148149-2	CEFF	Total/NA	Water	8260B	
570-148149-3	CBT	Total/NA	Water	8260B	
570-148149-4	POX	Total/NA	Water	8260B	
570-148149-6	INF	Total/NA	Water	8260B	
570-148149-7	EW-02	Total/NA	Water	8260B	
570-148149-8	MW-29	Total/NA	Water	8260B	
MB 570-354419/11	Method Blank	Total/NA	Water	8260B	
LCS 570-354419/4	Lab Control Sample	Total/NA	Water	8260B	
LCSD 570-354419/7	Lab Control Sample Dup	Total/NA	Water	8260B	

Analysis Batch: 354970

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-148149-7	EW-02	Total/NA	Water	8260B SIM	
MB 570-354970/7	Method Blank	Total/NA	Water	8260B SIM	
LCS 570-354970/4	Lab Control Sample	Total/NA	Water	8260B SIM	
LCSD 570-354970/5	Lab Control Sample Dup	Total/NA	Water	8260B SIM	
570-147820-B-3 MS	Matrix Spike	Total/NA	Water	8260B SIM	
570-147820-B-3 MSD	Matrix Spike Duplicate	Total/NA	Water	8260B SIM	

GC/MS Semi VOA

Prep Batch: 354249

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-148149-2	CEFF	Total/NA	Water	3510C	
570-148149-3	CBT	Total/NA	Water	3510C	
570-148149-4	POX	Total/NA	Water	3510C	
MB 570-354249/1-A	Method Blank	Total/NA	Water	3510C	
LCS 570-354249/2-A	Lab Control Sample	Total/NA	Water	3510C	
LCSD 570-354249/3-A	Lab Control Sample Dup	Total/NA	Water	3510C	

Analysis Batch: 354499

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-148149-2	CEFF	Total/NA	Water	8270C SIM ID	354249
570-148149-3	CBT	Total/NA	Water	8270C SIM ID	354249
570-148149-4	POX	Total/NA	Water	8270C SIM ID	354249
MB 570-354249/1-A	Method Blank	Total/NA	Water	8270C SIM ID	354249
LCS 570-354249/2-A	Lab Control Sample	Total/NA	Water	8270C SIM ID	354249
LCSD 570-354249/3-A	Lab Control Sample Dup	Total/NA	Water	8270C SIM ID	354249

QC Association Summary

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

Job ID: 570-148149-1

HPLC/IC

Analysis Batch: 354007

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-148149-6	INF	Total/NA	Water	300.0	
570-148149-7	EW-02	Total/NA	Water	300.0	
570-148149-8	MW-29	Total/NA	Water	300.0	
MB 570-354007/5	Method Blank	Total/NA	Water	300.0	
LCS 570-354007/6	Lab Control Sample	Total/NA	Water	300.0	
LCSD 570-354007/7	Lab Control Sample Dup	Total/NA	Water	300.0	
570-148149-6 MS	INF	Total/NA	Water	300.0	
570-148149-6 MSD	INF	Total/NA	Water	300.0	

Analysis Batch: 354016

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-148149-4	POX	Total/NA	Water	300.1	
570-148149-6	INF	Total/NA	Water	300.1	
MB 570-354016/4	Method Blank	Total/NA	Water	300.1	
LCS 570-354016/5	Lab Control Sample	Total/NA	Water	300.1	
LCSD 570-354016/6	Lab Control Sample Dup	Total/NA	Water	300.1	
MRL 570-354016/3	Lab Control Sample	Total/NA	Water	300.1	
570-148149-4 MS	POX	Total/NA	Water	300.1	
570-148149-4 MSD	POX	Total/NA	Water	300.1	

General Chemistry

Analysis Batch: 354621

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-148149-4	POX	Total/NA	Water	SM 2320B	
570-148149-5	PF	Total/NA	Water	SM 2320B	
MB 570-354621/10	Method Blank	Total/NA	Water	SM 2320B	
LCS 570-354621/8	Lab Control Sample	Total/NA	Water	SM 2320B	
LCSD 570-354621/9	Lab Control Sample Dup	Total/NA	Water	SM 2320B	
570-148040-B-4 DU	Duplicate	Total/NA	Water	SM 2320B	

Analysis Batch: 354655

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-148149-4	POX	Total/NA	Water	SM 5310D	
570-148149-5	PF	Total/NA	Water	SM 5310D	
MB 570-354655/4	Method Blank	Total/NA	Water	SM 5310D	
LCS 570-354655/5	Lab Control Sample	Total/NA	Water	SM 5310D	
LCSD 570-354655/6	Lab Control Sample Dup	Total/NA	Water	SM 5310D	
570-148267-A-1 MS	Matrix Spike	Total/NA	Water	SM 5310D	
570-148267-A-1 MSD	Matrix Spike Duplicate	Total/NA	Water	SM 5310D	

Analysis Batch: 354741

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-148149-5	PF	Total/NA	Water	SM 2540D	
MB 570-354741/1	Method Blank	Total/NA	Water	SM 2540D	
LCS 570-354741/2	Lab Control Sample	Total/NA	Water	SM 2540D	
LCSD 570-354741/3	Lab Control Sample Dup	Total/NA	Water	SM 2540D	
570-148032-B-1 DU	Duplicate	Total/NA	Water	SM 2540D	

Lab Chronicle

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

Job ID: 570-148149-1

Client Sample ID: TB-081023

Lab Sample ID: 570-148149-1

Date Collected: 08/10/23 08:00

Matrix: Water

Date Received: 08/10/23 13:08

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	354419	08/12/23 14:06	Y2DF	EET CAL 4
Instrument ID: GCMSRR										

Client Sample ID: CEFF

Lab Sample ID: 570-148149-2

Date Collected: 08/10/23 10:00

Matrix: Water

Date Received: 08/10/23 13:08

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	354419	08/12/23 14:34	Y2DF	EET CAL 4
Instrument ID: GCMSRR										
Total/NA	Prep	3510C			133.6 mL	10 mL	354249	08/11/23 14:40	USUL	EET CAL 4
Total/NA	Analysis	8270C SIM ID		1	1 mL	1 mL	354499	08/14/23 15:43	UFLE	EET CAL 4
Instrument ID: GCMS99										

Client Sample ID: CBT

Lab Sample ID: 570-148149-3

Date Collected: 08/10/23 10:05

Matrix: Water

Date Received: 08/10/23 13:08

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	354419	08/12/23 15:03	Y2DF	EET CAL 4
Instrument ID: GCMSRR										
Total/NA	Prep	3510C			135.6 mL	10 mL	354249	08/11/23 14:40	USUL	EET CAL 4
Total/NA	Analysis	8270C SIM ID		1	1 mL	1 mL	354499	08/14/23 15:59	UFLE	EET CAL 4
Instrument ID: GCMS99										

Client Sample ID: POX

Lab Sample ID: 570-148149-4

Date Collected: 08/10/23 10:10

Matrix: Water

Date Received: 08/10/23 13:08

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	354419	08/12/23 15:31	Y2DF	EET CAL 4
Instrument ID: GCMSRR										
Total/NA	Prep	3510C			134.9 mL	10 mL	354249	08/11/23 14:40	USUL	EET CAL 4
Total/NA	Analysis	8270C SIM ID		1	1 mL	1 mL	354499	08/14/23 16:14	UFLE	EET CAL 4
Instrument ID: GCMS99										
Total/NA	Analysis	300.1		20	4 mL	4 mL	354016	08/11/23 16:53	YO8L	EET CAL 4
Instrument ID: IC32										
Total/NA	Analysis	SM 2320B		1	10 mL	10 mL	354621	08/11/23 16:45	ZL4M	EET CAL 4
Instrument ID: ManSciMantech										
Total/NA	Analysis	SM 5310D		1	40 mL	40 mL	354655	08/12/23 00:32	ZL4M	EET CAL 4
Instrument ID: TOC12										

Lab Chronicle

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

Job ID: 570-148149-1

Client Sample ID: PF

Lab Sample ID: 570-148149-5

Date Collected: 08/10/23 10:20

Matrix: Water

Date Received: 08/10/23 13:08

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	354621	08/11/23 16:52	ZL4M	EET CAL 4
Total/NA	Analysis	SM 2540D Instrument ID: BAL71		1	1000 mL	1000 mL	354741	08/14/23 14:50	JB	EET CAL 4
Total/NA	Analysis	SM 5310D Instrument ID: TOC12		1	40 mL	40 mL	354655	08/12/23 00:52	ZL4M	EET CAL 4

Client Sample ID: INF

Lab Sample ID: 570-148149-6

Date Collected: 08/10/23 10:30

Matrix: Water

Date Received: 08/10/23 13:08

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: GCMSRR		1	20 mL	20 mL	354419	08/12/23 15:59	Y2DF	EET CAL 4
Total/NA	Analysis	8260B SIM Instrument ID: GCMSR		1	5 mL	5 mL	354055	08/11/23 17:36	KHF2	EET CAL 4
Total/NA	Analysis	300.0 Instrument ID: IC10		1	4 mL	4 mL	354007	08/11/23 07:21	YO8L	EET CAL 4
Total/NA	Analysis	300.1 Instrument ID: IC32		20	4 mL	4 mL	354016	08/11/23 17:27	YO8L	EET CAL 4

Client Sample ID: EW-02

Lab Sample ID: 570-148149-7

Date Collected: 08/10/23 10:45

Matrix: Water

Date Received: 08/10/23 13:08

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: GCMSRR		1	20 mL	20 mL	354419	08/12/23 16:28	Y2DF	EET CAL 4
Total/NA	Analysis	8260B SIM Instrument ID: GCMSFFF		1	25 mL	25 mL	354970	08/15/23 19:51	U4JL	EET CAL 4
Total/NA	Analysis	300.0 Instrument ID: IC10		1	4 mL	4 mL	354007	08/11/23 07:38	YO8L	EET CAL 4

Client Sample ID: MW-29

Lab Sample ID: 570-148149-8

Date Collected: 08/10/23 11:00

Matrix: Water

Date Received: 08/10/23 13:08

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: GCMSRR		1	20 mL	20 mL	354419	08/12/23 16:56	Y2DF	EET CAL 4
Total/NA	Analysis	8260B SIM Instrument ID: GCMSR		1	5 mL	5 mL	354055	08/11/23 18:29	KHF2	EET CAL 4
Total/NA	Analysis	300.0 Instrument ID: IC10		1	4 mL	4 mL	354007	08/11/23 07:54	YO8L	EET CAL 4

Eurofins Calscience

Lab Chronicle

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

Job ID: 570-148149-1

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: 570-148149-1

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: 570-148149-1

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: 570-148149-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
570-148149-1	TB-081023	Water	08/10/23 08:00	08/10/23 13:08
570-148149-2	CEFF	Water	08/10/23 10:00	08/10/23 13:08
570-148149-3	CBT	Water	08/10/23 10:05	08/10/23 13:08
570-148149-4	POX	Water	08/10/23 10:10	08/10/23 13:08
570-148149-5	PF	Water	08/10/23 10:20	08/10/23 13:08
570-148149-6	INF	Water	08/10/23 10:30	08/10/23 13:08
570-148149-7	EW-02	Water	08/10/23 10:45	08/10/23 13:08
570-148149-8	MW-29	Water	08/10/23 11:00	08/10/23 13:08

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>Jasmine Kelly</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)	Ethylendiamine	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	1,4-Dioxane by EPA 8270C 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-081023	8/10/2023	8:00		X	X			X		2						X									X											
2	CEFF	8/10/2023	10:00	X	X	X			X		3					1	X								X	X											
3	CBT	8/10/2023	10:05	X	X				X		3					1	X							X	X												
4	POX	8/10/2023	10:10	X	X	X	X	X	X		6	1	1		1	X	X			X	X			X	X												
5	PF	8/10/2023	10:20	X				X	X		3		1	1	1					X	X	X	X														
6	INF	8/10/2023	10:30	X	X	X		X	X		6	1	1			X	X	X					X				X										
7	EW-02	8/10/2023	10:45	X	X				X		6		1			X	X						X			X											
8	MW-29	8/10/2023	11:00	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																											
<u>SA H+A</u>				8/10/23 1:08		<u>SA EC</u>				8-10-23 12:08																											
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.

SC122.8/2.9

Temperature on receipt



570-148149 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: 570-148149-1

Login Number: 148149

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 8/24/2023 2:18:23 PM

JOB DESCRIPTION

Raytheon / 532.15

JOB NUMBER

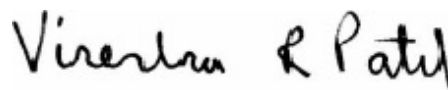
570-148149-2

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

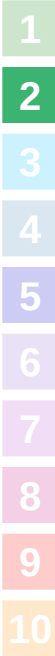


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Sample Summary	8
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Definitions/Glossary

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

Job ID: 570-148149-2

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: 570-148149-2

Job ID: 570-148149-2

Laboratory: Eurofins Calscience

Narrative

Job Narrative
570-148149-2

Comments

No additional comments.

Receipt

The samples were received on 8/10/2023 1:08 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 2.9° 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.

Detection Summary

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

Job ID: 570-148149-2

Client Sample ID: PF Lab Sample ID: 570-148149-5

No Detections.

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10

This Detection Summary does not include radiochemical test results.

Method Summary

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

Job ID: 570-148149-2

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: 570-148149-2

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
570-148149-5	PF	Water	08/10/23 10:20	08/10/23 13:08

1

2

3

4

5

6

7

8

9

10

Work Orders: 3H14044

Project: 570-148149-2

Attn: Virendra Patel

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

Report Date: 8/24/2023

Received Date: 8/12/2023

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 8/12/23 with the Chain-of-Custody document. The samples were received in good condition, at 1.5 °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 (570-148149-2)					Sampled: 08/10/23 10:20 by Client		
	3H14044-01 (Water)							
Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier	
Method: EPA 415.3			Instr: UVVIS04					
Batch ID: W3H1379		Preparation: _NONE (WETCHEM)		Prepared: 08/15/23 18:37			Analyst: ymt	
UV 254	ND		0.009	1/cm	1	08/15/23 20:49	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: W3H1379 - _NONE (WETCHEM)										
Blank (W3H1379-BLK1)				Prepared & Analyzed: 08/15/23						
UV 254	ND	0.009	1/cm							
LCS (W3H1379-BS1)				Prepared & Analyzed: 08/15/23						
UV 254	0.084	0.009	1/cm	0.0880		95	90-110			
Duplicate (W3H1379-DUP1)				Prepared & Analyzed: 08/15/23						
UV 254	0.018	0.009	1/cm		0.018			0	10	
Duplicate (W3H1379-DUP2)				Prepared & Analyzed: 08/15/23						
UV 254	0.117	0.009	1/cm		0.117			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:



Ryan J. Gasio
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.

3H14042
Environment Testing

Ver: 06/08/2028/24/2023

ICOC No:
570-267345

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



HARGIS + ASSOCIATES, INC.
HYDROGEOLOGY • ENGINEERING

Loc: 570

148149

Date: 8/10/2023

Page 1 of 1

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:				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)	Ethylendiamine	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	1,4-Dioxane by EPA 8270C 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-081023	8/10/2023	8:00		X	X			X		2						X									X											
2	CEFF	8/10/2023	10:00	X	X	X			X		3					1	X								X	X							X				
3	CBT	8/10/2023	10:05	X	X	X			X		3					1	X							X	X							X					
4	POX	8/10/2023	10:10	X	X	X	X	X	X		6	1	1			1	X	X		X	X			X	X							X					
5	PF	8/10/2023	10:20	X				X	X		3		1	1	1					X	X	X	X									X					
6	INF	8/10/2023	10:30	X	X	X		X	X		6	1	1			X	X	X					X				X					X					
7	EW-02	8/10/2023	10:45	X	X			X	X		6		1			X	X						X			X						X					
8	MW-29	8/10/2023	11:00	X	X			X	X		6		1			X	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																											
H+A				8/10/23 1:08		P C				8-10-23 12:08																											
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.

SC122.8/2.9

Temperature on receipt



570-148149 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: 570-148149-2

Login Number: 148149

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 9/6/2023 11:59:52 AM

JOB DESCRIPTION

Raytheon Main / 532.30

JOB NUMBER

570-149752-1

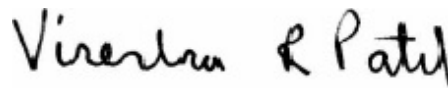
Eurofins Calscience

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



Generated
9/6/2023 11:59:52 AM

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 Main / 532.30

Job ID: 570-149752-1

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

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 / 532.30

Job ID: 570-149752-1

Job ID: 570-149752-1

Laboratory: Eurofins Calscience

Narrative

Job Narrative 570-149752-1

Receipt

The samples were received on 8/23/2023 5:24 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 time was 2.5°C

GC/MS VOA

Method 8260B_LL: The laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) for analytical batch 570-358798 recovered outside control limits for the following analyte: Acetone. This analyte was biased high in the LCS and was not detected in the associated samples; therefore, the data have been reported.

Method 8260B_LL: The matrix spike / matrix spike duplicate (MS/MSD) recoveries and precision for analytical batch 570-358798 were outside control limits for tert-Butyl alcohol (TBA). The associated laboratory control sample / laboratory sample control duplicate (LCS/LCSD) recoveries were within acceptance limits for this analyte.

Method 8260B_LL: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with analytical batch 570-359024. The laboratory control sample (LCS) was performed in duplicate (LCSD) to provide precision data for this batch.

Method 8260B_LL: The lot test of the laboratory trip blank water associated with LOT # 230811 indicated No detection above the method detection limit (MDL) for the following analyte(s): Acetone.

Method 8260B_LL: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with analytical batch 570-359426. 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_MS_ID: Results for sample MW-21_20230822 (570-149752-6) 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.

Detection Summary

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

Job ID: 570-149752-1

Client Sample ID: TB-082223_20230822

Lab Sample ID: 570-149752-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acetone - RA	4.1	J	8.0	3.6	ug/L	1		8260B	Total/NA

Client Sample ID: MW-09_20230822

Lab Sample ID: 570-149752-2

No Detections.

Client Sample ID: MW-26C_20230822

Lab Sample ID: 570-149752-3

No Detections.

Client Sample ID: MW-18_20230822

Lab Sample ID: 570-149752-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Trichlorofluoromethane	0.43	J	0.50	0.26	ug/L	1		8260B	Total/NA

Client Sample ID: RB-082223_20230822

Lab Sample ID: 570-149752-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acetone - RA	11		8.0	3.6	ug/L	1		8260B	Total/NA

Client Sample ID: MW-21_20230822

Lab Sample ID: 570-149752-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,1,2-Trichloro-1,2,2-trifluoroethane	3.7		0.50	0.25	ug/L	1		8260B	Total/NA
1,1,2-Trichloroethane	14		0.50	0.18	ug/L	1		8260B	Total/NA
1,1-Dichloroethane	25		0.50	0.21	ug/L	1		8260B	Total/NA
1,2-Dichloroethane	4.7		0.50	0.14	ug/L	1		8260B	Total/NA
cis-1,2-Dichloroethene	1.3		0.50	0.16	ug/L	1		8260B	Total/NA
Carbon tetrachloride	0.59		0.50	0.27	ug/L	1		8260B	Total/NA
Chloroform	1.6		0.50	0.17	ug/L	1		8260B	Total/NA
Tetrachloroethene	5.4		0.50	0.16	ug/L	1		8260B	Total/NA
Trichloroethene	12		0.50	0.15	ug/L	1		8260B	Total/NA
1,1-Dichloroethene - DL	1500		25	11	ug/L	50		8260B	Total/NA
1,4-Dioxane - DL	520		19	13	ug/L	50		8270C SIM ID	Total/NA

Client Sample ID: EW-01_20230822

Lab Sample ID: 570-149752-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,1,2-Trichloroethane	0.21	J	0.50	0.18	ug/L	1		8260B	Total/NA
1,1-Dichloroethane	0.44	J	0.50	0.21	ug/L	1		8260B	Total/NA
1,1-Dichloroethene - RA	35		0.50	0.21	ug/L	1		8260B	Total/NA
1,4-Dioxane	18		0.38	0.26	ug/L	1		8270C SIM ID	Total/NA

Client Sample ID: MW-39_20230822

Lab Sample ID: 570-149752-8

No Detections.

Client Sample ID: MW-32A_20230822

Lab Sample ID: 570-149752-9

No Detections.

This Detection Summary does not include radiochemical test results.

Eurofins Calscience

Client Sample Results

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

Job ID: 570-149752-1

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

Client Sample ID: TB-082223_20230822

Date Collected: 08/23/23 09:00

Date Received: 08/23/23 17:24

Lab Sample ID: 570-149752-1

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			08/29/23 02:09	1
1,1,1-Trichloroethane	ND		0.50	0.20	ug/L			08/29/23 02:09	1
1,1,2,2-Tetrachloroethane	ND		0.50	0.14	ug/L			08/29/23 02:09	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.50	0.25	ug/L			08/29/23 02:09	1
1,1,2-Trichloroethane	ND		0.50	0.18	ug/L			08/29/23 02:09	1
1,1-Dichloroethane	ND		0.50	0.21	ug/L			08/29/23 02:09	1
1,1-Dichloroethene	ND		0.50	0.21	ug/L			08/29/23 02:09	1
1,1-Dichloropropene	ND		0.50	0.16	ug/L			08/29/23 02:09	1
1,2,3-Trichlorobenzene	ND		0.50	0.26	ug/L			08/29/23 02:09	1
1,2,3-Trichloropropane	ND		0.50	0.31	ug/L			08/29/23 02:09	1
1,2,4-Trichlorobenzene	ND		0.50	0.26	ug/L			08/29/23 02:09	1
1,2,4-Trimethylbenzene	ND		0.50	0.22	ug/L			08/29/23 02:09	1
1,2-Dibromo-3-Chloropropane	ND		1.0	0.84	ug/L			08/29/23 02:09	1
1,2-Dibromoethane	ND		0.50	0.27	ug/L			08/29/23 02:09	1
1,2-Dichlorobenzene	ND		0.50	0.14	ug/L			08/29/23 02:09	1
1,2-Dichloroethane	ND		0.50	0.14	ug/L			08/29/23 02:09	1
1,2-Dichloropropane	ND		0.50	0.14	ug/L			08/29/23 02:09	1
1,3,5-Trimethylbenzene	ND		0.50	0.19	ug/L			08/29/23 02:09	1
1,3-Dichlorobenzene	ND		0.50	0.16	ug/L			08/29/23 02:09	1
1,3-Dichloropropane	ND		0.50	0.19	ug/L			08/29/23 02:09	1
1,4-Dichlorobenzene	ND		0.50	0.11	ug/L			08/29/23 02:09	1
2,2-Dichloropropane	ND		0.50	0.26	ug/L			08/29/23 02:09	1
2-Butanone	ND		5.0	2.9	ug/L			08/29/23 02:09	1
2-Chlorotoluene	ND		0.50	0.23	ug/L			08/29/23 02:09	1
2-Hexanone	ND		6.0	2.0	ug/L			08/29/23 02:09	1
4-Chlorotoluene	ND		0.50	0.24	ug/L			08/29/23 02:09	1
4-Methyl-2-pentanone	ND		5.0	1.6	ug/L			08/29/23 02:09	1
Benzene	ND		0.50	0.14	ug/L			08/29/23 02:09	1
Bromobenzene	ND		0.50	0.14	ug/L			08/29/23 02:09	1
Bromochloromethane	ND		1.0	0.27	ug/L			08/29/23 02:09	1
Bromodichloromethane	ND		0.50	0.15	ug/L			08/29/23 02:09	1
Bromoform	ND		0.50	0.28	ug/L			08/29/23 02:09	1
Bromomethane	ND		2.0	1.9	ug/L			08/29/23 02:09	1
cis-1,2-Dichloroethene	ND		0.50	0.16	ug/L			08/29/23 02:09	1
cis-1,3-Dichloropropene	ND		0.50	0.15	ug/L			08/29/23 02:09	1
Carbon disulfide	ND		1.0	0.32	ug/L			08/29/23 02:09	1
Carbon tetrachloride	ND		0.50	0.27	ug/L			08/29/23 02:09	1
Chlorobenzene	ND		0.50	0.12	ug/L			08/29/23 02:09	1
Chloroethane	ND		0.50	0.38	ug/L			08/29/23 02:09	1
Chloroform	ND		0.50	0.17	ug/L			08/29/23 02:09	1
Chloromethane	ND		1.0	0.65	ug/L			08/29/23 02:09	1
Dibromochloromethane	ND		0.50	0.21	ug/L			08/29/23 02:09	1
Dibromomethane	ND		0.50	0.16	ug/L			08/29/23 02:09	1
Dichlorodifluoromethane	ND		1.0	0.51	ug/L			08/29/23 02:09	1
Di-isopropyl ether (DIPE)	ND		0.50	0.16	ug/L			08/29/23 02:09	1
Ethanol	ND		50	40	ug/L			08/29/23 02:09	1
Ethylbenzene	ND		0.50	0.16	ug/L			08/29/23 02:09	1
Ethyl-t-butyl ether (ETBE)	ND		0.50	0.16	ug/L			08/29/23 02:09	1
Isopropylbenzene	ND		0.50	0.21	ug/L			08/29/23 02:09	1

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Client Sample Results

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

Job ID: 570-149752-1

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

Client Sample ID: TB-082223_20230822

Date Collected: 08/23/23 09:00

Date Received: 08/23/23 17:24

Lab Sample ID: 570-149752-1

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methylene Chloride	ND		1.0	0.40	ug/L			08/29/23 02:09	1
Methyl-t-Butyl Ether (MTBE)	ND		0.50	0.14	ug/L			08/29/23 02:09	1
Naphthalene	ND		1.0	0.55	ug/L			08/29/23 02:09	1
n-Butylbenzene	ND		0.50	0.24	ug/L			08/29/23 02:09	1
N-Propylbenzene	ND		0.50	0.18	ug/L			08/29/23 02:09	1
o-Xylene	ND		0.50	0.18	ug/L			08/29/23 02:09	1
m,p-Xylene	ND		1.0	0.39	ug/L			08/29/23 02:09	1
p-Isopropyltoluene	ND		0.50	0.20	ug/L			08/29/23 02:09	1
sec-Butylbenzene	ND		0.50	0.20	ug/L			08/29/23 02:09	1
Styrene	ND		0.50	0.27	ug/L			08/29/23 02:09	1
trans-1,2-Dichloroethene	ND		0.50	0.22	ug/L			08/29/23 02:09	1
trans-1,3-Dichloropropene	ND		0.50	0.21	ug/L			08/29/23 02:09	1
Tert-amyl-methyl ether (TAME)	ND		0.50	0.13	ug/L			08/29/23 02:09	1
tert-Butyl alcohol (TBA)	ND		5.0	3.1	ug/L			08/29/23 02:09	1
tert-Butylbenzene	ND		0.50	0.21	ug/L			08/29/23 02:09	1
Tetrachloroethene	ND		0.50	0.16	ug/L			08/29/23 02:09	1
Toluene	ND		0.50	0.14	ug/L			08/29/23 02:09	1
Trichloroethene	ND		0.50	0.15	ug/L			08/29/23 02:09	1
Trichlorofluoromethane	ND		0.50	0.26	ug/L			08/29/23 02:09	1
Vinyl acetate	ND		5.0	3.2	ug/L			08/29/23 02:09	1
Vinyl chloride	ND		0.50	0.23	ug/L			08/29/23 02:09	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	102		64 - 132		08/29/23 02:09	1
4-Bromofluorobenzene (Surr)	87		76 - 120		08/29/23 02:09	1
Dibromofluoromethane (Surr)	107		80 - 120		08/29/23 02:09	1
Toluene-d8 (Surr)	103		80 - 120		08/29/23 02:09	1

Client Sample ID: MW-09_20230822

Date Collected: 08/23/23 12:42

Date Received: 08/23/23 17:24

Lab Sample ID: 570-149752-2

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			08/29/23 03:04	1
1,1,1-Trichloroethane	ND		0.50	0.20	ug/L			08/29/23 03:04	1
1,1,2,2-Tetrachloroethane	ND		0.50	0.14	ug/L			08/29/23 03:04	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.50	0.25	ug/L			08/29/23 03:04	1
1,1,2-Trichloroethane	ND		0.50	0.18	ug/L			08/29/23 03:04	1
1,1-Dichloroethane	ND		0.50	0.21	ug/L			08/29/23 03:04	1
1,1-Dichloroethene	ND		0.50	0.21	ug/L			08/29/23 03:04	1
1,1-Dichloropropene	ND		0.50	0.16	ug/L			08/29/23 03:04	1
1,2,3-Trichlorobenzene	ND		0.50	0.26	ug/L			08/29/23 03:04	1
1,2,3-Trichloropropane	ND		0.50	0.31	ug/L			08/29/23 03:04	1
1,2,4-Trichlorobenzene	ND		0.50	0.26	ug/L			08/29/23 03:04	1
1,2,4-Trimethylbenzene	ND		0.50	0.22	ug/L			08/29/23 03:04	1
1,2-Dibromo-3-Chloropropane	ND		1.0	0.84	ug/L			08/29/23 03:04	1
1,2-Dibromoethane	ND		0.50	0.27	ug/L			08/29/23 03:04	1
1,2-Dichlorobenzene	ND		0.50	0.14	ug/L			08/29/23 03:04	1
1,2-Dichloroethane	ND		0.50	0.14	ug/L			08/29/23 03:04	1
1,2-Dichloropropane	ND		0.50	0.14	ug/L			08/29/23 03:04	1
1,3,5-Trimethylbenzene	ND		0.50	0.19	ug/L			08/29/23 03:04	1

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Client Sample Results

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

Job ID: 570-149752-1

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

Client Sample ID: MW-09_20230822

Date Collected: 08/23/23 12:42

Date Received: 08/23/23 17:24

Lab Sample ID: 570-149752-2

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3-Dichlorobenzene	ND		0.50	0.16	ug/L			08/29/23 03:04	1
1,3-Dichloropropane	ND		0.50	0.19	ug/L			08/29/23 03:04	1
1,4-Dichlorobenzene	ND		0.50	0.11	ug/L			08/29/23 03:04	1
2,2-Dichloropropane	ND		0.50	0.26	ug/L			08/29/23 03:04	1
2-Butanone	ND		5.0	2.9	ug/L			08/29/23 03:04	1
2-Chlorotoluene	ND		0.50	0.23	ug/L			08/29/23 03:04	1
2-Hexanone	ND		6.0	2.0	ug/L			08/29/23 03:04	1
4-Chlorotoluene	ND		0.50	0.24	ug/L			08/29/23 03:04	1
4-Methyl-2-pentanone	ND		5.0	1.6	ug/L			08/29/23 03:04	1
Acetone	ND	+	8.0	3.6	ug/L			08/29/23 03:04	1
Benzene	ND		0.50	0.14	ug/L			08/29/23 03:04	1
Bromobenzene	ND		0.50	0.14	ug/L			08/29/23 03:04	1
Bromochloromethane	ND		1.0	0.27	ug/L			08/29/23 03:04	1
Bromodichloromethane	ND		0.50	0.15	ug/L			08/29/23 03:04	1
Bromoform	ND		0.50	0.28	ug/L			08/29/23 03:04	1
Bromomethane	ND		2.0	1.9	ug/L			08/29/23 03:04	1
cis-1,2-Dichloroethene	ND		0.50	0.16	ug/L			08/29/23 03:04	1
cis-1,3-Dichloropropene	ND		0.50	0.15	ug/L			08/29/23 03:04	1
Carbon disulfide	ND		1.0	0.32	ug/L			08/29/23 03:04	1
Carbon tetrachloride	ND		0.50	0.27	ug/L			08/29/23 03:04	1
Chlorobenzene	ND		0.50	0.12	ug/L			08/29/23 03:04	1
Chloroethane	ND		0.50	0.38	ug/L			08/29/23 03:04	1
Chloroform	ND		0.50	0.17	ug/L			08/29/23 03:04	1
Chloromethane	ND		1.0	0.65	ug/L			08/29/23 03:04	1
Dibromochloromethane	ND		0.50	0.21	ug/L			08/29/23 03:04	1
Dibromomethane	ND		0.50	0.16	ug/L			08/29/23 03:04	1
Dichlorodifluoromethane	ND		1.0	0.51	ug/L			08/29/23 03:04	1
Di-isopropyl ether (DIPE)	ND		0.50	0.16	ug/L			08/29/23 03:04	1
Ethanol	ND		50	40	ug/L			08/29/23 03:04	1
Ethylbenzene	ND		0.50	0.16	ug/L			08/29/23 03:04	1
Ethyl-t-butyl ether (ETBE)	ND		0.50	0.16	ug/L			08/29/23 03:04	1
Isopropylbenzene	ND		0.50	0.21	ug/L			08/29/23 03:04	1
Methylene Chloride	ND		1.0	0.40	ug/L			08/29/23 03:04	1
Methyl-t-Butyl Ether (MTBE)	ND		0.50	0.14	ug/L			08/29/23 03:04	1
Naphthalene	ND		1.0	0.55	ug/L			08/29/23 03:04	1
n-Butylbenzene	ND		0.50	0.24	ug/L			08/29/23 03:04	1
N-Propylbenzene	ND		0.50	0.18	ug/L			08/29/23 03:04	1
o-Xylene	ND		0.50	0.18	ug/L			08/29/23 03:04	1
m,p-Xylene	ND		1.0	0.39	ug/L			08/29/23 03:04	1
p-Isopropyltoluene	ND		0.50	0.20	ug/L			08/29/23 03:04	1
sec-Butylbenzene	ND		0.50	0.20	ug/L			08/29/23 03:04	1
Styrene	ND		0.50	0.27	ug/L			08/29/23 03:04	1
trans-1,2-Dichloroethene	ND		0.50	0.22	ug/L			08/29/23 03:04	1
trans-1,3-Dichloropropene	ND		0.50	0.21	ug/L			08/29/23 03:04	1
Tert-amyl-methyl ether (TAME)	ND		0.50	0.13	ug/L			08/29/23 03:04	1
tert-Butyl alcohol (TBA)	ND		5.0	3.1	ug/L			08/29/23 03:04	1
tert-Butylbenzene	ND		0.50	0.21	ug/L			08/29/23 03:04	1
Tetrachloroethene	ND		0.50	0.16	ug/L			08/29/23 03:04	1
Toluene	ND		0.50	0.14	ug/L			08/29/23 03:04	1

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Client Sample Results

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

Job ID: 570-149752-1

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

Client Sample ID: MW-09_20230822

Date Collected: 08/23/23 12:42

Date Received: 08/23/23 17:24

Lab Sample ID: 570-149752-2

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Trichloroethene	ND		0.50	0.15	ug/L			08/29/23 03:04	1
Trichlorofluoromethane	ND		0.50	0.26	ug/L			08/29/23 03:04	1
Vinyl acetate	ND		5.0	3.2	ug/L			08/29/23 03:04	1
Vinyl chloride	ND		0.50	0.23	ug/L			08/29/23 03:04	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	102		64 - 132					08/29/23 03:04	1
4-Bromofluorobenzene (Surr)	86		76 - 120					08/29/23 03:04	1
Dibromofluoromethane (Surr)	107		80 - 120					08/29/23 03:04	1
Toluene-d8 (Surr)	101		80 - 120					08/29/23 03:04	1

Client Sample ID: MW-26C_20230822

Date Collected: 08/23/23 15:50

Date Received: 08/23/23 17:24

Lab Sample ID: 570-149752-3

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			08/29/23 03:32	1
1,1,1-Trichloroethane	ND		0.50	0.20	ug/L			08/29/23 03:32	1
1,1,2,2-Tetrachloroethane	ND		0.50	0.14	ug/L			08/29/23 03:32	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.50	0.25	ug/L			08/29/23 03:32	1
1,1,2-Trichloroethane	ND		0.50	0.18	ug/L			08/29/23 03:32	1
1,1-Dichloroethane	ND		0.50	0.21	ug/L			08/29/23 03:32	1
1,1-Dichloroethene	ND		0.50	0.21	ug/L			08/29/23 03:32	1
1,1-Dichloropropene	ND		0.50	0.16	ug/L			08/29/23 03:32	1
1,2,3-Trichlorobenzene	ND		0.50	0.26	ug/L			08/29/23 03:32	1
1,2,3-Trichloropropane	ND		0.50	0.31	ug/L			08/29/23 03:32	1
1,2,4-Trichlorobenzene	ND		0.50	0.26	ug/L			08/29/23 03:32	1
1,2,4-Trimethylbenzene	ND		0.50	0.22	ug/L			08/29/23 03:32	1
1,2-Dibromo-3-Chloropropane	ND		1.0	0.84	ug/L			08/29/23 03:32	1
1,2-Dibromoethane	ND		0.50	0.27	ug/L			08/29/23 03:32	1
1,2-Dichlorobenzene	ND		0.50	0.14	ug/L			08/29/23 03:32	1
1,2-Dichloroethane	ND		0.50	0.14	ug/L			08/29/23 03:32	1
1,2-Dichloropropane	ND		0.50	0.14	ug/L			08/29/23 03:32	1
1,3,5-Trimethylbenzene	ND		0.50	0.19	ug/L			08/29/23 03:32	1
1,3-Dichlorobenzene	ND		0.50	0.16	ug/L			08/29/23 03:32	1
1,3-Dichloropropane	ND		0.50	0.19	ug/L			08/29/23 03:32	1
1,4-Dichlorobenzene	ND		0.50	0.11	ug/L			08/29/23 03:32	1
2,2-Dichloropropane	ND		0.50	0.26	ug/L			08/29/23 03:32	1
2-Butanone	ND		5.0	2.9	ug/L			08/29/23 03:32	1
2-Chlorotoluene	ND		0.50	0.23	ug/L			08/29/23 03:32	1
2-Hexanone	ND		6.0	2.0	ug/L			08/29/23 03:32	1
4-Chlorotoluene	ND		0.50	0.24	ug/L			08/29/23 03:32	1
4-Methyl-2-pentanone	ND		5.0	1.6	ug/L			08/29/23 03:32	1
Acetone	ND	*+	8.0	3.6	ug/L			08/29/23 03:32	1
Benzene	ND		0.50	0.14	ug/L			08/29/23 03:32	1
Bromobenzene	ND		0.50	0.14	ug/L			08/29/23 03:32	1
Bromochloromethane	ND		1.0	0.27	ug/L			08/29/23 03:32	1
Bromodichloromethane	ND		0.50	0.15	ug/L			08/29/23 03:32	1
Bromoform	ND		0.50	0.28	ug/L			08/29/23 03:32	1
Bromomethane	ND		2.0	1.9	ug/L			08/29/23 03:32	1
cis-1,2-Dichloroethene	ND		0.50	0.16	ug/L			08/29/23 03:32	1

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Client Sample Results

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

Job ID: 570-149752-1

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

Client Sample ID: MW-26C_20230822

Date Collected: 08/23/23 15:50

Date Received: 08/23/23 17:24

Lab Sample ID: 570-149752-3

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,3-Dichloropropene	ND		0.50	0.15	ug/L			08/29/23 03:32	1
Carbon disulfide	ND		1.0	0.32	ug/L			08/29/23 03:32	1
Carbon tetrachloride	ND		0.50	0.27	ug/L			08/29/23 03:32	1
Chlorobenzene	ND		0.50	0.12	ug/L			08/29/23 03:32	1
Chloroethane	ND		0.50	0.38	ug/L			08/29/23 03:32	1
Chloroform	ND		0.50	0.17	ug/L			08/29/23 03:32	1
Chloromethane	ND		1.0	0.65	ug/L			08/29/23 03:32	1
Dibromochloromethane	ND		0.50	0.21	ug/L			08/29/23 03:32	1
Dibromomethane	ND		0.50	0.16	ug/L			08/29/23 03:32	1
Dichlorodifluoromethane	ND		1.0	0.51	ug/L			08/29/23 03:32	1
Di-isopropyl ether (DIPE)	ND		0.50	0.16	ug/L			08/29/23 03:32	1
Ethanol	ND		50	40	ug/L			08/29/23 03:32	1
Ethylbenzene	ND		0.50	0.16	ug/L			08/29/23 03:32	1
Ethyl-t-butyl ether (ETBE)	ND		0.50	0.16	ug/L			08/29/23 03:32	1
Isopropylbenzene	ND		0.50	0.21	ug/L			08/29/23 03:32	1
Methylene Chloride	ND		1.0	0.40	ug/L			08/29/23 03:32	1
Methyl-t-Butyl Ether (MTBE)	ND		0.50	0.14	ug/L			08/29/23 03:32	1
Naphthalene	ND		1.0	0.55	ug/L			08/29/23 03:32	1
n-Butylbenzene	ND		0.50	0.24	ug/L			08/29/23 03:32	1
N-Propylbenzene	ND		0.50	0.18	ug/L			08/29/23 03:32	1
o-Xylene	ND		0.50	0.18	ug/L			08/29/23 03:32	1
m,p-Xylene	ND		1.0	0.39	ug/L			08/29/23 03:32	1
p-Isopropyltoluene	ND		0.50	0.20	ug/L			08/29/23 03:32	1
sec-Butylbenzene	ND		0.50	0.20	ug/L			08/29/23 03:32	1
Styrene	ND		0.50	0.27	ug/L			08/29/23 03:32	1
trans-1,2-Dichloroethene	ND		0.50	0.22	ug/L			08/29/23 03:32	1
trans-1,3-Dichloropropene	ND		0.50	0.21	ug/L			08/29/23 03:32	1
Tert-amyl-methyl ether (TAME)	ND		0.50	0.13	ug/L			08/29/23 03:32	1
tert-Butyl alcohol (TBA)	ND		5.0	3.1	ug/L			08/29/23 03:32	1
tert-Butylbenzene	ND		0.50	0.21	ug/L			08/29/23 03:32	1
Tetrachloroethene	ND		0.50	0.16	ug/L			08/29/23 03:32	1
Toluene	ND		0.50	0.14	ug/L			08/29/23 03:32	1
Trichloroethene	ND		0.50	0.15	ug/L			08/29/23 03:32	1
Trichlorofluoromethane	ND		0.50	0.26	ug/L			08/29/23 03:32	1
Vinyl acetate	ND		5.0	3.2	ug/L			08/29/23 03:32	1
Vinyl chloride	ND		0.50	0.23	ug/L			08/29/23 03:32	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	104		64 - 132		08/29/23 03:32	1
4-Bromofluorobenzene (Surr)	87		76 - 120		08/29/23 03:32	1
Dibromofluoromethane (Surr)	110		80 - 120		08/29/23 03:32	1
Toluene-d8 (Surr)	100		80 - 120		08/29/23 03:32	1

Client Sample ID: MW-18_20230822

Date Collected: 08/23/23 14:15

Date Received: 08/23/23 17:24

Lab Sample ID: 570-149752-4

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			08/29/23 05:49	1
1,1,1-Trichloroethane	ND		0.50	0.20	ug/L			08/29/23 05:49	1
1,1,2,2-Tetrachloroethane	ND		0.50	0.14	ug/L			08/29/23 05:49	1

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Client Sample Results

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

Job ID: 570-149752-1

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

Client Sample ID: MW-18_20230822

Date Collected: 08/23/23 14:15

Date Received: 08/23/23 17:24

Lab Sample ID: 570-149752-4

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.50	0.25	ug/L			08/29/23 05:49	1
1,1,2-Trichloroethane	ND		0.50	0.18	ug/L			08/29/23 05:49	1
1,1-Dichloroethane	ND		0.50	0.21	ug/L			08/29/23 05:49	1
1,1-Dichloroethene	ND		0.50	0.21	ug/L			08/29/23 05:49	1
1,1-Dichloropropene	ND		0.50	0.16	ug/L			08/29/23 05:49	1
1,2,3-Trichlorobenzene	ND		0.50	0.26	ug/L			08/29/23 05:49	1
1,2,3-Trichloropropane	ND		0.50	0.31	ug/L			08/29/23 05:49	1
1,2,4-Trichlorobenzene	ND		0.50	0.26	ug/L			08/29/23 05:49	1
1,2,4-Trimethylbenzene	ND		0.50	0.22	ug/L			08/29/23 05:49	1
1,2-Dibromo-3-Chloropropane	ND		1.0	0.84	ug/L			08/29/23 05:49	1
1,2-Dibromoethane	ND		0.50	0.27	ug/L			08/29/23 05:49	1
1,2-Dichlorobenzene	ND		0.50	0.14	ug/L			08/29/23 05:49	1
1,2-Dichloroethane	ND		0.50	0.14	ug/L			08/29/23 05:49	1
1,2-Dichloropropane	ND		0.50	0.14	ug/L			08/29/23 05:49	1
1,3,5-Trimethylbenzene	ND		0.50	0.19	ug/L			08/29/23 05:49	1
1,3-Dichlorobenzene	ND		0.50	0.16	ug/L			08/29/23 05:49	1
1,3-Dichloropropane	ND		0.50	0.19	ug/L			08/29/23 05:49	1
1,4-Dichlorobenzene	ND		0.50	0.11	ug/L			08/29/23 05:49	1
2,2-Dichloropropane	ND		0.50	0.26	ug/L			08/29/23 05:49	1
2-Butanone	ND		5.0	2.9	ug/L			08/29/23 05:49	1
2-Chlorotoluene	ND		0.50	0.23	ug/L			08/29/23 05:49	1
2-Hexanone	ND		6.0	2.0	ug/L			08/29/23 05:49	1
4-Chlorotoluene	ND		0.50	0.24	ug/L			08/29/23 05:49	1
4-Methyl-2-pentanone	ND		5.0	1.6	ug/L			08/29/23 05:49	1
Acetone	ND	+	8.0	3.6	ug/L			08/29/23 05:49	1
Benzene	ND		0.50	0.14	ug/L			08/29/23 05:49	1
Bromobenzene	ND		0.50	0.14	ug/L			08/29/23 05:49	1
Bromochloromethane	ND		1.0	0.27	ug/L			08/29/23 05:49	1
Bromodichloromethane	ND		0.50	0.15	ug/L			08/29/23 05:49	1
Bromoform	ND		0.50	0.28	ug/L			08/29/23 05:49	1
Bromomethane	ND		2.0	1.9	ug/L			08/29/23 05:49	1
cis-1,2-Dichloroethene	ND		0.50	0.16	ug/L			08/29/23 05:49	1
cis-1,3-Dichloropropene	ND		0.50	0.15	ug/L			08/29/23 05:49	1
Carbon disulfide	ND		1.0	0.32	ug/L			08/29/23 05:49	1
Carbon tetrachloride	ND		0.50	0.27	ug/L			08/29/23 05:49	1
Chlorobenzene	ND		0.50	0.12	ug/L			08/29/23 05:49	1
Chloroethane	ND		0.50	0.38	ug/L			08/29/23 05:49	1
Chloroform	ND		0.50	0.17	ug/L			08/29/23 05:49	1
Chloromethane	ND		1.0	0.65	ug/L			08/29/23 05:49	1
Dibromochloromethane	ND		0.50	0.21	ug/L			08/29/23 05:49	1
Dibromomethane	ND		0.50	0.16	ug/L			08/29/23 05:49	1
Dichlorodifluoromethane	ND		1.0	0.51	ug/L			08/29/23 05:49	1
Di-isopropyl ether (DIPE)	ND		0.50	0.16	ug/L			08/29/23 05:49	1
Ethanol	ND		50	40	ug/L			08/29/23 05:49	1
Ethylbenzene	ND		0.50	0.16	ug/L			08/29/23 05:49	1
Ethyl-t-butyl ether (ETBE)	ND		0.50	0.16	ug/L			08/29/23 05:49	1
Isopropylbenzene	ND		0.50	0.21	ug/L			08/29/23 05:49	1
Methylene Chloride	ND		1.0	0.40	ug/L			08/29/23 05:49	1
Methyl-t-Butyl Ether (MTBE)	ND		0.50	0.14	ug/L			08/29/23 05:49	1

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Client Sample Results

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

Job ID: 570-149752-1

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

Client Sample ID: MW-18_20230822

Date Collected: 08/23/23 14:15

Date Received: 08/23/23 17:24

Lab Sample ID: 570-149752-4

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	ND		1.0	0.55	ug/L			08/29/23 05:49	1
n-Butylbenzene	ND		0.50	0.24	ug/L			08/29/23 05:49	1
N-Propylbenzene	ND		0.50	0.18	ug/L			08/29/23 05:49	1
o-Xylene	ND		0.50	0.18	ug/L			08/29/23 05:49	1
m,p-Xylene	ND		1.0	0.39	ug/L			08/29/23 05:49	1
p-Isopropyltoluene	ND		0.50	0.20	ug/L			08/29/23 05:49	1
sec-Butylbenzene	ND		0.50	0.20	ug/L			08/29/23 05:49	1
Styrene	ND		0.50	0.27	ug/L			08/29/23 05:49	1
trans-1,2-Dichloroethene	ND		0.50	0.22	ug/L			08/29/23 05:49	1
trans-1,3-Dichloropropene	ND		0.50	0.21	ug/L			08/29/23 05:49	1
Tert-amyl-methyl ether (TAME)	ND		0.50	0.13	ug/L			08/29/23 05:49	1
tert-Butyl alcohol (TBA)	ND	F1 F2	5.0	3.1	ug/L			08/29/23 05:49	1
tert-Butylbenzene	ND		0.50	0.21	ug/L			08/29/23 05:49	1
Tetrachloroethene	ND		0.50	0.16	ug/L			08/29/23 05:49	1
Toluene	ND		0.50	0.14	ug/L			08/29/23 05:49	1
Trichloroethene	ND		0.50	0.15	ug/L			08/29/23 05:49	1
Trichlorofluoromethane	0.43	J	0.50	0.26	ug/L			08/29/23 05:49	1
Vinyl acetate	ND		5.0	3.2	ug/L			08/29/23 05:49	1
Vinyl chloride	ND		0.50	0.23	ug/L			08/29/23 05:49	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	103		64 - 132		08/29/23 05:49	1
4-Bromofluorobenzene (Surr)	86		76 - 120		08/29/23 05:49	1
Dibromofluoromethane (Surr)	109		80 - 120		08/29/23 05:49	1
Toluene-d8 (Surr)	101		80 - 120		08/29/23 05:49	1

Client Sample ID: RB-082223_20230822

Date Collected: 08/23/23 14:20

Date Received: 08/23/23 17:24

Lab Sample ID: 570-149752-5

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			08/29/23 02:37	1
1,1,1-Trichloroethane	ND		0.50	0.20	ug/L			08/29/23 02:37	1
1,1,2,2-Tetrachloroethane	ND		0.50	0.14	ug/L			08/29/23 02:37	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.50	0.25	ug/L			08/29/23 02:37	1
1,1,2-Trichloroethane	ND		0.50	0.18	ug/L			08/29/23 02:37	1
1,1-Dichloroethane	ND		0.50	0.21	ug/L			08/29/23 02:37	1
1,1-Dichloroethene	ND		0.50	0.21	ug/L			08/29/23 02:37	1
1,1-Dichloropropene	ND		0.50	0.16	ug/L			08/29/23 02:37	1
1,2,3-Trichlorobenzene	ND		0.50	0.26	ug/L			08/29/23 02:37	1
1,2,3-Trichloropropane	ND		0.50	0.31	ug/L			08/29/23 02:37	1
1,2,4-Trichlorobenzene	ND		0.50	0.26	ug/L			08/29/23 02:37	1
1,2,4-Trimethylbenzene	ND		0.50	0.22	ug/L			08/29/23 02:37	1
1,2-Dibromo-3-Chloropropane	ND		1.0	0.84	ug/L			08/29/23 02:37	1
1,2-Dibromoethane	ND		0.50	0.27	ug/L			08/29/23 02:37	1
1,2-Dichlorobenzene	ND		0.50	0.14	ug/L			08/29/23 02:37	1
1,2-Dichloroethane	ND		0.50	0.14	ug/L			08/29/23 02:37	1
1,2-Dichloropropane	ND		0.50	0.14	ug/L			08/29/23 02:37	1
1,3,5-Trimethylbenzene	ND		0.50	0.19	ug/L			08/29/23 02:37	1
1,3-Dichlorobenzene	ND		0.50	0.16	ug/L			08/29/23 02:37	1
1,3-Dichloropropane	ND		0.50	0.19	ug/L			08/29/23 02:37	1

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Client Sample Results

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

Job ID: 570-149752-1

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

Client Sample ID: RB-082223_20230822

Date Collected: 08/23/23 14:20

Date Received: 08/23/23 17:24

Lab Sample ID: 570-149752-5

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dichlorobenzene	ND		0.50	0.11	ug/L			08/29/23 02:37	1
2,2-Dichloropropane	ND		0.50	0.26	ug/L			08/29/23 02:37	1
2-Butanone	ND		5.0	2.9	ug/L			08/29/23 02:37	1
2-Chlorotoluene	ND		0.50	0.23	ug/L			08/29/23 02:37	1
2-Hexanone	ND		6.0	2.0	ug/L			08/29/23 02:37	1
4-Chlorotoluene	ND		0.50	0.24	ug/L			08/29/23 02:37	1
4-Methyl-2-pentanone	ND		5.0	1.6	ug/L			08/29/23 02:37	1
Benzene	ND		0.50	0.14	ug/L			08/29/23 02:37	1
Bromobenzene	ND		0.50	0.14	ug/L			08/29/23 02:37	1
Bromochloromethane	ND		1.0	0.27	ug/L			08/29/23 02:37	1
Bromodichloromethane	ND		0.50	0.15	ug/L			08/29/23 02:37	1
Bromoform	ND		0.50	0.28	ug/L			08/29/23 02:37	1
Bromomethane	ND		2.0	1.9	ug/L			08/29/23 02:37	1
cis-1,2-Dichloroethene	ND		0.50	0.16	ug/L			08/29/23 02:37	1
cis-1,3-Dichloropropene	ND		0.50	0.15	ug/L			08/29/23 02:37	1
Carbon disulfide	ND		1.0	0.32	ug/L			08/29/23 02:37	1
Carbon tetrachloride	ND		0.50	0.27	ug/L			08/29/23 02:37	1
Chlorobenzene	ND		0.50	0.12	ug/L			08/29/23 02:37	1
Chloroethane	ND		0.50	0.38	ug/L			08/29/23 02:37	1
Chloroform	ND		0.50	0.17	ug/L			08/29/23 02:37	1
Chloromethane	ND		1.0	0.65	ug/L			08/29/23 02:37	1
Dibromochloromethane	ND		0.50	0.21	ug/L			08/29/23 02:37	1
Dibromomethane	ND		0.50	0.16	ug/L			08/29/23 02:37	1
Dichlorodifluoromethane	ND		1.0	0.51	ug/L			08/29/23 02:37	1
Di-isopropyl ether (DIPE)	ND		0.50	0.16	ug/L			08/29/23 02:37	1
Ethanol	ND		50	40	ug/L			08/29/23 02:37	1
Ethylbenzene	ND		0.50	0.16	ug/L			08/29/23 02:37	1
Ethyl-t-butyl ether (ETBE)	ND		0.50	0.16	ug/L			08/29/23 02:37	1
Isopropylbenzene	ND		0.50	0.21	ug/L			08/29/23 02:37	1
Methylene Chloride	ND		1.0	0.40	ug/L			08/29/23 02:37	1
Methyl-t-Butyl Ether (MTBE)	ND		0.50	0.14	ug/L			08/29/23 02:37	1
Naphthalene	ND		1.0	0.55	ug/L			08/29/23 02:37	1
n-Butylbenzene	ND		0.50	0.24	ug/L			08/29/23 02:37	1
N-Propylbenzene	ND		0.50	0.18	ug/L			08/29/23 02:37	1
o-Xylene	ND		0.50	0.18	ug/L			08/29/23 02:37	1
m,p-Xylene	ND		1.0	0.39	ug/L			08/29/23 02:37	1
p-Isopropyltoluene	ND		0.50	0.20	ug/L			08/29/23 02:37	1
sec-Butylbenzene	ND		0.50	0.20	ug/L			08/29/23 02:37	1
Styrene	ND		0.50	0.27	ug/L			08/29/23 02:37	1
trans-1,2-Dichloroethene	ND		0.50	0.22	ug/L			08/29/23 02:37	1
trans-1,3-Dichloropropene	ND		0.50	0.21	ug/L			08/29/23 02:37	1
Tert-amyl-methyl ether (TAME)	ND		0.50	0.13	ug/L			08/29/23 02:37	1
tert-Butyl alcohol (TBA)	ND		5.0	3.1	ug/L			08/29/23 02:37	1
tert-Butylbenzene	ND		0.50	0.21	ug/L			08/29/23 02:37	1
Tetrachloroethene	ND		0.50	0.16	ug/L			08/29/23 02:37	1
Toluene	ND		0.50	0.14	ug/L			08/29/23 02:37	1
Trichloroethene	ND		0.50	0.15	ug/L			08/29/23 02:37	1
Trichlorofluoromethane	ND		0.50	0.26	ug/L			08/29/23 02:37	1
Vinyl acetate	ND		5.0	3.2	ug/L			08/29/23 02:37	1

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Client Sample Results

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

Job ID: 570-149752-1

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

Client Sample ID: RB-082223_20230822

Date Collected: 08/23/23 14:20

Date Received: 08/23/23 17:24

Lab Sample ID: 570-149752-5

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Vinyl chloride	ND		0.50	0.23	ug/L			08/29/23 02:37	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	101		64 - 132					08/29/23 02:37	1
4-Bromofluorobenzene (Surr)	86		76 - 120					08/29/23 02:37	1
Dibromofluoromethane (Surr)	108		80 - 120					08/29/23 02:37	1
Toluene-d8 (Surr)	101		80 - 120					08/29/23 02:37	1

Client Sample ID: MW-21_20230822

Date Collected: 08/23/23 15:15

Date Received: 08/23/23 17:24

Lab Sample ID: 570-149752-6

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			08/29/23 03:59	1
1,1,1-Trichloroethane	ND		0.50	0.20	ug/L			08/29/23 03:59	1
1,1,2,2-Tetrachloroethane	ND		0.50	0.14	ug/L			08/29/23 03:59	1
1,1,2-Trichloro-1,2,2-trifluoroethane	3.7		0.50	0.25	ug/L			08/29/23 03:59	1
1,1,2-Trichloroethane	14		0.50	0.18	ug/L			08/29/23 03:59	1
1,1-Dichloroethane	25		0.50	0.21	ug/L			08/29/23 03:59	1
1,1-Dichloropropene	ND		0.50	0.16	ug/L			08/29/23 03:59	1
1,2,3-Trichlorobenzene	ND		0.50	0.26	ug/L			08/29/23 03:59	1
1,2,3-Trichloropropane	ND		0.50	0.31	ug/L			08/29/23 03:59	1
1,2,4-Trichlorobenzene	ND		0.50	0.26	ug/L			08/29/23 03:59	1
1,2,4-Trimethylbenzene	ND		0.50	0.22	ug/L			08/29/23 03:59	1
1,2-Dibromo-3-Chloropropane	ND		1.0	0.84	ug/L			08/29/23 03:59	1
1,2-Dibromoethane	ND		0.50	0.27	ug/L			08/29/23 03:59	1
1,2-Dichlorobenzene	ND		0.50	0.14	ug/L			08/29/23 03:59	1
1,2-Dichloroethane	4.7		0.50	0.14	ug/L			08/29/23 03:59	1
1,2-Dichloropropane	ND		0.50	0.14	ug/L			08/29/23 03:59	1
1,3,5-Trimethylbenzene	ND		0.50	0.19	ug/L			08/29/23 03:59	1
1,3-Dichlorobenzene	ND		0.50	0.16	ug/L			08/29/23 03:59	1
1,3-Dichloropropane	ND		0.50	0.19	ug/L			08/29/23 03:59	1
1,4-Dichlorobenzene	ND		0.50	0.11	ug/L			08/29/23 03:59	1
2,2-Dichloropropane	ND		0.50	0.26	ug/L			08/29/23 03:59	1
2-Butanone	ND		5.0	2.9	ug/L			08/29/23 03:59	1
2-Chlorotoluene	ND		0.50	0.23	ug/L			08/29/23 03:59	1
2-Hexanone	ND		6.0	2.0	ug/L			08/29/23 03:59	1
4-Chlorotoluene	ND		0.50	0.24	ug/L			08/29/23 03:59	1
4-Methyl-2-pentanone	ND		5.0	1.6	ug/L			08/29/23 03:59	1
Acetone	ND	+	8.0	3.6	ug/L			08/29/23 03:59	1
Benzene	ND		0.50	0.14	ug/L			08/29/23 03:59	1
Bromobenzene	ND		0.50	0.14	ug/L			08/29/23 03:59	1
Bromochloromethane	ND		1.0	0.27	ug/L			08/29/23 03:59	1
Bromodichloromethane	ND		0.50	0.15	ug/L			08/29/23 03:59	1
Bromoform	ND		0.50	0.28	ug/L			08/29/23 03:59	1
Bromomethane	ND		2.0	1.9	ug/L			08/29/23 03:59	1
cis-1,2-Dichloroethene	1.3		0.50	0.16	ug/L			08/29/23 03:59	1
cis-1,3-Dichloropropene	ND		0.50	0.15	ug/L			08/29/23 03:59	1
Carbon disulfide	ND		1.0	0.32	ug/L			08/29/23 03:59	1
Carbon tetrachloride	0.59		0.50	0.27	ug/L			08/29/23 03:59	1

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Client Sample Results

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

Job ID: 570-149752-1

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

Client Sample ID: MW-21_20230822

Date Collected: 08/23/23 15:15

Date Received: 08/23/23 17:24

Lab Sample ID: 570-149752-6

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chlorobenzene	ND		0.50	0.12	ug/L			08/29/23 03:59	1
Chloroethane	ND		0.50	0.38	ug/L			08/29/23 03:59	1
Chloroform	1.6		0.50	0.17	ug/L			08/29/23 03:59	1
Chloromethane	ND		1.0	0.65	ug/L			08/29/23 03:59	1
Dibromochloromethane	ND		0.50	0.21	ug/L			08/29/23 03:59	1
Dibromomethane	ND		0.50	0.16	ug/L			08/29/23 03:59	1
Dichlorodifluoromethane	ND		1.0	0.51	ug/L			08/29/23 03:59	1
Di-isopropyl ether (DIPE)	ND		0.50	0.16	ug/L			08/29/23 03:59	1
Ethanol	ND		50	40	ug/L			08/29/23 03:59	1
Ethylbenzene	ND		0.50	0.16	ug/L			08/29/23 03:59	1
Ethyl-t-butyl ether (ETBE)	ND		0.50	0.16	ug/L			08/29/23 03:59	1
Isopropylbenzene	ND		0.50	0.21	ug/L			08/29/23 03:59	1
Methylene Chloride	ND		1.0	0.40	ug/L			08/29/23 03:59	1
Methyl-t-Butyl Ether (MTBE)	ND		0.50	0.14	ug/L			08/29/23 03:59	1
Naphthalene	ND		1.0	0.55	ug/L			08/29/23 03:59	1
n-Butylbenzene	ND		0.50	0.24	ug/L			08/29/23 03:59	1
N-Propylbenzene	ND		0.50	0.18	ug/L			08/29/23 03:59	1
o-Xylene	ND		0.50	0.18	ug/L			08/29/23 03:59	1
m,p-Xylene	ND		1.0	0.39	ug/L			08/29/23 03:59	1
p-Isopropyltoluene	ND		0.50	0.20	ug/L			08/29/23 03:59	1
sec-Butylbenzene	ND		0.50	0.20	ug/L			08/29/23 03:59	1
Styrene	ND		0.50	0.27	ug/L			08/29/23 03:59	1
trans-1,2-Dichloroethene	ND		0.50	0.22	ug/L			08/29/23 03:59	1
trans-1,3-Dichloropropene	ND		0.50	0.21	ug/L			08/29/23 03:59	1
Tert-amyl-methyl ether (TAME)	ND		0.50	0.13	ug/L			08/29/23 03:59	1
tert-Butyl alcohol (TBA)	ND		5.0	3.1	ug/L			08/29/23 03:59	1
tert-Butylbenzene	ND		0.50	0.21	ug/L			08/29/23 03:59	1
Tetrachloroethene	5.4		0.50	0.16	ug/L			08/29/23 03:59	1
Toluene	ND		0.50	0.14	ug/L			08/29/23 03:59	1
Trichloroethene	12		0.50	0.15	ug/L			08/29/23 03:59	1
Trichlorofluoromethane	ND		0.50	0.26	ug/L			08/29/23 03:59	1
Vinyl acetate	ND		5.0	3.2	ug/L			08/29/23 03:59	1
Vinyl chloride	ND		0.50	0.23	ug/L			08/29/23 03:59	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	104		64 - 132		08/29/23 03:59	1
4-Bromofluorobenzene (Surr)	86		76 - 120		08/29/23 03:59	1
Dibromofluoromethane (Surr)	105		80 - 120		08/29/23 03:59	1
Toluene-d8 (Surr)	99		80 - 120		08/29/23 03:59	1

Client Sample ID: EW-01_20230822

Date Collected: 08/23/23 15:45

Date Received: 08/23/23 17:24

Lab Sample ID: 570-149752-7

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			08/29/23 04:27	1
1,1,1-Trichloroethane	ND		0.50	0.20	ug/L			08/29/23 04:27	1
1,1,2,2-Tetrachloroethane	ND		0.50	0.14	ug/L			08/29/23 04:27	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.50	0.25	ug/L			08/29/23 04:27	1
1,1,2-Trichloroethane	0.21	J	0.50	0.18	ug/L			08/29/23 04:27	1
1,1-Dichloroethane	0.44	J	0.50	0.21	ug/L			08/29/23 04:27	1

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Client Sample Results

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

Job ID: 570-149752-1

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

Client Sample ID: EW-01_20230822

Date Collected: 08/23/23 15:45

Date Received: 08/23/23 17:24

Lab Sample ID: 570-149752-7

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloropropene	ND		0.50	0.16	ug/L			08/29/23 04:27	1
1,2,3-Trichlorobenzene	ND		0.50	0.26	ug/L			08/29/23 04:27	1
1,2,3-Trichloropropane	ND		0.50	0.31	ug/L			08/29/23 04:27	1
1,2,4-Trichlorobenzene	ND		0.50	0.26	ug/L			08/29/23 04:27	1
1,2,4-Trimethylbenzene	ND		0.50	0.22	ug/L			08/29/23 04:27	1
1,2-Dibromo-3-Chloropropane	ND		1.0	0.84	ug/L			08/29/23 04:27	1
1,2-Dibromoethane	ND		0.50	0.27	ug/L			08/29/23 04:27	1
1,2-Dichlorobenzene	ND		0.50	0.14	ug/L			08/29/23 04:27	1
1,2-Dichloroethane	ND		0.50	0.14	ug/L			08/29/23 04:27	1
1,2-Dichloropropane	ND		0.50	0.14	ug/L			08/29/23 04:27	1
1,3,5-Trimethylbenzene	ND		0.50	0.19	ug/L			08/29/23 04:27	1
1,3-Dichlorobenzene	ND		0.50	0.16	ug/L			08/29/23 04:27	1
1,3-Dichloropropane	ND		0.50	0.19	ug/L			08/29/23 04:27	1
1,4-Dichlorobenzene	ND		0.50	0.11	ug/L			08/29/23 04:27	1
2,2-Dichloropropane	ND		0.50	0.26	ug/L			08/29/23 04:27	1
2-Butanone	ND		5.0	2.9	ug/L			08/29/23 04:27	1
2-Chlorotoluene	ND		0.50	0.23	ug/L			08/29/23 04:27	1
2-Hexanone	ND		6.0	2.0	ug/L			08/29/23 04:27	1
4-Chlorotoluene	ND		0.50	0.24	ug/L			08/29/23 04:27	1
4-Methyl-2-pentanone	ND		5.0	1.6	ug/L			08/29/23 04:27	1
Acetone	ND	+	8.0	3.6	ug/L			08/29/23 04:27	1
Benzene	ND		0.50	0.14	ug/L			08/29/23 04:27	1
Bromobenzene	ND		0.50	0.14	ug/L			08/29/23 04:27	1
Bromochloromethane	ND		1.0	0.27	ug/L			08/29/23 04:27	1
Bromodichloromethane	ND		0.50	0.15	ug/L			08/29/23 04:27	1
Bromoform	ND		0.50	0.28	ug/L			08/29/23 04:27	1
Bromomethane	ND		2.0	1.9	ug/L			08/29/23 04:27	1
cis-1,2-Dichloroethene	ND		0.50	0.16	ug/L			08/29/23 04:27	1
cis-1,3-Dichloropropene	ND		0.50	0.15	ug/L			08/29/23 04:27	1
Carbon disulfide	ND		1.0	0.32	ug/L			08/29/23 04:27	1
Carbon tetrachloride	ND		0.50	0.27	ug/L			08/29/23 04:27	1
Chlorobenzene	ND		0.50	0.12	ug/L			08/29/23 04:27	1
Chloroethane	ND		0.50	0.38	ug/L			08/29/23 04:27	1
Chloroform	ND		0.50	0.17	ug/L			08/29/23 04:27	1
Chloromethane	ND		1.0	0.65	ug/L			08/29/23 04:27	1
Dibromochloromethane	ND		0.50	0.21	ug/L			08/29/23 04:27	1
Dibromomethane	ND		0.50	0.16	ug/L			08/29/23 04:27	1
Dichlorodifluoromethane	ND		1.0	0.51	ug/L			08/29/23 04:27	1
Di-isopropyl ether (DIPE)	ND		0.50	0.16	ug/L			08/29/23 04:27	1
Ethanol	ND		50	40	ug/L			08/29/23 04:27	1
Ethylbenzene	ND		0.50	0.16	ug/L			08/29/23 04:27	1
Ethyl-t-butyl ether (ETBE)	ND		0.50	0.16	ug/L			08/29/23 04:27	1
Isopropylbenzene	ND		0.50	0.21	ug/L			08/29/23 04:27	1
Methylene Chloride	ND		1.0	0.40	ug/L			08/29/23 04:27	1
Methyl-t-Butyl Ether (MTBE)	ND		0.50	0.14	ug/L			08/29/23 04:27	1
Naphthalene	ND		1.0	0.55	ug/L			08/29/23 04:27	1
n-Butylbenzene	ND		0.50	0.24	ug/L			08/29/23 04:27	1
N-Propylbenzene	ND		0.50	0.18	ug/L			08/29/23 04:27	1
o-Xylene	ND		0.50	0.18	ug/L			08/29/23 04:27	1

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Client Sample Results

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

Job ID: 570-149752-1

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

Client Sample ID: EW-01_20230822

Date Collected: 08/23/23 15:45

Date Received: 08/23/23 17:24

Lab Sample ID: 570-149752-7

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
m,p-Xylene	ND		1.0	0.39	ug/L			08/29/23 04:27	1
p-Isopropyltoluene	ND		0.50	0.20	ug/L			08/29/23 04:27	1
sec-Butylbenzene	ND		0.50	0.20	ug/L			08/29/23 04:27	1
Styrene	ND		0.50	0.27	ug/L			08/29/23 04:27	1
trans-1,2-Dichloroethene	ND		0.50	0.22	ug/L			08/29/23 04:27	1
trans-1,3-Dichloropropene	ND		0.50	0.21	ug/L			08/29/23 04:27	1
Tert-amyl-methyl ether (TAME)	ND		0.50	0.13	ug/L			08/29/23 04:27	1
tert-Butyl alcohol (TBA)	ND		5.0	3.1	ug/L			08/29/23 04:27	1
tert-Butylbenzene	ND		0.50	0.21	ug/L			08/29/23 04:27	1
Tetrachloroethene	ND		0.50	0.16	ug/L			08/29/23 04:27	1
Toluene	ND		0.50	0.14	ug/L			08/29/23 04:27	1
Trichloroethene	ND		0.50	0.15	ug/L			08/29/23 04:27	1
Trichlorofluoromethane	ND		0.50	0.26	ug/L			08/29/23 04:27	1
Vinyl acetate	ND		5.0	3.2	ug/L			08/29/23 04:27	1
Vinyl chloride	ND		0.50	0.23	ug/L			08/29/23 04:27	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	102		64 - 132		08/29/23 04:27	1
4-Bromofluorobenzene (Surr)	86		76 - 120		08/29/23 04:27	1
Dibromofluoromethane (Surr)	108		80 - 120		08/29/23 04:27	1
Toluene-d8 (Surr)	102		80 - 120		08/29/23 04:27	1

Client Sample ID: MW-39_20230822

Date Collected: 08/23/23 10:55

Date Received: 08/23/23 17:24

Lab Sample ID: 570-149752-8

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			08/29/23 04:54	1
1,1,1-Trichloroethane	ND		0.50	0.20	ug/L			08/29/23 04:54	1
1,1,2,2-Tetrachloroethane	ND		0.50	0.14	ug/L			08/29/23 04:54	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.50	0.25	ug/L			08/29/23 04:54	1
1,1,2-Trichloroethane	ND		0.50	0.18	ug/L			08/29/23 04:54	1
1,1-Dichloroethane	ND		0.50	0.21	ug/L			08/29/23 04:54	1
1,1-Dichloroethene	ND		0.50	0.21	ug/L			08/29/23 04:54	1
1,1-Dichloropropene	ND		0.50	0.16	ug/L			08/29/23 04:54	1
1,2,3-Trichlorobenzene	ND		0.50	0.26	ug/L			08/29/23 04:54	1
1,2,3-Trichloropropane	ND		0.50	0.31	ug/L			08/29/23 04:54	1
1,2,4-Trichlorobenzene	ND		0.50	0.26	ug/L			08/29/23 04:54	1
1,2,4-Trimethylbenzene	ND		0.50	0.22	ug/L			08/29/23 04:54	1
1,2-Dibromo-3-Chloropropane	ND		1.0	0.84	ug/L			08/29/23 04:54	1
1,2-Dibromoethane	ND		0.50	0.27	ug/L			08/29/23 04:54	1
1,2-Dichlorobenzene	ND		0.50	0.14	ug/L			08/29/23 04:54	1
1,2-Dichloroethane	ND		0.50	0.14	ug/L			08/29/23 04:54	1
1,2-Dichloropropane	ND		0.50	0.14	ug/L			08/29/23 04:54	1
1,3,5-Trimethylbenzene	ND		0.50	0.19	ug/L			08/29/23 04:54	1
1,3-Dichlorobenzene	ND		0.50	0.16	ug/L			08/29/23 04:54	1
1,3-Dichloropropane	ND		0.50	0.19	ug/L			08/29/23 04:54	1
1,4-Dichlorobenzene	ND		0.50	0.11	ug/L			08/29/23 04:54	1
2,2-Dichloropropane	ND		0.50	0.26	ug/L			08/29/23 04:54	1
2-Butanone	ND		5.0	2.9	ug/L			08/29/23 04:54	1
2-Chlorotoluene	ND		0.50	0.23	ug/L			08/29/23 04:54	1

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Client Sample Results

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

Job ID: 570-149752-1

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

Client Sample ID: MW-39_20230822

Date Collected: 08/23/23 10:55

Date Received: 08/23/23 17:24

Lab Sample ID: 570-149752-8

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Hexanone	ND		6.0	2.0	ug/L			08/29/23 04:54	1
4-Chlorotoluene	ND		0.50	0.24	ug/L			08/29/23 04:54	1
4-Methyl-2-pentanone	ND		5.0	1.6	ug/L			08/29/23 04:54	1
Acetone	ND	+	8.0	3.6	ug/L			08/29/23 04:54	1
Benzene	ND		0.50	0.14	ug/L			08/29/23 04:54	1
Bromobenzene	ND		0.50	0.14	ug/L			08/29/23 04:54	1
Bromochloromethane	ND		1.0	0.27	ug/L			08/29/23 04:54	1
Bromodichloromethane	ND		0.50	0.15	ug/L			08/29/23 04:54	1
Bromoform	ND		0.50	0.28	ug/L			08/29/23 04:54	1
Bromomethane	ND		2.0	1.9	ug/L			08/29/23 04:54	1
cis-1,2-Dichloroethene	ND		0.50	0.16	ug/L			08/29/23 04:54	1
cis-1,3-Dichloropropene	ND		0.50	0.15	ug/L			08/29/23 04:54	1
Carbon disulfide	ND		1.0	0.32	ug/L			08/29/23 04:54	1
Carbon tetrachloride	ND		0.50	0.27	ug/L			08/29/23 04:54	1
Chlorobenzene	ND		0.50	0.12	ug/L			08/29/23 04:54	1
Chloroethane	ND		0.50	0.38	ug/L			08/29/23 04:54	1
Chloroform	ND		0.50	0.17	ug/L			08/29/23 04:54	1
Chloromethane	ND		1.0	0.65	ug/L			08/29/23 04:54	1
Dibromochloromethane	ND		0.50	0.21	ug/L			08/29/23 04:54	1
Dibromomethane	ND		0.50	0.16	ug/L			08/29/23 04:54	1
Dichlorodifluoromethane	ND		1.0	0.51	ug/L			08/29/23 04:54	1
Di-isopropyl ether (DIPE)	ND		0.50	0.16	ug/L			08/29/23 04:54	1
Ethanol	ND		50	40	ug/L			08/29/23 04:54	1
Ethylbenzene	ND		0.50	0.16	ug/L			08/29/23 04:54	1
Ethyl-t-butyl ether (ETBE)	ND		0.50	0.16	ug/L			08/29/23 04:54	1
Isopropylbenzene	ND		0.50	0.21	ug/L			08/29/23 04:54	1
Methylene Chloride	ND		1.0	0.40	ug/L			08/29/23 04:54	1
Methyl-t-Butyl Ether (MTBE)	ND		0.50	0.14	ug/L			08/29/23 04:54	1
Naphthalene	ND		1.0	0.55	ug/L			08/29/23 04:54	1
n-Butylbenzene	ND		0.50	0.24	ug/L			08/29/23 04:54	1
N-Propylbenzene	ND		0.50	0.18	ug/L			08/29/23 04:54	1
o-Xylene	ND		0.50	0.18	ug/L			08/29/23 04:54	1
m,p-Xylene	ND		1.0	0.39	ug/L			08/29/23 04:54	1
p-Isopropyltoluene	ND		0.50	0.20	ug/L			08/29/23 04:54	1
sec-Butylbenzene	ND		0.50	0.20	ug/L			08/29/23 04:54	1
Styrene	ND		0.50	0.27	ug/L			08/29/23 04:54	1
trans-1,2-Dichloroethene	ND		0.50	0.22	ug/L			08/29/23 04:54	1
trans-1,3-Dichloropropene	ND		0.50	0.21	ug/L			08/29/23 04:54	1
Tert-amyl-methyl ether (TAME)	ND		0.50	0.13	ug/L			08/29/23 04:54	1
tert-Butyl alcohol (TBA)	ND		5.0	3.1	ug/L			08/29/23 04:54	1
tert-Butylbenzene	ND		0.50	0.21	ug/L			08/29/23 04:54	1
Tetrachloroethene	ND		0.50	0.16	ug/L			08/29/23 04:54	1
Toluene	ND		0.50	0.14	ug/L			08/29/23 04:54	1
Trichloroethene	ND		0.50	0.15	ug/L			08/29/23 04:54	1
Trichlorofluoromethane	ND		0.50	0.26	ug/L			08/29/23 04:54	1
Vinyl acetate	ND		5.0	3.2	ug/L			08/29/23 04:54	1
Vinyl chloride	ND		0.50	0.23	ug/L			08/29/23 04:54	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	99		64 - 132		08/29/23 04:54	1

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Client Sample Results

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

Job ID: 570-149752-1

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

Client Sample ID: MW-39_20230822

Date Collected: 08/23/23 10:55

Date Received: 08/23/23 17:24

Lab Sample ID: 570-149752-8

Matrix: Water

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	88		76 - 120		08/29/23 04:54	1
Dibromofluoromethane (Surr)	107		80 - 120		08/29/23 04:54	1
Toluene-d8 (Surr)	103		80 - 120		08/29/23 04:54	1

Client Sample ID: MW-32A_20230822

Date Collected: 08/23/23 14:45

Date Received: 08/23/23 17:24

Lab Sample ID: 570-149752-9

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			08/29/23 05:22	1
1,1,1-Trichloroethane	ND		0.50	0.20	ug/L			08/29/23 05:22	1
1,1,2,2-Tetrachloroethane	ND		0.50	0.14	ug/L			08/29/23 05:22	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.50	0.25	ug/L			08/29/23 05:22	1
1,1,2-Trichloroethane	ND		0.50	0.18	ug/L			08/29/23 05:22	1
1,1-Dichloroethane	ND		0.50	0.21	ug/L			08/29/23 05:22	1
1,1-Dichloroethene	ND		0.50	0.21	ug/L			08/29/23 05:22	1
1,1-Dichloropropene	ND		0.50	0.16	ug/L			08/29/23 05:22	1
1,2,3-Trichlorobenzene	ND		0.50	0.26	ug/L			08/29/23 05:22	1
1,2,3-Trichloropropane	ND		0.50	0.31	ug/L			08/29/23 05:22	1
1,2,4-Trichlorobenzene	ND		0.50	0.26	ug/L			08/29/23 05:22	1
1,2,4-Trimethylbenzene	ND		0.50	0.22	ug/L			08/29/23 05:22	1
1,2-Dibromo-3-Chloropropane	ND		1.0	0.84	ug/L			08/29/23 05:22	1
1,2-Dibromoethane	ND		0.50	0.27	ug/L			08/29/23 05:22	1
1,2-Dichlorobenzene	ND		0.50	0.14	ug/L			08/29/23 05:22	1
1,2-Dichloroethane	ND		0.50	0.14	ug/L			08/29/23 05:22	1
1,2-Dichloropropane	ND		0.50	0.14	ug/L			08/29/23 05:22	1
1,3,5-Trimethylbenzene	ND		0.50	0.19	ug/L			08/29/23 05:22	1
1,3-Dichlorobenzene	ND		0.50	0.16	ug/L			08/29/23 05:22	1
1,3-Dichloropropane	ND		0.50	0.19	ug/L			08/29/23 05:22	1
1,4-Dichlorobenzene	ND		0.50	0.11	ug/L			08/29/23 05:22	1
2,2-Dichloropropane	ND		0.50	0.26	ug/L			08/29/23 05:22	1
2-Butanone	ND		5.0	2.9	ug/L			08/29/23 05:22	1
2-Chlorotoluene	ND		0.50	0.23	ug/L			08/29/23 05:22	1
2-Hexanone	ND		6.0	2.0	ug/L			08/29/23 05:22	1
4-Chlorotoluene	ND		0.50	0.24	ug/L			08/29/23 05:22	1
4-Methyl-2-pentanone	ND		5.0	1.6	ug/L			08/29/23 05:22	1
Acetone	ND	+	8.0	3.6	ug/L			08/29/23 05:22	1
Benzene	ND		0.50	0.14	ug/L			08/29/23 05:22	1
Bromobenzene	ND		0.50	0.14	ug/L			08/29/23 05:22	1
Bromochloromethane	ND		1.0	0.27	ug/L			08/29/23 05:22	1
Bromodichloromethane	ND		0.50	0.15	ug/L			08/29/23 05:22	1
Bromoform	ND		0.50	0.28	ug/L			08/29/23 05:22	1
Bromomethane	ND		2.0	1.9	ug/L			08/29/23 05:22	1
cis-1,2-Dichloroethene	ND		0.50	0.16	ug/L			08/29/23 05:22	1
cis-1,3-Dichloropropene	ND		0.50	0.15	ug/L			08/29/23 05:22	1
Carbon disulfide	ND		1.0	0.32	ug/L			08/29/23 05:22	1
Carbon tetrachloride	ND		0.50	0.27	ug/L			08/29/23 05:22	1
Chlorobenzene	ND		0.50	0.12	ug/L			08/29/23 05:22	1
Chloroethane	ND		0.50	0.38	ug/L			08/29/23 05:22	1
Chloroform	ND		0.50	0.17	ug/L			08/29/23 05:22	1

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Client Sample Results

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

Job ID: 570-149752-1

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

Client Sample ID: MW-32A_20230822

Date Collected: 08/23/23 14:45

Date Received: 08/23/23 17:24

Lab Sample ID: 570-149752-9

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloromethane	ND		1.0	0.65	ug/L			08/29/23 05:22	1
Dibromochloromethane	ND		0.50	0.21	ug/L			08/29/23 05:22	1
Dibromomethane	ND		0.50	0.16	ug/L			08/29/23 05:22	1
Dichlorodifluoromethane	ND		1.0	0.51	ug/L			08/29/23 05:22	1
Di-isopropyl ether (DIPE)	ND		0.50	0.16	ug/L			08/29/23 05:22	1
Ethanol	ND		50	40	ug/L			08/29/23 05:22	1
Ethylbenzene	ND		0.50	0.16	ug/L			08/29/23 05:22	1
Ethyl-t-butyl ether (ETBE)	ND		0.50	0.16	ug/L			08/29/23 05:22	1
Isopropylbenzene	ND		0.50	0.21	ug/L			08/29/23 05:22	1
Methylene Chloride	ND		1.0	0.40	ug/L			08/29/23 05:22	1
Methyl-t-Butyl Ether (MTBE)	ND		0.50	0.14	ug/L			08/29/23 05:22	1
Naphthalene	ND		1.0	0.55	ug/L			08/29/23 05:22	1
n-Butylbenzene	ND		0.50	0.24	ug/L			08/29/23 05:22	1
N-Propylbenzene	ND		0.50	0.18	ug/L			08/29/23 05:22	1
o-Xylene	ND		0.50	0.18	ug/L			08/29/23 05:22	1
m,p-Xylene	ND		1.0	0.39	ug/L			08/29/23 05:22	1
p-Isopropyltoluene	ND		0.50	0.20	ug/L			08/29/23 05:22	1
sec-Butylbenzene	ND		0.50	0.20	ug/L			08/29/23 05:22	1
Styrene	ND		0.50	0.27	ug/L			08/29/23 05:22	1
trans-1,2-Dichloroethene	ND		0.50	0.22	ug/L			08/29/23 05:22	1
trans-1,3-Dichloropropene	ND		0.50	0.21	ug/L			08/29/23 05:22	1
Tert-amyl-methyl ether (TAME)	ND		0.50	0.13	ug/L			08/29/23 05:22	1
tert-Butyl alcohol (TBA)	ND		5.0	3.1	ug/L			08/29/23 05:22	1
tert-Butylbenzene	ND		0.50	0.21	ug/L			08/29/23 05:22	1
Tetrachloroethene	ND		0.50	0.16	ug/L			08/29/23 05:22	1
Toluene	ND		0.50	0.14	ug/L			08/29/23 05:22	1
Trichloroethene	ND		0.50	0.15	ug/L			08/29/23 05:22	1
Trichlorofluoromethane	ND		0.50	0.26	ug/L			08/29/23 05:22	1
Vinyl acetate	ND		5.0	3.2	ug/L			08/29/23 05:22	1
Vinyl chloride	ND		0.50	0.23	ug/L			08/29/23 05:22	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	102		64 - 132		08/29/23 05:22	1
4-Bromofluorobenzene (Surr)	87		76 - 120		08/29/23 05:22	1
Dibromofluoromethane (Surr)	109		80 - 120		08/29/23 05:22	1
Toluene-d8 (Surr)	102		80 - 120		08/29/23 05:22	1

Client Sample Results

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

Job ID: 570-149752-1

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

Client Sample ID: MW-21_20230822

Date Collected: 08/23/23 15:15

Date Received: 08/23/23 17:24

Lab Sample ID: 570-149752-6

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	1500		25	11	ug/L			08/29/23 20:22	50
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	105		64 - 132					08/29/23 20:22	50
4-Bromofluorobenzene (Surr)	89		76 - 120					08/29/23 20:22	50
Dibromofluoromethane (Surr)	107		80 - 120					08/29/23 20:22	50
Toluene-d8 (Surr)	103		80 - 120					08/29/23 20:22	50

Client Sample Results

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

Job ID: 570-149752-1

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

Client Sample ID: TB-082223_20230822

Date Collected: 08/23/23 09:00

Date Received: 08/23/23 17:24

Lab Sample ID: 570-149752-1

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	4.1	J	8.0	3.6	ug/L			08/29/23 13:02	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	108		64 - 132					08/29/23 13:02	1
4-Bromofluorobenzene (Surr)	89		76 - 120					08/29/23 13:02	1
Dibromofluoromethane (Surr)	110		80 - 120					08/29/23 13:02	1
Toluene-d8 (Surr)	102		80 - 120					08/29/23 13:02	1

Client Sample ID: RB-082223_20230822

Date Collected: 08/23/23 14:20

Date Received: 08/23/23 17:24

Lab Sample ID: 570-149752-5

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	11		8.0	3.6	ug/L			08/29/23 19:27	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	104		64 - 132					08/29/23 19:27	1
4-Bromofluorobenzene (Surr)	89		76 - 120					08/29/23 19:27	1
Dibromofluoromethane (Surr)	108		80 - 120					08/29/23 19:27	1
Toluene-d8 (Surr)	102		80 - 120					08/29/23 19:27	1

Client Sample ID: EW-01_20230822

Date Collected: 08/23/23 15:45

Date Received: 08/23/23 17:24

Lab Sample ID: 570-149752-7

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	35		0.50	0.21	ug/L			08/30/23 16:33	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	116		64 - 132					08/30/23 16:33	1
4-Bromofluorobenzene (Surr)	96		76 - 120					08/30/23 16:33	1
Dibromofluoromethane (Surr)	110		80 - 120					08/30/23 16:33	1
Toluene-d8 (Surr)	102		80 - 120					08/30/23 16:33	1

Client Sample Results

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

Job ID: 570-149752-1

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

Client Sample ID: MW-09_20230822

Date Collected: 08/23/23 12:42

Date Received: 08/23/23 17:24

Lab Sample ID: 570-149752-2

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	ND		0.37	0.26	ug/L		08/24/23 08:47	08/28/23 16:45	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,4-Dioxane-d8	31		21 - 120				08/24/23 08:47	08/28/23 16:45	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Nitrobenzene-d5	74		58 - 135				08/24/23 08:47	08/28/23 16:45	1

Client Sample ID: MW-26C_20230822

Date Collected: 08/23/23 15:50

Date Received: 08/23/23 17:24

Lab Sample ID: 570-149752-3

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	ND		0.39	0.27	ug/L		08/24/23 08:47	08/28/23 17:00	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,4-Dioxane-d8	34		21 - 120				08/24/23 08:47	08/28/23 17:00	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Nitrobenzene-d5	74		58 - 135				08/24/23 08:47	08/28/23 17:00	1

Client Sample ID: MW-18_20230822

Date Collected: 08/23/23 14:15

Date Received: 08/23/23 17:24

Lab Sample ID: 570-149752-4

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	ND		0.38	0.26	ug/L		08/24/23 08:47	08/28/23 16:31	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,4-Dioxane-d8	28		21 - 120				08/24/23 08:47	08/28/23 16:31	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Nitrobenzene-d5	75		58 - 135				08/24/23 08:47	08/28/23 16:31	1

Client Sample ID: RB-082223_20230822

Date Collected: 08/23/23 14:20

Date Received: 08/23/23 17:24

Lab Sample ID: 570-149752-5

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	ND		0.38	0.26	ug/L		08/24/23 08:47	08/28/23 17:14	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,4-Dioxane-d8	31		21 - 120				08/24/23 08:47	08/28/23 17:14	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Nitrobenzene-d5	76		58 - 135				08/24/23 08:47	08/28/23 17:14	1

Client Sample ID: EW-01_20230822

Date Collected: 08/23/23 15:45

Date Received: 08/23/23 17:24

Lab Sample ID: 570-149752-7

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	18		0.38	0.26	ug/L		08/24/23 08:47	08/28/23 17:43	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,4-Dioxane-d8	30		21 - 120				08/24/23 08:47	08/28/23 17:43	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Nitrobenzene-d5	76		58 - 135				08/24/23 08:47	08/28/23 17:43	1

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Client Sample Results

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

Job ID: 570-149752-1

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

Client Sample ID: MW-39_20230822

Date Collected: 08/23/23 10:55

Date Received: 08/23/23 17:24

Lab Sample ID: 570-149752-8

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	ND		0.40	0.28	ug/L		08/24/23 08:47	08/28/23 17:57	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,4-Dioxane-d8	34		21 - 120				08/24/23 08:47	08/28/23 17:57	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Nitrobenzene-d5	75		58 - 135				08/24/23 08:47	08/28/23 17:57	1

Client Sample ID: MW-32A_20230822

Date Collected: 08/23/23 14:45

Date Received: 08/23/23 17:24

Lab Sample ID: 570-149752-9

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	ND		0.39	0.27	ug/L		08/24/23 08:47	08/28/23 18:11	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,4-Dioxane-d8	31		21 - 120				08/24/23 08:47	08/28/23 18:11	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Nitrobenzene-d5	75		58 - 135				08/24/23 08:47	08/28/23 18:11	1

Client Sample Results

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

Job ID: 570-149752-1

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

Client Sample ID: MW-21_20230822

Date Collected: 08/23/23 15:15

Date Received: 08/23/23 17:24

Lab Sample ID: 570-149752-6

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	520		19	13	ug/L		08/24/23 08:47	09/05/23 15:22	50
<i>Isotope Dilution</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>				<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
1,4-Dioxane-d8	43	*3	21 - 120				08/24/23 08:47	09/05/23 15:22	50
<i>Surrogate</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>				<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
Nitrobenzene-d5	104	*3	58 - 135				08/24/23 08:47	09/05/23 15:22	50

Surrogate Summary

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

Job ID: 570-149752-1

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)
570-149752-1	TB-082223_20230822	102	87	107	103
570-149752-1 - RA	TB-082223_20230822	108	89	110	102
570-149752-2	MW-09_20230822	102	86	107	101
570-149752-3	MW-26C_20230822	104	87	110	100
570-149752-4	MW-18_20230822	103	86	109	101
570-149752-4 MS	MW-18_20230822	101	100	100	101
570-149752-4 MSD	MW-18_20230822	103	97	102	100
570-149752-5	RB-082223_20230822	101	86	108	101
570-149752-5 - RA	RB-082223_20230822	104	89	108	102
570-149752-6	MW-21_20230822	104	86	105	99
570-149752-6 - DL	MW-21_20230822	105	89	107	103
570-149752-7	EW-01_20230822	102	86	108	102
570-149752-7 - RA	EW-01_20230822	116	96	110	102
570-149752-8	MW-39_20230822	99	88	107	103
570-149752-9	MW-32A_20230822	102	87	109	102
LCS 570-358798/4	Lab Control Sample	102	98	100	100
LCS 570-359024/4	Lab Control Sample	102	97	100	99
LCS 570-359426/4	Lab Control Sample	102	99	105	101
LCSD 570-358798/5	Lab Control Sample Dup	100	99	101	100
LCSD 570-359024/5	Lab Control Sample Dup	99	98	99	100
LCSD 570-359426/5	Lab Control Sample Dup	106	97	104	101
MB 570-358798/7	Method Blank	99	86	102	102
MB 570-359024/8	Method Blank	103	89	109	105
MB 570-359426/7	Method Blank	109	95	105	98

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

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)			
		NBZ (58-135)			
570-149752-2	MW-09_20230822	74			
570-149752-3	MW-26C_20230822	74			
570-149752-4	MW-18_20230822	75			
570-149752-4 MS	MW-18_20230822	68			
570-149752-4 MSD	MW-18_20230822	79			
570-149752-5	RB-082223_20230822	76			
570-149752-6 - DL	MW-21_20230822	104 *3			
570-149752-7	EW-01_20230822	76			
570-149752-8	MW-39_20230822	75			
570-149752-9	MW-32A_20230822	75			
LCS 570-357715/2-A	Lab Control Sample	67			
LCSD 570-357715/3-A	Lab Control Sample Dup	68			
MB 570-357715/1-A	Method Blank	70			

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Surrogate Summary

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

Job ID: 570-149752-1

Surrogate Legend
NBZ = Nitrobenzene-d5

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

Isotope Dilution Summary

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

Job ID: 570-149752-1

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)						
570-149752-2	MW-09_20230822	31						
570-149752-3	MW-26C_20230822	34						
570-149752-4	MW-18_20230822	28						
570-149752-4 MS	MW-18_20230822	30						
570-149752-4 MSD	MW-18_20230822	33						
570-149752-5	RB-082223_20230822	31						
570-149752-6 - DL	MW-21_20230822	43 *3						
570-149752-7	EW-01_20230822	30						
570-149752-8	MW-39_20230822	34						
570-149752-9	MW-32A_20230822	31						
LCS 570-357715/2-A	Lab Control Sample	30						
LCSD 570-357715/3-A	Lab Control Sample Dup	39						
MB 570-357715/1-A	Method Blank	39						

Surrogate Legend

DXE = 1,4-Dioxane-d8

QC Sample Results

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

Job ID: 570-149752-1

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

Lab Sample ID: MB 570-358798/7

Matrix: Water

Analysis Batch: 358798

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			08/28/23 21:07	1
1,1,1-Trichloroethane	ND		0.50	0.20	ug/L			08/28/23 21:07	1
1,1,2,2-Tetrachloroethane	ND		0.50	0.14	ug/L			08/28/23 21:07	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.50	0.25	ug/L			08/28/23 21:07	1
1,1,2-Trichloroethane	ND		0.50	0.18	ug/L			08/28/23 21:07	1
1,1-Dichloroethane	ND		0.50	0.21	ug/L			08/28/23 21:07	1
1,1-Dichloroethene	ND		0.50	0.21	ug/L			08/28/23 21:07	1
1,1-Dichloropropene	ND		0.50	0.16	ug/L			08/28/23 21:07	1
1,2,3-Trichlorobenzene	ND		0.50	0.26	ug/L			08/28/23 21:07	1
1,2,3-Trichloropropane	ND		0.50	0.31	ug/L			08/28/23 21:07	1
1,2,4-Trichlorobenzene	ND		0.50	0.26	ug/L			08/28/23 21:07	1
1,2,4-Trimethylbenzene	ND		0.50	0.22	ug/L			08/28/23 21:07	1
1,2-Dibromo-3-Chloropropane	ND		1.0	0.84	ug/L			08/28/23 21:07	1
1,2-Dibromoethane	ND		0.50	0.27	ug/L			08/28/23 21:07	1
1,2-Dichlorobenzene	ND		0.50	0.14	ug/L			08/28/23 21:07	1
1,2-Dichloroethane	ND		0.50	0.14	ug/L			08/28/23 21:07	1
1,2-Dichloropropane	ND		0.50	0.14	ug/L			08/28/23 21:07	1
1,3,5-Trimethylbenzene	ND		0.50	0.19	ug/L			08/28/23 21:07	1
1,3-Dichlorobenzene	ND		0.50	0.16	ug/L			08/28/23 21:07	1
1,3-Dichloropropane	ND		0.50	0.19	ug/L			08/28/23 21:07	1
1,4-Dichlorobenzene	ND		0.50	0.11	ug/L			08/28/23 21:07	1
2,2-Dichloropropane	ND		0.50	0.26	ug/L			08/28/23 21:07	1
2-Butanone	ND		5.0	2.9	ug/L			08/28/23 21:07	1
2-Chlorotoluene	ND		0.50	0.23	ug/L			08/28/23 21:07	1
2-Hexanone	ND		6.0	2.0	ug/L			08/28/23 21:07	1
4-Chlorotoluene	ND		0.50	0.24	ug/L			08/28/23 21:07	1
4-Methyl-2-pentanone	ND		5.0	1.6	ug/L			08/28/23 21:07	1
Acetone	ND		8.0	3.6	ug/L			08/28/23 21:07	1
Benzene	ND		0.50	0.14	ug/L			08/28/23 21:07	1
Bromobenzene	ND		0.50	0.14	ug/L			08/28/23 21:07	1
Bromochloromethane	ND		1.0	0.27	ug/L			08/28/23 21:07	1
Bromodichloromethane	ND		0.50	0.15	ug/L			08/28/23 21:07	1
Bromoform	ND		0.50	0.28	ug/L			08/28/23 21:07	1
Bromomethane	ND		2.0	1.9	ug/L			08/28/23 21:07	1
cis-1,2-Dichloroethene	ND		0.50	0.16	ug/L			08/28/23 21:07	1
cis-1,3-Dichloropropene	ND		0.50	0.15	ug/L			08/28/23 21:07	1
Carbon disulfide	ND		1.0	0.32	ug/L			08/28/23 21:07	1
Carbon tetrachloride	ND		0.50	0.27	ug/L			08/28/23 21:07	1
Chlorobenzene	ND		0.50	0.12	ug/L			08/28/23 21:07	1
Chloroethane	ND		0.50	0.38	ug/L			08/28/23 21:07	1
Chloroform	ND		0.50	0.17	ug/L			08/28/23 21:07	1
Chloromethane	ND		1.0	0.65	ug/L			08/28/23 21:07	1
Dibromochloromethane	ND		0.50	0.21	ug/L			08/28/23 21:07	1
Dibromomethane	ND		0.50	0.16	ug/L			08/28/23 21:07	1
Dichlorodifluoromethane	ND		1.0	0.51	ug/L			08/28/23 21:07	1
Di-isopropyl ether (DIPE)	ND		0.50	0.16	ug/L			08/28/23 21:07	1
Ethanol	ND		50	40	ug/L			08/28/23 21:07	1
Ethylbenzene	ND		0.50	0.16	ug/L			08/28/23 21:07	1

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QC Sample Results

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

Job ID: 570-149752-1

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

Lab Sample ID: MB 570-358798/7

Matrix: Water

Analysis Batch: 358798

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	0.16	ug/L			08/28/23 21:07	1
Isopropylbenzene	ND		0.50	0.21	ug/L			08/28/23 21:07	1
Methylene Chloride	ND		1.0	0.40	ug/L			08/28/23 21:07	1
Methyl-t-Butyl Ether (MTBE)	ND		0.50	0.14	ug/L			08/28/23 21:07	1
Naphthalene	ND		1.0	0.55	ug/L			08/28/23 21:07	1
n-Butylbenzene	ND		0.50	0.24	ug/L			08/28/23 21:07	1
N-Propylbenzene	ND		0.50	0.18	ug/L			08/28/23 21:07	1
o-Xylene	ND		0.50	0.18	ug/L			08/28/23 21:07	1
m,p-Xylene	ND		1.0	0.39	ug/L			08/28/23 21:07	1
p-Isopropyltoluene	ND		0.50	0.20	ug/L			08/28/23 21:07	1
sec-Butylbenzene	ND		0.50	0.20	ug/L			08/28/23 21:07	1
Styrene	ND		0.50	0.27	ug/L			08/28/23 21:07	1
trans-1,2-Dichloroethene	ND		0.50	0.22	ug/L			08/28/23 21:07	1
trans-1,3-Dichloropropene	ND		0.50	0.21	ug/L			08/28/23 21:07	1
Tert-amyl-methyl ether (TAME)	ND		0.50	0.13	ug/L			08/28/23 21:07	1
tert-Butyl alcohol (TBA)	ND		5.0	3.1	ug/L			08/28/23 21:07	1
tert-Butylbenzene	ND		0.50	0.21	ug/L			08/28/23 21:07	1
Tetrachloroethene	ND		0.50	0.16	ug/L			08/28/23 21:07	1
Toluene	ND		0.50	0.14	ug/L			08/28/23 21:07	1
Trichloroethene	ND		0.50	0.15	ug/L			08/28/23 21:07	1
Trichlorofluoromethane	ND		0.50	0.26	ug/L			08/28/23 21:07	1
Vinyl acetate	ND		5.0	3.2	ug/L			08/28/23 21:07	1
Vinyl chloride	ND		0.50	0.23	ug/L			08/28/23 21:07	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	99		64 - 132		08/28/23 21:07	1
4-Bromofluorobenzene (Surr)	86		76 - 120		08/28/23 21:07	1
Dibromofluoromethane (Surr)	102		80 - 120		08/28/23 21:07	1
Toluene-d8 (Surr)	102		80 - 120		08/28/23 21:07	1

Lab Sample ID: LCS 570-358798/4

Matrix: Water

Analysis Batch: 358798

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	10.04		ug/L		100	80 - 126
1,2-Dibromoethane	10.0	10.13		ug/L		101	80 - 125
1,2-Dichlorobenzene	10.0	10.40		ug/L		104	80 - 120
1,2-Dichloroethane	10.0	10.77		ug/L		108	76 - 130
Benzene	10.0	10.65		ug/L		107	80 - 120
Carbon tetrachloride	10.0	10.50		ug/L		105	61 - 139
Chlorobenzene	10.0	10.37		ug/L		104	80 - 120
Di-isopropyl ether (DIPE)	10.0	10.36		ug/L		104	65 - 145
Ethanol	100	166.3		ug/L		166	20 - 180
Ethylbenzene	10.0	10.26		ug/L		103	80 - 126
Ethyl-t-butyl ether (ETBE)	10.0	9.880		ug/L		99	76 - 125
Methyl-t-Butyl Ether (MTBE)	10.0	10.01		ug/L		100	69 - 128
o-Xylene	10.0	10.54		ug/L		105	80 - 124

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QC Sample Results

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

Job ID: 570-149752-1

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

Lab Sample ID: LCS 570-358798/4

Matrix: Water

Analysis Batch: 358798

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	21.35		ug/L		107	80 - 123
Tert-amyl-methyl ether (TAME)	10.0	10.24		ug/L		102	78 - 133
tert-Butyl alcohol (TBA)	50.0	53.78		ug/L		108	68 - 133
Toluene	10.0	10.64		ug/L		106	80 - 120
Trichloroethene	10.0	10.76		ug/L		108	77 - 124
Vinyl chloride	10.0	8.391		ug/L		84	50 - 160

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	102		64 - 132
4-Bromofluorobenzene (Surr)	98		76 - 120
Dibromofluoromethane (Surr)	100		80 - 120
Toluene-d8 (Surr)	100		80 - 120

Lab Sample ID: LCSD 570-358798/5

Matrix: Water

Analysis Batch: 358798

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	10.29		ug/L		103	80 - 126	2	21
1,2-Dibromoethane	10.0	10.14		ug/L		101	80 - 125	0	20
1,2-Dichlorobenzene	10.0	10.33		ug/L		103	80 - 120	1	20
1,2-Dichloroethane	10.0	10.69		ug/L		107	76 - 130	1	20
Benzene	10.0	10.74		ug/L		107	80 - 120	1	20
Carbon tetrachloride	10.0	10.42		ug/L		104	61 - 139	1	20
Chlorobenzene	10.0	10.29		ug/L		103	80 - 120	1	20
Di-isopropyl ether (DIPE)	10.0	10.33		ug/L		103	65 - 145	0	20
Ethanol	100	131.8		ug/L		132	20 - 180	23	30
Ethylbenzene	10.0	10.23		ug/L		102	80 - 126	0	20
Ethyl-t-butyl ether (ETBE)	10.0	10.04		ug/L		100	76 - 125	2	20
Methyl-t-Butyl Ether (MTBE)	10.0	10.17		ug/L		102	69 - 128	2	20
o-Xylene	10.0	10.38		ug/L		104	80 - 124	2	20
m,p-Xylene	20.0	21.20		ug/L		106	80 - 123	1	20
Tert-amyl-methyl ether (TAME)	10.0	10.42		ug/L		104	78 - 133	2	20
tert-Butyl alcohol (TBA)	50.0	59.89		ug/L		120	68 - 133	11	21
Toluene	10.0	10.54		ug/L		105	80 - 120	1	20
Trichloroethene	10.0	10.62		ug/L		106	77 - 124	1	20
Vinyl chloride	10.0	8.483		ug/L		85	50 - 160	1	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	100		64 - 132
4-Bromofluorobenzene (Surr)	99		76 - 120
Dibromofluoromethane (Surr)	101		80 - 120
Toluene-d8 (Surr)	100		80 - 120

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QC Sample Results

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

Job ID: 570-149752-1

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

Lab Sample ID: 570-149752-4 MS

Matrix: Water

Analysis Batch: 358798

Client Sample ID: MW-18_20230822

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
1,1-Dichloroethene	ND		10.0	9.932		ug/L		99	57 - 148
1,2-Dibromoethane	ND		10.0	9.216		ug/L		92	74 - 128
1,2-Dichlorobenzene	ND		10.0	9.809		ug/L		98	74 - 126
1,2-Dichloroethane	ND		10.0	10.27		ug/L		103	65 - 140
Benzene	ND		10.0	10.31		ug/L		103	75 - 125
Carbon tetrachloride	ND		10.0	9.992		ug/L		100	50 - 159
Chlorobenzene	ND		10.0	9.982		ug/L		100	75 - 128
Di-isopropyl ether (DIPE)	ND		10.0	9.917		ug/L		99	65 - 137
Ethanol	ND		100	104.7		ug/L		105	20 - 180
Ethylbenzene	ND		10.0	10.14		ug/L		101	73 - 135
Ethyl-t-butyl ether (ETBE)	ND		10.0	9.469		ug/L		95	62 - 136
Methyl-t-Butyl Ether (MTBE)	ND		10.0	9.299		ug/L		93	59 - 131
o-Xylene	ND		10.0	10.18		ug/L		102	69 - 138
m,p-Xylene	ND		20.0	20.68		ug/L		103	73 - 138
Tert-amyl-methyl ether (TAME)	ND		10.0	9.565		ug/L		96	60 - 134
tert-Butyl alcohol (TBA)	ND	F1 F2	50.0	95.99	F1	ug/L		192	54 - 168
Toluene	ND		10.0	10.34		ug/L		103	75 - 127
Trichloroethene	ND		10.0	10.33		ug/L		103	34 - 159
Vinyl chloride	ND		10.0	8.101		ug/L		81	51 - 168

Surrogate	%Recovery	MS Qualifier	MS Limits
1,2-Dichloroethane-d4 (Surr)	101		64 - 132
4-Bromofluorobenzene (Surr)	100		76 - 120
Dibromofluoromethane (Surr)	100		80 - 120
Toluene-d8 (Surr)	101		80 - 120

Lab Sample ID: 570-149752-4 MSD

Matrix: Water

Analysis Batch: 358798

Client Sample ID: MW-18_20230822

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-Dichloroethene	ND		10.0	8.594		ug/L		86	57 - 148	14	20
1,2-Dibromoethane	ND		10.0	9.659		ug/L		97	74 - 128	5	20
1,2-Dichlorobenzene	ND		10.0	9.650		ug/L		96	74 - 126	2	20
1,2-Dichloroethane	ND		10.0	10.22		ug/L		102	65 - 140	0	20
Benzene	ND		10.0	9.179		ug/L		92	75 - 125	12	20
Carbon tetrachloride	ND		10.0	8.540		ug/L		85	50 - 159	16	20
Chlorobenzene	ND		10.0	8.985		ug/L		90	75 - 128	11	20
Di-isopropyl ether (DIPE)	ND		10.0	9.601		ug/L		96	65 - 137	3	20
Ethanol	ND		100	137.2		ug/L		137	20 - 180	27	40
Ethylbenzene	ND		10.0	8.504		ug/L		85	73 - 135	18	20
Ethyl-t-butyl ether (ETBE)	ND		10.0	9.401		ug/L		94	62 - 136	1	20
Methyl-t-Butyl Ether (MTBE)	ND		10.0	9.739		ug/L		97	59 - 131	5	20
o-Xylene	ND		10.0	8.708		ug/L		87	69 - 138	16	20
m,p-Xylene	ND		20.0	17.55		ug/L		88	73 - 138	16	21
Tert-amyl-methyl ether (TAME)	ND		10.0	9.694		ug/L		97	60 - 134	1	20
tert-Butyl alcohol (TBA)	ND	F1 F2	50.0	52.90	F2	ug/L		106	54 - 168	58	35
Toluene	ND		10.0	8.901		ug/L		89	75 - 127	15	20

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QC Sample Results

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

Job ID: 570-149752-1

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

Lab Sample ID: 570-149752-4 MSD

Matrix: Water

Analysis Batch: 358798

Client Sample ID: MW-18_20230822

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Trichloroethene	ND		10.0	8.951		ug/L		90	34 - 159	14	23
Vinyl chloride	ND		10.0	8.133		ug/L		81	51 - 168	0	20

Surrogate	MSD %Recovery	MSD Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	103		64 - 132
4-Bromofluorobenzene (Surr)	97		76 - 120
Dibromofluoromethane (Surr)	102		80 - 120
Toluene-d8 (Surr)	100		80 - 120

Lab Sample ID: MB 570-359024/8

Matrix: Water

Analysis Batch: 359024

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			08/29/23 11:13	1
1,1,1-Trichloroethane	ND		0.50	0.20	ug/L			08/29/23 11:13	1
1,1,2,2-Tetrachloroethane	ND		0.50	0.14	ug/L			08/29/23 11:13	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.50	0.25	ug/L			08/29/23 11:13	1
1,1,2-Trichloroethane	ND		0.50	0.18	ug/L			08/29/23 11:13	1
1,1-Dichloroethane	ND		0.50	0.21	ug/L			08/29/23 11:13	1
1,1-Dichloroethene	ND		0.50	0.21	ug/L			08/29/23 11:13	1
1,1-Dichloropropene	ND		0.50	0.16	ug/L			08/29/23 11:13	1
1,2,3-Trichlorobenzene	ND		0.50	0.26	ug/L			08/29/23 11:13	1
1,2,3-Trichloropropane	ND		0.50	0.31	ug/L			08/29/23 11:13	1
1,2,4-Trichlorobenzene	ND		0.50	0.26	ug/L			08/29/23 11:13	1
1,2,4-Trimethylbenzene	ND		0.50	0.22	ug/L			08/29/23 11:13	1
1,2-Dibromo-3-Chloropropane	ND		1.0	0.84	ug/L			08/29/23 11:13	1
1,2-Dibromoethane	ND		0.50	0.27	ug/L			08/29/23 11:13	1
1,2-Dichlorobenzene	ND		0.50	0.14	ug/L			08/29/23 11:13	1
1,2-Dichloroethane	ND		0.50	0.14	ug/L			08/29/23 11:13	1
1,2-Dichloropropane	ND		0.50	0.14	ug/L			08/29/23 11:13	1
1,3,5-Trimethylbenzene	ND		0.50	0.19	ug/L			08/29/23 11:13	1
1,3-Dichlorobenzene	ND		0.50	0.16	ug/L			08/29/23 11:13	1
1,3-Dichloropropane	ND		0.50	0.19	ug/L			08/29/23 11:13	1
1,4-Dichlorobenzene	ND		0.50	0.11	ug/L			08/29/23 11:13	1
2,2-Dichloropropane	ND		0.50	0.26	ug/L			08/29/23 11:13	1
2-Butanone	ND		5.0	2.9	ug/L			08/29/23 11:13	1
2-Chlorotoluene	ND		0.50	0.23	ug/L			08/29/23 11:13	1
2-Hexanone	ND		6.0	2.0	ug/L			08/29/23 11:13	1
4-Chlorotoluene	ND		0.50	0.24	ug/L			08/29/23 11:13	1
4-Methyl-2-pentanone	ND		5.0	1.6	ug/L			08/29/23 11:13	1
Acetone	ND		8.0	3.6	ug/L			08/29/23 11:13	1
Benzene	ND		0.50	0.14	ug/L			08/29/23 11:13	1
Bromobenzene	ND		0.50	0.14	ug/L			08/29/23 11:13	1
Bromochloromethane	ND		1.0	0.27	ug/L			08/29/23 11:13	1
Bromodichloromethane	ND		0.50	0.15	ug/L			08/29/23 11:13	1
Bromoform	ND		0.50	0.28	ug/L			08/29/23 11:13	1
Bromomethane	ND		2.0	1.9	ug/L			08/29/23 11:13	1

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QC Sample Results

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

Job ID: 570-149752-1

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

Lab Sample ID: MB 570-359024/8

Matrix: Water

Analysis Batch: 359024

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	ND		0.50	0.16	ug/L			08/29/23 11:13	1
cis-1,3-Dichloropropene	ND		0.50	0.15	ug/L			08/29/23 11:13	1
Carbon disulfide	ND		1.0	0.32	ug/L			08/29/23 11:13	1
Carbon tetrachloride	ND		0.50	0.27	ug/L			08/29/23 11:13	1
Chlorobenzene	ND		0.50	0.12	ug/L			08/29/23 11:13	1
Chloroethane	ND		0.50	0.38	ug/L			08/29/23 11:13	1
Chloroform	ND		0.50	0.17	ug/L			08/29/23 11:13	1
Chloromethane	ND		1.0	0.65	ug/L			08/29/23 11:13	1
Dibromochloromethane	ND		0.50	0.21	ug/L			08/29/23 11:13	1
Dibromomethane	ND		0.50	0.16	ug/L			08/29/23 11:13	1
Dichlorodifluoromethane	ND		1.0	0.51	ug/L			08/29/23 11:13	1
Di-isopropyl ether (DIPE)	ND		0.50	0.16	ug/L			08/29/23 11:13	1
Ethanol	ND		50	40	ug/L			08/29/23 11:13	1
Ethylbenzene	ND		0.50	0.16	ug/L			08/29/23 11:13	1
Ethyl-t-butyl ether (ETBE)	ND		0.50	0.16	ug/L			08/29/23 11:13	1
Isopropylbenzene	ND		0.50	0.21	ug/L			08/29/23 11:13	1
Methylene Chloride	ND		1.0	0.40	ug/L			08/29/23 11:13	1
Methyl-t-Butyl Ether (MTBE)	ND		0.50	0.14	ug/L			08/29/23 11:13	1
Naphthalene	ND		1.0	0.55	ug/L			08/29/23 11:13	1
n-Butylbenzene	ND		0.50	0.24	ug/L			08/29/23 11:13	1
N-Propylbenzene	ND		0.50	0.18	ug/L			08/29/23 11:13	1
o-Xylene	ND		0.50	0.18	ug/L			08/29/23 11:13	1
m,p-Xylene	ND		1.0	0.39	ug/L			08/29/23 11:13	1
p-Isopropyltoluene	ND		0.50	0.20	ug/L			08/29/23 11:13	1
sec-Butylbenzene	ND		0.50	0.20	ug/L			08/29/23 11:13	1
Styrene	ND		0.50	0.27	ug/L			08/29/23 11:13	1
trans-1,2-Dichloroethene	ND		0.50	0.22	ug/L			08/29/23 11:13	1
trans-1,3-Dichloropropene	ND		0.50	0.21	ug/L			08/29/23 11:13	1
Tert-amyl-methyl ether (TAME)	ND		0.50	0.13	ug/L			08/29/23 11:13	1
tert-Butyl alcohol (TBA)	ND		5.0	3.1	ug/L			08/29/23 11:13	1
tert-Butylbenzene	ND		0.50	0.21	ug/L			08/29/23 11:13	1
Tetrachloroethene	ND		0.50	0.16	ug/L			08/29/23 11:13	1
Toluene	ND		0.50	0.14	ug/L			08/29/23 11:13	1
Trichloroethene	ND		0.50	0.15	ug/L			08/29/23 11:13	1
Trichlorofluoromethane	ND		0.50	0.26	ug/L			08/29/23 11:13	1
Vinyl acetate	ND		5.0	3.2	ug/L			08/29/23 11:13	1
Vinyl chloride	ND		0.50	0.23	ug/L			08/29/23 11:13	1
Surrogate	MB %Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	103		64 - 132					08/29/23 11:13	1
4-Bromofluorobenzene (Surr)	89		76 - 120					08/29/23 11:13	1
Dibromofluoromethane (Surr)	109		80 - 120					08/29/23 11:13	1
Toluene-d8 (Surr)	105		80 - 120					08/29/23 11:13	1

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QC Sample Results

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

Job ID: 570-149752-1

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

Lab Sample ID: LCS 570-359024/4

Matrix: Water

Analysis Batch: 359024

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	10.26		ug/L		103	80 - 126
Surrogate	LCS %Recovery	LCS Qualifier	Limits				
1,2-Dichloroethane-d4 (Surr)	102		64 - 132				
4-Bromofluorobenzene (Surr)	97		76 - 120				
Dibromofluoromethane (Surr)	100		80 - 120				
Toluene-d8 (Surr)	99		80 - 120				

Lab Sample ID: LCSD 570-359024/5

Matrix: Water

Analysis Batch: 359024

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	9.843		ug/L		98	80 - 126	4	21
Surrogate	LCSD %Recovery	LCSD Qualifier	Limits						
1,2-Dichloroethane-d4 (Surr)	99		64 - 132						
4-Bromofluorobenzene (Surr)	98		76 - 120						
Dibromofluoromethane (Surr)	99		80 - 120						
Toluene-d8 (Surr)	100		80 - 120						

Lab Sample ID: MB 570-359426/7

Matrix: Water

Analysis Batch: 359426

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
1,1-Dichloroethene	ND		0.50	0.21	ug/L			08/30/23 08:11	1
Surrogate	MB	MB	Limits				Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier							
1,2-Dichloroethane-d4 (Surr)	109		64 - 132					08/30/23 08:11	1
4-Bromofluorobenzene (Surr)	95		76 - 120					08/30/23 08:11	1
Dibromofluoromethane (Surr)	105		80 - 120					08/30/23 08:11	1
Toluene-d8 (Surr)	98		80 - 120					08/30/23 08:11	1

Lab Sample ID: LCS 570-359426/4

Matrix: Water

Analysis Batch: 359426

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	10.42		ug/L		104	80 - 126
Surrogate	LCS %Recovery	LCS Qualifier	Limits				
1,2-Dichloroethane-d4 (Surr)	102		64 - 132				
4-Bromofluorobenzene (Surr)	99		76 - 120				
Dibromofluoromethane (Surr)	105		80 - 120				
Toluene-d8 (Surr)	101		80 - 120				

Eurofins Calscience

QC Sample Results

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

Job ID: 570-149752-1

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

Lab Sample ID: LCSD 570-359426/5

Matrix: Water

Analysis Batch: 359426

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	10.11		ug/L		101	80 - 126	3	21
Surrogate	LCSD %Recovery	LCSD Qualifier	Limits						
1,2-Dichloroethane-d4 (Surr)	106		64 - 132						
4-Bromofluorobenzene (Surr)	97		76 - 120						
Dibromofluoromethane (Surr)	104		80 - 120						
Toluene-d8 (Surr)	101		80 - 120						

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

Lab Sample ID: MB 570-357715/1-A

Matrix: Water

Analysis Batch: 358801

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 357715

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	ND		0.50	0.34	ug/L	-	08/24/23 08:47	08/28/23 14:37	1
Isotope Dilution	%Recovery	MB Qualifier	Limits						
1,4-Dioxane-d8	39		21 - 120						
Surrogate	%Recovery	MB Qualifier	Limits						
Nitrobenzene-d5	70		58 - 135						

Lab Sample ID: LCS 570-357715/2-A

Matrix: Water

Analysis Batch: 358801

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 357715

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
1,4-Dioxane			20.0	16.13		ug/L		81	63 - 144		

Lab Sample ID: LCSD 570-357715/3-A

Matrix: Water

Analysis Batch: 358801

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 357715

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
1,4-Dioxane	20.0	15.30		ug/L		76	63 - 144	5	20
Isotope Dilution	LCSD %Recovery	LCSD Qualifier	Limits						
1,4-Dioxane-d8	39		21 - 120						

Eurofins Calscience

QC Sample Results

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

Job ID: 570-149752-1

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

Lab Sample ID: LCSD 570-357715/3-A

Matrix: Water

Analysis Batch: 358801

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 357715

	LCSD	LCSD	
Surrogate	%Recovery	Qualifier	Limits
Nitrobenzene-d5	68		58 - 135

Lab Sample ID: 570-149752-4 MS

Matrix: Water

Analysis Batch: 358801

Client Sample ID: MW-18_20230822

Prep Type: Total/NA

Prep Batch: 357715

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
1,4-Dioxane	ND		15.0	12.26		ug/L		82	48 - 164
Isotope Dilution	MS %Recovery	MS Qualifier	Limits						
1,4-Dioxane-d8	30		21 - 120						
Surrogate	MS %Recovery	MS Qualifier	Limits						
Nitrobenzene-d5	68		58 - 135						

Lab Sample ID: 570-149752-4 MSD

Matrix: Water

Analysis Batch: 358801

Client Sample ID: MW-18_20230822

Prep Type: Total/NA

Prep Batch: 357715

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	12.18		ug/L		80	48 - 164	1	20
Isotope Dilution	MSD %Recovery	MSD Qualifier	Limits								
1,4-Dioxane-d8	33		21 - 120								
Surrogate	MSD %Recovery	MSD Qualifier	Limits								
Nitrobenzene-d5	79		58 - 135								

QC Association Summary

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

Job ID: 570-149752-1

GC/MS VOA

Analysis Batch: 358798

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-149752-1	TB-082223_20230822	Total/NA	Water	8260B	
570-149752-2	MW-09_20230822	Total/NA	Water	8260B	
570-149752-3	MW-26C_20230822	Total/NA	Water	8260B	
570-149752-4	MW-18_20230822	Total/NA	Water	8260B	
570-149752-5	RB-082223_20230822	Total/NA	Water	8260B	
570-149752-6	MW-21_20230822	Total/NA	Water	8260B	
570-149752-7	EW-01_20230822	Total/NA	Water	8260B	
570-149752-8	MW-39_20230822	Total/NA	Water	8260B	
570-149752-9	MW-32A_20230822	Total/NA	Water	8260B	
MB 570-358798/7	Method Blank	Total/NA	Water	8260B	
LCS 570-358798/4	Lab Control Sample	Total/NA	Water	8260B	
LCSD 570-358798/5	Lab Control Sample Dup	Total/NA	Water	8260B	
570-149752-4 MS	MW-18_20230822	Total/NA	Water	8260B	
570-149752-4 MSD	MW-18_20230822	Total/NA	Water	8260B	

Analysis Batch: 359024

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-149752-1 - RA	TB-082223_20230822	Total/NA	Water	8260B	
570-149752-5 - RA	RB-082223_20230822	Total/NA	Water	8260B	
570-149752-6 - DL	MW-21_20230822	Total/NA	Water	8260B	
MB 570-359024/8	Method Blank	Total/NA	Water	8260B	
LCS 570-359024/4	Lab Control Sample	Total/NA	Water	8260B	
LCSD 570-359024/5	Lab Control Sample Dup	Total/NA	Water	8260B	

Analysis Batch: 359426

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-149752-7 - RA	EW-01_20230822	Total/NA	Water	8260B	
MB 570-359426/7	Method Blank	Total/NA	Water	8260B	
LCS 570-359426/4	Lab Control Sample	Total/NA	Water	8260B	
LCSD 570-359426/5	Lab Control Sample Dup	Total/NA	Water	8260B	

GC/MS Semi VOA

Prep Batch: 357715

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-149752-2	MW-09_20230822	Total/NA	Water	3510C	
570-149752-3	MW-26C_20230822	Total/NA	Water	3510C	
570-149752-4	MW-18_20230822	Total/NA	Water	3510C	
570-149752-5	RB-082223_20230822	Total/NA	Water	3510C	
570-149752-6 - DL	MW-21_20230822	Total/NA	Water	3510C	
570-149752-7	EW-01_20230822	Total/NA	Water	3510C	
570-149752-8	MW-39_20230822	Total/NA	Water	3510C	
570-149752-9	MW-32A_20230822	Total/NA	Water	3510C	
MB 570-357715/1-A	Method Blank	Total/NA	Water	3510C	
LCS 570-357715/2-A	Lab Control Sample	Total/NA	Water	3510C	
LCSD 570-357715/3-A	Lab Control Sample Dup	Total/NA	Water	3510C	
570-149752-4 MS	MW-18_20230822	Total/NA	Water	3510C	
570-149752-4 MSD	MW-18_20230822	Total/NA	Water	3510C	

QC Association Summary

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

Job ID: 570-149752-1

GC/MS Semi VOA

Analysis Batch: 358801

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-149752-2	MW-09_20230822	Total/NA	Water	8270C SIM ID	357715
570-149752-3	MW-26C_20230822	Total/NA	Water	8270C SIM ID	357715
570-149752-4	MW-18_20230822	Total/NA	Water	8270C SIM ID	357715
570-149752-5	RB-082223_20230822	Total/NA	Water	8270C SIM ID	357715
570-149752-7	EW-01_20230822	Total/NA	Water	8270C SIM ID	357715
570-149752-8	MW-39_20230822	Total/NA	Water	8270C SIM ID	357715
570-149752-9	MW-32A_20230822	Total/NA	Water	8270C SIM ID	357715
MB 570-357715/1-A	Method Blank	Total/NA	Water	8270C SIM ID	357715
LCS 570-357715/2-A	Lab Control Sample	Total/NA	Water	8270C SIM ID	357715
LCSD 570-357715/3-A	Lab Control Sample Dup	Total/NA	Water	8270C SIM ID	357715
570-149752-4 MS	MW-18_20230822	Total/NA	Water	8270C SIM ID	357715
570-149752-4 MSD	MW-18_20230822	Total/NA	Water	8270C SIM ID	357715

Analysis Batch: 360763

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-149752-6 - DL	MW-21_20230822	Total/NA	Water	8270C SIM ID	357715

Lab Chronicle

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

Job ID: 570-149752-1

Client Sample ID: TB-082223_20230822

Lab Sample ID: 570-149752-1

Date Collected: 08/23/23 09:00

Matrix: Water

Date Received: 08/23/23 17:24

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	358798	08/29/23 02:09	KHF2	EET CAL 4
		Instrument ID: GCMSVV								
Total/NA	Analysis	8260B	RA	1	20 mL	20 mL	359024	08/29/23 13:02	Y2DF	EET CAL 4
		Instrument ID: GCMSVV								

Client Sample ID: MW-09_20230822

Lab Sample ID: 570-149752-2

Date Collected: 08/23/23 12:42

Matrix: Water

Date Received: 08/23/23 17:24

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	358798	08/29/23 03:04	KHF2	EET CAL 4
		Instrument ID: GCMSVV								
Total/NA	Prep	3510C			133.4 mL	10 mL	357715	08/24/23 08:47	RY4P	EET CAL 4
Total/NA	Analysis	8270C SIM ID		1	1 mL	1 mL	358801	08/28/23 16:45	ULLI	EET CAL 4
		Instrument ID: GCMSDDD								

Client Sample ID: MW-26C_20230822

Lab Sample ID: 570-149752-3

Date Collected: 08/23/23 15:50

Matrix: Water

Date Received: 08/23/23 17:24

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	358798	08/29/23 03:32	KHF2	EET CAL 4
		Instrument ID: GCMSVV								
Total/NA	Prep	3510C			128.7 mL	10 mL	357715	08/24/23 08:47	RY4P	EET CAL 4
Total/NA	Analysis	8270C SIM ID		1	1 mL	1 mL	358801	08/28/23 17:00	ULLI	EET CAL 4
		Instrument ID: GCMSDDD								

Client Sample ID: MW-18_20230822

Lab Sample ID: 570-149752-4

Date Collected: 08/23/23 14:15

Matrix: Water

Date Received: 08/23/23 17:24

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	358798	08/29/23 05:49	KHF2	EET CAL 4
		Instrument ID: GCMSVV								
Total/NA	Prep	3510C			132.3 mL	10 mL	357715	08/24/23 08:47	RY4P	EET CAL 4
Total/NA	Analysis	8270C SIM ID		1	1 mL	1 mL	358801	08/28/23 16:31	ULLI	EET CAL 4
		Instrument ID: GCMSDDD								

Client Sample ID: RB-082223_20230822

Lab Sample ID: 570-149752-5

Date Collected: 08/23/23 14:20

Matrix: Water

Date Received: 08/23/23 17:24

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	358798	08/29/23 02:37	KHF2	EET CAL 4
		Instrument ID: GCMSVV								

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Lab Chronicle

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

Job ID: 570-149752-1

Client Sample ID: RB-082223_20230822

Lab Sample ID: 570-149752-5

Date Collected: 08/23/23 14:20

Matrix: Water

Date Received: 08/23/23 17:24

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B	RA	1	20 mL	20 mL	359024	08/29/23 19:27	Y2DF	EET CAL 4
Total/NA	Prep	3510C			132.5 mL	10 mL	357715	08/24/23 08:47	RY4P	EET CAL 4
Total/NA	Analysis	8270C SIM ID		1	1 mL	1 mL	358801	08/28/23 17:14	ULLI	EET CAL 4
Instrument ID: GCMSDDD										

Client Sample ID: MW-21_20230822

Lab Sample ID: 570-149752-6

Date Collected: 08/23/23 15:15

Matrix: Water

Date Received: 08/23/23 17:24

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	358798	08/29/23 03:59	KHF2	EET CAL 4
Instrument ID: GCMSVV										
Total/NA	Analysis	8260B	DL	50	20 mL	20 mL	359024	08/29/23 20:22	Y2DF	EET CAL 4
Instrument ID: GCMSVV										
Total/NA	Prep	3510C	DL		131 mL	10 mL	357715	08/24/23 08:47	RY4P	EET CAL 4
Total/NA	Analysis	8270C SIM ID	DL	50	1 mL	1 mL	360763	09/05/23 15:22	ULLI	EET CAL 4
Instrument ID: GCMSDDD										

Client Sample ID: EW-01_20230822

Lab Sample ID: 570-149752-7

Date Collected: 08/23/23 15:45

Matrix: Water

Date Received: 08/23/23 17:24

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B	RA	1	20 mL	20 mL	359426	08/30/23 16:33	N5PD	EET CAL 4
Instrument ID: GCMSUU										
Total/NA	Analysis	8260B		1	20 mL	20 mL	358798	08/29/23 04:27	KHF2	EET CAL 4
Instrument ID: GCMSVV										
Total/NA	Prep	3510C			132.4 mL	10 mL	357715	08/24/23 08:47	RY4P	EET CAL 4
Total/NA	Analysis	8270C SIM ID		1	1 mL	1 mL	358801	08/28/23 17:43	ULLI	EET CAL 4
Instrument ID: GCMSDDD										

Client Sample ID: MW-39_20230822

Lab Sample ID: 570-149752-8

Date Collected: 08/23/23 10:55

Matrix: Water

Date Received: 08/23/23 17:24

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	358798	08/29/23 04:54	KHF2	EET CAL 4
Instrument ID: GCMSVV										
Total/NA	Prep	3510C			123.6 mL	10 mL	357715	08/24/23 08:47	RY4P	EET CAL 4
Total/NA	Analysis	8270C SIM ID		1	1 mL	1 mL	358801	08/28/23 17:57	ULLI	EET CAL 4
Instrument ID: GCMSDDD										

Lab Chronicle

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

Job ID: 570-149752-1

Client Sample ID: MW-32A_20230822

Lab Sample ID: 570-149752-9

Date Collected: 08/23/23 14:45

Matrix: Water

Date Received: 08/23/23 17:24

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	358798	08/29/23 05:22	KHF2	EET CAL 4
		Instrument ID: GCMSVV								
Total/NA	Prep	3510C			128.1 mL	10 mL	357715	08/24/23 08:47	RY4P	EET CAL 4
Total/NA	Analysis	8270C SIM ID		1	1 mL	1 mL	358801	08/28/23 18:11	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 / 532.30

Job ID: 570-149752-1

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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Method Summary

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

Job ID: 570-149752-1

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 / 532.30

Job ID: 570-149752-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
570-149752-1	TB-082223_20230822	Water	08/23/23 09:00	08/23/23 17:24
570-149752-2	MW-09_20230822	Water	08/23/23 12:42	08/23/23 17:24
570-149752-3	MW-26C_20230822	Water	08/23/23 15:50	08/23/23 17:24
570-149752-4	MW-18_20230822	Water	08/23/23 14:15	08/23/23 17:24
570-149752-5	RB-082223_20230822	Water	08/23/23 14:20	08/23/23 17:24
570-149752-6	MW-21_20230822	Water	08/23/23 15:15	08/23/23 17:24
570-149752-7	EW-01_20230822	Water	08/23/23 15:45	08/23/23 17:24
570-149752-8	MW-39_20230822	Water	08/23/23 10:55	08/23/23 17:24
570-149752-9	MW-32A_20230822	Water	08/23/23 14:45	08/23/23 17:24



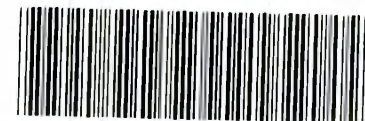
Fax 858.455.6533

Page 1 of 2

Sampled By:				Groundwater	Lab prepared water	Hydrochloric Acid (%)		Ice	40-ml VOA	125 mL Amber		VOCs by EPA 8260	1,4 Dioxane by 8270					0 - 10	10 - 100	100 - 1,000	> 1,000	24 hr TAT	48 hr TAT	Standard TAT	Level IV Data Validity	MS/MSD Requested	REMARKS
LAB ID	SAMPLE ID	Date	Time																								
A. Warden-Plum, M. Tinglof, J. Loftus		SAMPLE COLLECTION																									ECI Project #57003509
1	TB-082223-20230822	08/22/23	0900	X	X			X	2			X						X						X			Report J Flags
2	MW-09-20230822		1242	X	X			X	3			X						X					X				No EDF requested
	↓		↓	X				X		1			X					X					X				
3	MW-26C-20230822		1550	X	X			X	3			X						X					X				
	↓		↓	X				X		1			X					X					X				
4	MW-18-20230823	08/23/23	1415	X	X			X	3			X						X					X		X		
	↓		↓	X				X		3			X					X					X		X		
5	RB-082323-20230823		1420	X	X			X	3			X						X					X				
	↓		↓	X				X		1			X					X					X				
6	MW-21-20230823		1515	X	X			X	3			X						X					X				
	↓		↓	X				X		1			X					X					X				
7	EW-01-20230823		1545	X	X			X	3			X								X			X				
	↓		↓	X				X		1			X						X				X				
												</															

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



570-149752 Chain of Custody

nargis.com

Login Sample Receipt Checklist

Client: Hargis + Associates, Inc.

Job Number: 570-149752-1

Login Number: 149752

List Source: Eurofins Calscience

List Number: 1

Creator: Patel, Jayesh

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 8/31/2023 12:52:54 PM

JOB DESCRIPTION

Raytheon / 532.30

JOB NUMBER

570-150023-1

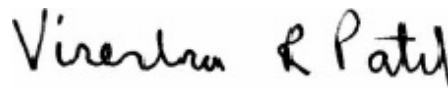
Eurofins Calscience

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
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(714)895-5494

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Definitions/Glossary

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

Job ID: 570-150023-1

Qualifiers

GC/MS Semi VOA

Qualifier	Qualifier Description
S1+	Surrogate recovery exceeds control 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 / 532.30

Job ID: 570-150023-1

Job ID: 570-150023-1

Laboratory: Eurofins Calscience

Narrative

Job Narrative
570-150023-1

Comments

No additional comments.

Receipt

The samples were received on 8/24/2023 5:40 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 1.8° C.

GC/MS VOA

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

GC/MS Semi VOA

Method 8270C SIM ID: Surrogate recovery for the following sample was outside control limits: MW-08-20230824 (570-150023-3). Re-extraction and/or re-analysis was performed and surrogate recovery was outside control limits. The re-analysis set of data has been reported.

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 / 532.30

Job ID: 570-150023-1

Client Sample ID: TB-082423A

Lab Sample ID: 570-150023-1

No Detections.

Client Sample ID: MW-20-20230824

Lab Sample ID: 570-150023-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloroform	1.9		0.50		ug/L	1		8260B	Total/NA

Client Sample ID: MW-08-20230824

Lab Sample ID: 570-150023-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,1,2-Trichloro-1,2,2-trifluoroethane	1.1		0.50		ug/L	1		8260B	Total/NA
1,1-Dichloroethene	25		0.50		ug/L	1		8260B	Total/NA
cis-1,2-Dichloroethene	3.4		0.50		ug/L	1		8260B	Total/NA
Trichloroethene	81		0.50		ug/L	1		8260B	Total/NA
1,4-Dioxane - RA	1.6		0.38		ug/L	1		8270C SIM ID	Total/NA

Client Sample ID: MW-0800-20230824

Lab Sample ID: 570-150023-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,1,2-Trichloro-1,2,2-trifluoroethane	1.1		0.50		ug/L	1		8260B	Total/NA
1,1-Dichloroethene	26		0.50		ug/L	1		8260B	Total/NA
cis-1,2-Dichloroethene	3.4		0.50		ug/L	1		8260B	Total/NA
Trichloroethene	81		0.50		ug/L	1		8260B	Total/NA
1,4-Dioxane - RA	1.5		0.38		ug/L	1		8270C SIM ID	Total/NA

Client Sample ID: RB-082423

Lab Sample ID: 570-150023-5

No Detections.

Client Sample ID: MW-15-20230824

Lab Sample ID: 570-150023-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,1-Dichloroethene	4.3		0.50		ug/L	1		8260B	Total/NA
Trichloroethene	0.64		0.50		ug/L	1		8260B	Total/NA
Trichlorofluoromethane	2.7		0.50		ug/L	1		8260B	Total/NA

Client Sample ID: MW-16-20230824

Lab Sample ID: 570-150023-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,1-Dichloroethene	420		10		ug/L	20		8260B	Total/NA
1,4-Dioxane	50		0.39		ug/L	1		8270C SIM ID	Total/NA

Client Sample ID: MW-28-20230824

Lab Sample ID: 570-150023-8

No Detections.

Client Sample ID: MW-35C-20230824

Lab Sample ID: 570-150023-9

No Detections.

Client Sample ID: MW-32C-20230824

Lab Sample ID: 570-150023-10

No Detections.

This Detection Summary does not include radiochemical test results.

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Client Sample Results

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

Job ID: 570-150023-1

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

Client Sample ID: TB-082423A
Date Collected: 08/24/23 08:00
Date Received: 08/24/23 17:40

Lab Sample ID: 570-150023-1
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		0.50		ug/L			08/29/23 20:03	1
1,1,1-Trichloroethane	ND		0.50		ug/L			08/29/23 20:03	1
1,1,2,2-Tetrachloroethane	ND		0.50		ug/L			08/29/23 20:03	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.50		ug/L			08/29/23 20:03	1
1,1,2-Trichloroethane	ND		0.50		ug/L			08/29/23 20:03	1
1,1-Dichloroethane	ND		0.50		ug/L			08/29/23 20:03	1
1,1-Dichloroethene	ND		0.50		ug/L			08/29/23 20:03	1
1,1-Dichloropropene	ND		0.50		ug/L			08/29/23 20:03	1
1,2,3-Trichlorobenzene	ND		0.50		ug/L			08/29/23 20:03	1
1,2,3-Trichloropropane	ND		0.50		ug/L			08/29/23 20:03	1
1,2,4-Trichlorobenzene	ND		0.50		ug/L			08/29/23 20:03	1
1,2,4-Trimethylbenzene	ND		0.50		ug/L			08/29/23 20:03	1
1,2-Dibromo-3-Chloropropane	ND		1.0		ug/L			08/29/23 20:03	1
1,2-Dibromoethane	ND		0.50		ug/L			08/29/23 20:03	1
1,2-Dichlorobenzene	ND		0.50		ug/L			08/29/23 20:03	1
1,2-Dichloroethane	ND		0.50		ug/L			08/29/23 20:03	1
1,2-Dichloropropane	ND		0.50		ug/L			08/29/23 20:03	1
1,3,5-Trimethylbenzene	ND		0.50		ug/L			08/29/23 20:03	1
1,3-Dichlorobenzene	ND		0.50		ug/L			08/29/23 20:03	1
1,3-Dichloropropane	ND		0.50		ug/L			08/29/23 20:03	1
1,4-Dichlorobenzene	ND		0.50		ug/L			08/29/23 20:03	1
2,2-Dichloropropane	ND		0.50		ug/L			08/29/23 20:03	1
2-Butanone	ND		5.0		ug/L			08/29/23 20:03	1
2-Chlorotoluene	ND		0.50		ug/L			08/29/23 20:03	1
2-Hexanone	ND		6.0		ug/L			08/29/23 20:03	1
4-Chlorotoluene	ND		0.50		ug/L			08/29/23 20:03	1
4-Methyl-2-pentanone	ND		5.0		ug/L			08/29/23 20:03	1
Acetone	ND		8.0		ug/L			08/29/23 20:03	1
Benzene	ND		0.50		ug/L			08/29/23 20:03	1
Bromobenzene	ND		0.50		ug/L			08/29/23 20:03	1
Bromochloromethane	ND		1.0		ug/L			08/29/23 20:03	1
Bromodichloromethane	ND		0.50		ug/L			08/29/23 20:03	1
Bromoform	ND		0.50		ug/L			08/29/23 20:03	1
Bromomethane	ND		2.0		ug/L			08/29/23 20:03	1
cis-1,2-Dichloroethene	ND		0.50		ug/L			08/29/23 20:03	1
cis-1,3-Dichloropropene	ND		0.50		ug/L			08/29/23 20:03	1
Carbon disulfide	ND		1.0		ug/L			08/29/23 20:03	1
Carbon tetrachloride	ND		0.50		ug/L			08/29/23 20:03	1
Chlorobenzene	ND		0.50		ug/L			08/29/23 20:03	1
Chloroethane	ND		0.50		ug/L			08/29/23 20:03	1
Chloroform	ND		0.50		ug/L			08/29/23 20:03	1
Chloromethane	ND		1.0		ug/L			08/29/23 20:03	1
Dibromochloromethane	ND		0.50		ug/L			08/29/23 20:03	1
Dibromomethane	ND		0.50		ug/L			08/29/23 20:03	1
Dichlorodifluoromethane	ND		1.0		ug/L			08/29/23 20:03	1
Ethylbenzene	ND		0.50		ug/L			08/29/23 20:03	1
Isopropylbenzene	ND		0.50		ug/L			08/29/23 20:03	1
Methylene Chloride	ND		1.0		ug/L			08/29/23 20:03	1
Methyl-t-Butyl Ether (MTBE)	ND		0.50		ug/L			08/29/23 20:03	1

Eurofins Calscience

Client Sample Results

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

Job ID: 570-150023-1

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

Client Sample ID: TB-082423A
Date Collected: 08/24/23 08:00
Date Received: 08/24/23 17:40

Lab Sample ID: 570-150023-1
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	ND		1.0		ug/L			08/29/23 20:03	1
n-Butylbenzene	ND		0.50		ug/L			08/29/23 20:03	1
N-Propylbenzene	ND		0.50		ug/L			08/29/23 20:03	1
o-Xylene	ND		0.50		ug/L			08/29/23 20:03	1
m,p-Xylene	ND		1.0		ug/L			08/29/23 20:03	1
p-Isopropyltoluene	ND		0.50		ug/L			08/29/23 20:03	1
sec-Butylbenzene	ND		0.50		ug/L			08/29/23 20:03	1
Styrene	ND		0.50		ug/L			08/29/23 20:03	1
trans-1,2-Dichloroethene	ND		0.50		ug/L			08/29/23 20:03	1
trans-1,3-Dichloropropene	ND		0.50		ug/L			08/29/23 20:03	1
tert-Butylbenzene	ND		0.50		ug/L			08/29/23 20:03	1
Tetrachloroethene	ND		0.50		ug/L			08/29/23 20:03	1
Toluene	ND		0.50		ug/L			08/29/23 20:03	1
Trichloroethene	ND		0.50		ug/L			08/29/23 20:03	1
Trichlorofluoromethane	ND		0.50		ug/L			08/29/23 20:03	1
Vinyl acetate	ND		5.0		ug/L			08/29/23 20:03	1
Vinyl chloride	ND		0.50		ug/L			08/29/23 20:03	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	105		64 - 132		08/29/23 20:03	1
4-Bromofluorobenzene (Surr)	91		76 - 120		08/29/23 20:03	1
Dibromofluoromethane	100		80 - 120		08/29/23 20:03	1
Toluene-d8 (Surr)	101		80 - 120		08/29/23 20:03	1

Client Sample ID: MW-20-20230824
Date Collected: 08/24/23 10:42
Date Received: 08/24/23 17:40

Lab Sample ID: 570-150023-2
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		0.50		ug/L			08/29/23 20:28	1
1,1,1-Trichloroethane	ND		0.50		ug/L			08/29/23 20:28	1
1,1,2,2-Tetrachloroethane	ND		0.50		ug/L			08/29/23 20:28	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.50		ug/L			08/29/23 20:28	1
1,1,2-Trichloroethane	ND		0.50		ug/L			08/29/23 20:28	1
1,1-Dichloroethane	ND		0.50		ug/L			08/29/23 20:28	1
1,1-Dichloroethene	ND		0.50		ug/L			08/29/23 20:28	1
1,1-Dichloropropene	ND		0.50		ug/L			08/29/23 20:28	1
1,2,3-Trichlorobenzene	ND		0.50		ug/L			08/29/23 20:28	1
1,2,3-Trichloropropane	ND		0.50		ug/L			08/29/23 20:28	1
1,2,4-Trichlorobenzene	ND		0.50		ug/L			08/29/23 20:28	1
1,2,4-Trimethylbenzene	ND		0.50		ug/L			08/29/23 20:28	1
1,2-Dibromo-3-Chloropropane	ND		1.0		ug/L			08/29/23 20:28	1
1,2-Dibromoethane	ND		0.50		ug/L			08/29/23 20:28	1
1,2-Dichlorobenzene	ND		0.50		ug/L			08/29/23 20:28	1
1,2-Dichloroethane	ND		0.50		ug/L			08/29/23 20:28	1
1,2-Dichloropropane	ND		0.50		ug/L			08/29/23 20:28	1
1,3,5-Trimethylbenzene	ND		0.50		ug/L			08/29/23 20:28	1
1,3-Dichlorobenzene	ND		0.50		ug/L			08/29/23 20:28	1
1,3-Dichloropropane	ND		0.50		ug/L			08/29/23 20:28	1
1,4-Dichlorobenzene	ND		0.50		ug/L			08/29/23 20:28	1
2,2-Dichloropropane	ND		0.50		ug/L			08/29/23 20:28	1

Eurofins Calscience

Client Sample Results

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

Job ID: 570-150023-1

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

Client Sample ID: MW-20-20230824

Date Collected: 08/24/23 10:42

Date Received: 08/24/23 17:40

Lab Sample ID: 570-150023-2

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Butanone	ND		5.0		ug/L			08/29/23 20:28	1
2-Chlorotoluene	ND		0.50		ug/L			08/29/23 20:28	1
2-Hexanone	ND		6.0		ug/L			08/29/23 20:28	1
4-Chlorotoluene	ND		0.50		ug/L			08/29/23 20:28	1
4-Methyl-2-pentanone	ND		5.0		ug/L			08/29/23 20:28	1
Acetone	ND		8.0		ug/L			08/29/23 20:28	1
Benzene	ND		0.50		ug/L			08/29/23 20:28	1
Bromobenzene	ND		0.50		ug/L			08/29/23 20:28	1
Bromochloromethane	ND		1.0		ug/L			08/29/23 20:28	1
Bromodichloromethane	ND		0.50		ug/L			08/29/23 20:28	1
Bromoform	ND		0.50		ug/L			08/29/23 20:28	1
Bromomethane	ND		2.0		ug/L			08/29/23 20:28	1
cis-1,2-Dichloroethene	ND		0.50		ug/L			08/29/23 20:28	1
cis-1,3-Dichloropropene	ND		0.50		ug/L			08/29/23 20:28	1
Carbon disulfide	ND		1.0		ug/L			08/29/23 20:28	1
Carbon tetrachloride	ND		0.50		ug/L			08/29/23 20:28	1
Chlorobenzene	ND		0.50		ug/L			08/29/23 20:28	1
Chloroethane	ND		0.50		ug/L			08/29/23 20:28	1
Chloroform	1.9		0.50		ug/L			08/29/23 20:28	1
Chloromethane	ND		1.0		ug/L			08/29/23 20:28	1
Dibromochloromethane	ND		0.50		ug/L			08/29/23 20:28	1
Dibromomethane	ND		0.50		ug/L			08/29/23 20:28	1
Dichlorodifluoromethane	ND		1.0		ug/L			08/29/23 20:28	1
Ethylbenzene	ND		0.50		ug/L			08/29/23 20:28	1
Isopropylbenzene	ND		0.50		ug/L			08/29/23 20:28	1
Methylene Chloride	ND		1.0		ug/L			08/29/23 20:28	1
Methyl-t-Butyl Ether (MTBE)	ND		0.50		ug/L			08/29/23 20:28	1
Naphthalene	ND		1.0		ug/L			08/29/23 20:28	1
n-Butylbenzene	ND		0.50		ug/L			08/29/23 20:28	1
N-Propylbenzene	ND		0.50		ug/L			08/29/23 20:28	1
o-Xylene	ND		0.50		ug/L			08/29/23 20:28	1
m,p-Xylene	ND		1.0		ug/L			08/29/23 20:28	1
p-Isopropyltoluene	ND		0.50		ug/L			08/29/23 20:28	1
sec-Butylbenzene	ND		0.50		ug/L			08/29/23 20:28	1
Styrene	ND		0.50		ug/L			08/29/23 20:28	1
trans-1,2-Dichloroethene	ND		0.50		ug/L			08/29/23 20:28	1
trans-1,3-Dichloropropene	ND		0.50		ug/L			08/29/23 20:28	1
tert-Butylbenzene	ND		0.50		ug/L			08/29/23 20:28	1
Tetrachloroethene	ND		0.50		ug/L			08/29/23 20:28	1
Toluene	ND		0.50		ug/L			08/29/23 20:28	1
Trichloroethene	ND		0.50		ug/L			08/29/23 20:28	1
Trichlorofluoromethane	ND		0.50		ug/L			08/29/23 20:28	1
Vinyl acetate	ND		5.0		ug/L			08/29/23 20:28	1
Vinyl chloride	ND		0.50		ug/L			08/29/23 20:28	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	108		64 - 132		08/29/23 20:28	1
4-Bromofluorobenzene (Surr)	89		76 - 120		08/29/23 20:28	1
Dibromofluoromethane	102		80 - 120		08/29/23 20:28	1
Toluene-d8 (Surr)	99		80 - 120		08/29/23 20:28	1

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Client Sample Results

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

Job ID: 570-150023-1

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

Client Sample ID: MW-08-20230824

Date Collected: 08/24/23 13:20

Date Received: 08/24/23 17:40

Lab Sample ID: 570-150023-3

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		0.50		ug/L			08/29/23 22:09	1
1,1,1-Trichloroethane	ND		0.50		ug/L			08/29/23 22:09	1
1,1,2,2-Tetrachloroethane	ND		0.50		ug/L			08/29/23 22:09	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.1		0.50		ug/L			08/29/23 22:09	1
1,1,2-Trichloroethane	ND		0.50		ug/L			08/29/23 22:09	1
1,1-Dichloroethane	ND		0.50		ug/L			08/29/23 22:09	1
1,1-Dichloroethene	25		0.50		ug/L			08/29/23 22:09	1
1,1-Dichloropropene	ND		0.50		ug/L			08/29/23 22:09	1
1,2,3-Trichlorobenzene	ND		0.50		ug/L			08/29/23 22:09	1
1,2,3-Trichloropropane	ND		0.50		ug/L			08/29/23 22:09	1
1,2,4-Trichlorobenzene	ND		0.50		ug/L			08/29/23 22:09	1
1,2,4-Trimethylbenzene	ND		0.50		ug/L			08/29/23 22:09	1
1,2-Dibromo-3-Chloropropane	ND		1.0		ug/L			08/29/23 22:09	1
1,2-Dibromoethane	ND		0.50		ug/L			08/29/23 22:09	1
1,2-Dichlorobenzene	ND		0.50		ug/L			08/29/23 22:09	1
1,2-Dichloroethane	ND		0.50		ug/L			08/29/23 22:09	1
1,2-Dichloropropane	ND		0.50		ug/L			08/29/23 22:09	1
1,3,5-Trimethylbenzene	ND		0.50		ug/L			08/29/23 22:09	1
1,3-Dichlorobenzene	ND		0.50		ug/L			08/29/23 22:09	1
1,3-Dichloropropane	ND		0.50		ug/L			08/29/23 22:09	1
1,4-Dichlorobenzene	ND		0.50		ug/L			08/29/23 22:09	1
2,2-Dichloropropane	ND		0.50		ug/L			08/29/23 22:09	1
2-Butanone	ND		5.0		ug/L			08/29/23 22:09	1
2-Chlorotoluene	ND		0.50		ug/L			08/29/23 22:09	1
2-Hexanone	ND		6.0		ug/L			08/29/23 22:09	1
4-Chlorotoluene	ND		0.50		ug/L			08/29/23 22:09	1
4-Methyl-2-pentanone	ND		5.0		ug/L			08/29/23 22:09	1
Acetone	ND		8.0		ug/L			08/29/23 22:09	1
Benzene	ND		0.50		ug/L			08/29/23 22:09	1
Bromobenzene	ND		0.50		ug/L			08/29/23 22:09	1
Bromochloromethane	ND		1.0		ug/L			08/29/23 22:09	1
Bromodichloromethane	ND		0.50		ug/L			08/29/23 22:09	1
Bromoform	ND		0.50		ug/L			08/29/23 22:09	1
Bromomethane	ND		2.0		ug/L			08/29/23 22:09	1
cis-1,2-Dichloroethene	3.4		0.50		ug/L			08/29/23 22:09	1
cis-1,3-Dichloropropene	ND		0.50		ug/L			08/29/23 22:09	1
Carbon disulfide	ND		1.0		ug/L			08/29/23 22:09	1
Carbon tetrachloride	ND		0.50		ug/L			08/29/23 22:09	1
Chlorobenzene	ND		0.50		ug/L			08/29/23 22:09	1
Chloroethane	ND		0.50		ug/L			08/29/23 22:09	1
Chloroform	ND		0.50		ug/L			08/29/23 22:09	1
Chloromethane	ND		1.0		ug/L			08/29/23 22:09	1
Dibromochloromethane	ND		0.50		ug/L			08/29/23 22:09	1
Dibromomethane	ND		0.50		ug/L			08/29/23 22:09	1
Dichlorodifluoromethane	ND		1.0		ug/L			08/29/23 22:09	1
Ethylbenzene	ND		0.50		ug/L			08/29/23 22:09	1
Isopropylbenzene	ND		0.50		ug/L			08/29/23 22:09	1
Methylene Chloride	ND		1.0		ug/L			08/29/23 22:09	1
Methyl-t-Butyl Ether (MTBE)	ND		0.50		ug/L			08/29/23 22:09	1

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Client Sample Results

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

Job ID: 570-150023-1

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

Client Sample ID: MW-08-20230824

Date Collected: 08/24/23 13:20

Date Received: 08/24/23 17:40

Lab Sample ID: 570-150023-3

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	ND		1.0		ug/L			08/29/23 22:09	1
n-Butylbenzene	ND		0.50		ug/L			08/29/23 22:09	1
N-Propylbenzene	ND		0.50		ug/L			08/29/23 22:09	1
o-Xylene	ND		0.50		ug/L			08/29/23 22:09	1
m,p-Xylene	ND		1.0		ug/L			08/29/23 22:09	1
p-Isopropyltoluene	ND		0.50		ug/L			08/29/23 22:09	1
sec-Butylbenzene	ND		0.50		ug/L			08/29/23 22:09	1
Styrene	ND		0.50		ug/L			08/29/23 22:09	1
trans-1,2-Dichloroethene	ND		0.50		ug/L			08/29/23 22:09	1
trans-1,3-Dichloropropene	ND		0.50		ug/L			08/29/23 22:09	1
tert-Butylbenzene	ND		0.50		ug/L			08/29/23 22:09	1
Tetrachloroethene	ND		0.50		ug/L			08/29/23 22:09	1
Toluene	ND		0.50		ug/L			08/29/23 22:09	1
Trichloroethene	81		0.50		ug/L			08/29/23 22:09	1
Trichlorofluoromethane	ND		0.50		ug/L			08/29/23 22:09	1
Vinyl acetate	ND		5.0		ug/L			08/29/23 22:09	1
Vinyl chloride	ND		0.50		ug/L			08/29/23 22:09	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	106		64 - 132		08/29/23 22:09	1
4-Bromofluorobenzene (Surr)	88		76 - 120		08/29/23 22:09	1
Dibromofluoromethane	99		80 - 120		08/29/23 22:09	1
Toluene-d8 (Surr)	99		80 - 120		08/29/23 22:09	1

Client Sample ID: MW-0800-20230824

Date Collected: 08/24/23 13:25

Date Received: 08/24/23 17:40

Lab Sample ID: 570-150023-4

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		0.50		ug/L			08/29/23 22:33	1
1,1,1-Trichloroethane	ND		0.50		ug/L			08/29/23 22:33	1
1,1,2,2-Tetrachloroethane	ND		0.50		ug/L			08/29/23 22:33	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.1		0.50		ug/L			08/29/23 22:33	1
1,1,2-Trichloroethane	ND		0.50		ug/L			08/29/23 22:33	1
1,1-Dichloroethane	ND		0.50		ug/L			08/29/23 22:33	1
1,1-Dichloroethene	26		0.50		ug/L			08/29/23 22:33	1
1,1-Dichloropropene	ND		0.50		ug/L			08/29/23 22:33	1
1,2,3-Trichlorobenzene	ND		0.50		ug/L			08/29/23 22:33	1
1,2,3-Trichloropropane	ND		0.50		ug/L			08/29/23 22:33	1
1,2,4-Trichlorobenzene	ND		0.50		ug/L			08/29/23 22:33	1
1,2,4-Trimethylbenzene	ND		0.50		ug/L			08/29/23 22:33	1
1,2-Dibromo-3-Chloropropane	ND		1.0		ug/L			08/29/23 22:33	1
1,2-Dibromoethane	ND		0.50		ug/L			08/29/23 22:33	1
1,2-Dichlorobenzene	ND		0.50		ug/L			08/29/23 22:33	1
1,2-Dichloroethane	ND		0.50		ug/L			08/29/23 22:33	1
1,2-Dichloropropane	ND		0.50		ug/L			08/29/23 22:33	1
1,3,5-Trimethylbenzene	ND		0.50		ug/L			08/29/23 22:33	1
1,3-Dichlorobenzene	ND		0.50		ug/L			08/29/23 22:33	1
1,3-Dichloropropane	ND		0.50		ug/L			08/29/23 22:33	1
1,4-Dichlorobenzene	ND		0.50		ug/L			08/29/23 22:33	1

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Client Sample Results

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

Job ID: 570-150023-1

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

Client Sample ID: MW-0800-20230824

Date Collected: 08/24/23 13:25

Date Received: 08/24/23 17:40

Lab Sample ID: 570-150023-4

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,2-Dichloropropane	ND		0.50		ug/L			08/29/23 22:33	1
2-Butanone	ND		5.0		ug/L			08/29/23 22:33	1
2-Chlorotoluene	ND		0.50		ug/L			08/29/23 22:33	1
2-Hexanone	ND		6.0		ug/L			08/29/23 22:33	1
4-Chlorotoluene	ND		0.50		ug/L			08/29/23 22:33	1
4-Methyl-2-pentanone	ND		5.0		ug/L			08/29/23 22:33	1
Acetone	ND		8.0		ug/L			08/29/23 22:33	1
Benzene	ND		0.50		ug/L			08/29/23 22:33	1
Bromobenzene	ND		0.50		ug/L			08/29/23 22:33	1
Bromochloromethane	ND		1.0		ug/L			08/29/23 22:33	1
Bromodichloromethane	ND		0.50		ug/L			08/29/23 22:33	1
Bromoform	ND		0.50		ug/L			08/29/23 22:33	1
Bromomethane	ND		2.0		ug/L			08/29/23 22:33	1
cis-1,2-Dichloroethene	3.4		0.50		ug/L			08/29/23 22:33	1
cis-1,3-Dichloropropene	ND		0.50		ug/L			08/29/23 22:33	1
Carbon disulfide	ND		1.0		ug/L			08/29/23 22:33	1
Carbon tetrachloride	ND		0.50		ug/L			08/29/23 22:33	1
Chlorobenzene	ND		0.50		ug/L			08/29/23 22:33	1
Chloroethane	ND		0.50		ug/L			08/29/23 22:33	1
Chloroform	ND		0.50		ug/L			08/29/23 22:33	1
Chloromethane	ND		1.0		ug/L			08/29/23 22:33	1
Dibromochloromethane	ND		0.50		ug/L			08/29/23 22:33	1
Dibromomethane	ND		0.50		ug/L			08/29/23 22:33	1
Dichlorodifluoromethane	ND		1.0		ug/L			08/29/23 22:33	1
Ethylbenzene	ND		0.50		ug/L			08/29/23 22:33	1
Isopropylbenzene	ND		0.50		ug/L			08/29/23 22:33	1
Methylene Chloride	ND		1.0		ug/L			08/29/23 22:33	1
Methyl-t-Butyl Ether (MTBE)	ND		0.50		ug/L			08/29/23 22:33	1
Naphthalene	ND		1.0		ug/L			08/29/23 22:33	1
n-Butylbenzene	ND		0.50		ug/L			08/29/23 22:33	1
N-Propylbenzene	ND		0.50		ug/L			08/29/23 22:33	1
o-Xylene	ND		0.50		ug/L			08/29/23 22:33	1
m,p-Xylene	ND		1.0		ug/L			08/29/23 22:33	1
p-Isopropyltoluene	ND		0.50		ug/L			08/29/23 22:33	1
sec-Butylbenzene	ND		0.50		ug/L			08/29/23 22:33	1
Styrene	ND		0.50		ug/L			08/29/23 22:33	1
trans-1,2-Dichloroethene	ND		0.50		ug/L			08/29/23 22:33	1
trans-1,3-Dichloropropene	ND		0.50		ug/L			08/29/23 22:33	1
tert-Butylbenzene	ND		0.50		ug/L			08/29/23 22:33	1
Tetrachloroethene	ND		0.50		ug/L			08/29/23 22:33	1
Toluene	ND		0.50		ug/L			08/29/23 22:33	1
Trichloroethene	81		0.50		ug/L			08/29/23 22:33	1
Trichlorofluoromethane	ND		0.50		ug/L			08/29/23 22:33	1
Vinyl acetate	ND		5.0		ug/L			08/29/23 22:33	1
Vinyl chloride	ND		0.50		ug/L			08/29/23 22:33	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	107		64 - 132		08/29/23 22:33	1
4-Bromofluorobenzene (Surr)	88		76 - 120		08/29/23 22:33	1
Dibromofluoromethane	103		80 - 120		08/29/23 22:33	1

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Client Sample Results

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

Job ID: 570-150023-1

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

Client Sample ID: MW-0800-20230824
Date Collected: 08/24/23 13:25
Date Received: 08/24/23 17:40

Lab Sample ID: 570-150023-4
Matrix: Water

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	99		80 - 120		08/29/23 22:33	1

Client Sample ID: RB-082423
Date Collected: 08/24/23 13:33
Date Received: 08/24/23 17:40

Lab Sample ID: 570-150023-5
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		0.50		ug/L			08/29/23 22:58	1
1,1,1-Trichloroethane	ND		0.50		ug/L			08/29/23 22:58	1
1,1,2,2-Tetrachloroethane	ND		0.50		ug/L			08/29/23 22:58	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.50		ug/L			08/29/23 22:58	1
1,1,2-Trichloroethane	ND		0.50		ug/L			08/29/23 22:58	1
1,1-Dichloroethane	ND		0.50		ug/L			08/29/23 22:58	1
1,1-Dichloroethene	ND		0.50		ug/L			08/29/23 22:58	1
1,1-Dichloropropene	ND		0.50		ug/L			08/29/23 22:58	1
1,2,3-Trichlorobenzene	ND		0.50		ug/L			08/29/23 22:58	1
1,2,3-Trichloropropane	ND		0.50		ug/L			08/29/23 22:58	1
1,2,4-Trichlorobenzene	ND		0.50		ug/L			08/29/23 22:58	1
1,2,4-Trimethylbenzene	ND		0.50		ug/L			08/29/23 22:58	1
1,2-Dibromo-3-Chloropropane	ND		1.0		ug/L			08/29/23 22:58	1
1,2-Dibromoethane	ND		0.50		ug/L			08/29/23 22:58	1
1,2-Dichlorobenzene	ND		0.50		ug/L			08/29/23 22:58	1
1,2-Dichloroethane	ND		0.50		ug/L			08/29/23 22:58	1
1,2-Dichloropropane	ND		0.50		ug/L			08/29/23 22:58	1
1,3,5-Trimethylbenzene	ND		0.50		ug/L			08/29/23 22:58	1
1,3-Dichlorobenzene	ND		0.50		ug/L			08/29/23 22:58	1
1,3-Dichloropropane	ND		0.50		ug/L			08/29/23 22:58	1
1,4-Dichlorobenzene	ND		0.50		ug/L			08/29/23 22:58	1
2,2-Dichloropropane	ND		0.50		ug/L			08/29/23 22:58	1
2-Butanone	ND		5.0		ug/L			08/29/23 22:58	1
2-Chlorotoluene	ND		0.50		ug/L			08/29/23 22:58	1
2-Hexanone	ND		6.0		ug/L			08/29/23 22:58	1
4-Chlorotoluene	ND		0.50		ug/L			08/29/23 22:58	1
4-Methyl-2-pentanone	ND		5.0		ug/L			08/29/23 22:58	1
Acetone	ND		8.0		ug/L			08/29/23 22:58	1
Benzene	ND		0.50		ug/L			08/29/23 22:58	1
Bromobenzene	ND		0.50		ug/L			08/29/23 22:58	1
Bromochloromethane	ND		1.0		ug/L			08/29/23 22:58	1
Bromodichloromethane	ND		0.50		ug/L			08/29/23 22:58	1
Bromoform	ND		0.50		ug/L			08/29/23 22:58	1
Bromomethane	ND		2.0		ug/L			08/29/23 22:58	1
cis-1,2-Dichloroethene	ND		0.50		ug/L			08/29/23 22:58	1
cis-1,3-Dichloropropene	ND		0.50		ug/L			08/29/23 22:58	1
Carbon disulfide	ND		1.0		ug/L			08/29/23 22:58	1
Carbon tetrachloride	ND		0.50		ug/L			08/29/23 22:58	1
Chlorobenzene	ND		0.50		ug/L			08/29/23 22:58	1
Chloroethane	ND		0.50		ug/L			08/29/23 22:58	1
Chloroform	ND		0.50		ug/L			08/29/23 22:58	1
Chloromethane	ND		1.0		ug/L			08/29/23 22:58	1
Dibromochloromethane	ND		0.50		ug/L			08/29/23 22:58	1

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Client Sample Results

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

Job ID: 570-150023-1

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

Client Sample ID: RB-082423
Date Collected: 08/24/23 13:33
Date Received: 08/24/23 17:40

Lab Sample ID: 570-150023-5
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dibromomethane	ND		0.50		ug/L			08/29/23 22:58	1
Dichlorodifluoromethane	ND		1.0		ug/L			08/29/23 22:58	1
Ethylbenzene	ND		0.50		ug/L			08/29/23 22:58	1
Isopropylbenzene	ND		0.50		ug/L			08/29/23 22:58	1
Methylene Chloride	ND		1.0		ug/L			08/29/23 22:58	1
Methyl-t-Butyl Ether (MTBE)	ND		0.50		ug/L			08/29/23 22:58	1
Naphthalene	ND		1.0		ug/L			08/29/23 22:58	1
n-Butylbenzene	ND		0.50		ug/L			08/29/23 22:58	1
N-Propylbenzene	ND		0.50		ug/L			08/29/23 22:58	1
o-Xylene	ND		0.50		ug/L			08/29/23 22:58	1
m,p-Xylene	ND		1.0		ug/L			08/29/23 22:58	1
p-Isopropyltoluene	ND		0.50		ug/L			08/29/23 22:58	1
sec-Butylbenzene	ND		0.50		ug/L			08/29/23 22:58	1
Styrene	ND		0.50		ug/L			08/29/23 22:58	1
trans-1,2-Dichloroethene	ND		0.50		ug/L			08/29/23 22:58	1
trans-1,3-Dichloropropene	ND		0.50		ug/L			08/29/23 22:58	1
tert-Butylbenzene	ND		0.50		ug/L			08/29/23 22:58	1
Tetrachloroethene	ND		0.50		ug/L			08/29/23 22:58	1
Toluene	ND		0.50		ug/L			08/29/23 22:58	1
Trichloroethene	ND		0.50		ug/L			08/29/23 22:58	1
Trichlorofluoromethane	ND		0.50		ug/L			08/29/23 22:58	1
Vinyl acetate	ND		5.0		ug/L			08/29/23 22:58	1
Vinyl chloride	ND		0.50		ug/L			08/29/23 22:58	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	106		64 - 132		08/29/23 22:58	1
4-Bromofluorobenzene (Surr)	86		76 - 120		08/29/23 22:58	1
Dibromofluoromethane	101		80 - 120		08/29/23 22:58	1
Toluene-d8 (Surr)	97		80 - 120		08/29/23 22:58	1

Client Sample ID: MW-15-20230824
Date Collected: 08/24/23 14:33
Date Received: 08/24/23 17:40

Lab Sample ID: 570-150023-6
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		0.50		ug/L			08/29/23 23:23	1
1,1,1-Trichloroethane	ND		0.50		ug/L			08/29/23 23:23	1
1,1,2,2-Tetrachloroethane	ND		0.50		ug/L			08/29/23 23:23	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.50		ug/L			08/29/23 23:23	1
1,1,2-Trichloroethane	ND		0.50		ug/L			08/29/23 23:23	1
1,1-Dichloroethane	ND		0.50		ug/L			08/29/23 23:23	1
1,1-Dichloroethene	4.3		0.50		ug/L			08/29/23 23:23	1
1,1-Dichloropropene	ND		0.50		ug/L			08/29/23 23:23	1
1,2,3-Trichlorobenzene	ND		0.50		ug/L			08/29/23 23:23	1
1,2,3-Trichloropropane	ND		0.50		ug/L			08/29/23 23:23	1
1,2,4-Trichlorobenzene	ND		0.50		ug/L			08/29/23 23:23	1
1,2,4-Trimethylbenzene	ND		0.50		ug/L			08/29/23 23:23	1
1,2-Dibromo-3-Chloropropane	ND		1.0		ug/L			08/29/23 23:23	1
1,2-Dibromoethane	ND		0.50		ug/L			08/29/23 23:23	1
1,2-Dichlorobenzene	ND		0.50		ug/L			08/29/23 23:23	1
1,2-Dichloroethane	ND		0.50		ug/L			08/29/23 23:23	1

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Client Sample Results

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

Job ID: 570-150023-1

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

Client Sample ID: MW-15-20230824

Date Collected: 08/24/23 14:33

Date Received: 08/24/23 17:40

Lab Sample ID: 570-150023-6

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dichloropropane	ND		0.50		ug/L			08/29/23 23:23	1
1,3,5-Trimethylbenzene	ND		0.50		ug/L			08/29/23 23:23	1
1,3-Dichlorobenzene	ND		0.50		ug/L			08/29/23 23:23	1
1,3-Dichloropropane	ND		0.50		ug/L			08/29/23 23:23	1
1,4-Dichlorobenzene	ND		0.50		ug/L			08/29/23 23:23	1
2,2-Dichloropropane	ND		0.50		ug/L			08/29/23 23:23	1
2-Butanone	ND		5.0		ug/L			08/29/23 23:23	1
2-Chlorotoluene	ND		0.50		ug/L			08/29/23 23:23	1
2-Hexanone	ND		6.0		ug/L			08/29/23 23:23	1
4-Chlorotoluene	ND		0.50		ug/L			08/29/23 23:23	1
4-Methyl-2-pentanone	ND		5.0		ug/L			08/29/23 23:23	1
Acetone	ND		8.0		ug/L			08/29/23 23:23	1
Benzene	ND		0.50		ug/L			08/29/23 23:23	1
Bromobenzene	ND		0.50		ug/L			08/29/23 23:23	1
Bromochloromethane	ND		1.0		ug/L			08/29/23 23:23	1
Bromodichloromethane	ND		0.50		ug/L			08/29/23 23:23	1
Bromoform	ND		0.50		ug/L			08/29/23 23:23	1
Bromomethane	ND		2.0		ug/L			08/29/23 23:23	1
cis-1,2-Dichloroethene	ND		0.50		ug/L			08/29/23 23:23	1
cis-1,3-Dichloropropene	ND		0.50		ug/L			08/29/23 23:23	1
Carbon disulfide	ND		1.0		ug/L			08/29/23 23:23	1
Carbon tetrachloride	ND		0.50		ug/L			08/29/23 23:23	1
Chlorobenzene	ND		0.50		ug/L			08/29/23 23:23	1
Chloroethane	ND		0.50		ug/L			08/29/23 23:23	1
Chloroform	ND		0.50		ug/L			08/29/23 23:23	1
Chloromethane	ND		1.0		ug/L			08/29/23 23:23	1
Dibromochloromethane	ND		0.50		ug/L			08/29/23 23:23	1
Dibromomethane	ND		0.50		ug/L			08/29/23 23:23	1
Dichlorodifluoromethane	ND		1.0		ug/L			08/29/23 23:23	1
Ethylbenzene	ND		0.50		ug/L			08/29/23 23:23	1
Isopropylbenzene	ND		0.50		ug/L			08/29/23 23:23	1
Methylene Chloride	ND		1.0		ug/L			08/29/23 23:23	1
Methyl-t-Butyl Ether (MTBE)	ND		0.50		ug/L			08/29/23 23:23	1
Naphthalene	ND		1.0		ug/L			08/29/23 23:23	1
n-Butylbenzene	ND		0.50		ug/L			08/29/23 23:23	1
N-Propylbenzene	ND		0.50		ug/L			08/29/23 23:23	1
o-Xylene	ND		0.50		ug/L			08/29/23 23:23	1
m,p-Xylene	ND		1.0		ug/L			08/29/23 23:23	1
p-Isopropyltoluene	ND		0.50		ug/L			08/29/23 23:23	1
sec-Butylbenzene	ND		0.50		ug/L			08/29/23 23:23	1
Styrene	ND		0.50		ug/L			08/29/23 23:23	1
trans-1,2-Dichloroethene	ND		0.50		ug/L			08/29/23 23:23	1
trans-1,3-Dichloropropene	ND		0.50		ug/L			08/29/23 23:23	1
tert-Butylbenzene	ND		0.50		ug/L			08/29/23 23:23	1
Tetrachloroethene	ND		0.50		ug/L			08/29/23 23:23	1
Toluene	ND		0.50		ug/L			08/29/23 23:23	1
Trichloroethene	0.64		0.50		ug/L			08/29/23 23:23	1
Trichlorofluoromethane	2.7		0.50		ug/L			08/29/23 23:23	1
Vinyl acetate	ND		5.0		ug/L			08/29/23 23:23	1

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Client Sample Results

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

Job ID: 570-150023-1

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

Client Sample ID: MW-15-20230824

Date Collected: 08/24/23 14:33

Date Received: 08/24/23 17:40

Lab Sample ID: 570-150023-6

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Vinyl chloride	ND		0.50		ug/L			08/29/23 23:23	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	106		64 - 132					08/29/23 23:23	1
4-Bromofluorobenzene (Surr)	86		76 - 120					08/29/23 23:23	1
Dibromofluoromethane	100		80 - 120					08/29/23 23:23	1
Toluene-d8 (Surr)	98		80 - 120					08/29/23 23:23	1

Client Sample ID: MW-16-20230824

Date Collected: 08/24/23 16:25

Date Received: 08/24/23 17:40

Lab Sample ID: 570-150023-7

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		10		ug/L			08/29/23 23:48	20
1,1,1-Trichloroethane	ND		10		ug/L			08/29/23 23:48	20
1,1,2,2-Tetrachloroethane	ND		10		ug/L			08/29/23 23:48	20
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		10		ug/L			08/29/23 23:48	20
1,1,2-Trichloroethane	ND		10		ug/L			08/29/23 23:48	20
1,1-Dichloroethane	ND		10		ug/L			08/29/23 23:48	20
1,1-Dichloroethene	420		10		ug/L			08/29/23 23:48	20
1,1-Dichloropropene	ND		10		ug/L			08/29/23 23:48	20
1,2,3-Trichlorobenzene	ND		10		ug/L			08/29/23 23:48	20
1,2,3-Trichloropropane	ND		10		ug/L			08/29/23 23:48	20
1,2,4-Trichlorobenzene	ND		10		ug/L			08/29/23 23:48	20
1,2,4-Trimethylbenzene	ND		10		ug/L			08/29/23 23:48	20
1,2-Dibromo-3-Chloropropane	ND		20		ug/L			08/29/23 23:48	20
1,2-Dibromoethane	ND		10		ug/L			08/29/23 23:48	20
1,2-Dichlorobenzene	ND		10		ug/L			08/29/23 23:48	20
1,2-Dichloroethane	ND		10		ug/L			08/29/23 23:48	20
1,2-Dichloropropane	ND		10		ug/L			08/29/23 23:48	20
1,3,5-Trimethylbenzene	ND		10		ug/L			08/29/23 23:48	20
1,3-Dichlorobenzene	ND		10		ug/L			08/29/23 23:48	20
1,3-Dichloropropane	ND		10		ug/L			08/29/23 23:48	20
1,4-Dichlorobenzene	ND		10		ug/L			08/29/23 23:48	20
2,2-Dichloropropane	ND		10		ug/L			08/29/23 23:48	20
2-Butanone	ND		100		ug/L			08/29/23 23:48	20
2-Chlorotoluene	ND		10		ug/L			08/29/23 23:48	20
2-Hexanone	ND		120		ug/L			08/29/23 23:48	20
4-Chlorotoluene	ND		10		ug/L			08/29/23 23:48	20
4-Methyl-2-pentanone	ND		100		ug/L			08/29/23 23:48	20
Acetone	ND		160		ug/L			08/29/23 23:48	20
Benzene	ND		10		ug/L			08/29/23 23:48	20
Bromobenzene	ND		10		ug/L			08/29/23 23:48	20
Bromochloromethane	ND		20		ug/L			08/29/23 23:48	20
Bromodichloromethane	ND		10		ug/L			08/29/23 23:48	20
Bromoform	ND		10		ug/L			08/29/23 23:48	20
Bromomethane	ND		40		ug/L			08/29/23 23:48	20
cis-1,2-Dichloroethene	ND		10		ug/L			08/29/23 23:48	20
cis-1,3-Dichloropropene	ND		10		ug/L			08/29/23 23:48	20
Carbon disulfide	ND		20		ug/L			08/29/23 23:48	20
Carbon tetrachloride	ND		10		ug/L			08/29/23 23:48	20

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Client Sample Results

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

Job ID: 570-150023-1

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

Client Sample ID: MW-16-20230824

Date Collected: 08/24/23 16:25

Date Received: 08/24/23 17:40

Lab Sample ID: 570-150023-7

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chlorobenzene	ND		10		ug/L			08/29/23 23:48	20
Chloroethane	ND		10		ug/L			08/29/23 23:48	20
Chloroform	ND		10		ug/L			08/29/23 23:48	20
Chloromethane	ND		20		ug/L			08/29/23 23:48	20
Dibromochloromethane	ND		10		ug/L			08/29/23 23:48	20
Dibromomethane	ND		10		ug/L			08/29/23 23:48	20
Dichlorodifluoromethane	ND		20		ug/L			08/29/23 23:48	20
Ethylbenzene	ND		10		ug/L			08/29/23 23:48	20
Isopropylbenzene	ND		10		ug/L			08/29/23 23:48	20
Methylene Chloride	ND		20		ug/L			08/29/23 23:48	20
Methyl-t-Butyl Ether (MTBE)	ND		10		ug/L			08/29/23 23:48	20
Naphthalene	ND		20		ug/L			08/29/23 23:48	20
n-Butylbenzene	ND		10		ug/L			08/29/23 23:48	20
N-Propylbenzene	ND		10		ug/L			08/29/23 23:48	20
o-Xylene	ND		10		ug/L			08/29/23 23:48	20
m,p-Xylene	ND		20		ug/L			08/29/23 23:48	20
p-Isopropyltoluene	ND		10		ug/L			08/29/23 23:48	20
sec-Butylbenzene	ND		10		ug/L			08/29/23 23:48	20
Styrene	ND		10		ug/L			08/29/23 23:48	20
trans-1,2-Dichloroethene	ND		10		ug/L			08/29/23 23:48	20
trans-1,3-Dichloropropene	ND		10		ug/L			08/29/23 23:48	20
tert-Butylbenzene	ND		10		ug/L			08/29/23 23:48	20
Tetrachloroethene	ND		10		ug/L			08/29/23 23:48	20
Toluene	ND		10		ug/L			08/29/23 23:48	20
Trichloroethene	ND		10		ug/L			08/29/23 23:48	20
Trichlorofluoromethane	ND		10		ug/L			08/29/23 23:48	20
Vinyl acetate	ND		100		ug/L			08/29/23 23:48	20
Vinyl chloride	ND		10		ug/L			08/29/23 23:48	20

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	105		64 - 132		08/29/23 23:48	20
4-Bromofluorobenzene (Surr)	88		76 - 120		08/29/23 23:48	20
Dibromofluoromethane	101		80 - 120		08/29/23 23:48	20
Toluene-d8 (Surr)	99		80 - 120		08/29/23 23:48	20

Client Sample ID: MW-28-20230824

Date Collected: 08/24/23 09:00

Date Received: 08/24/23 17:40

Lab Sample ID: 570-150023-8

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		0.50		ug/L			08/30/23 00:14	1
1,1,1-Trichloroethane	ND		0.50		ug/L			08/30/23 00:14	1
1,1,2,2-Tetrachloroethane	ND		0.50		ug/L			08/30/23 00:14	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.50		ug/L			08/30/23 00:14	1
1,1,2-Trichloroethane	ND		0.50		ug/L			08/30/23 00:14	1
1,1-Dichloroethane	ND		0.50		ug/L			08/30/23 00:14	1
1,1-Dichloroethene	ND		0.50		ug/L			08/30/23 00:14	1
1,1-Dichloropropene	ND		0.50		ug/L			08/30/23 00:14	1
1,2,3-Trichlorobenzene	ND		0.50		ug/L			08/30/23 00:14	1
1,2,3-Trichloropropane	ND		0.50		ug/L			08/30/23 00:14	1
1,2,4-Trichlorobenzene	ND		0.50		ug/L			08/30/23 00:14	1

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Client Sample Results

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

Job ID: 570-150023-1

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

Client Sample ID: MW-28-20230824

Date Collected: 08/24/23 09:00

Date Received: 08/24/23 17:40

Lab Sample ID: 570-150023-8

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trimethylbenzene	ND		0.50		ug/L			08/30/23 00:14	1
1,2-Dibromo-3-Chloropropane	ND		1.0		ug/L			08/30/23 00:14	1
1,2-Dibromoethane	ND		0.50		ug/L			08/30/23 00:14	1
1,2-Dichlorobenzene	ND		0.50		ug/L			08/30/23 00:14	1
1,2-Dichloroethane	ND		0.50		ug/L			08/30/23 00:14	1
1,2-Dichloropropane	ND		0.50		ug/L			08/30/23 00:14	1
1,3,5-Trimethylbenzene	ND		0.50		ug/L			08/30/23 00:14	1
1,3-Dichlorobenzene	ND		0.50		ug/L			08/30/23 00:14	1
1,3-Dichloropropane	ND		0.50		ug/L			08/30/23 00:14	1
1,4-Dichlorobenzene	ND		0.50		ug/L			08/30/23 00:14	1
2,2-Dichloropropane	ND		0.50		ug/L			08/30/23 00:14	1
2-Butanone	ND		5.0		ug/L			08/30/23 00:14	1
2-Chlorotoluene	ND		0.50		ug/L			08/30/23 00:14	1
2-Hexanone	ND		6.0		ug/L			08/30/23 00:14	1
4-Chlorotoluene	ND		0.50		ug/L			08/30/23 00:14	1
4-Methyl-2-pentanone	ND		5.0		ug/L			08/30/23 00:14	1
Acetone	ND		8.0		ug/L			08/30/23 00:14	1
Benzene	ND		0.50		ug/L			08/30/23 00:14	1
Bromobenzene	ND		0.50		ug/L			08/30/23 00:14	1
Bromochloromethane	ND		1.0		ug/L			08/30/23 00:14	1
Bromodichloromethane	ND		0.50		ug/L			08/30/23 00:14	1
Bromoform	ND		0.50		ug/L			08/30/23 00:14	1
Bromomethane	ND		2.0		ug/L			08/30/23 00:14	1
cis-1,2-Dichloroethene	ND		0.50		ug/L			08/30/23 00:14	1
cis-1,3-Dichloropropene	ND		0.50		ug/L			08/30/23 00:14	1
Carbon disulfide	ND		1.0		ug/L			08/30/23 00:14	1
Carbon tetrachloride	ND		0.50		ug/L			08/30/23 00:14	1
Chlorobenzene	ND		0.50		ug/L			08/30/23 00:14	1
Chloroethane	ND		0.50		ug/L			08/30/23 00:14	1
Chloroform	ND		0.50		ug/L			08/30/23 00:14	1
Chloromethane	ND		1.0		ug/L			08/30/23 00:14	1
Dibromochloromethane	ND		0.50		ug/L			08/30/23 00:14	1
Dibromomethane	ND		0.50		ug/L			08/30/23 00:14	1
Dichlorodifluoromethane	ND		1.0		ug/L			08/30/23 00:14	1
Ethylbenzene	ND		0.50		ug/L			08/30/23 00:14	1
Isopropylbenzene	ND		0.50		ug/L			08/30/23 00:14	1
Methylene Chloride	ND		1.0		ug/L			08/30/23 00:14	1
Methyl-t-Butyl Ether (MTBE)	ND		0.50		ug/L			08/30/23 00:14	1
Naphthalene	ND		1.0		ug/L			08/30/23 00:14	1
n-Butylbenzene	ND		0.50		ug/L			08/30/23 00:14	1
N-Propylbenzene	ND		0.50		ug/L			08/30/23 00:14	1
o-Xylene	ND		0.50		ug/L			08/30/23 00:14	1
m,p-Xylene	ND		1.0		ug/L			08/30/23 00:14	1
p-Isopropyltoluene	ND		0.50		ug/L			08/30/23 00:14	1
sec-Butylbenzene	ND		0.50		ug/L			08/30/23 00:14	1
Styrene	ND		0.50		ug/L			08/30/23 00:14	1
trans-1,2-Dichloroethene	ND		0.50		ug/L			08/30/23 00:14	1
trans-1,3-Dichloropropene	ND		0.50		ug/L			08/30/23 00:14	1
tert-Butylbenzene	ND		0.50		ug/L			08/30/23 00:14	1

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Client Sample Results

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

Job ID: 570-150023-1

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

Client Sample ID: MW-28-20230824

Date Collected: 08/24/23 09:00

Date Received: 08/24/23 17:40

Lab Sample ID: 570-150023-8

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Tetrachloroethene	ND		0.50		ug/L			08/30/23 00:14	1
Toluene	ND		0.50		ug/L			08/30/23 00:14	1
Trichloroethene	ND		0.50		ug/L			08/30/23 00:14	1
Trichlorofluoromethane	ND		0.50		ug/L			08/30/23 00:14	1
Vinyl acetate	ND		5.0		ug/L			08/30/23 00:14	1
Vinyl chloride	ND		0.50		ug/L			08/30/23 00:14	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	107		64 - 132		08/30/23 00:14	1
4-Bromofluorobenzene (Surr)	88		76 - 120		08/30/23 00:14	1
Dibromofluoromethane	101		80 - 120		08/30/23 00:14	1
Toluene-d8 (Surr)	100		80 - 120		08/30/23 00:14	1

Client Sample ID: MW-35C-20230824

Date Collected: 08/24/23 11:07

Date Received: 08/24/23 17:40

Lab Sample ID: 570-150023-9

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		0.50		ug/L			08/30/23 00:39	1
1,1,1-Trichloroethane	ND		0.50		ug/L			08/30/23 00:39	1
1,1,2,2-Tetrachloroethane	ND		0.50		ug/L			08/30/23 00:39	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.50		ug/L			08/30/23 00:39	1
1,1,2-Trichloroethane	ND		0.50		ug/L			08/30/23 00:39	1
1,1-Dichloroethane	ND		0.50		ug/L			08/30/23 00:39	1
1,1-Dichloroethene	ND		0.50		ug/L			08/30/23 00:39	1
1,1-Dichloropropene	ND		0.50		ug/L			08/30/23 00:39	1
1,2,3-Trichlorobenzene	ND		0.50		ug/L			08/30/23 00:39	1
1,2,3-Trichloropropane	ND		0.50		ug/L			08/30/23 00:39	1
1,2,4-Trichlorobenzene	ND		0.50		ug/L			08/30/23 00:39	1
1,2,4-Trimethylbenzene	ND		0.50		ug/L			08/30/23 00:39	1
1,2-Dibromo-3-Chloropropane	ND		1.0		ug/L			08/30/23 00:39	1
1,2-Dibromoethane	ND		0.50		ug/L			08/30/23 00:39	1
1,2-Dichlorobenzene	ND		0.50		ug/L			08/30/23 00:39	1
1,2-Dichloroethane	ND		0.50		ug/L			08/30/23 00:39	1
1,2-Dichloropropane	ND		0.50		ug/L			08/30/23 00:39	1
1,3,5-Trimethylbenzene	ND		0.50		ug/L			08/30/23 00:39	1
1,3-Dichlorobenzene	ND		0.50		ug/L			08/30/23 00:39	1
1,3-Dichloropropane	ND		0.50		ug/L			08/30/23 00:39	1
1,4-Dichlorobenzene	ND		0.50		ug/L			08/30/23 00:39	1
2,2-Dichloropropane	ND		0.50		ug/L			08/30/23 00:39	1
2-Butanone	ND		5.0		ug/L			08/30/23 00:39	1
2-Chlorotoluene	ND		0.50		ug/L			08/30/23 00:39	1
2-Hexanone	ND		6.0		ug/L			08/30/23 00:39	1
4-Chlorotoluene	ND		0.50		ug/L			08/30/23 00:39	1
4-Methyl-2-pentanone	ND		5.0		ug/L			08/30/23 00:39	1
Acetone	ND		8.0		ug/L			08/30/23 00:39	1
Benzene	ND		0.50		ug/L			08/30/23 00:39	1
Bromobenzene	ND		0.50		ug/L			08/30/23 00:39	1
Bromochloromethane	ND		1.0		ug/L			08/30/23 00:39	1
Bromodichloromethane	ND		0.50		ug/L			08/30/23 00:39	1
Bromoform	ND		0.50		ug/L			08/30/23 00:39	1

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Client Sample Results

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

Job ID: 570-150023-1

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

Client Sample ID: MW-35C-20230824

Date Collected: 08/24/23 11:07

Date Received: 08/24/23 17:40

Lab Sample ID: 570-150023-9

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromomethane	ND		2.0		ug/L			08/30/23 00:39	1
cis-1,2-Dichloroethene	ND		0.50		ug/L			08/30/23 00:39	1
cis-1,3-Dichloropropene	ND		0.50		ug/L			08/30/23 00:39	1
Carbon disulfide	ND		1.0		ug/L			08/30/23 00:39	1
Carbon tetrachloride	ND		0.50		ug/L			08/30/23 00:39	1
Chlorobenzene	ND		0.50		ug/L			08/30/23 00:39	1
Chloroethane	ND		0.50		ug/L			08/30/23 00:39	1
Chloroform	ND		0.50		ug/L			08/30/23 00:39	1
Chloromethane	ND		1.0		ug/L			08/30/23 00:39	1
Dibromochloromethane	ND		0.50		ug/L			08/30/23 00:39	1
Dibromomethane	ND		0.50		ug/L			08/30/23 00:39	1
Dichlorodifluoromethane	ND		1.0		ug/L			08/30/23 00:39	1
Ethylbenzene	ND		0.50		ug/L			08/30/23 00:39	1
Isopropylbenzene	ND		0.50		ug/L			08/30/23 00:39	1
Methylene Chloride	ND		1.0		ug/L			08/30/23 00:39	1
Methyl-t-Butyl Ether (MTBE)	ND		0.50		ug/L			08/30/23 00:39	1
Naphthalene	ND		1.0		ug/L			08/30/23 00:39	1
n-Butylbenzene	ND		0.50		ug/L			08/30/23 00:39	1
N-Propylbenzene	ND		0.50		ug/L			08/30/23 00:39	1
o-Xylene	ND		0.50		ug/L			08/30/23 00:39	1
m,p-Xylene	ND		1.0		ug/L			08/30/23 00:39	1
p-Isopropyltoluene	ND		0.50		ug/L			08/30/23 00:39	1
sec-Butylbenzene	ND		0.50		ug/L			08/30/23 00:39	1
Styrene	ND		0.50		ug/L			08/30/23 00:39	1
trans-1,2-Dichloroethene	ND		0.50		ug/L			08/30/23 00:39	1
trans-1,3-Dichloropropene	ND		0.50		ug/L			08/30/23 00:39	1
tert-Butylbenzene	ND		0.50		ug/L			08/30/23 00:39	1
Tetrachloroethene	ND		0.50		ug/L			08/30/23 00:39	1
Toluene	ND		0.50		ug/L			08/30/23 00:39	1
Trichloroethene	ND		0.50		ug/L			08/30/23 00:39	1
Trichlorofluoromethane	ND		0.50		ug/L			08/30/23 00:39	1
Vinyl acetate	ND		5.0		ug/L			08/30/23 00:39	1
Vinyl chloride	ND		0.50		ug/L			08/30/23 00:39	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	105		64 - 132		08/30/23 00:39	1
4-Bromofluorobenzene (Surr)	87		76 - 120		08/30/23 00:39	1
Dibromofluoromethane	101		80 - 120		08/30/23 00:39	1
Toluene-d8 (Surr)	99		80 - 120		08/30/23 00:39	1

Client Sample ID: MW-32C-20230824

Date Collected: 08/24/23 14:50

Date Received: 08/24/23 17:40

Lab Sample ID: 570-150023-10

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		0.50		ug/L			08/30/23 01:04	1
1,1,1-Trichloroethane	ND		0.50		ug/L			08/30/23 01:04	1
1,1,2,2-Tetrachloroethane	ND		0.50		ug/L			08/30/23 01:04	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.50		ug/L			08/30/23 01:04	1
1,1,2-Trichloroethane	ND		0.50		ug/L			08/30/23 01:04	1
1,1-Dichloroethane	ND		0.50		ug/L			08/30/23 01:04	1

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Client Sample Results

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

Job ID: 570-150023-1

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

Client Sample ID: MW-32C-20230824

Date Collected: 08/24/23 14:50

Date Received: 08/24/23 17:40

Lab Sample ID: 570-150023-10

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	ND		0.50		ug/L			08/30/23 01:04	1
1,1-Dichloropropene	ND		0.50		ug/L			08/30/23 01:04	1
1,2,3-Trichlorobenzene	ND		0.50		ug/L			08/30/23 01:04	1
1,2,3-Trichloropropane	ND		0.50		ug/L			08/30/23 01:04	1
1,2,4-Trichlorobenzene	ND		0.50		ug/L			08/30/23 01:04	1
1,2,4-Trimethylbenzene	ND		0.50		ug/L			08/30/23 01:04	1
1,2-Dibromo-3-Chloropropane	ND		1.0		ug/L			08/30/23 01:04	1
1,2-Dibromoethane	ND		0.50		ug/L			08/30/23 01:04	1
1,2-Dichlorobenzene	ND		0.50		ug/L			08/30/23 01:04	1
1,2-Dichloroethane	ND		0.50		ug/L			08/30/23 01:04	1
1,2-Dichloropropane	ND		0.50		ug/L			08/30/23 01:04	1
1,3,5-Trimethylbenzene	ND		0.50		ug/L			08/30/23 01:04	1
1,3-Dichlorobenzene	ND		0.50		ug/L			08/30/23 01:04	1
1,3-Dichloropropane	ND		0.50		ug/L			08/30/23 01:04	1
1,4-Dichlorobenzene	ND		0.50		ug/L			08/30/23 01:04	1
2,2-Dichloropropane	ND		0.50		ug/L			08/30/23 01:04	1
2-Butanone	ND		5.0		ug/L			08/30/23 01:04	1
2-Chlorotoluene	ND		0.50		ug/L			08/30/23 01:04	1
2-Hexanone	ND		6.0		ug/L			08/30/23 01:04	1
4-Chlorotoluene	ND		0.50		ug/L			08/30/23 01:04	1
4-Methyl-2-pentanone	ND		5.0		ug/L			08/30/23 01:04	1
Acetone	ND		8.0		ug/L			08/30/23 01:04	1
Benzene	ND		0.50		ug/L			08/30/23 01:04	1
Bromobenzene	ND		0.50		ug/L			08/30/23 01:04	1
Bromochloromethane	ND		1.0		ug/L			08/30/23 01:04	1
Bromodichloromethane	ND		0.50		ug/L			08/30/23 01:04	1
Bromoform	ND		0.50		ug/L			08/30/23 01:04	1
Bromomethane	ND		2.0		ug/L			08/30/23 01:04	1
cis-1,2-Dichloroethene	ND		0.50		ug/L			08/30/23 01:04	1
cis-1,3-Dichloropropane	ND		0.50		ug/L			08/30/23 01:04	1
Carbon disulfide	ND		1.0		ug/L			08/30/23 01:04	1
Carbon tetrachloride	ND		0.50		ug/L			08/30/23 01:04	1
Chlorobenzene	ND		0.50		ug/L			08/30/23 01:04	1
Chloroethane	ND		0.50		ug/L			08/30/23 01:04	1
Chloroform	ND		0.50		ug/L			08/30/23 01:04	1
Chloromethane	ND		1.0		ug/L			08/30/23 01:04	1
Dibromochloromethane	ND		0.50		ug/L			08/30/23 01:04	1
Dibromomethane	ND		0.50		ug/L			08/30/23 01:04	1
Dichlorodifluoromethane	ND		1.0		ug/L			08/30/23 01:04	1
Ethylbenzene	ND		0.50		ug/L			08/30/23 01:04	1
Isopropylbenzene	ND		0.50		ug/L			08/30/23 01:04	1
Methylene Chloride	ND		1.0		ug/L			08/30/23 01:04	1
Methyl-t-Butyl Ether (MTBE)	ND		0.50		ug/L			08/30/23 01:04	1
Naphthalene	ND		1.0		ug/L			08/30/23 01:04	1
n-Butylbenzene	ND		0.50		ug/L			08/30/23 01:04	1
N-Propylbenzene	ND		0.50		ug/L			08/30/23 01:04	1
o-Xylene	ND		0.50		ug/L			08/30/23 01:04	1
m,p-Xylene	ND		1.0		ug/L			08/30/23 01:04	1
p-Isopropyltoluene	ND		0.50		ug/L			08/30/23 01:04	1

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Client Sample Results

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

Job ID: 570-150023-1

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

Client Sample ID: MW-32C-20230824

Date Collected: 08/24/23 14:50

Date Received: 08/24/23 17:40

Lab Sample ID: 570-150023-10

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
sec-Butylbenzene	ND		0.50		ug/L			08/30/23 01:04	1
Styrene	ND		0.50		ug/L			08/30/23 01:04	1
trans-1,2-Dichloroethene	ND		0.50		ug/L			08/30/23 01:04	1
trans-1,3-Dichloropropene	ND		0.50		ug/L			08/30/23 01:04	1
tert-Butylbenzene	ND		0.50		ug/L			08/30/23 01:04	1
Tetrachloroethene	ND		0.50		ug/L			08/30/23 01:04	1
Toluene	ND		0.50		ug/L			08/30/23 01:04	1
Trichloroethene	ND		0.50		ug/L			08/30/23 01:04	1
Trichlorofluoromethane	ND		0.50		ug/L			08/30/23 01:04	1
Vinyl acetate	ND		5.0		ug/L			08/30/23 01:04	1
Vinyl chloride	ND		0.50		ug/L			08/30/23 01:04	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	104		64 - 132		08/30/23 01:04	1
4-Bromofluorobenzene (Surr)	85		76 - 120		08/30/23 01:04	1
Dibromofluoromethane	106		80 - 120		08/30/23 01:04	1
Toluene-d8 (Surr)	99		80 - 120		08/30/23 01:04	1

Client Sample Results

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

Job ID: 570-150023-1

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

Client Sample ID: MW-20-20230824

Date Collected: 08/24/23 10:42

Date Received: 08/24/23 17:40

Lab Sample ID: 570-150023-2

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	ND		0.39		ug/L		08/28/23 06:04	08/29/23 12:33	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,4-Dioxane-d8	25		21 - 120				08/28/23 06:04	08/29/23 12:33	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Nitrobenzene-d5	64		58 - 135				08/28/23 06:04	08/29/23 12:33	1

Client Sample ID: RB-082423

Date Collected: 08/24/23 13:33

Date Received: 08/24/23 17:40

Lab Sample ID: 570-150023-5

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	ND		0.37		ug/L		08/28/23 06:04	08/29/23 16:11	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,4-Dioxane-d8	29		21 - 120				08/28/23 06:04	08/29/23 16:11	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Nitrobenzene-d5	58		58 - 135				08/28/23 06:04	08/29/23 16:11	1

Client Sample ID: MW-16-20230824

Date Collected: 08/24/23 16:25

Date Received: 08/24/23 17:40

Lab Sample ID: 570-150023-7

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	50		0.39		ug/L		08/28/23 06:04	08/29/23 16:25	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,4-Dioxane-d8	21		21 - 120				08/28/23 06:04	08/29/23 16:25	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Nitrobenzene-d5	66		58 - 135				08/28/23 06:04	08/29/23 16:25	1

Client Sample ID: MW-28-20230824

Date Collected: 08/24/23 09:00

Date Received: 08/24/23 17:40

Lab Sample ID: 570-150023-8

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	ND		0.39		ug/L		08/28/23 06:04	08/29/23 16:40	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,4-Dioxane-d8	24		21 - 120				08/28/23 06:04	08/29/23 16:40	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Nitrobenzene-d5	63		58 - 135				08/28/23 06:04	08/29/23 16:40	1

Client Sample ID: MW-35C-20230824

Date Collected: 08/24/23 11:07

Date Received: 08/24/23 17:40

Lab Sample ID: 570-150023-9

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	ND		0.38		ug/L		08/28/23 06:04	08/29/23 16:54	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,4-Dioxane-d8	21		21 - 120				08/28/23 06:04	08/29/23 16:54	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Nitrobenzene-d5	64		58 - 135				08/28/23 06:04	08/29/23 16:54	1

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Client Sample Results

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

Job ID: 570-150023-1

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

Client Sample ID: MW-32C-20230824

Date Collected: 08/24/23 14:50

Date Received: 08/24/23 17:40

Lab Sample ID: 570-150023-10

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	ND		0.39		ug/L		08/28/23 06:04	08/29/23 17:08	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,4-Dioxane-d8	23		21 - 120				08/28/23 06:04	08/29/23 17:08	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Nitrobenzene-d5	58		58 - 135				08/28/23 06:04	08/29/23 17:08	1

Client Sample Results

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

Job ID: 570-150023-1

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

Client Sample ID: MW-08-20230824

Date Collected: 08/24/23 13:20

Date Received: 08/24/23 17:40

Lab Sample ID: 570-150023-3

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	1.6		0.38		ug/L		08/28/23 06:04	08/30/23 17:17	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,4-Dioxane-d8	44		21 - 120				08/28/23 06:04	08/30/23 17:17	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Nitrobenzene-d5	184	S1+	58 - 135				08/28/23 06:04	08/30/23 17:17	1

Client Sample ID: MW-0800-20230824

Date Collected: 08/24/23 13:25

Date Received: 08/24/23 17:40

Lab Sample ID: 570-150023-4

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	1.5		0.38		ug/L		08/28/23 06:04	08/30/23 17:32	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,4-Dioxane-d8	40		21 - 120				08/28/23 06:04	08/30/23 17:32	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Nitrobenzene-d5	84		58 - 135				08/28/23 06:04	08/30/23 17:32	1

Surrogate Summary

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

Job ID: 570-150023-1

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)
570-150023-1	TB-082423A	105	91	100	101
570-150023-2	MW-20-20230824	108	89	102	99
570-150023-2 MS	MW-20-20230824	101	96	100	99
570-150023-2 MSD	MW-20-20230824	108	96	100	100
570-150023-3	MW-08-20230824	106	88	99	99
570-150023-4	MW-0800-20230824	107	88	103	99
570-150023-5	RB-082423	106	86	101	97
570-150023-6	MW-15-20230824	106	86	100	98
570-150023-7	MW-16-20230824	105	88	101	99
570-150023-8	MW-28-20230824	107	88	101	100
570-150023-9	MW-35C-20230824	105	87	101	99
570-150023-10	MW-32C-20230824	104	85	106	99
LCS 570-359165/3	Lab Control Sample	108	97	101	100
LCSD 570-359165/4	Lab Control Sample Dup	108	95	100	99
MB 570-359165/6	Method Blank	106	89	101	100

Surrogate Legend

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

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

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)			
		NBZ (58-135)			
570-150023-2	MW-20-20230824	64			
570-150023-2 MS	MW-20-20230824	67			
570-150023-2 MSD	MW-20-20230824	60			
570-150023-3 - RA	MW-08-20230824	184 S1+			
570-150023-4 - RA	MW-0800-20230824	84			
570-150023-5	RB-082423	58			
570-150023-7	MW-16-20230824	66			
570-150023-8	MW-28-20230824	63			
570-150023-9	MW-35C-20230824	64			
570-150023-10	MW-32C-20230824	58			
LCS 570-358578/2-A	Lab Control Sample	64			
LCSD 570-358578/3-A	Lab Control Sample Dup	70			
MB 570-358578/1-A	Method Blank	68			

Surrogate Legend

NBZ = Nitrobenzene-d5

Isotope Dilution Summary

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

Job ID: 570-150023-1

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)
570-150023-2	MW-20-20230824	25
570-150023-2 MS	MW-20-20230824	25
570-150023-2 MSD	MW-20-20230824	22
570-150023-3 - RA	MW-08-20230824	44
570-150023-4 - RA	MW-0800-20230824	40
570-150023-5	RB-082423	29
570-150023-7	MW-16-20230824	21
570-150023-8	MW-28-20230824	24
570-150023-9	MW-35C-20230824	21
570-150023-10	MW-32C-20230824	23
LCS 570-358578/2-A	Lab Control Sample	29
LCSD 570-358578/3-A	Lab Control Sample Dup	29
MB 570-358578/1-A	Method Blank	33

Surrogate Legend

DXE = 1,4-Dioxane-d8

QC Sample Results

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

Job ID: 570-150023-1

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

Lab Sample ID: MB 570-359165/6

Matrix: Water

Analysis Batch: 359165

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			08/29/23 19:38	1
1,1,1-Trichloroethane	ND		0.50		ug/L			08/29/23 19:38	1
1,1,2,2-Tetrachloroethane	ND		0.50		ug/L			08/29/23 19:38	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.50		ug/L			08/29/23 19:38	1
1,1,2-Trichloroethane	ND		0.50		ug/L			08/29/23 19:38	1
1,1-Dichloroethane	ND		0.50		ug/L			08/29/23 19:38	1
1,1-Dichloroethene	ND		0.50		ug/L			08/29/23 19:38	1
1,1-Dichloropropene	ND		0.50		ug/L			08/29/23 19:38	1
1,2,3-Trichlorobenzene	ND		0.50		ug/L			08/29/23 19:38	1
1,2,3-Trichloropropane	ND		0.50		ug/L			08/29/23 19:38	1
1,2,4-Trichlorobenzene	ND		0.50		ug/L			08/29/23 19:38	1
1,2,4-Trimethylbenzene	ND		0.50		ug/L			08/29/23 19:38	1
1,2-Dibromo-3-Chloropropane	ND		1.0		ug/L			08/29/23 19:38	1
1,2-Dibromoethane	ND		0.50		ug/L			08/29/23 19:38	1
1,2-Dichlorobenzene	ND		0.50		ug/L			08/29/23 19:38	1
1,2-Dichloroethane	ND		0.50		ug/L			08/29/23 19:38	1
1,2-Dichloropropane	ND		0.50		ug/L			08/29/23 19:38	1
1,3,5-Trimethylbenzene	ND		0.50		ug/L			08/29/23 19:38	1
1,3-Dichlorobenzene	ND		0.50		ug/L			08/29/23 19:38	1
1,3-Dichloropropane	ND		0.50		ug/L			08/29/23 19:38	1
1,4-Dichlorobenzene	ND		0.50		ug/L			08/29/23 19:38	1
2,2-Dichloropropane	ND		0.50		ug/L			08/29/23 19:38	1
2-Butanone	ND		5.0		ug/L			08/29/23 19:38	1
2-Chlorotoluene	ND		0.50		ug/L			08/29/23 19:38	1
2-Hexanone	ND		6.0		ug/L			08/29/23 19:38	1
4-Chlorotoluene	ND		0.50		ug/L			08/29/23 19:38	1
4-Methyl-2-pentanone	ND		5.0		ug/L			08/29/23 19:38	1
Acetone	ND		8.0		ug/L			08/29/23 19:38	1
Benzene	ND		0.50		ug/L			08/29/23 19:38	1
Bromobenzene	ND		0.50		ug/L			08/29/23 19:38	1
Bromochloromethane	ND		1.0		ug/L			08/29/23 19:38	1
Bromodichloromethane	ND		0.50		ug/L			08/29/23 19:38	1
Bromoform	ND		0.50		ug/L			08/29/23 19:38	1
Bromomethane	ND		2.0		ug/L			08/29/23 19:38	1
cis-1,2-Dichloroethene	ND		0.50		ug/L			08/29/23 19:38	1
cis-1,3-Dichloropropene	ND		0.50		ug/L			08/29/23 19:38	1
Carbon disulfide	ND		1.0		ug/L			08/29/23 19:38	1
Carbon tetrachloride	ND		0.50		ug/L			08/29/23 19:38	1
Chlorobenzene	ND		0.50		ug/L			08/29/23 19:38	1
Chloroethane	ND		0.50		ug/L			08/29/23 19:38	1
Chloroform	ND		0.50		ug/L			08/29/23 19:38	1
Chloromethane	ND		1.0		ug/L			08/29/23 19:38	1
Dibromochloromethane	ND		0.50		ug/L			08/29/23 19:38	1
Dibromomethane	ND		0.50		ug/L			08/29/23 19:38	1
Dichlorodifluoromethane	ND		1.0		ug/L			08/29/23 19:38	1
Ethylbenzene	ND		0.50		ug/L			08/29/23 19:38	1
Isopropylbenzene	ND		0.50		ug/L			08/29/23 19:38	1
Methylene Chloride	ND		1.0		ug/L			08/29/23 19:38	1

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QC Sample Results

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

Job ID: 570-150023-1

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

Lab Sample ID: MB 570-359165/6

Matrix: Water

Analysis Batch: 359165

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			08/29/23 19:38	1
Naphthalene	ND		1.0		ug/L			08/29/23 19:38	1
n-Butylbenzene	ND		0.50		ug/L			08/29/23 19:38	1
N-Propylbenzene	ND		0.50		ug/L			08/29/23 19:38	1
o-Xylene	ND		0.50		ug/L			08/29/23 19:38	1
m,p-Xylene	ND		1.0		ug/L			08/29/23 19:38	1
p-Isopropyltoluene	ND		0.50		ug/L			08/29/23 19:38	1
sec-Butylbenzene	ND		0.50		ug/L			08/29/23 19:38	1
Styrene	ND		0.50		ug/L			08/29/23 19:38	1
trans-1,2-Dichloroethene	ND		0.50		ug/L			08/29/23 19:38	1
trans-1,3-Dichloropropene	ND		0.50		ug/L			08/29/23 19:38	1
tert-Butylbenzene	ND		0.50		ug/L			08/29/23 19:38	1
Tetrachloroethene	ND		0.50		ug/L			08/29/23 19:38	1
Toluene	ND		0.50		ug/L			08/29/23 19:38	1
Trichloroethene	ND		0.50		ug/L			08/29/23 19:38	1
Trichlorofluoromethane	ND		0.50		ug/L			08/29/23 19:38	1
Vinyl acetate	ND		5.0		ug/L			08/29/23 19:38	1
Vinyl chloride	ND		0.50		ug/L			08/29/23 19:38	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	106		64 - 132		08/29/23 19:38	1
4-Bromofluorobenzene (Surr)	89		76 - 120		08/29/23 19:38	1
Dibromofluoromethane	101		80 - 120		08/29/23 19:38	1
Toluene-d8 (Surr)	100		80 - 120		08/29/23 19:38	1

Lab Sample ID: LCS 570-359165/3

Matrix: Water

Analysis Batch: 359165

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	10.07		ug/L		101	80 - 125
1,1,1-Trichloroethane	10.0	9.104		ug/L		91	75 - 121
1,1,2,2-Tetrachloroethane	10.0	10.08		ug/L		101	80 - 120
1,1,2-Trichloro-1,2,2-trifluoroethane	10.0	9.130		ug/L		91	56 - 132
1,1,2-Trichloroethane	10.0	10.60		ug/L		106	80 - 121
1,1-Dichloroethane	10.0	9.513		ug/L		95	80 - 120
1,1-Dichloroethene	10.0	9.063		ug/L		91	80 - 126
1,1-Dichloropropene	10.0	8.730		ug/L		87	72 - 122
1,2,3-Trichlorobenzene	10.0	9.985		ug/L		100	80 - 125
1,2,3-Trichloropropane	10.0	8.598		ug/L		86	75 - 127
1,2,4-Trichlorobenzene	10.0	9.524		ug/L		95	80 - 124
1,2,4-Trimethylbenzene	10.0	9.231		ug/L		92	80 - 128
1,2-Dibromo-3-Chloropropane	10.0	9.647		ug/L		96	63 - 123
1,2-Dibromoethane	10.0	10.64		ug/L		106	80 - 125
1,2-Dichlorobenzene	10.0	10.22		ug/L		102	80 - 120
1,2-Dichloroethane	10.0	10.87		ug/L		109	76 - 130
1,2-Dichloropropane	10.0	9.872		ug/L		99	74 - 124
1,3,5-Trimethylbenzene	10.0	9.241		ug/L		92	80 - 122

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QC Sample Results

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

Job ID: 570-150023-1

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

Lab Sample ID: LCS 570-359165/3

Matrix: Water

Analysis Batch: 359165

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	9.721		ug/L		97	80 - 120
1,3-Dichloropropane	10.0	10.42		ug/L		104	80 - 121
1,4-Dichlorobenzene	10.0	9.704		ug/L		97	80 - 120
2,2-Dichloropropane	10.0	9.068		ug/L		91	79 - 131
2-Butanone	10.0	9.510		ug/L		95	48 - 145
2-Chlorotoluene	10.0	9.449		ug/L		94	80 - 120
2-Hexanone	10.0	6.614		ug/L		66	50 - 149
4-Chlorotoluene	10.0	9.266		ug/L		93	80 - 120
4-Methyl-2-pentanone	10.0	8.356		ug/L		84	63 - 120
Acetone	10.0	12.81		ug/L		128	45 - 139
Benzene	10.0	9.493		ug/L		95	80 - 120
Bromobenzene	10.0	10.22		ug/L		102	80 - 125
Bromochloromethane	10.0	9.936		ug/L		99	80 - 120
Bromodichloromethane	10.0	10.08		ug/L		101	73 - 131
Bromoform	10.0	10.18		ug/L		102	76 - 124
Bromomethane	10.0	6.507		ug/L		65	26 - 180
cis-1,2-Dichloroethene	10.0	9.048		ug/L		90	80 - 120
cis-1,3-Dichloropropene	10.0	10.31		ug/L		103	76 - 123
Carbon disulfide	10.0	8.548		ug/L		85	75 - 123
Carbon tetrachloride	10.0	9.159		ug/L		92	61 - 139
Chlorobenzene	10.0	9.855		ug/L		99	80 - 120
Chloroethane	10.0	7.430		ug/L		74	54 - 150
Chloroform	10.0	9.079		ug/L		91	80 - 120
Chloromethane	10.0	8.527		ug/L		85	28 - 151
Dibromochloromethane	10.0	10.25		ug/L		103	74 - 136
Dibromomethane	10.0	10.36		ug/L		104	80 - 122
Dichlorodifluoromethane	10.0	7.130		ug/L		71	27 - 154
Ethylbenzene	10.0	9.094		ug/L		91	80 - 126
Isopropylbenzene	10.0	8.538		ug/L		85	80 - 120
Methylene Chloride	10.0	9.221		ug/L		92	80 - 120
Methyl-t-Butyl Ether (MTBE)	10.0	9.480		ug/L		95	69 - 128
Naphthalene	10.0	9.219		ug/L		92	70 - 130
n-Butylbenzene	10.0	9.062		ug/L		91	78 - 127
N-Propylbenzene	10.0	8.960		ug/L		90	80 - 121
o-Xylene	10.0	9.482		ug/L		95	80 - 124
m,p-Xylene	20.0	19.30		ug/L		96	80 - 123
p-Isopropyltoluene	10.0	9.074		ug/L		91	80 - 128
sec-Butylbenzene	10.0	8.660		ug/L		87	80 - 125
Styrene	10.0	9.588		ug/L		96	80 - 121
trans-1,2-Dichloroethene	10.0	8.990		ug/L		90	79 - 120
trans-1,3-Dichloropropene	10.0	9.597		ug/L		96	80 - 126
tert-Butylbenzene	10.0	9.022		ug/L		90	80 - 121
Tetrachloroethene	10.0	9.744		ug/L		97	80 - 125
Toluene	10.0	9.397		ug/L		94	80 - 120
Trichloroethene	10.0	9.546		ug/L		95	77 - 124
Trichlorofluoromethane	10.0	8.065		ug/L		81	41 - 163
Vinyl acetate	10.0	9.936		ug/L		99	61 - 126
Vinyl chloride	10.0	7.993		ug/L		80	50 - 160

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QC Sample Results

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

Job ID: 570-150023-1

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

Lab Sample ID: LCS 570-359165/3

Matrix: Water

Analysis Batch: 359165

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	108		64 - 132
4-Bromofluorobenzene (Surr)	97		76 - 120
Dibromofluoromethane	101		80 - 120
Toluene-d8 (Surr)	100		80 - 120

Lab Sample ID: LCSD 570-359165/4

Matrix: Water

Analysis Batch: 359165

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	10.09		ug/L		101	80 - 125	0	20
1,1,1-Trichloroethane	10.0	9.189		ug/L		92	75 - 121	1	20
1,1,2,2-Tetrachloroethane	10.0	10.25		ug/L		102	80 - 120	2	20
1,1,2-Trichloro-1,2,2-trifluoroethane	10.0	9.035		ug/L		90	56 - 132	1	22
1,1,2-Trichloroethane	10.0	10.52		ug/L		105	80 - 121	1	20
1,1-Dichloroethane	10.0	9.446		ug/L		94	80 - 120	1	20
1,1-Dichloroethene	10.0	9.207		ug/L		92	80 - 126	2	21
1,1-Dichloropropene	10.0	8.779		ug/L		88	72 - 122	1	20
1,2,3-Trichlorobenzene	10.0	10.02		ug/L		100	80 - 125	0	20
1,2,3-Trichloropropane	10.0	8.733		ug/L		87	75 - 127	2	20
1,2,4-Trichlorobenzene	10.0	9.533		ug/L		95	80 - 124	0	20
1,2,4-Trimethylbenzene	10.0	9.607		ug/L		96	80 - 128	4	20
1,2-Dibromo-3-Chloropropane	10.0	9.690		ug/L		97	63 - 123	0	20
1,2-Dibromoethane	10.0	10.28		ug/L		103	80 - 125	3	20
1,2-Dichlorobenzene	10.0	10.45		ug/L		105	80 - 120	2	20
1,2-Dichloroethane	10.0	10.89		ug/L		109	76 - 130	0	20
1,2-Dichloropropane	10.0	9.921		ug/L		99	74 - 124	0	20
1,3,5-Trimethylbenzene	10.0	9.394		ug/L		94	80 - 122	2	20
1,3-Dichlorobenzene	10.0	9.845		ug/L		98	80 - 120	1	20
1,3-Dichloropropane	10.0	10.08		ug/L		101	80 - 121	3	20
1,4-Dichlorobenzene	10.0	9.767		ug/L		98	80 - 120	1	20
2,2-Dichloropropane	10.0	9.051		ug/L		91	79 - 131	0	20
2-Butanone	10.0	10.46		ug/L		105	48 - 145	10	30
2-Chlorotoluene	10.0	9.360		ug/L		94	80 - 120	1	20
2-Hexanone	10.0	8.089		ug/L		81	50 - 149	20	29
4-Chlorotoluene	10.0	9.479		ug/L		95	80 - 120	2	20
4-Methyl-2-pentanone	10.0	8.619		ug/L		86	63 - 120	3	20
Acetone	10.0	13.34		ug/L		133	45 - 139	4	30
Benzene	10.0	9.685		ug/L		97	80 - 120	2	20
Bromobenzene	10.0	10.13		ug/L		101	80 - 125	1	20
Bromochloromethane	10.0	9.737		ug/L		97	80 - 120	2	20
Bromodichloromethane	10.0	10.19		ug/L		102	73 - 131	1	20
Bromoform	10.0	10.51		ug/L		105	76 - 124	3	20
Bromomethane	10.0	6.132		ug/L		61	26 - 180	6	20
cis-1,2-Dichloroethene	10.0	9.110		ug/L		91	80 - 120	1	20
cis-1,3-Dichloropropene	10.0	10.50		ug/L		105	76 - 123	2	20
Carbon disulfide	10.0	8.568		ug/L		86	75 - 123	0	20
Carbon tetrachloride	10.0	9.293		ug/L		93	61 - 139	1	20

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QC Sample Results

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

Job ID: 570-150023-1

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

Lab Sample ID: LCSD 570-359165/4

Matrix: Water

Analysis Batch: 359165

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chlorobenzene	10.0	9.926		ug/L		99	80 - 120	1	20
Chloroethane	10.0	7.828		ug/L		78	54 - 150	5	25
Chloroform	10.0	9.022		ug/L		90	80 - 120	1	20
Chloromethane	10.0	8.266		ug/L		83	28 - 151	3	20
Dibromochloromethane	10.0	10.20		ug/L		102	74 - 136	1	20
Dibromomethane	10.0	10.38		ug/L		104	80 - 122	0	20
Dichlorodifluoromethane	10.0	7.169		ug/L		72	27 - 154	1	21
Ethylbenzene	10.0	9.302		ug/L		93	80 - 126	2	20
Isopropylbenzene	10.0	8.715		ug/L		87	80 - 120	2	20
Methylene Chloride	10.0	9.363		ug/L		94	80 - 120	2	20
Methyl-t-Butyl Ether (MTBE)	10.0	9.360		ug/L		94	69 - 128	1	20
Naphthalene	10.0	9.360		ug/L		94	70 - 130	2	20
n-Butylbenzene	10.0	9.422		ug/L		94	78 - 127	4	20
N-Propylbenzene	10.0	9.020		ug/L		90	80 - 121	1	20
o-Xylene	10.0	9.529		ug/L		95	80 - 124	0	20
m,p-Xylene	20.0	19.65		ug/L		98	80 - 123	2	20
p-Isopropyltoluene	10.0	9.473		ug/L		95	80 - 128	4	20
sec-Butylbenzene	10.0	9.079		ug/L		91	80 - 125	5	20
Styrene	10.0	9.602		ug/L		96	80 - 121	0	20
trans-1,2-Dichloroethene	10.0	9.105		ug/L		91	79 - 120	1	20
trans-1,3-Dichloropropene	10.0	9.710		ug/L		97	80 - 126	1	20
tert-Butylbenzene	10.0	9.398		ug/L		94	80 - 121	4	20
Tetrachloroethene	10.0	10.04		ug/L		100	80 - 125	3	20
Toluene	10.0	9.577		ug/L		96	80 - 120	2	20
Trichloroethene	10.0	9.601		ug/L		96	77 - 124	1	20
Trichlorofluoromethane	10.0	8.125		ug/L		81	41 - 163	1	21
Vinyl acetate	10.0	9.837		ug/L		98	61 - 126	1	24
Vinyl chloride	10.0	7.946		ug/L		79	50 - 160	1	20

Surrogate	LCSD %Recovery	LCSD Qualifier	LCSD Limits
1,2-Dichloroethane-d4 (Surr)	108		64 - 132
4-Bromofluorobenzene (Surr)	95		76 - 120
Dibromofluoromethane	100		80 - 120
Toluene-d8 (Surr)	99		80 - 120

Lab Sample ID: 570-150023-2 MS

Matrix: Water

Analysis Batch: 359165

Client Sample ID: MW-20-20230824

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	10.61		ug/L		106	61 - 142
1,1,1-Trichloroethane	ND		10.0	9.900		ug/L		99	68 - 138
1,1,2,2-Tetrachloroethane	ND		10.0	10.24		ug/L		102	71 - 133
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		10.0	7.665		ug/L		77	51 - 132
1,1,2-Trichloroethane	ND		10.0	10.89		ug/L		109	70 - 132
1,1-Dichloroethane	ND		10.0	10.19		ug/L		102	70 - 132
1,1-Dichloroethene	ND		10.0	8.994		ug/L		90	57 - 148
1,1-Dichloropropene	ND		10.0	9.498		ug/L		95	74 - 132

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QC Sample Results

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

Job ID: 570-150023-1

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

Lab Sample ID: 570-150023-2 MS

Matrix: Water

Analysis Batch: 359165

Client Sample ID: MW-20-20230824

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	9.491		ug/L		95	66 - 135
1,2,3-Trichloropropane	ND		10.0	8.173		ug/L		82	61 - 130
1,2,4-Trichlorobenzene	ND		10.0	9.190		ug/L		92	66 - 131
1,2,4-Trimethylbenzene	ND		10.0	9.837		ug/L		98	65 - 132
1,2-Dibromo-3-Chloropropane	ND		10.0	9.551		ug/L		96	48 - 132
1,2-Dibromoethane	ND		10.0	10.53		ug/L		105	74 - 128
1,2-Dichlorobenzene	ND		10.0	10.48		ug/L		105	74 - 126
1,2-Dichloroethane	ND		10.0	11.25		ug/L		112	65 - 140
1,2-Dichloropropane	ND		10.0	10.51		ug/L		105	75 - 127
1,3,5-Trimethylbenzene	ND		10.0	9.816		ug/L		98	64 - 144
1,3-Dichlorobenzene	ND		10.0	10.05		ug/L		100	73 - 125
1,3-Dichloropropane	ND		10.0	10.53		ug/L		105	71 - 131
1,4-Dichlorobenzene	ND		10.0	9.909		ug/L		99	73 - 125
2,2-Dichloropropane	ND		10.0	7.844		ug/L		78	39 - 138
2-Butanone	ND		10.0	8.191		ug/L		82	44 - 140
2-Chlorotoluene	ND		10.0	9.886		ug/L		99	71 - 130
2-Hexanone	ND		10.0	9.508		ug/L		95	52 - 136
4-Chlorotoluene	ND		10.0	9.668		ug/L		97	69 - 127
4-Methyl-2-pentanone	ND		10.0	8.153		ug/L		82	44 - 139
Acetone	ND		10.0	8.758		ug/L		88	20 - 174
Benzene	ND		10.0	10.28		ug/L		103	75 - 125
Bromobenzene	ND		10.0	10.46		ug/L		105	75 - 132
Bromochloromethane	ND		10.0	10.04		ug/L		100	75 - 125
Bromodichloromethane	ND		10.0	10.59		ug/L		106	70 - 137
Bromoform	ND		10.0	10.26		ug/L		103	51 - 142
Bromomethane	ND		10.0	7.215		ug/L		72	46 - 164
cis-1,2-Dichloroethene	ND		10.0	9.699		ug/L		97	62 - 138
cis-1,3-Dichloropropene	ND		10.0	10.15		ug/L		101	67 - 125
Carbon disulfide	ND		10.0	8.626		ug/L		86	70 - 132
Carbon tetrachloride	ND		10.0	10.14		ug/L		101	50 - 159
Chlorobenzene	ND		10.0	10.45		ug/L		105	75 - 128
Chloroethane	ND		10.0	8.060		ug/L		81	62 - 161
Chloroform	1.9		10.0	11.37		ug/L		95	73 - 130
Chloromethane	ND		10.0	8.945		ug/L		89	45 - 157
Dibromochloromethane	ND		10.0	10.57		ug/L		106	63 - 145
Dibromomethane	ND		10.0	10.62		ug/L		106	75 - 127
Dichlorodifluoromethane	ND		10.0	6.689		ug/L		67	31 - 132
Ethylbenzene	ND		10.0	9.904		ug/L		99	73 - 135
Isopropylbenzene	ND		10.0	9.181		ug/L		92	69 - 141
Methylene Chloride	ND		10.0	9.686		ug/L		97	65 - 127
Methyl-t-Butyl Ether (MTBE)	ND		10.0	9.404		ug/L		94	59 - 131
Naphthalene	ND		10.0	8.329		ug/L		83	51 - 133
n-Butylbenzene	ND		10.0	9.451		ug/L		95	66 - 128
N-Propylbenzene	ND		10.0	9.477		ug/L		95	73 - 136
o-Xylene	ND		10.0	10.05		ug/L		101	69 - 138
m,p-Xylene	ND		20.0	20.78		ug/L		104	73 - 138
p-Isopropyltoluene	ND		10.0	9.675		ug/L		97	69 - 134
sec-Butylbenzene	ND		10.0	9.458		ug/L		95	70 - 130
Styrene	ND		10.0	9.886		ug/L		99	45 - 144

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QC Sample Results

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

Job ID: 570-150023-1

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

Lab Sample ID: 570-150023-2 MS

Matrix: Water

Analysis Batch: 359165

Client Sample ID: MW-20-20230824

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	9.654		ug/L		97	61 - 138
trans-1,3-Dichloropropene	ND		10.0	9.422		ug/L		94	61 - 131
tert-Butylbenzene	ND		10.0	9.808		ug/L		98	71 - 131
Tetrachloroethene	ND		10.0	10.72		ug/L		107	64 - 150
Toluene	ND		10.0	10.16		ug/L		102	75 - 127
Trichloroethene	ND		10.0	10.19		ug/L		102	34 - 159
Trichlorofluoromethane	ND		10.0	7.879		ug/L		79	69 - 142
Vinyl acetate	ND		10.0	8.905		ug/L		89	35 - 132
Vinyl chloride	ND		10.0	8.924		ug/L		89	51 - 168

Surrogate	MS %Recovery	MS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	101		64 - 132
4-Bromofluorobenzene (Surr)	96		76 - 120
Dibromofluoromethane	100		80 - 120
Toluene-d8 (Surr)	99		80 - 120

Lab Sample ID: 570-150023-2 MSD

Matrix: Water

Analysis Batch: 359165

Client Sample ID: MW-20-20230824

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	10.63		ug/L		106	61 - 142	0	20
1,1,1-Trichloroethane	ND		10.0	10.11		ug/L		101	68 - 138	2	20
1,1,2,2-Tetrachloroethane	ND		10.0	10.40		ug/L		104	71 - 133	2	20
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		10.0	7.729		ug/L		77	51 - 132	1	21
1,1,2-Trichloroethane	ND		10.0	10.80		ug/L		108	70 - 132	1	20
1,1-Dichloroethane	ND		10.0	10.19		ug/L		102	70 - 132	0	20
1,1-Dichloroethene	ND		10.0	9.446		ug/L		94	57 - 148	5	20
1,1-Dichloropropene	ND		10.0	9.668		ug/L		97	74 - 132	2	20
1,2,3-Trichlorobenzene	ND		10.0	9.913		ug/L		99	66 - 135	4	22
1,2,3-Trichloropropane	ND		10.0	8.522		ug/L		85	61 - 130	4	20
1,2,4-Trichlorobenzene	ND		10.0	9.829		ug/L		98	66 - 131	7	24
1,2,4-Trimethylbenzene	ND		10.0	9.999		ug/L		100	65 - 132	2	22
1,2-Dibromo-3-Chloropropane	ND		10.0	9.877		ug/L		99	48 - 132	3	20
1,2-Dibromoethane	ND		10.0	10.62		ug/L		106	74 - 128	1	20
1,2-Dichlorobenzene	ND		10.0	10.75		ug/L		108	74 - 126	3	20
1,2-Dichloroethane	ND		10.0	11.06		ug/L		111	65 - 140	2	20
1,2-Dichloropropane	ND		10.0	10.37		ug/L		104	75 - 127	1	20
1,3,5-Trimethylbenzene	ND		10.0	9.832		ug/L		98	64 - 144	0	22
1,3-Dichlorobenzene	ND		10.0	10.33		ug/L		103	73 - 125	3	21
1,3-Dichloropropane	ND		10.0	10.47		ug/L		105	71 - 131	1	20
1,4-Dichlorobenzene	ND		10.0	10.33		ug/L		103	73 - 125	4	20
2,2-Dichloropropane	ND		10.0	7.918		ug/L		79	39 - 138	1	20
2-Butanone	ND		10.0	8.815		ug/L		88	44 - 140	7	34
2-Chlorotoluene	ND		10.0	10.05		ug/L		100	71 - 130	2	20
2-Hexanone	ND		10.0	6.553		ug/L		66	52 - 136	37	37
4-Chlorotoluene	ND		10.0	10.02		ug/L		100	69 - 127	4	20
4-Methyl-2-pentanone	ND		10.0	8.046		ug/L		80	44 - 139	1	21

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QC Sample Results

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

Job ID: 570-150023-1

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

Lab Sample ID: 570-150023-2 MSD

Matrix: Water

Analysis Batch: 359165

Client Sample ID: MW-20-20230824

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	8.272		ug/L		83	20 - 174	6	35
Benzene	ND		10.0	10.27		ug/L		103	75 - 125	0	20
Bromobenzene	ND		10.0	10.57		ug/L		106	75 - 132	1	20
Bromochloromethane	ND		10.0	10.38		ug/L		104	75 - 125	3	20
Bromodichloromethane	ND		10.0	10.35		ug/L		104	70 - 137	2	20
Bromoform	ND		10.0	10.37		ug/L		104	51 - 142	1	20
Bromomethane	ND		10.0	7.508		ug/L		75	46 - 164	4	25
cis-1,2-Dichloroethene	ND		10.0	9.767		ug/L		98	62 - 138	1	20
cis-1,3-Dichloropropene	ND		10.0	10.37		ug/L		104	67 - 125	2	20
Carbon disulfide	ND		10.0	8.752		ug/L		88	70 - 132	1	20
Carbon tetrachloride	ND		10.0	10.09		ug/L		101	50 - 159	0	20
Chlorobenzene	ND		10.0	10.53		ug/L		105	75 - 128	1	20
Chloroethane	ND		10.0	7.997		ug/L		80	62 - 161	1	20
Chloroform	1.9		10.0	11.38		ug/L		95	73 - 130	0	20
Chloromethane	ND		10.0	9.552		ug/L		96	45 - 157	7	21
Dibromochloromethane	ND		10.0	10.68		ug/L		107	63 - 145	1	20
Dibromomethane	ND		10.0	10.47		ug/L		105	75 - 127	1	20
Dichlorodifluoromethane	ND		10.0	6.700		ug/L		67	31 - 132	0	21
Ethylbenzene	ND		10.0	9.948		ug/L		99	73 - 135	0	20
Isopropylbenzene	ND		10.0	9.357		ug/L		94	69 - 141	2	22
Methylene Chloride	ND		10.0	9.063		ug/L		91	65 - 127	7	20
Methyl-t-Butyl Ether (MTBE)	ND		10.0	9.483		ug/L		95	59 - 131	1	20
Naphthalene	ND		10.0	9.165		ug/L		92	51 - 133	10	25
n-Butylbenzene	ND		10.0	9.776		ug/L		98	66 - 128	3	24
N-Propylbenzene	ND		10.0	9.620		ug/L		96	73 - 136	1	22
o-Xylene	ND		10.0	10.15		ug/L		102	69 - 138	1	20
m,p-Xylene	ND		20.0	20.81		ug/L		104	73 - 138	0	21
p-Isopropyltoluene	ND		10.0	9.942		ug/L		99	69 - 134	3	23
sec-Butylbenzene	ND		10.0	9.679		ug/L		97	70 - 130	2	22
Styrene	ND		10.0	9.960		ug/L		100	45 - 144	1	32
trans-1,2-Dichloroethene	ND		10.0	9.796		ug/L		98	61 - 138	1	21
trans-1,3-Dichloropropene	ND		10.0	9.399		ug/L		94	61 - 131	0	20
tert-Butylbenzene	ND		10.0	9.922		ug/L		99	71 - 131	1	23
Tetrachloroethene	ND		10.0	10.74		ug/L		107	64 - 150	0	23
Toluene	ND		10.0	10.03		ug/L		100	75 - 127	1	20
Trichloroethene	ND		10.0	10.01		ug/L		100	34 - 159	2	23
Trichlorofluoromethane	ND		10.0	7.950		ug/L		80	69 - 142	1	20
Vinyl acetate	ND		10.0	9.055		ug/L		91	35 - 132	2	29
Vinyl chloride	ND		10.0	9.138		ug/L		91	51 - 168	2	20

Surrogate	MSD %Recovery	MSD Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	108		64 - 132
4-Bromofluorobenzene (Surr)	96		76 - 120
Dibromofluoromethane	100		80 - 120
Toluene-d8 (Surr)	100		80 - 120

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QC Sample Results

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

Job ID: 570-150023-1

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

Lab Sample ID: MB 570-358578/1-A

Matrix: Water

Analysis Batch: 359082

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 358578

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	ND		0.50		ug/L		08/28/23 06:04	08/29/23 10:24	1
Isotope Dilution	%Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,4-Dioxane-d8	33		21 - 120				08/28/23 06:04	08/29/23 10:24	1
Surrogate	%Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
Nitrobenzene-d5	68		58 - 135				08/28/23 06:04	08/29/23 10:24	1

Lab Sample ID: LCS 570-358578/2-A

Matrix: Water

Analysis Batch: 359082

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 358578

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits	
1,4-Dioxane	20.0	15.80		ug/L		79	63 - 144	
Isotope Dilution	%Recovery	LCS Qualifier	Limits					
1,4-Dioxane-d8	29		21 - 120					
Surrogate	%Recovery	LCS Qualifier	Limits					
Nitrobenzene-d5	64		58 - 135					

Lab Sample ID: LCSD 570-358578/3-A

Matrix: Water

Analysis Batch: 359082

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 358578

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
1,4-Dioxane	20.0	17.09		ug/L		85	63 - 144	8	20
Isotope Dilution	%Recovery	LCSD Qualifier	Limits						
1,4-Dioxane-d8	29		21 - 120						
Surrogate	%Recovery	LCSD Qualifier	Limits						
Nitrobenzene-d5	70		58 - 135						

Lab Sample ID: 570-150023-2 MS

Matrix: Water

Analysis Batch: 359082

Client Sample ID: MW-20-20230824

Prep Type: Total/NA

Prep Batch: 358578

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits	
1,4-Dioxane	ND		15.7	13.39		ug/L		85	48 - 164	
Isotope Dilution	%Recovery	MS Qualifier	Limits							
1,4-Dioxane-d8	25		21 - 120							
Surrogate	%Recovery	MS Qualifier	Limits							
Nitrobenzene-d5	67		58 - 135							

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QC Sample Results

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

Job ID: 570-150023-1

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

Lab Sample ID: 570-150023-2 MSD

Matrix: Water

Analysis Batch: 359082

Client Sample ID: MW-20-20230824

Prep Type: Total/NA

Prep Batch: 358578

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
1,4-Dioxane	ND		15.5	12.32		ug/L	-	79	48 - 164	8	20
	MSD	MSD									
Isotope Dilution	%Recovery	Qualifier	Limits								
1,4-Dioxane-d8	22		21 - 120								
	MSD	MSD									
Surrogate	%Recovery	Qualifier	Limits								
Nitrobenzene-d5	60		58 - 135								

QC Association Summary

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

Job ID: 570-150023-1

GC/MS VOA

Analysis Batch: 359165

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-150023-1	TB-082423A	Total/NA	Water	8260B	
570-150023-2	MW-20-20230824	Total/NA	Water	8260B	
570-150023-3	MW-08-20230824	Total/NA	Water	8260B	
570-150023-4	MW-0800-20230824	Total/NA	Water	8260B	
570-150023-5	RB-082423	Total/NA	Water	8260B	
570-150023-6	MW-15-20230824	Total/NA	Water	8260B	
570-150023-7	MW-16-20230824	Total/NA	Water	8260B	
570-150023-8	MW-28-20230824	Total/NA	Water	8260B	
570-150023-9	MW-35C-20230824	Total/NA	Water	8260B	
570-150023-10	MW-32C-20230824	Total/NA	Water	8260B	
MB 570-359165/6	Method Blank	Total/NA	Water	8260B	
LCS 570-359165/3	Lab Control Sample	Total/NA	Water	8260B	
LCSD 570-359165/4	Lab Control Sample Dup	Total/NA	Water	8260B	
570-150023-2 MS	MW-20-20230824	Total/NA	Water	8260B	
570-150023-2 MSD	MW-20-20230824	Total/NA	Water	8260B	

GC/MS Semi VOA

Prep Batch: 358578

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-150023-2	MW-20-20230824	Total/NA	Water	3510C	
570-150023-3 - RA	MW-08-20230824	Total/NA	Water	3510C	
570-150023-4 - RA	MW-0800-20230824	Total/NA	Water	3510C	
570-150023-5	RB-082423	Total/NA	Water	3510C	
570-150023-7	MW-16-20230824	Total/NA	Water	3510C	
570-150023-8	MW-28-20230824	Total/NA	Water	3510C	
570-150023-9	MW-35C-20230824	Total/NA	Water	3510C	
570-150023-10	MW-32C-20230824	Total/NA	Water	3510C	
MB 570-358578/1-A	Method Blank	Total/NA	Water	3510C	
LCS 570-358578/2-A	Lab Control Sample	Total/NA	Water	3510C	
LCSD 570-358578/3-A	Lab Control Sample Dup	Total/NA	Water	3510C	
570-150023-2 MS	MW-20-20230824	Total/NA	Water	3510C	
570-150023-2 MSD	MW-20-20230824	Total/NA	Water	3510C	

Analysis Batch: 359082

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-150023-2	MW-20-20230824	Total/NA	Water	8270C SIM ID	358578
570-150023-5	RB-082423	Total/NA	Water	8270C SIM ID	358578
570-150023-7	MW-16-20230824	Total/NA	Water	8270C SIM ID	358578
570-150023-8	MW-28-20230824	Total/NA	Water	8270C SIM ID	358578
570-150023-9	MW-35C-20230824	Total/NA	Water	8270C SIM ID	358578
570-150023-10	MW-32C-20230824	Total/NA	Water	8270C SIM ID	358578
MB 570-358578/1-A	Method Blank	Total/NA	Water	8270C SIM ID	358578
LCS 570-358578/2-A	Lab Control Sample	Total/NA	Water	8270C SIM ID	358578
LCSD 570-358578/3-A	Lab Control Sample Dup	Total/NA	Water	8270C SIM ID	358578
570-150023-2 MS	MW-20-20230824	Total/NA	Water	8270C SIM ID	358578
570-150023-2 MSD	MW-20-20230824	Total/NA	Water	8270C SIM ID	358578

Analysis Batch: 359746

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-150023-3 - RA	MW-08-20230824	Total/NA	Water	8270C SIM ID	358578

Eurofins Calscience

QC Association Summary

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

Job ID: 570-150023-1

GC/MS Semi VOA (Continued)

Analysis Batch: 359746 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-150023-4 - RA	MW-0800-20230824	Total/NA	Water	8270C SIM ID	358578

- 1
- 2
- 3
- 4
- 5
- 6
- 7
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- 12
- 13
- 14
- 15
- 16

Lab Chronicle

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

Job ID: 570-150023-1

Client Sample ID: TB-082423A

Lab Sample ID: 570-150023-1

Date Collected: 08/24/23 08:00

Matrix: Water

Date Received: 08/24/23 17:40

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	359165	08/29/23 20:03	N5PD	EET CAL 4
Instrument ID: GCMSL										

Client Sample ID: MW-20-20230824

Lab Sample ID: 570-150023-2

Date Collected: 08/24/23 10:42

Matrix: Water

Date Received: 08/24/23 17:40

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	359165	08/29/23 20:28	N5PD	EET CAL 4
Instrument ID: GCMSL										
Total/NA	Prep	3510C			128.3 mL	10 mL	358578	08/28/23 06:04	RY4P	EET CAL 4
Total/NA	Analysis	8270C SIM ID		1	1 mL	1 mL	359082	08/29/23 12:33	J7WE	EET CAL 4
Instrument ID: GCMSDDD										

Client Sample ID: MW-08-20230824

Lab Sample ID: 570-150023-3

Date Collected: 08/24/23 13:20

Matrix: Water

Date Received: 08/24/23 17:40

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	359165	08/29/23 22:09	N5PD	EET CAL 4
Instrument ID: GCMSL										
Total/NA	Prep	3510C	RA		132.8 mL	10 mL	358578	08/28/23 06:04	RY4P	EET CAL 4
Total/NA	Analysis	8270C SIM ID	RA	1	1 mL	1 mL	359746	08/30/23 17:17	J7WE	EET CAL 4
Instrument ID: GCMSDDD										

Client Sample ID: MW-0800-20230824

Lab Sample ID: 570-150023-4

Date Collected: 08/24/23 13:25

Matrix: Water

Date Received: 08/24/23 17:40

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	359165	08/29/23 22:33	N5PD	EET CAL 4
Instrument ID: GCMSL										
Total/NA	Prep	3510C	RA		130.6 mL	10 mL	358578	08/28/23 06:04	RY4P	EET CAL 4
Total/NA	Analysis	8270C SIM ID	RA	1	1 mL	1 mL	359746	08/30/23 17:32	J7WE	EET CAL 4
Instrument ID: GCMSDDD										

Client Sample ID: RB-082423

Lab Sample ID: 570-150023-5

Date Collected: 08/24/23 13:33

Matrix: Water

Date Received: 08/24/23 17:40

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	359165	08/29/23 22:58	N5PD	EET CAL 4
Instrument ID: GCMSL										
Total/NA	Prep	3510C			134.1 mL	10 mL	358578	08/28/23 06:04	RY4P	EET CAL 4
Total/NA	Analysis	8270C SIM ID		1	1 mL	1 mL	359082	08/29/23 16:11	J7WE	EET CAL 4
Instrument ID: GCMSDDD										

Eurofins Calscience

Lab Chronicle

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

Job ID: 570-150023-1

Client Sample ID: MW-15-20230824

Lab Sample ID: 570-150023-6

Date Collected: 08/24/23 14:33

Matrix: Water

Date Received: 08/24/23 17:40

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	359165	08/29/23 23:23	N5PD	EET CAL 4
Instrument ID: GCMSL										

Client Sample ID: MW-16-20230824

Lab Sample ID: 570-150023-7

Date Collected: 08/24/23 16:25

Matrix: Water

Date Received: 08/24/23 17:40

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	359165	08/29/23 23:48	N5PD	EET CAL 4
Instrument ID: GCMSL										
Total/NA	Prep	3510C			129.5 mL	10 mL	358578	08/28/23 06:04	RY4P	EET CAL 4
Total/NA	Analysis	8270C SIM ID		1	1 mL	1 mL	359082	08/29/23 16:25	J7WE	EET CAL 4
Instrument ID: GCMSDDD										

Client Sample ID: MW-28-20230824

Lab Sample ID: 570-150023-8

Date Collected: 08/24/23 09:00

Matrix: Water

Date Received: 08/24/23 17:40

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	359165	08/30/23 00:14	N5PD	EET CAL 4
Instrument ID: GCMSL										
Total/NA	Prep	3510C			129.5 mL	10 mL	358578	08/28/23 06:04	RY4P	EET CAL 4
Total/NA	Analysis	8270C SIM ID		1	1 mL	1 mL	359082	08/29/23 16:40	J7WE	EET CAL 4
Instrument ID: GCMSDDD										

Client Sample ID: MW-35C-20230824

Lab Sample ID: 570-150023-9

Date Collected: 08/24/23 11:07

Matrix: Water

Date Received: 08/24/23 17:40

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	359165	08/30/23 00:39	N5PD	EET CAL 4
Instrument ID: GCMSL										
Total/NA	Prep	3510C			130.6 mL	10 mL	358578	08/28/23 06:04	RY4P	EET CAL 4
Total/NA	Analysis	8270C SIM ID		1	1 mL	1 mL	359082	08/29/23 16:54	J7WE	EET CAL 4
Instrument ID: GCMSDDD										

Client Sample ID: MW-32C-20230824

Lab Sample ID: 570-150023-10

Date Collected: 08/24/23 14:50

Matrix: Water

Date Received: 08/24/23 17:40

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	359165	08/30/23 01:04	N5PD	EET CAL 4
Instrument ID: GCMSL										
Total/NA	Prep	3510C			129.8 mL	10 mL	358578	08/28/23 06:04	RY4P	EET CAL 4
Total/NA	Analysis	8270C SIM ID		1	1 mL	1 mL	359082	08/29/23 17:08	J7WE	EET CAL 4
Instrument ID: GCMSDDD										

Eurofins Calscience

Lab Chronicle

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

Job ID: 570-150023-1

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 / 532.30

Job ID: 570-150023-1

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

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Method Summary

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

Job ID: 570-150023-1

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 / 532.30

Job ID: 570-150023-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
570-150023-1	TB-082423A	Water	08/24/23 08:00	08/24/23 17:40
570-150023-2	MW-20-20230824	Water	08/24/23 10:42	08/24/23 17:40
570-150023-3	MW-08-20230824	Water	08/24/23 13:20	08/24/23 17:40
570-150023-4	MW-0800-20230824	Water	08/24/23 13:25	08/24/23 17:40
570-150023-5	RB-082423	Water	08/24/23 13:33	08/24/23 17:40
570-150023-6	MW-15-20230824	Water	08/24/23 14:33	08/24/23 17:40
570-150023-7	MW-16-20230824	Water	08/24/23 16:25	08/24/23 17:40
570-150023-8	MW-28-20230824	Water	08/24/23 09:00	08/24/23 17:40
570-150023-9	MW-35C-20230824	Water	08/24/23 11:07	08/24/23 17:40
570-150023-10	MW-32C-20230824	Water	08/24/23 14:50	08/24/23 17:40

PROJECT: Raytheon Main

TASK NO.: 532.30

Project Manager Steve Netto

QA Manager Amber Warden-Plum

Phone 858.455.6500

Fax 858.455.6533

H2H3

Loc: 570

150023

Date: 8/24/23

Page 1 of 2

MATRIX		PRESERVATION		CONTAINERS		ANALYSIS REQUESTED		Expected Concentration Range (ppb) for VOA's				SPECIAL HANDLING								
Groundwater																				
Lab prepared water																				
Hydrochloric Acid (HCl)																				
													</							

Laboratory
Eurofins Calscience, Inc.
Attn: Virendra Patel
2841 Dow Ave, Ste 100
Tustin, CA 92780
714-895-5494

ECI Project #57003509

REMARKS

Report J Flags

No EDF requested

Total number of containers per analysis:

Total No. of Containers:

Relinquished By: / Company:	Date / Time	Received By: / Company	Date / Time
<i>[Signature]</i> / H+H	8/24/23 1637	<i>[Signature]</i> - CC	8/24/23 1637
Relinquished By: / Company:	Date / Time	Received By: / Company	Date / Time
<i>[Signature]</i> - CC	8/24/23 1740	<i>[Signature]</i> - REC	8/24/23 1740

- ☐ 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.

Temperature on receipt



570-150023 Chain of Custody

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: 8/24/23
Page 2 of 2

Sampled By:				SAMPLE COLLECTION		MATRIX		PRESERVATION		CONTAINERS		ANALYSIS REQUESTED		Expected Concentration Range (ppb) for VOA's				SPECIAL HANDLING				Laboratory	
LAB ID	SAMPLE ID	Date	Time	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	Remarks		
8	MW-28-20230824	8/24/23	0900	✓	✓		✓	3		✓		✓						✓			Report J Flags		
	↓		↓	✓	✓		✓		1	✓	✓	✓						✓			No EDF requested		
9	MW-35C-20230824		1107	✓	✓		✓	3		✓		✓						✓					
	↓		↓	✓	✓		✓		1	✓	✓	✓						✓					
10	MW-32C-20230824		1450	✓	✓		✓	3		✓		✓						✓					
	↓		↓	✓	✓		✓		1	✓	✓	✓						✓					

Total number of containers per analysis: _____

Relinquished By: / Company: Steve Netto / H+A Date / Time: 8/24/23 1637

Relinquished By: / Company: Steve Netto Date / Time: 8/24/23 1740

Received By: / Company: Steve Netto Date / Time: 8/24/23 1637

Received By: / Company: Steve Netto Date / Time: 8/24/23 1740

☐ No. of containers correct

☐ Received in good condition

☐ Custody seals secure

☐ Conforms to COC document

Total No. of Containers: _____

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 x
- Note applicable preservatives, special instructions, and deviations from typical environmental samples.
- Consult project QA documents for specific instructions.

Temperature on receipt _____

Login Sample Receipt Checklist

Client: Hargis + Associates, Inc.

Job Number: 570-150023-1

Login Number: 150023

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	

August 31, 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 : 2301408
Client Reference : Raytheon Main, 532.30

Enclosed are the results for sample(s) received on August 24, 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
lana.davidkov@atlglobal.com
Authorized to Release on 08/31/23 16:19 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 : 08/31/2023

SUMMARY OF SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
TB-082423B	2301408-01	Water	8/24/23 8:00	8/24/23 17:15
MW-08_20230824	2301408-02	Water	8/24/23 13:30	8/24/23 17:15



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 : 08/31/2023

Notes and Definitions

S15	Surrogate recovery outside laboratory acceptance limit. However, the surrogate is not associated with the target analyte.
R	RPD value outside acceptance criteria. Calculation is based on raw values.
L4	Laboratory Control Sample outside of control limit but within Marginal Exceedance (ME) limit.
J	Analyte detected below the Practical Quantitation Limit but above or equal to the Method Detection Limit. Result is an estimated concentration.
ND	Analyte is not detected at or above the Practical Quantitation Limit (PQL). When client requests quantitation against MDL, analyte is not detected at or above the Method Detection Limit (MDL)
PQL	Practical Quantitation Limit
MDL	Method Detection Limit
NR	Not Reported
RPD	Relative Percent Difference
CA2	CA-ELAP (CDPH)
OR1	OR-NELAP (OSPHL)

Notes:

- (1) The reported MDL and PQL are based on prep ratio variation and analytical dilution.
- (2) The suffix [2C] of specific analytes signifies that the reported result is taken from the instrument's second column.
- (3) Results are wet unless otherwise specified.



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 : 08/31/2023

Client Sample ID: TB-082423B

Lab ID: 2301408-01

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	0.42	1	B3H0855	08/24/2023	08/24/23 18:33	
1,1,1-Trichloroethane	ND	0.50	0.42	1	B3H0855	08/24/2023	08/24/23 18:33	
1,1,2,2-Tetrachloroethane	ND	0.50	0.44	1	B3H0855	08/24/2023	08/24/23 18:33	
1,1,2-Trichloroethane	ND	0.50	0.39	1	B3H0855	08/24/2023	08/24/23 18:33	
1,1-Dichloroethane	ND	0.50	0.45	1	B3H0855	08/24/2023	08/24/23 18:33	
1,1-Dichloroethene	ND	0.50	0.28	1	B3H0855	08/24/2023	08/24/23 18:33	
1,1-Dichloropropene	ND	0.50	0.39	1	B3H0855	08/24/2023	08/24/23 18:33	
1,2,3-Trichloropropane	ND	0.50	0.42	1	B3H0855	08/24/2023	08/24/23 18:33	
1,2,3-Trichlorobenzene	ND	0.50	0.32	1	B3H0855	08/24/2023	08/24/23 18:33	
1,2,4-Trichlorobenzene	ND	0.50	0.28	1	B3H0855	08/24/2023	08/24/23 18:33	
1,2,4-Trimethylbenzene	ND	0.50	0.24	1	B3H0855	08/24/2023	08/24/23 18:33	
1,2-Dibromo-3-chloropropane	ND	0.50	0.50	1	B3H0855	08/24/2023	08/24/23 18:33	
1,2-Dibromoethane	ND	0.50	0.23	1	B3H0855	08/24/2023	08/24/23 18:33	
1,2-Dichlorobenzene	ND	0.50	0.31	1	B3H0855	08/24/2023	08/24/23 18:33	
1,2-Dichloroethane	ND	0.50	0.34	1	B3H0855	08/24/2023	08/24/23 18:33	
1,2-Dichloropropane	ND	0.50	0.45	1	B3H0855	08/24/2023	08/24/23 18:33	
1,3,5-Trimethylbenzene	ND	0.50	0.38	1	B3H0855	08/24/2023	08/24/23 18:33	
1,3-Dichlorobenzene	ND	0.50	0.22	1	B3H0855	08/24/2023	08/24/23 18:33	
1,3-Dichloropropane	ND	0.50	0.31	1	B3H0855	08/24/2023	08/24/23 18:33	
1,4-Dichlorobenzene	ND	0.50	0.21	1	B3H0855	08/24/2023	08/24/23 18:33	
2,2-Dichloropropane	ND	0.50	0.49	1	B3H0855	08/24/2023	08/24/23 18:33	
2-Chlorotoluene	ND	0.50	0.40	1	B3H0855	08/24/2023	08/24/23 18:33	
4-Chlorotoluene	ND	0.50	0.23	1	B3H0855	08/24/2023	08/24/23 18:33	
4-Isopropyltoluene	ND	0.50	0.13	1	B3H0855	08/24/2023	08/24/23 18:33	
Benzene	ND	0.50	0.18	1	B3H0855	08/24/2023	08/24/23 18:33	
Bromobenzene	ND	0.50	0.26	1	B3H0855	08/24/2023	08/24/23 18:33	
Bromodichloromethane	ND	0.50	0.38	1	B3H0855	08/24/2023	08/24/23 18:33	
Bromoform	ND	0.50	0.40	1	B3H0855	08/24/2023	08/24/23 18:33	
Bromomethane	ND	0.50	0.41	1	B3H0855	08/24/2023	08/24/23 18:33	
Carbon tetrachloride	ND	0.50	0.30	1	B3H0855	08/24/2023	08/24/23 18:33	
Chlorobenzene	ND	0.50	0.23	1	B3H0855	08/24/2023	08/24/23 18:33	
Chloroethane	ND	0.50	0.47	1	B3H0855	08/24/2023	08/24/23 18:33	
Chloroform	ND	0.50	0.40	1	B3H0855	08/24/2023	08/24/23 18:33	
Chloromethane	ND	0.50	0.24	1	B3H0855	08/24/2023	08/24/23 18:33	
cis-1,2-Dichloroethene	ND	0.50	0.49	1	B3H0855	08/24/2023	08/24/23 18:33	
cis-1,3-Dichloropropene	ND	0.50	0.22	1	B3H0855	08/24/2023	08/24/23 18:33	
Dibromochloromethane	ND	0.50	0.26	1	B3H0855	08/24/2023	08/24/23 18:33	
Dibromomethane	ND	0.50	0.30	1	B3H0855	08/24/2023	08/24/23 18:33	
Dichlorodifluoromethane	ND	0.50	0.24	1	B3H0855	08/24/2023	08/24/23 18:33	
Ethylbenzene	ND	0.50	0.22	1	B3H0855	08/24/2023	08/24/23 18:33	



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 : 08/31/2023

Client Sample ID: TB-082423B

Lab ID: 2301408-01

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	0.38	1	B3H0855	08/24/2023	08/24/23 18:33	
Isopropylbenzene	ND	0.50	0.28	1	B3H0855	08/24/2023	08/24/23 18:33	
m,p-Xylene	ND	1.0	0.54	1	B3H0855	08/24/2023	08/24/23 18:33	
Methylene chloride	ND	1.0	0.26	1	B3H0855	08/24/2023	08/24/23 18:33	
n-Butylbenzene	ND	0.50	0.27	1	B3H0855	08/24/2023	08/24/23 18:33	
n-Propylbenzene	ND	0.50	0.22	1	B3H0855	08/24/2023	08/24/23 18:33	
Naphthalene	ND	0.50	0.24	1	B3H0855	08/24/2023	08/24/23 18:33	
o-Xylene	ND	0.50	0.26	1	B3H0855	08/24/2023	08/24/23 18:33	
sec-Butylbenzene	ND	0.50	0.30	1	B3H0855	08/24/2023	08/24/23 18:33	
Styrene	ND	0.50	0.24	1	B3H0855	08/24/2023	08/24/23 18:33	
tert-Butylbenzene	ND	0.50	0.22	1	B3H0855	08/24/2023	08/24/23 18:33	
Tetrachloroethene	ND	0.50	0.49	1	B3H0855	08/24/2023	08/24/23 18:33	
Toluene	ND	0.50	0.33	1	B3H0855	08/24/2023	08/24/23 18:33	
trans-1,2-Dichloroethene	ND	0.50	0.26	1	B3H0855	08/24/2023	08/24/23 18:33	
Trichloroethene	ND	0.50	0.45	1	B3H0855	08/24/2023	08/24/23 18:33	
Trichlorofluoromethane	ND	0.50	0.23	1	B3H0855	08/24/2023	08/24/23 18:33	
Vinyl chloride	ND	0.50	0.19	1	B3H0855	08/24/2023	08/24/23 18:33	
Surrogate: 1,2-Dichloroethane-d4	94.9 %	72.2	121		B3H0855	08/24/2023	08/24/23 18:33	
Surrogate: 4-Bromofluorobenzene	98.2 %	80.1	115		B3H0855	08/24/2023	08/24/23 18:33	
Surrogate: Dibromofluoromethane	117 %	76.6	131		B3H0855	08/24/2023	08/24/23 18:33	
Surrogate: Toluene-d8	102 %	82.9	116		B3H0855	08/24/2023	08/24/23 18:33	



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 : 08/31/2023

Client Sample ID: MW-08_20230824

Lab ID: 2301408-02

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	0.42	1	B3H0855	08/24/2023	08/24/23 18:56	
1,1,1-Trichloroethane	ND	0.50	0.42	1	B3H0855	08/24/2023	08/24/23 18:56	
1,1,2,2-Tetrachloroethane	ND	0.50	0.44	1	B3H0855	08/24/2023	08/24/23 18:56	
1,1,2-Trichloroethane	ND	0.50	0.39	1	B3H0855	08/24/2023	08/24/23 18:56	
1,1-Dichloroethane	ND	0.50	0.45	1	B3H0855	08/24/2023	08/24/23 18:56	
1,1-Dichloroethene	32	0.50	0.28	1	B3H0855	08/24/2023	08/24/23 18:56	
1,1-Dichloropropene	ND	0.50	0.39	1	B3H0855	08/24/2023	08/24/23 18:56	
1,2,3-Trichloropropane	ND	0.50	0.42	1	B3H0855	08/24/2023	08/24/23 18:56	
1,2,3-Trichlorobenzene	ND	0.50	0.32	1	B3H0855	08/24/2023	08/24/23 18:56	
1,2,4-Trichlorobenzene	ND	0.50	0.28	1	B3H0855	08/24/2023	08/24/23 18:56	
1,2,4-Trimethylbenzene	ND	0.50	0.24	1	B3H0855	08/24/2023	08/24/23 18:56	
1,2-Dibromo-3-chloropropane	ND	0.50	0.50	1	B3H0855	08/24/2023	08/24/23 18:56	
1,2-Dibromoethane	ND	0.50	0.23	1	B3H0855	08/24/2023	08/24/23 18:56	
1,2-Dichlorobenzene	ND	0.50	0.31	1	B3H0855	08/24/2023	08/24/23 18:56	
1,2-Dichloroethane	ND	0.50	0.34	1	B3H0855	08/24/2023	08/24/23 18:56	
1,2-Dichloropropane	ND	0.50	0.45	1	B3H0855	08/24/2023	08/24/23 18:56	
1,3,5-Trimethylbenzene	ND	0.50	0.38	1	B3H0855	08/24/2023	08/24/23 18:56	
1,3-Dichlorobenzene	ND	0.50	0.22	1	B3H0855	08/24/2023	08/24/23 18:56	
1,3-Dichloropropane	ND	0.50	0.31	1	B3H0855	08/24/2023	08/24/23 18:56	
1,4-Dichlorobenzene	ND	0.50	0.21	1	B3H0855	08/24/2023	08/24/23 18:56	
2,2-Dichloropropane	ND	0.50	0.49	1	B3H0855	08/24/2023	08/24/23 18:56	
2-Chlorotoluene	ND	0.50	0.40	1	B3H0855	08/24/2023	08/24/23 18:56	
4-Chlorotoluene	ND	0.50	0.23	1	B3H0855	08/24/2023	08/24/23 18:56	
4-Isopropyltoluene	ND	0.50	0.13	1	B3H0855	08/24/2023	08/24/23 18:56	
Benzene	ND	0.50	0.18	1	B3H0855	08/24/2023	08/24/23 18:56	
Bromobenzene	ND	0.50	0.26	1	B3H0855	08/24/2023	08/24/23 18:56	
Bromodichloromethane	ND	0.50	0.38	1	B3H0855	08/24/2023	08/24/23 18:56	
Bromoform	ND	0.50	0.40	1	B3H0855	08/24/2023	08/24/23 18:56	
Bromomethane	ND	0.50	0.41	1	B3H0855	08/24/2023	08/24/23 18:56	
Carbon tetrachloride	ND	0.50	0.30	1	B3H0855	08/24/2023	08/24/23 18:56	
Chlorobenzene	ND	0.50	0.23	1	B3H0855	08/24/2023	08/24/23 18:56	
Chloroethane	ND	0.50	0.47	1	B3H0855	08/24/2023	08/24/23 18:56	
Chloroform	0.43	0.50	0.40	1	B3H0855	08/24/2023	08/24/23 18:56	J
Chloromethane	ND	0.50	0.24	1	B3H0855	08/24/2023	08/24/23 18:56	
cis-1,2-Dichloroethene	4.3	0.50	0.49	1	B3H0855	08/24/2023	08/24/23 18:56	
cis-1,3-Dichloropropene	ND	0.50	0.22	1	B3H0855	08/24/2023	08/24/23 18:56	
Dibromochloromethane	ND	0.50	0.26	1	B3H0855	08/24/2023	08/24/23 18:56	
Dibromomethane	ND	0.50	0.30	1	B3H0855	08/24/2023	08/24/23 18:56	
Dichlorodifluoromethane	ND	0.50	0.24	1	B3H0855	08/24/2023	08/24/23 18:56	
Ethylbenzene	ND	0.50	0.22	1	B3H0855	08/24/2023	08/24/23 18:56	



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 : 08/31/2023

Client Sample ID: MW-08_20230824

Lab ID: 2301408-02

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	0.38	1	B3H0855	08/24/2023	08/24/23 18:56	
Isopropylbenzene	ND	0.50	0.28	1	B3H0855	08/24/2023	08/24/23 18:56	
m,p-Xylene	ND	1.0	0.54	1	B3H0855	08/24/2023	08/24/23 18:56	
Methylene chloride	ND	1.0	0.26	1	B3H0855	08/24/2023	08/24/23 18:56	
n-Butylbenzene	ND	0.50	0.27	1	B3H0855	08/24/2023	08/24/23 18:56	
n-Propylbenzene	ND	0.50	0.22	1	B3H0855	08/24/2023	08/24/23 18:56	
Naphthalene	ND	0.50	0.24	1	B3H0855	08/24/2023	08/24/23 18:56	
o-Xylene	ND	0.50	0.26	1	B3H0855	08/24/2023	08/24/23 18:56	
sec-Butylbenzene	ND	0.50	0.30	1	B3H0855	08/24/2023	08/24/23 18:56	
Styrene	ND	0.50	0.24	1	B3H0855	08/24/2023	08/24/23 18:56	
tert-Butylbenzene	ND	0.50	0.22	1	B3H0855	08/24/2023	08/24/23 18:56	
Tetrachloroethene	ND	0.50	0.49	1	B3H0855	08/24/2023	08/24/23 18:56	
Toluene	ND	0.50	0.33	1	B3H0855	08/24/2023	08/24/23 18:56	
trans-1,2-Dichloroethene	ND	0.50	0.26	1	B3H0855	08/24/2023	08/24/23 18:56	
Trichloroethene	75	0.50	0.45	1	B3H0855	08/24/2023	08/24/23 18:56	
Trichlorofluoromethane	ND	0.50	0.23	1	B3H0855	08/24/2023	08/24/23 18:56	
Vinyl chloride	ND	0.50	0.19	1	B3H0855	08/24/2023	08/24/23 18:56	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>104 %</i>	<i>72.2 - 121</i>			B3H0855	08/24/2023	08/24/23 18:56	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>101 %</i>	<i>80.1 - 115</i>			B3H0855	08/24/2023	08/24/23 18:56	
<i>Surrogate: Dibromofluoromethane</i>	<i>122 %</i>	<i>76.6 - 131</i>			B3H0855	08/24/2023	08/24/23 18:56	
<i>Surrogate: Toluene-d8</i>	<i>107 %</i>	<i>82.9 - 116</i>			B3H0855	08/24/2023	08/24/23 18:56	

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	B3H0860	08/25/2023	08/25/23 17:36	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	<i>108 %</i>	<i>82.2 - 133</i>			B3H0860	08/25/2023	08/25/23 17:36	
<i>Surrogate: 2-Fluorobiphenyl</i>	<i>114 %</i>	<i>72.9 - 162</i>			B3H0860	08/25/2023	08/25/23 17:36	
<i>Surrogate: 4-Terphenyl-d14</i>	<i>92.4 %</i>	<i>19 - 203</i>			B3H0860	08/25/2023	08/25/23 17:36	
<i>Surrogate: Nitrobenzene-d5</i>	<i>88.8 %</i>	<i>-13.6 - 137</i>			B3H0860	08/25/2023	08/25/23 17:36	



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 : 08/31/2023

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 Limits	% Rec Limits	RPD	RPD Limit	Notes

Batch B3H0855 - MSVOA_LL_W

Blank (B3H0855-BLK1)

Prepared: 8/24/2023 Analyzed: 8/24/2023

1,1,1,2-Tetrachloroethane	ND	0.50	0.42
1,1,1-Trichloroethane	ND	0.50	0.42
1,1,2,2-Tetrachloroethane	ND	0.50	0.44
1,1,2-Trichloroethane	ND	0.50	0.39
1,1-Dichloroethane	ND	0.50	0.45
1,1-Dichloroethene	ND	0.50	0.28
1,1-Dichloropropene	ND	0.50	0.39
1,2,3-Trichloropropane	ND	0.50	0.42
1,2,3-Trichlorobenzene	ND	0.50	0.32
1,2,4-Trichlorobenzene	ND	0.50	0.28
1,2,4-Trimethylbenzene	ND	0.50	0.24
1,2-Dibromo-3-chloropropane	ND	0.50	0.50
1,2-Dibromoethane	ND	0.50	0.23
1,2-Dichlorobenzene	ND	0.50	0.31
1,2-Dichloroethane	ND	0.50	0.34
1,2-Dichloropropane	ND	0.50	0.45
1,3,5-Trimethylbenzene	ND	0.50	0.38
1,3-Dichlorobenzene	ND	0.50	0.22
1,3-Dichloropropane	ND	0.50	0.31
1,4-Dichlorobenzene	ND	0.50	0.21
2,2-Dichloropropane	ND	0.50	0.49
2-Chlorotoluene	ND	0.50	0.40
4-Chlorotoluene	ND	0.50	0.23
4-Isopropyltoluene	ND	0.50	0.13
Benzene	ND	0.50	0.18
Bromobenzene	ND	0.50	0.26
Bromodichloromethane	ND	0.50	0.38
Bromoform	ND	0.50	0.40
Bromomethane	ND	0.50	0.41
Carbon tetrachloride	ND	0.50	0.30
Chlorobenzene	ND	0.50	0.23
Chloroethane	ND	0.50	0.47
Chloroform	ND	0.50	0.40
Chloromethane	ND	0.50	0.24
cis-1,2-Dichloroethene	ND	0.50	0.49
cis-1,3-Dichloropropene	ND	0.50	0.22
Dibromochloromethane	ND	0.50	0.26
Dibromomethane	ND	0.50	0.30
Dichlorodifluoromethane	ND	0.50	0.24
Ethylbenzene	ND	0.50	0.22
Hexachlorobutadiene	ND	0.50	0.38
Isopropylbenzene	ND	0.50	0.28



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 : 08/31/2023

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

Batch B3H0855 - MSVOA_LL_W (continued)

Blank (B3H0855-BLK1) - Continued

Prepared: 8/24/2023 Analyzed: 8/24/2023

m,p-Xylene	ND	1.0	0.54
Methylene chloride	ND	1.0	0.26
n-Butylbenzene	ND	0.50	0.27
n-Propylbenzene	ND	0.50	0.22
Naphthalene	ND	0.50	0.24
o-Xylene	ND	0.50	0.26
sec-Butylbenzene	ND	0.50	0.30
Styrene	ND	0.50	0.24
tert-Butylbenzene	ND	0.50	0.22
Tetrachloroethene	ND	0.50	0.49
Toluene	ND	0.50	0.33
trans-1,2-Dichloroethene	ND	0.50	0.26
Trichloroethene	ND	0.50	0.45
Trichlorofluoromethane	ND	0.50	0.23
Vinyl chloride	ND	0.50	0.19

Surrogate: 1,2-Dichloroethane-d4	26.42		25.0000	106	72.2 - 121
Surrogate: 4-Bromofluorobenzene	25.31		25.0000	101	80.1 - 115
Surrogate: Dibromofluoromethane	31.15		25.0000	125	76.6 - 131
Surrogate: Toluene-d8	24.98		25.0000	99.9	82.9 - 116

LCS (B3H0855-BS1)

Prepared: 8/24/2023 Analyzed: 8/24/2023

1,1,1,2-Tetrachloroethane	19.0100	0.50	0.42	20.0000	95.0	74.2 - 113
1,1,1-Trichloroethane	20.1300	0.50	0.42	20.0000	101	69.3 - 123
1,1,2,2-Tetrachloroethane	17.3400	0.50	0.44	20.0000	86.7	68.4 - 110
1,1,2-Trichloroethane	19.3000	0.50	0.39	20.0000	96.5	74.7 - 123
1,1-Dichloroethane	20.1100	0.50	0.45	20.0000	101	71.1 - 124
1,1-Dichloroethene	20.4000	0.50	0.28	20.0000	102	69.9 - 123
1,1-Dichloropropene	16.8000	0.50	0.39	20.0000	84.0	72.1 - 119
1,2,3-Trichloropropane	20.5000	0.50	0.42	20.0000	102	67.7 - 122
1,2,3-Trichlorobenzene	18.4000	0.50	0.32	20.0000	92.0	21.9 - 140
1,2,4-Trichlorobenzene	20.4400	0.50	0.28	20.0000	102	35.9 - 135
1,2,4-Trimethylbenzene	18.6400	0.50	0.24	20.0000	93.2	74.5 - 121
1,2-Dibromo-3-chloropropane	14.5900	0.50	0.50	20.0000	73.0	56.4 - 114
1,2-Dibromoethane	20.2700	0.50	0.23	20.0000	101	80.8 - 122
1,2-Dichlorobenzene	18.8000	0.50	0.31	20.0000	94.0	65.3 - 119
1,2-Dichloroethane	18.6300	0.50	0.34	20.0000	93.2	74.5 - 121
1,2-Dichloropropane	19.8500	0.50	0.45	20.0000	99.2	77.7 - 120
1,3,5-Trimethylbenzene	18.8200	0.50	0.38	20.0000	94.1	72.4 - 119
1,3-Dichlorobenzene	18.0200	0.50	0.22	20.0000	90.1	71.9 - 113
1,3-Dichloropropane	19.7100	0.50	0.31	20.0000	98.6	70.7 - 119
1,4-Dichlorobenzene	18.5300	0.50	0.21	20.0000	92.6	69.5 - 114
2,2-Dichloropropane	19.3400	0.50	0.49	20.0000	96.7	67.9 - 129
2-Chlorotoluene	19.6500	0.50	0.40	20.0000	98.2	72.2 - 119
4-Chlorotoluene	16.9800	0.50	0.23	20.0000	84.9	66.6 - 116
4-Isopropyltoluene	20.5700	0.50	0.13	20.0000	103	72.7 - 123



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 : 08/31/2023

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

Batch B3H0855 - MSVOA_LL_W (continued)

LCS (B3H0855-BS1) - Continued

Prepared: 8/24/2023 Analyzed: 8/24/2023

Benzene	18.6800	0.50	0.18	20.0000		93.4	74.6 - 119		
Bromobenzene	19.1900	0.50	0.26	20.0000		96.0	73.6 - 115		
Bromodichloromethane	19.2500	0.50	0.38	20.0000		96.2	77 - 122		
Bromoform	19.7300	0.50	0.40	20.0000		98.6	68.9 - 121		
Bromomethane	19.2900	0.50	0.41	20.0000		96.4	-14.1 - 189		
Carbon tetrachloride	18.7000	0.50	0.30	20.0000		93.5	68.6 - 116		
Chlorobenzene	18.6600	0.50	0.23	20.0000		93.3	71.1 - 114		
Chloroethane	20.1500	0.50	0.47	20.0000		101	68 - 147		
Chloroform	20.3300	0.50	0.40	20.0000		102	72.4 - 128		
Chloromethane	18.2300	0.50	0.24	20.0000		91.2	38.4 - 164		
cis-1,2-Dichloroethene	24.4000	0.50	0.49	20.0000		122	74.3 - 127		
cis-1,3-Dichloropropene	18.0300	0.50	0.22	20.0000		90.2	68.6 - 141		
Dibromochloromethane	19.6900	0.50	0.26	20.0000		98.4	68.6 - 118		
Dibromomethane	19.3000	0.50	0.30	20.0000		96.5	79 - 119		
Dichlorodifluoromethane	19.5700	0.50	0.24	20.0000		97.8	7.14 - 218		
Ethylbenzene	18.2600	0.50	0.22	20.0000		91.3	72.8 - 116		
Hexachlorobutadiene	20.3600	0.50	0.38	20.0000		102	33 - 142		
Isopropylbenzene	17.8800	0.50	0.28	20.0000		89.4	74 - 121		
m,p-Xylene	37.0800	1.0	0.54	40.0000		92.7	71.5 - 117		
Methylene chloride	25.1700	1.0	0.26	20.0000		126	61.7 - 141		
n-Butylbenzene	20.4700	0.50	0.27	20.0000		102	63.9 - 124		
n-Propylbenzene	17.1400	0.50	0.22	20.0000		85.7	65.1 - 117		
Naphthalene	18.4500	0.50	0.24	20.0000		92.2	35.2 - 124		
o-Xylene	19.1700	0.50	0.26	20.0000		95.8	74.9 - 117		
sec-Butylbenzene	18.7400	0.50	0.30	20.0000		93.7	69.4 - 119		
Styrene	18.6300	0.50	0.24	20.0000		93.2	67.6 - 123		
tert-Butylbenzene	18.5300	0.50	0.22	20.0000		92.6	70.7 - 118		
Tetrachloroethene	18.0900	0.50	0.49	20.0000		90.4	67.2 - 114		
Toluene	19.7100	0.50	0.33	20.0000		98.6	77.1 - 120		
trans-1,2-Dichloroethene	16.4400	0.50	0.26	20.0000		82.2	71.4 - 123		
Trichloroethene	18.5900	0.50	0.45	20.0000		93.0	66 - 120		
Trichlorofluoromethane	18.7900	0.50	0.23	20.0000		94.0	58.3 - 150		
Vinyl chloride	20.4000	0.50	0.19	20.0000		102	54.3 - 154		

Surrogate: 1,2-Dichloroethane-d4	26.47			25.0000		106	72.2 - 121		
Surrogate: 4-Bromofluorobenzene	26.10			25.0000		104	80.1 - 115		
Surrogate: Dibromofluoromethane	28.68			25.0000		115	76.6 - 131		
Surrogate: Toluene-d8	25.07			25.0000		100	82.9 - 116		

LCS Dup (B3H0855-BSD1)

Prepared: 8/24/2023 Analyzed: 8/24/2023

1,1,1,2-Tetrachloroethane	16.1700	0.50	0.42	20.0000		80.8	74.2 - 113	16.1	20
1,1,1-Trichloroethane	18.0500	0.50	0.42	20.0000		90.2	69.3 - 123	10.9	20
1,1,2,2-Tetrachloroethane	15.5000	0.50	0.44	20.0000		77.5	68.4 - 110	11.2	20
1,1,2-Trichloroethane	18.2300	0.50	0.39	20.0000		91.2	74.7 - 123	5.70	20
1,1-Dichloroethane	18.5500	0.50	0.45	20.0000		92.8	71.1 - 124	8.07	20
1,1-Dichloroethene	18.6100	0.50	0.28	20.0000		93.0	69.9 - 123	9.18	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 : 08/31/2023

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

Batch B3H0855 - MSVOA_LL_W (continued)

LCS Dup (B3H0855-BSD1) - Continued

Prepared: 8/24/2023 Analyzed: 8/24/2023

1,1-Dichloropropene	13.8300	0.50	0.39	20.0000	69.2	72.1 - 119	19.4	20	L4
1,2,3-Trichloropropane	17.2400	0.50	0.42	20.0000	86.2	67.7 - 122	17.3	20	
1,2,3-Trichlorobenzene	16.0800	0.50	0.32	20.0000	80.4	21.9 - 140	13.5	20	
1,2,4-Trichlorobenzene	16.8400	0.50	0.28	20.0000	84.2	35.9 - 135	19.3	20	
1,2,4-Trimethylbenzene	15.5200	0.50	0.24	20.0000	77.6	74.5 - 121	18.3	20	
1,2-Dibromo-3-chloropropane	11.8700	0.50	0.50	20.0000	59.4	56.4 - 114	20.6	20	R
1,2-Dibromoethane	19.1900	0.50	0.23	20.0000	96.0	80.8 - 122	5.47	20	
1,2-Dichlorobenzene	15.5600	0.50	0.31	20.0000	77.8	65.3 - 119	18.9	20	
1,2-Dichloroethane	17.3500	0.50	0.34	20.0000	86.8	74.5 - 121	7.12	20	
1,2-Dichloropropane	18.6200	0.50	0.45	20.0000	93.1	77.7 - 120	6.39	20	
1,3,5-Trimethylbenzene	15.4100	0.50	0.38	20.0000	77.0	72.4 - 119	19.9	20	
1,3-Dichlorobenzene	15.2000	0.50	0.22	20.0000	76.0	71.9 - 113	17.0	20	
1,3-Dichloropropane	17.8200	0.50	0.31	20.0000	89.1	70.7 - 119	10.1	20	
1,4-Dichlorobenzene	15.3400	0.50	0.21	20.0000	76.7	69.5 - 114	18.8	20	
2,2-Dichloropropane	17.0100	0.50	0.49	20.0000	85.0	67.9 - 129	12.8	20	
2-Chlorotoluene	15.7700	0.50	0.40	20.0000	78.8	72.2 - 119	21.9	20	R
4-Chlorotoluene	13.8300	0.50	0.23	20.0000	69.2	66.6 - 116	20.4	20	R
4-Isopropyltoluene	16.7900	0.50	0.13	20.0000	84.0	72.7 - 123	20.2	20	R
Benzene	16.6200	0.50	0.18	20.0000	83.1	74.6 - 119	11.7	20	
Bromobenzene	16.1000	0.50	0.26	20.0000	80.5	73.6 - 115	17.5	20	
Bromodichloromethane	17.8500	0.50	0.38	20.0000	89.2	77 - 122	7.55	20	
Bromoform	17.3400	0.50	0.40	20.0000	86.7	68.9 - 121	12.9	20	
Bromomethane	16.5500	0.50	0.41	20.0000	82.8	-14.1 - 189	15.3	20	
Carbon tetrachloride	16.1100	0.50	0.30	20.0000	80.6	68.6 - 116	14.9	20	
Chlorobenzene	16.1800	0.50	0.23	20.0000	80.9	71.1 - 114	14.2	20	
Chloroethane	17.2400	0.50	0.47	20.0000	86.2	68 - 147	15.6	20	
Chloroform	18.6500	0.50	0.40	20.0000	93.2	72.4 - 128	8.62	20	
Chloromethane	17.5300	0.50	0.24	20.0000	87.6	38.4 - 164	3.91	20	
cis-1,2-Dichloroethene	22.6300	0.50	0.49	20.0000	113	74.3 - 127	7.53	20	
cis-1,3-Dichloropropene	16.4300	0.50	0.22	20.0000	82.2	68.6 - 141	9.29	20	
Dibromochloromethane	17.8000	0.50	0.26	20.0000	89.0	68.6 - 118	10.1	20	
Dibromomethane	18.0700	0.50	0.30	20.0000	90.4	79 - 119	6.58	20	
Dichlorodifluoromethane	18.5500	0.50	0.24	20.0000	92.8	71.4 - 218	5.35	20	
Ethylbenzene	16.8000	0.50	0.22	20.0000	84.0	72.8 - 116	8.33	20	
Hexachlorobutadiene	15.6800	0.50	0.38	20.0000	78.4	33 - 142	26.0	20	R
Isopropylbenzene	15.0400	0.50	0.28	20.0000	75.2	74 - 121	17.3	20	
m,p-Xylene	32.2200	1.0	0.54	40.0000	80.6	71.5 - 117	14.0	20	
Methylene chloride	23.2000	1.0	0.26	20.0000	116	61.7 - 141	8.15	20	
n-Butylbenzene	16.8400	0.50	0.27	20.0000	84.2	63.9 - 124	19.5	20	
n-Propylbenzene	14.0400	0.50	0.22	20.0000	70.2	65.1 - 117	19.9	20	
Naphthalene	16.4200	0.50	0.24	20.0000	82.1	35.2 - 124	11.6	20	
o-Xylene	16.2300	0.50	0.26	20.0000	81.2	74.9 - 117	16.6	20	
sec-Butylbenzene	15.0200	0.50	0.30	20.0000	75.1	69.4 - 119	22.0	20	R
Styrene	16.1400	0.50	0.24	20.0000	80.7	67.6 - 123	14.3	20	
tert-Butylbenzene	15.5600	0.50	0.22	20.0000	77.8	70.7 - 118	17.4	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 : 08/31/2023

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

Batch B3H0855 - MSVOA_LL_W (continued)

LCS Dup (B3H0855-BSD1) - Continued

Prepared: 8/24/2023 Analyzed: 8/24/2023

Tetrachloroethene	15.5100	0.50	0.49	20.0000		77.6	67.2 - 114	15.4	20	
Toluene	17.1300	0.50	0.33	20.0000		85.6	77.1 - 120	14.0	20	
trans-1,2-Dichloroethene	13.7400	0.50	0.26	20.0000		68.7	71.4 - 123	17.9	20	L4
Trichloroethene	16.8300	0.50	0.45	20.0000		84.2	66 - 120	9.94	20	
Trichlorofluoromethane	16.2800	0.50	0.23	20.0000		81.4	58.3 - 150	14.3	20	
Vinyl chloride	17.4900	0.50	0.19	20.0000		87.4	54.3 - 154	15.4	20	
Surrogate: 1,2-Dichloroethane-d4	26.35			25.0000		105	72.2 - 121			
Surrogate: 4-Bromofluorobenzene	25.73			25.0000		103	80.1 - 115			
Surrogate: Dibromofluoromethane	28.25			25.0000		113	76.6 - 131			
Surrogate: Toluene-d8	25.49			25.0000		102	82.9 - 116			



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3131 Camino De Rio North Suite 355

San Diego , CA 92108

Project Number : Raytheon Main, 532.30

Report To : Steve Netto

Reported : 08/31/2023

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

Batch B3H0860 - MSSEMI_ISOTOPEDILN_W

Blank (B3H0860-BLK1)

Prepared: 8/25/2023 Analyzed: 8/25/2023

1,4-Dioxane ND 0.20 0.05

Surrogate: 1,2-Dichlorobenzene-d4	1.195		1.00000	119	82.2 - 133
Surrogate: 2-Fluorobiphenyl	1.102		1.00000	110	72.9 - 162
Surrogate: 4-Terphenyl-d14	0.9109		1.00000	91.1	19 - 203
Surrogate: Nitrobenzene-d5	0.9906		1.00000	99.1	-13.6 - 137

LCS (B3H0860-BS1)

Prepared: 8/25/2023 Analyzed: 8/25/2023

1,4-Dioxane 1.13241 0.20 0.05 1.00000 113 77.1 - 179

Surrogate: 1,2-Dichlorobenzene-d4	1.129		1.00000	113	82.2 - 133
Surrogate: 2-Fluorobiphenyl	1.091		1.00000	109	72.9 - 162
Surrogate: 4-Terphenyl-d14	0.9158		1.00000	91.6	19 - 203
Surrogate: Nitrobenzene-d5	0.9497		1.00000	95.0	-13.6 - 137

LCS Dup (B3H0860-BSD1)

Prepared: 8/25/2023 Analyzed: 8/25/2023

1,4-Dioxane 1.27773 0.20 0.05 1.00000 128 77.1 - 179 12.1 20

Surrogate: 1,2-Dichlorobenzene-d4	1.202		1.00000	120	82.2 - 133
Surrogate: 2-Fluorobiphenyl	1.083		1.00000	108	72.9 - 162
Surrogate: 4-Terphenyl-d14	0.9333		1.00000	93.3	19 - 203
Surrogate: Nitrobenzene-d5	0.7509		1.00000	75.1	-13.6 - 137

TASK NO.: 532 30

Project Manager Steve Netto
QA Manager Amber Warden-Plum
Phone 858.455.6500
Fax 858.455.6533

Sampled By:

[illegible][illegible]

Total number of containers per analysis:

Relinquished By: / Company:	Date / Time	Received By: / Company	Date / Time
<i>[Signature]</i> / H + A	8/24/23 1623	<i>[Signature]</i> ATL	8/24/23 1623
<i>[Signature]</i> ATL	8/24/23 17:15	<i>[Signature]</i> ATL	8/24/23 17:15

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

Send Results to:
Steve Netto

Steve Nardo
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
- Indicate the number of sample containers in analytical request space; indicate choice with $\sqrt{}$ or $\times$
- Note applicable preservatives, special instructions, and deviations from typical environmental samples.
- Consult project QA documents for specific instructions.

2.5°C Temperature on receipt

September 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 : 2301452
Client Reference : Raytheon Main, 532.30

Enclosed are the results for sample(s) received on August 29, 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
lana.davidkov@atlglobal.com
Authorized to Release on 09/05/23 14:33 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 : 09/05/2023

SUMMARY OF SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
TB-082523B	2301452-01	Water	8/25/23 8:00	8/29/23 17:20
MW-30B_20230825	2301452-02	Water	8/25/23 14:10	8/29/23 17:20
MW-32B_20230828	2301452-03	Water	8/25/23 14:45	8/29/23 17:20



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Project Number : Raytheon Main, 532.30

Report To : Steve Netto

Reported : 09/05/2023

Notes and Definitions

S15	Surrogate recovery outside laboratory acceptance limit. However, the surrogate is not associated with the target analyte.
L3	Laboratory control sample outside in-house established limits but within method criteria.
ND	Analyte is not detected at or above the Practical Quantitation Limit (PQL). When client requests quantitation against MDL, analyte is not detected at or above the Method Detection Limit (MDL)
PQL	Practical Quantitation Limit
MDL	Method Detection Limit
NR	Not Reported
RPD	Relative Percent Difference
CA2	CA-ELAP (CDPH)
OR1	OR-NELAP (OSPHL)

Notes:

- (1) The reported MDL and PQL are based on prep ratio variation and analytical dilution.
- (2) The suffix [2C] of specific analytes signifies that the reported result is taken from the instrument's second column.
- (3) Results are wet unless otherwise specified.



Certificate of Analysis

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3131 Camino De Rio North Suite 355

San Diego , CA 92108

Project Number : Raytheon Main, 532.30

Report To : Steve Netto

Reported : 09/05/2023

Client Sample ID: TB-082523B

Lab ID: 2301452-01

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	0.42	1	B3H0914	08/30/2023	08/30/23 12:49	
1,1,1-Trichloroethane	ND	0.50	0.42	1	B3H0914	08/30/2023	08/30/23 12:49	
1,1,2,2-Tetrachloroethane	ND	0.50	0.44	1	B3H0914	08/30/2023	08/30/23 12:49	
1,1,2-Trichloroethane	ND	0.50	0.39	1	B3H0914	08/30/2023	08/30/23 12:49	
1,1-Dichloroethane	ND	0.50	0.45	1	B3H0914	08/30/2023	08/30/23 12:49	
1,1-Dichloroethene	ND	0.50	0.28	1	B3H0914	08/30/2023	08/30/23 12:49	
1,1-Dichloropropene	ND	0.50	0.39	1	B3H0914	08/30/2023	08/30/23 12:49	
1,2,3-Trichloropropane	ND	0.50	0.42	1	B3H0914	08/30/2023	08/30/23 12:49	
1,2,3-Trichlorobenzene	ND	0.50	0.32	1	B3H0914	08/30/2023	08/30/23 12:49	
1,2,4-Trichlorobenzene	ND	0.50	0.28	1	B3H0914	08/30/2023	08/30/23 12:49	
1,2,4-Trimethylbenzene	ND	0.50	0.24	1	B3H0914	08/30/2023	08/30/23 12:49	
1,2-Dibromo-3-chloropropane	ND	0.50	0.50	1	B3H0914	08/30/2023	08/30/23 12:49	
1,2-Dibromoethane	ND	0.50	0.23	1	B3H0914	08/30/2023	08/30/23 12:49	
1,2-Dichlorobenzene	ND	0.50	0.31	1	B3H0914	08/30/2023	08/30/23 12:49	
1,2-Dichloroethane	ND	0.50	0.34	1	B3H0914	08/30/2023	08/30/23 12:49	
1,2-Dichloropropane	ND	0.50	0.45	1	B3H0914	08/30/2023	08/30/23 12:49	
1,3,5-Trimethylbenzene	ND	0.50	0.38	1	B3H0914	08/30/2023	08/30/23 12:49	
1,3-Dichlorobenzene	ND	0.50	0.22	1	B3H0914	08/30/2023	08/30/23 12:49	
1,3-Dichloropropane	ND	0.50	0.31	1	B3H0914	08/30/2023	08/30/23 12:49	
1,4-Dichlorobenzene	ND	0.50	0.21	1	B3H0914	08/30/2023	08/30/23 12:49	
2,2-Dichloropropane	ND	0.50	0.49	1	B3H0914	08/30/2023	08/30/23 12:49	
2-Chlorotoluene	ND	0.50	0.40	1	B3H0914	08/30/2023	08/30/23 12:49	
4-Chlorotoluene	ND	0.50	0.23	1	B3H0914	08/30/2023	08/30/23 12:49	
4-Isopropyltoluene	ND	0.50	0.13	1	B3H0914	08/30/2023	08/30/23 12:49	
Benzene	ND	0.50	0.18	1	B3H0914	08/30/2023	08/30/23 12:49	
Bromobenzene	ND	0.50	0.26	1	B3H0914	08/30/2023	08/30/23 12:49	
Bromodichloromethane	ND	0.50	0.38	1	B3H0914	08/30/2023	08/30/23 12:49	
Bromoform	ND	0.50	0.40	1	B3H0914	08/30/2023	08/30/23 12:49	
Bromomethane	ND	0.50	0.41	1	B3H0914	08/30/2023	08/30/23 12:49	
Carbon tetrachloride	ND	0.50	0.30	1	B3H0914	08/30/2023	08/30/23 12:49	
Chlorobenzene	ND	0.50	0.23	1	B3H0914	08/30/2023	08/30/23 12:49	
Chloroethane	ND	0.50	0.47	1	B3H0914	08/30/2023	08/30/23 12:49	
Chloroform	ND	0.50	0.40	1	B3H0914	08/30/2023	08/30/23 12:49	
Chloromethane	ND	0.50	0.24	1	B3H0914	08/30/2023	08/30/23 12:49	
cis-1,2-Dichloroethene	ND	0.50	0.49	1	B3H0914	08/30/2023	08/30/23 12:49	
cis-1,3-Dichloropropene	ND	0.50	0.22	1	B3H0914	08/30/2023	08/30/23 12:49	
Dibromochloromethane	ND	0.50	0.26	1	B3H0914	08/30/2023	08/30/23 12:49	
Dibromomethane	ND	0.50	0.30	1	B3H0914	08/30/2023	08/30/23 12:49	
Dichlorodifluoromethane	ND	0.50	0.24	1	B3H0914	08/30/2023	08/30/23 12:49	
Ethylbenzene	ND	0.50	0.22	1	B3H0914	08/30/2023	08/30/23 12:49	



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 : 09/05/2023

Client Sample ID: TB-082523B

Lab ID: 2301452-01

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	0.38	1	B3H0914	08/30/2023	08/30/23 12:49	
Isopropylbenzene	ND	0.50	0.28	1	B3H0914	08/30/2023	08/30/23 12:49	
m,p-Xylene	ND	1.0	0.54	1	B3H0914	08/30/2023	08/30/23 12:49	
Methylene chloride	ND	1.0	0.26	1	B3H0914	08/30/2023	08/30/23 12:49	
n-Butylbenzene	ND	0.50	0.27	1	B3H0914	08/30/2023	08/30/23 12:49	
n-Propylbenzene	ND	0.50	0.22	1	B3H0914	08/30/2023	08/30/23 12:49	
Naphthalene	ND	0.50	0.24	1	B3H0914	08/30/2023	08/30/23 12:49	
o-Xylene	ND	0.50	0.26	1	B3H0914	08/30/2023	08/30/23 12:49	
sec-Butylbenzene	ND	0.50	0.30	1	B3H0914	08/30/2023	08/30/23 12:49	
Styrene	ND	0.50	0.24	1	B3H0914	08/30/2023	08/30/23 12:49	
tert-Butylbenzene	ND	0.50	0.22	1	B3H0914	08/30/2023	08/30/23 12:49	
Tetrachloroethene	ND	0.50	0.49	1	B3H0914	08/30/2023	08/30/23 12:49	
Toluene	ND	0.50	0.33	1	B3H0914	08/30/2023	08/30/23 12:49	
trans-1,2-Dichloroethene	ND	0.50	0.26	1	B3H0914	08/30/2023	08/30/23 12:49	
Trichloroethene	ND	0.50	0.45	1	B3H0914	08/30/2023	08/30/23 12:49	
Trichlorofluoromethane	ND	0.50	0.23	1	B3H0914	08/30/2023	08/30/23 12:49	
Vinyl chloride	ND	0.50	0.19	1	B3H0914	08/30/2023	08/30/23 12:49	
Surrogate: 1,2-Dichloroethane-d4	94.3 %	72.2	121		B3H0914	08/30/2023	08/30/23 12:49	
Surrogate: 4-Bromofluorobenzene	100 %	80.1	115		B3H0914	08/30/2023	08/30/23 12:49	
Surrogate: Dibromofluoromethane	115 %	76.6	131		B3H0914	08/30/2023	08/30/23 12:49	
Surrogate: Toluene-d8	96.6 %	82.9	116		B3H0914	08/30/2023	08/30/23 12:49	



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 : 09/05/2023

Client Sample ID: MW-30B_20230825

Lab ID: 2301452-02

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	0.42	1	B3H0914	08/30/2023	08/30/23 13:12	
1,1,1-Trichloroethane	ND	0.50	0.42	1	B3H0914	08/30/2023	08/30/23 13:12	
1,1,2,2-Tetrachloroethane	ND	0.50	0.44	1	B3H0914	08/30/2023	08/30/23 13:12	
1,1,2-Trichloroethane	ND	0.50	0.39	1	B3H0914	08/30/2023	08/30/23 13:12	
1,1-Dichloroethane	ND	0.50	0.45	1	B3H0914	08/30/2023	08/30/23 13:12	
1,1-Dichloroethene	25	0.50	0.28	1	B3H0914	08/30/2023	08/30/23 13:12	
1,1-Dichloropropene	ND	0.50	0.39	1	B3H0914	08/30/2023	08/30/23 13:12	
1,2,3-Trichloropropane	ND	0.50	0.42	1	B3H0914	08/30/2023	08/30/23 13:12	
1,2,3-Trichlorobenzene	ND	0.50	0.32	1	B3H0914	08/30/2023	08/30/23 13:12	
1,2,4-Trichlorobenzene	ND	0.50	0.28	1	B3H0914	08/30/2023	08/30/23 13:12	
1,2,4-Trimethylbenzene	ND	0.50	0.24	1	B3H0914	08/30/2023	08/30/23 13:12	
1,2-Dibromo-3-chloropropane	ND	0.50	0.50	1	B3H0914	08/30/2023	08/30/23 13:12	
1,2-Dibromoethane	ND	0.50	0.23	1	B3H0914	08/30/2023	08/30/23 13:12	
1,2-Dichlorobenzene	ND	0.50	0.31	1	B3H0914	08/30/2023	08/30/23 13:12	
1,2-Dichloroethane	ND	0.50	0.34	1	B3H0914	08/30/2023	08/30/23 13:12	
1,2-Dichloropropane	ND	0.50	0.45	1	B3H0914	08/30/2023	08/30/23 13:12	
1,3,5-Trimethylbenzene	ND	0.50	0.38	1	B3H0914	08/30/2023	08/30/23 13:12	
1,3-Dichlorobenzene	ND	0.50	0.22	1	B3H0914	08/30/2023	08/30/23 13:12	
1,3-Dichloropropane	ND	0.50	0.31	1	B3H0914	08/30/2023	08/30/23 13:12	
1,4-Dichlorobenzene	ND	0.50	0.21	1	B3H0914	08/30/2023	08/30/23 13:12	
2,2-Dichloropropane	ND	0.50	0.49	1	B3H0914	08/30/2023	08/30/23 13:12	
2-Chlorotoluene	ND	0.50	0.40	1	B3H0914	08/30/2023	08/30/23 13:12	
4-Chlorotoluene	ND	0.50	0.23	1	B3H0914	08/30/2023	08/30/23 13:12	
4-Isopropyltoluene	ND	0.50	0.13	1	B3H0914	08/30/2023	08/30/23 13:12	
Benzene	ND	0.50	0.18	1	B3H0914	08/30/2023	08/30/23 13:12	
Bromobenzene	ND	0.50	0.26	1	B3H0914	08/30/2023	08/30/23 13:12	
Bromodichloromethane	ND	0.50	0.38	1	B3H0914	08/30/2023	08/30/23 13:12	
Bromoform	ND	0.50	0.40	1	B3H0914	08/30/2023	08/30/23 13:12	
Bromomethane	ND	0.50	0.41	1	B3H0914	08/30/2023	08/30/23 13:12	
Carbon tetrachloride	ND	0.50	0.30	1	B3H0914	08/30/2023	08/30/23 13:12	
Chlorobenzene	ND	0.50	0.23	1	B3H0914	08/30/2023	08/30/23 13:12	
Chloroethane	ND	0.50	0.47	1	B3H0914	08/30/2023	08/30/23 13:12	
Chloroform	0.53	0.50	0.40	1	B3H0914	08/30/2023	08/30/23 13:12	
Chloromethane	ND	0.50	0.24	1	B3H0914	08/30/2023	08/30/23 13:12	
cis-1,2-Dichloroethene	4.7	0.50	0.49	1	B3H0914	08/30/2023	08/30/23 13:12	
cis-1,3-Dichloropropene	ND	0.50	0.22	1	B3H0914	08/30/2023	08/30/23 13:12	
Dibromochloromethane	ND	0.50	0.26	1	B3H0914	08/30/2023	08/30/23 13:12	
Dibromomethane	ND	0.50	0.30	1	B3H0914	08/30/2023	08/30/23 13:12	
Dichlorodifluoromethane	ND	0.50	0.24	1	B3H0914	08/30/2023	08/30/23 13:12	
Ethylbenzene	ND	0.50	0.22	1	B3H0914	08/30/2023	08/30/23 13:12	



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 : 09/05/2023

Client Sample ID: MW-30B_20230825

Lab ID: 2301452-02

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	0.38	1	B3H0914	08/30/2023	08/30/23 13:12	
Isopropylbenzene	ND	0.50	0.28	1	B3H0914	08/30/2023	08/30/23 13:12	
m,p-Xylene	ND	1.0	0.54	1	B3H0914	08/30/2023	08/30/23 13:12	
Methylene chloride	ND	1.0	0.26	1	B3H0914	08/30/2023	08/30/23 13:12	
n-Butylbenzene	ND	0.50	0.27	1	B3H0914	08/30/2023	08/30/23 13:12	
n-Propylbenzene	ND	0.50	0.22	1	B3H0914	08/30/2023	08/30/23 13:12	
Naphthalene	ND	0.50	0.24	1	B3H0914	08/30/2023	08/30/23 13:12	
o-Xylene	ND	0.50	0.26	1	B3H0914	08/30/2023	08/30/23 13:12	
sec-Butylbenzene	ND	0.50	0.30	1	B3H0914	08/30/2023	08/30/23 13:12	
Styrene	ND	0.50	0.24	1	B3H0914	08/30/2023	08/30/23 13:12	
tert-Butylbenzene	ND	0.50	0.22	1	B3H0914	08/30/2023	08/30/23 13:12	
Tetrachloroethene	ND	0.50	0.49	1	B3H0914	08/30/2023	08/30/23 13:12	
Toluene	ND	0.50	0.33	1	B3H0914	08/30/2023	08/30/23 13:12	
trans-1,2-Dichloroethene	ND	0.50	0.26	1	B3H0914	08/30/2023	08/30/23 13:12	
Trichloroethene	77	0.50	0.45	1	B3H0914	08/30/2023	08/30/23 13:12	
Trichlorofluoromethane	ND	0.50	0.23	1	B3H0914	08/30/2023	08/30/23 13:12	
Vinyl chloride	ND	0.50	0.19	1	B3H0914	08/30/2023	08/30/23 13:12	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>104 %</i>	<i>72.2 - 121</i>			B3H0914	08/30/2023	<i>08/30/23 13:12</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>99.7 %</i>	<i>80.1 - 115</i>			B3H0914	08/30/2023	<i>08/30/23 13:12</i>	
<i>Surrogate: Dibromofluoromethane</i>	<i>116 %</i>	<i>76.6 - 131</i>			B3H0914	08/30/2023	<i>08/30/23 13:12</i>	
<i>Surrogate: Toluene-d8</i>	<i>104 %</i>	<i>82.9 - 116</i>			B3H0914	08/30/2023	<i>08/30/23 13:12</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	1.2	0.20	0.05	1	B3H0894	08/30/2023	09/01/23 00:31	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	<i>86.4 %</i>	<i>82.2 - 133</i>			B3H0894	08/30/2023	<i>09/01/23 00:31</i>	
<i>Surrogate: 2-Fluorobiphenyl</i>	<i>101 %</i>	<i>72.9 - 162</i>			B3H0894	08/30/2023	<i>09/01/23 00:31</i>	
<i>Surrogate: 4-Terphenyl-d14</i>	<i>107 %</i>	<i>19 - 203</i>			B3H0894	08/30/2023	<i>09/01/23 00:31</i>	
<i>Surrogate: Nitrobenzene-d5</i>	<i>89.0 %</i>	<i>-13.6 - 137</i>			B3H0894	08/30/2023	<i>09/01/23 00:31</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 : 09/05/2023

Client Sample ID: MW-32B_20230828

Lab ID: 2301452-03

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	0.42	1	B3H0914	08/30/2023	08/30/23 13:35	
1,1,1-Trichloroethane	ND	0.50	0.42	1	B3H0914	08/30/2023	08/30/23 13:35	
1,1,2,2-Tetrachloroethane	ND	0.50	0.44	1	B3H0914	08/30/2023	08/30/23 13:35	
1,1,2-Trichloroethane	ND	0.50	0.39	1	B3H0914	08/30/2023	08/30/23 13:35	
1,1-Dichloroethane	1.2	0.50	0.45	1	B3H0914	08/30/2023	08/30/23 13:35	
1,1-Dichloroethene	100	2.5	1.4	5	B3H0914	08/30/2023	08/30/23 15:52	
1,1-Dichloropropene	ND	0.50	0.39	1	B3H0914	08/30/2023	08/30/23 13:35	
1,2,3-Trichloropropane	ND	0.50	0.42	1	B3H0914	08/30/2023	08/30/23 13:35	
1,2,3-Trichlorobenzene	ND	0.50	0.32	1	B3H0914	08/30/2023	08/30/23 13:35	
1,2,4-Trichlorobenzene	ND	0.50	0.28	1	B3H0914	08/30/2023	08/30/23 13:35	
1,2,4-Trimethylbenzene	ND	0.50	0.24	1	B3H0914	08/30/2023	08/30/23 13:35	
1,2-Dibromo-3-chloropropane	ND	0.50	0.50	1	B3H0914	08/30/2023	08/30/23 13:35	
1,2-Dibromoethane	ND	0.50	0.23	1	B3H0914	08/30/2023	08/30/23 13:35	
1,2-Dichlorobenzene	ND	0.50	0.31	1	B3H0914	08/30/2023	08/30/23 13:35	
1,2-Dichloroethane	ND	0.50	0.34	1	B3H0914	08/30/2023	08/30/23 13:35	
1,2-Dichloropropane	ND	0.50	0.45	1	B3H0914	08/30/2023	08/30/23 13:35	
1,3,5-Trimethylbenzene	ND	0.50	0.38	1	B3H0914	08/30/2023	08/30/23 13:35	
1,3-Dichlorobenzene	ND	0.50	0.22	1	B3H0914	08/30/2023	08/30/23 13:35	
1,3-Dichloropropane	ND	0.50	0.31	1	B3H0914	08/30/2023	08/30/23 13:35	
1,4-Dichlorobenzene	ND	0.50	0.21	1	B3H0914	08/30/2023	08/30/23 13:35	
2,2-Dichloropropane	ND	0.50	0.49	1	B3H0914	08/30/2023	08/30/23 13:35	
2-Chlorotoluene	ND	0.50	0.40	1	B3H0914	08/30/2023	08/30/23 13:35	
4-Chlorotoluene	ND	0.50	0.23	1	B3H0914	08/30/2023	08/30/23 13:35	
4-Isopropyltoluene	ND	0.50	0.13	1	B3H0914	08/30/2023	08/30/23 13:35	
Benzene	ND	0.50	0.18	1	B3H0914	08/30/2023	08/30/23 13:35	
Bromobenzene	ND	0.50	0.26	1	B3H0914	08/30/2023	08/30/23 13:35	
Bromodichloromethane	ND	0.50	0.38	1	B3H0914	08/30/2023	08/30/23 13:35	
Bromoform	ND	0.50	0.40	1	B3H0914	08/30/2023	08/30/23 13:35	
Bromomethane	ND	0.50	0.41	1	B3H0914	08/30/2023	08/30/23 13:35	
Carbon tetrachloride	ND	0.50	0.30	1	B3H0914	08/30/2023	08/30/23 13:35	
Chlorobenzene	ND	0.50	0.23	1	B3H0914	08/30/2023	08/30/23 13:35	
Chloroethane	ND	0.50	0.47	1	B3H0914	08/30/2023	08/30/23 13:35	
Chloroform	ND	0.50	0.40	1	B3H0914	08/30/2023	08/30/23 13:35	
Chloromethane	ND	0.50	0.24	1	B3H0914	08/30/2023	08/30/23 13:35	
cis-1,2-Dichloroethene	4.8	0.50	0.49	1	B3H0914	08/30/2023	08/30/23 13:35	
cis-1,3-Dichloropropene	ND	0.50	0.22	1	B3H0914	08/30/2023	08/30/23 13:35	
Dibromochloromethane	ND	0.50	0.26	1	B3H0914	08/30/2023	08/30/23 13:35	
Dibromomethane	ND	0.50	0.30	1	B3H0914	08/30/2023	08/30/23 13:35	
Dichlorodifluoromethane	ND	0.50	0.24	1	B3H0914	08/30/2023	08/30/23 13:35	
Ethylbenzene	ND	0.50	0.22	1	B3H0914	08/30/2023	08/30/23 13:35	



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 : 09/05/2023

Client Sample ID: MW-32B_20230828

Lab ID: 2301452-03

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	0.38	1	B3H0914	08/30/2023	08/30/23 13:35	
Isopropylbenzene	ND	0.50	0.28	1	B3H0914	08/30/2023	08/30/23 13:35	
m,p-Xylene	ND	1.0	0.54	1	B3H0914	08/30/2023	08/30/23 13:35	
Methylene chloride	ND	1.0	0.26	1	B3H0914	08/30/2023	08/30/23 13:35	
n-Butylbenzene	ND	0.50	0.27	1	B3H0914	08/30/2023	08/30/23 13:35	
n-Propylbenzene	ND	0.50	0.22	1	B3H0914	08/30/2023	08/30/23 13:35	
Naphthalene	ND	0.50	0.24	1	B3H0914	08/30/2023	08/30/23 13:35	
o-Xylene	ND	0.50	0.26	1	B3H0914	08/30/2023	08/30/23 13:35	
sec-Butylbenzene	ND	0.50	0.30	1	B3H0914	08/30/2023	08/30/23 13:35	
Styrene	ND	0.50	0.24	1	B3H0914	08/30/2023	08/30/23 13:35	
tert-Butylbenzene	ND	0.50	0.22	1	B3H0914	08/30/2023	08/30/23 13:35	
Tetrachloroethene	ND	0.50	0.49	1	B3H0914	08/30/2023	08/30/23 13:35	
Toluene	ND	0.50	0.33	1	B3H0914	08/30/2023	08/30/23 13:35	
trans-1,2-Dichloroethene	ND	0.50	0.26	1	B3H0914	08/30/2023	08/30/23 13:35	
Trichloroethene	38	0.50	0.45	1	B3H0914	08/30/2023	08/30/23 13:35	
Trichlorofluoromethane	ND	0.50	0.23	1	B3H0914	08/30/2023	08/30/23 13:35	
Vinyl chloride	ND	0.50	0.19	1	B3H0914	08/30/2023	08/30/23 13:35	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>96.2 %</i>	<i>72.2 - 121</i>			B3H0914	08/30/2023	<i>08/30/23 13:35</i>	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>100 %</i>	<i>72.2 - 121</i>			B3H0914	08/30/2023	<i>08/30/23 15:52</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>99.2 %</i>	<i>80.1 - 115</i>			B3H0914	08/30/2023	<i>08/30/23 13:35</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>95.3 %</i>	<i>80.1 - 115</i>			B3H0914	08/30/2023	<i>08/30/23 15:52</i>	
<i>Surrogate: Dibromofluoromethane</i>	<i>118 %</i>	<i>76.6 - 131</i>			B3H0914	08/30/2023	<i>08/30/23 13:35</i>	
<i>Surrogate: Dibromofluoromethane</i>	<i>118 %</i>	<i>76.6 - 131</i>			B3H0914	08/30/2023	<i>08/30/23 15:52</i>	
<i>Surrogate: Toluene-d8</i>	<i>99.0 %</i>	<i>82.9 - 116</i>			B3H0914	08/30/2023	<i>08/30/23 13:35</i>	
<i>Surrogate: Toluene-d8</i>	<i>98.4 %</i>	<i>82.9 - 116</i>			B3H0914	08/30/2023	<i>08/30/23 15:52</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	7.9	0.20	0.05	1	B3H0894	08/30/2023	09/01/23 00:57	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	<i>92.8 %</i>	<i>82.2 - 133</i>			B3H0894	08/30/2023	<i>09/01/23 00:57</i>	
<i>Surrogate: 2-Fluorobiphenyl</i>	<i>98.7 %</i>	<i>72.9 - 162</i>			B3H0894	08/30/2023	<i>09/01/23 00:57</i>	
<i>Surrogate: 4-Terphenyl-d14</i>	<i>105 %</i>	<i>19 - 203</i>			B3H0894	08/30/2023	<i>09/01/23 00:57</i>	
<i>Surrogate: Nitrobenzene-d5</i>	<i>91.2 %</i>	<i>-13.6 - 137</i>			B3H0894	08/30/2023	<i>09/01/23 00:57</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 : 09/05/2023

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

Batch B3H0914 - MSVOA_LL_W

Blank (B3H0914-BLK1)

Prepared: 8/30/2023 Analyzed: 8/30/2023

1,1,1,2-Tetrachloroethane	ND	0.50	0.42
1,1,1-Trichloroethane	ND	0.50	0.42
1,1,2,2-Tetrachloroethane	ND	0.50	0.44
1,1,2-Trichloroethane	ND	0.50	0.39
1,1-Dichloroethane	ND	0.50	0.45
1,1-Dichloroethene	ND	0.50	0.28
1,1-Dichloropropene	ND	0.50	0.39
1,2,3-Trichloropropane	ND	0.50	0.42
1,2,3-Trichlorobenzene	ND	0.50	0.32
1,2,4-Trichlorobenzene	ND	0.50	0.28
1,2,4-Trimethylbenzene	ND	0.50	0.24
1,2-Dibromo-3-chloropropane	ND	0.50	0.50
1,2-Dibromoethane	ND	0.50	0.23
1,2-Dichlorobenzene	ND	0.50	0.31
1,2-Dichloroethane	ND	0.50	0.34
1,2-Dichloropropane	ND	0.50	0.45
1,3,5-Trimethylbenzene	ND	0.50	0.38
1,3-Dichlorobenzene	ND	0.50	0.22
1,3-Dichloropropane	ND	0.50	0.31
1,4-Dichlorobenzene	ND	0.50	0.21
2,2-Dichloropropane	ND	0.50	0.49
2-Chlorotoluene	ND	0.50	0.40
4-Chlorotoluene	ND	0.50	0.23
4-Isopropyltoluene	ND	0.50	0.13
Benzene	ND	0.50	0.18
Bromobenzene	ND	0.50	0.26
Bromodichloromethane	ND	0.50	0.38
Bromoform	ND	0.50	0.40
Bromomethane	ND	0.50	0.41
Carbon tetrachloride	ND	0.50	0.30
Chlorobenzene	ND	0.50	0.23
Chloroethane	ND	0.50	0.47
Chloroform	ND	0.50	0.40
Chloromethane	ND	0.50	0.24
cis-1,2-Dichloroethene	ND	0.50	0.49
cis-1,3-Dichloropropene	ND	0.50	0.22
Dibromochloromethane	ND	0.50	0.26
Dibromomethane	ND	0.50	0.30
Dichlorodifluoromethane	ND	0.50	0.24
Ethylbenzene	ND	0.50	0.22
Hexachlorobutadiene	ND	0.50	0.38
Isopropylbenzene	ND	0.50	0.28



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San Diego , CA 92108

Project Number : Raytheon Main, 532.30

Report To : Steve Netto

Reported : 09/05/2023

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

Batch B3H0914 - MSVOA_LL_W (continued)

Blank (B3H0914-BLK1) - Continued

Prepared: 8/30/2023 Analyzed: 8/30/2023

m,p-Xylene	ND	1.0	0.54
Methylene chloride	ND	1.0	0.26
n-Butylbenzene	ND	0.50	0.27
n-Propylbenzene	ND	0.50	0.22
Naphthalene	ND	0.50	0.24
o-Xylene	ND	0.50	0.26
sec-Butylbenzene	ND	0.50	0.30
Styrene	ND	0.50	0.24
tert-Butylbenzene	ND	0.50	0.22
Tetrachloroethene	ND	0.50	0.49
Toluene	ND	0.50	0.33
trans-1,2-Dichloroethene	ND	0.50	0.26
Trichloroethene	ND	0.50	0.45
Trichlorofluoromethane	ND	0.50	0.23
Vinyl chloride	ND	0.50	0.19

Surrogate: 1,2-Dichloroethane-d4	24.36		25.0000	97.4	72.2 - 121
Surrogate: 4-Bromofluorobenzene	24.61		25.0000	98.4	80.1 - 115
Surrogate: Dibromofluoromethane	28.79		25.0000	115	76.6 - 131
Surrogate: Toluene-d8	25.82		25.0000	103	82.9 - 116

LCS (B3H0914-BS1)

Prepared: 8/30/2023 Analyzed: 8/30/2023

1,1,1,2-Tetrachloroethane	19.6400	0.50	0.42	20.0000	98.2	74.2 - 113
1,1,1-Trichloroethane	21.1300	0.50	0.42	20.0000	106	69.3 - 123
1,1,2,2-Tetrachloroethane	16.0600	0.50	0.44	20.0000	80.3	68.4 - 110
1,1,2-Trichloroethane	19.1500	0.50	0.39	20.0000	95.8	74.7 - 123
1,1-Dichloroethane	20.5900	0.50	0.45	20.0000	103	71.1 - 124
1,1-Dichloroethene	22.2900	0.50	0.28	20.0000	111	69.9 - 123
1,1-Dichloropropene	17.1100	0.50	0.39	20.0000	85.6	72.1 - 119
1,2,3-Trichloropropane	18.7100	0.50	0.42	20.0000	93.6	67.7 - 122
1,2,3-Trichlorobenzene	17.4000	0.50	0.32	20.0000	87.0	21.9 - 140
1,2,4-Trichlorobenzene	18.8300	0.50	0.28	20.0000	94.2	35.9 - 135
1,2,4-Trimethylbenzene	17.4300	0.50	0.24	20.0000	87.2	74.5 - 121
1,2-Dibromo-3-chloropropane	12.9800	0.50	0.50	20.0000	64.9	56.4 - 114
1,2-Dibromoethane	20.1900	0.50	0.23	20.0000	101	80.8 - 122
1,2-Dichlorobenzene	18.4400	0.50	0.31	20.0000	92.2	65.3 - 119
1,2-Dichloroethane	20.5200	0.50	0.34	20.0000	103	74.5 - 121
1,2-Dichloropropane	19.4700	0.50	0.45	20.0000	97.4	77.7 - 120
1,3,5-Trimethylbenzene	17.8800	0.50	0.38	20.0000	89.4	72.4 - 119
1,3-Dichlorobenzene	17.4500	0.50	0.22	20.0000	87.2	71.9 - 113
1,3-Dichloropropane	19.5800	0.50	0.31	20.0000	97.9	70.7 - 119
1,4-Dichlorobenzene	17.7400	0.50	0.21	20.0000	88.7	69.5 - 114
2,2-Dichloropropane	19.8000	0.50	0.49	20.0000	99.0	67.9 - 129
2-Chlorotoluene	17.6800	0.50	0.40	20.0000	88.4	72.2 - 119
4-Chlorotoluene	15.9900	0.50	0.23	20.0000	80.0	66.6 - 116
4-Isopropyltoluene	19.4400	0.50	0.13	20.0000	97.2	72.7 - 123



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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 : 09/05/2023

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

Batch B3H0914 - MSVOA_LL_W (continued)

LCS (B3H0914-BS1) - Continued

Prepared: 8/30/2023 Analyzed: 8/30/2023

Benzene	19.8100	0.50	0.18	20.0000		99.0	74.6 - 119		
Bromobenzene	18.8300	0.50	0.26	20.0000		94.2	73.6 - 115		
Bromodichloromethane	19.2200	0.50	0.38	20.0000		96.1	77 - 122		
Bromoform	20.8800	0.50	0.40	20.0000		104	68.9 - 121		
Bromomethane	20.2300	0.50	0.41	20.0000		101	-14.1 - 189		
Carbon tetrachloride	19.2900	0.50	0.30	20.0000		96.4	68.6 - 116		
Chlorobenzene	19.6500	0.50	0.23	20.0000		98.2	71.1 - 114		
Chloroethane	20.0400	0.50	0.47	20.0000		100	68 - 147		
Chloroform	21.2800	0.50	0.40	20.0000		106	72.4 - 128		
Chloromethane	19.1100	0.50	0.24	20.0000		95.6	38.4 - 164		
cis-1,2-Dichloroethene	25.4500	0.50	0.49	20.0000		127	74.3 - 127		L3
cis-1,3-Dichloropropene	18.0600	0.50	0.22	20.0000		90.3	68.6 - 141		
Dibromochloromethane	21.1900	0.50	0.26	20.0000		106	68.6 - 118		
Dibromomethane	19.6600	0.50	0.30	20.0000		98.3	79 - 119		
Dichlorodifluoromethane	20.0600	0.50	0.24	20.0000		100	7.14 - 218		
Ethylbenzene	19.8900	0.50	0.22	20.0000		99.4	72.8 - 116		
Hexachlorobutadiene	19.3500	0.50	0.38	20.0000		96.8	33 - 142		
Isopropylbenzene	18.0900	0.50	0.28	20.0000		90.4	74 - 121		
m,p-Xylene	36.8000	1.0	0.54	40.0000		92.0	71.5 - 117		
Methylene chloride	26.2700	1.0	0.26	20.0000		131	61.7 - 141		
n-Butylbenzene	18.8700	0.50	0.27	20.0000		94.4	63.9 - 124		
n-Propylbenzene	15.9800	0.50	0.22	20.0000		79.9	65.1 - 117		
Naphthalene	16.9600	0.50	0.24	20.0000		84.8	35.2 - 124		
o-Xylene	19.1800	0.50	0.26	20.0000		95.9	74.9 - 117		
sec-Butylbenzene	17.8900	0.50	0.30	20.0000		89.4	69.4 - 119		
Styrene	19.2200	0.50	0.24	20.0000		96.1	67.6 - 123		
tert-Butylbenzene	17.5800	0.50	0.22	20.0000		87.9	70.7 - 118		
Tetrachloroethene	19.2300	0.50	0.49	20.0000		96.2	67.2 - 114		
Toluene	18.7000	0.50	0.33	20.0000		93.5	77.1 - 120		
trans-1,2-Dichloroethene	16.4200	0.50	0.26	20.0000		82.1	71.4 - 123		
Trichloroethene	19.9200	0.50	0.45	20.0000		99.6	66 - 120		
Trichlorofluoromethane	19.8600	0.50	0.23	20.0000		99.3	58.3 - 150		
Vinyl chloride	19.6100	0.50	0.19	20.0000		98.0	54.3 - 154		

Surrogate: 1,2-Dichloroethane-d4

25.54

25.0000

102

72.2 - 121

Surrogate: 4-Bromofluorobenzene

25.71

25.0000

103

80.1 - 115

Surrogate: Dibromofluoromethane

28.31

25.0000

113

76.6 - 131

Surrogate: Toluene-d8

24.44

25.0000

97.8

82.9 - 116

LCS Dup (B3H0914-BSD1)

Prepared: 8/30/2023 Analyzed: 8/30/2023

1,1,1,2-Tetrachloroethane	18.6400	0.50	0.42	20.0000		93.2	74.2 - 113	5.22	20
1,1,1-Trichloroethane	19.4900	0.50	0.42	20.0000		97.4	69.3 - 123	8.07	20
1,1,2,2-Tetrachloroethane	16.8900	0.50	0.44	20.0000		84.4	68.4 - 110	5.04	20
1,1,2-Trichloroethane	19.7100	0.50	0.39	20.0000		98.6	74.7 - 123	2.88	20
1,1-Dichloroethane	20.2700	0.50	0.45	20.0000		101	71.1 - 124	1.57	20
1,1-Dichloroethene	21.9200	0.50	0.28	20.0000		110	69.9 - 123	1.67	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 : 09/05/2023

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

Batch B3H0914 - MSVOA_LL_W (continued)

LCS Dup (B3H0914-BSD1) - Continued

Prepared: 8/30/2023 Analyzed: 8/30/2023

1,1-Dichloropropene	16.3700	0.50	0.39	20.0000	81.8	72.1 - 119	4.42	20	
1,2,3-Trichloropropane	19.1800	0.50	0.42	20.0000	95.9	67.7 - 122	2.48	20	
1,2,3-Trichlorobenzene	17.8900	0.50	0.32	20.0000	89.4	21.9 - 140	2.78	20	
1,2,4-Trichlorobenzene	19.2400	0.50	0.28	20.0000	96.2	35.9 - 135	2.15	20	
1,2,4-Trimethylbenzene	17.9200	0.50	0.24	20.0000	89.6	74.5 - 121	2.77	20	
1,2-Dibromo-3-chloropropane	14.4000	0.50	0.50	20.0000	72.0	56.4 - 114	10.4	20	
1,2-Dibromoethane	19.9000	0.50	0.23	20.0000	99.5	80.8 - 122	1.45	20	
1,2-Dichlorobenzene	18.1900	0.50	0.31	20.0000	91.0	65.3 - 119	1.37	20	
1,2-Dichloroethane	19.2000	0.50	0.34	20.0000	96.0	74.5 - 121	6.65	20	
1,2-Dichloropropane	20.5500	0.50	0.45	20.0000	103	77.7 - 120	5.40	20	
1,3,5-Trimethylbenzene	18.1300	0.50	0.38	20.0000	90.6	72.4 - 119	1.39	20	
1,3-Dichlorobenzene	17.5200	0.50	0.22	20.0000	87.6	71.9 - 113	0.400	20	
1,3-Dichloropropane	19.4000	0.50	0.31	20.0000	97.0	70.7 - 119	0.924	20	
1,4-Dichlorobenzene	17.8600	0.50	0.21	20.0000	89.3	69.5 - 114	0.674	20	
2,2-Dichloropropane	18.7100	0.50	0.49	20.0000	93.6	67.9 - 129	5.66	20	
2-Chlorotoluene	17.9500	0.50	0.40	20.0000	89.8	72.2 - 119	1.52	20	
4-Chlorotoluene	15.7700	0.50	0.23	20.0000	78.8	66.6 - 116	1.39	20	
4-Isopropyltoluene	19.1700	0.50	0.13	20.0000	95.8	72.7 - 123	1.40	20	
Benzene	18.6000	0.50	0.18	20.0000	93.0	74.6 - 119	6.30	20	
Bromobenzene	18.9100	0.50	0.26	20.0000	94.6	73.6 - 115	0.424	20	
Bromodichloromethane	20.0900	0.50	0.38	20.0000	100	77 - 122	4.43	20	
Bromoform	20.4500	0.50	0.40	20.0000	102	68.9 - 121	2.08	20	
Bromomethane	19.5700	0.50	0.41	20.0000	97.8	-14.1 - 189	3.32	20	
Carbon tetrachloride	18.4100	0.50	0.30	20.0000	92.0	68.6 - 116	4.67	20	
Chlorobenzene	18.5500	0.50	0.23	20.0000	92.8	71.1 - 114	5.76	20	
Chloroethane	20.0700	0.50	0.47	20.0000	100	68 - 147	0.150	20	
Chloroform	20.4800	0.50	0.40	20.0000	102	72.4 - 128	3.83	20	
Chloromethane	19.4000	0.50	0.24	20.0000	97.0	38.4 - 164	1.51	20	
cis-1,2-Dichloroethene	24.9800	0.50	0.49	20.0000	125	74.3 - 127	1.86	20	
cis-1,3-Dichloropropene	18.8300	0.50	0.22	20.0000	94.2	68.6 - 141	4.17	20	
Dibromochloromethane	20.2400	0.50	0.26	20.0000	101	68.6 - 118	4.59	20	
Dibromomethane	19.9100	0.50	0.30	20.0000	99.6	79 - 119	1.26	20	
Dichlorodifluoromethane	19.6500	0.50	0.24	20.0000	98.2	71.4 - 218	2.06	20	
Ethylbenzene	18.6400	0.50	0.22	20.0000	93.2	72.8 - 116	6.49	20	
Hexachlorobutadiene	19.7500	0.50	0.38	20.0000	98.8	33 - 142	2.05	20	
Isopropylbenzene	17.6800	0.50	0.28	20.0000	88.4	74 - 121	2.29	20	
m,p-Xylene	35.9900	1.0	0.54	40.0000	90.0	71.5 - 117	2.23	20	
Methylene chloride	24.0600	1.0	0.26	20.0000	120	61.7 - 141	8.78	20	
n-Butylbenzene	19.2600	0.50	0.27	20.0000	96.3	63.9 - 124	2.05	20	
n-Propylbenzene	15.7800	0.50	0.22	20.0000	78.9	65.1 - 117	1.26	20	
Naphthalene	17.9100	0.50	0.24	20.0000	89.6	35.2 - 124	5.45	20	
o-Xylene	18.0900	0.50	0.26	20.0000	90.4	74.9 - 117	5.85	20	
sec-Butylbenzene	17.7300	0.50	0.30	20.0000	88.6	69.4 - 119	0.898	20	
Styrene	18.5000	0.50	0.24	20.0000	92.5	67.6 - 123	3.82	20	
tert-Butylbenzene	17.5400	0.50	0.22	20.0000	87.7	70.7 - 118	0.228	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 : 09/05/2023

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	RPD Limit	Notes

Batch B3H0914 - MSVOA_LL_W (continued)

LCS Dup (B3H0914-BSD1) - Continued

Prepared: 8/30/2023 Analyzed: 8/30/2023

Tetrachloroethene	18.5400	0.50	0.49	20.0000		92.7	67.2 - 114	3.65	20
Toluene	18.4900	0.50	0.33	20.0000		92.4	77.1 - 120	1.13	20
trans-1,2-Dichloroethene	15.7600	0.50	0.26	20.0000		78.8	71.4 - 123	4.10	20
Trichloroethene	19.4000	0.50	0.45	20.0000		97.0	66 - 120	2.64	20
Trichlorofluoromethane	19.3800	0.50	0.23	20.0000		96.9	58.3 - 150	2.45	20
Vinyl chloride	19.4700	0.50	0.19	20.0000		97.4	54.3 - 154	0.716	20
Surrogate: 1,2-Dichloroethane-d4	25.04			25.0000		100	72.2 - 121		
Surrogate: 4-Bromofluorobenzene	25.69			25.0000		103	80.1 - 115		
Surrogate: Dibromofluoromethane	28.85			25.0000		115	76.6 - 131		
Surrogate: Toluene-d8	24.71			25.0000		98.8	82.9 - 116		



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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 : 09/05/2023

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

Batch B3H0894 - MSSEMI_ISOTOPEDILN_W

Blank (B3H0894-BLK1)

Prepared: 8/30/2023 Analyzed: 8/31/2023

1,4-Dioxane ND 0.20 0.05

Surrogate: 1,2-Dichlorobenzene-d4	0.9174		1.00000	91.7	82.2 - 133
Surrogate: 2-Fluorobiphenyl	0.9448		1.00000	94.5	72.9 - 162
Surrogate: 4-Terphenyl-d14	0.9900		1.00000	99.0	19 - 203
Surrogate: Nitrobenzene-d5	0.8594		1.00000	85.9	-13.6 - 137

LCS (B3H0894-BS1)

Prepared: 8/30/2023 Analyzed: 8/31/2023

1,4-Dioxane 1.21270 0.20 0.05 1.00000 121 77.1 - 179

Surrogate: 1,2-Dichlorobenzene-d4	0.8731		1.00000	87.3	82.2 - 133
Surrogate: 2-Fluorobiphenyl	0.9751		1.00000	97.5	72.9 - 162
Surrogate: 4-Terphenyl-d14	0.9754		1.00000	97.5	19 - 203
Surrogate: Nitrobenzene-d5	0.8233		1.00000	82.3	-13.6 - 137

LCS Dup (B3H0894-BSD1)

Prepared: 8/30/2023 Analyzed: 9/1/2023

1,4-Dioxane 1.12081 0.20 0.05 1.00000 112 77.1 - 179 7.88 20

Surrogate: 1,2-Dichlorobenzene-d4	0.9137		1.00000	91.4	82.2 - 133
Surrogate: 2-Fluorobiphenyl	0.9999		1.00000	100	72.9 - 162
Surrogate: 4-Terphenyl-d14	1.062		1.00000	106	19 - 203
Surrogate: Nitrobenzene-d5	0.6677		1.00000	66.8	-13.6 - 137

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 / 532.30

JOB NUMBER

570-150445-1

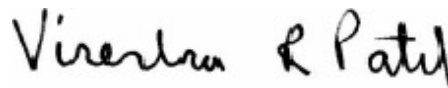
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Job Notes

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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 / 532.30

Job ID: 570-150445-1

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
*+	LCS and/or LCSD is outside acceptance limits, high biased.
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.
F1	MS and/or MSD recovery exceeds control limits.
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.

GC/MS Semi VOA

Qualifier	Qualifier Description
S1+	Surrogate recovery exceeds control 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 / 532.30

Job ID: 570-150445-1

Job ID: 570-150445-1

Laboratory: Eurofins Calscience

Narrative

Job Narrative 570-150445-1

Receipt

The samples were received on 8/29/2023 5:22 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 time was 3.6°C

GC/MS VOA

Method 8260B_LL: The continuing calibration verification (CCV) associated with batch 570-359803 recovered above the upper control limit for Acetone. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The associated samples are impacted: MW-40_20230829 (570-150445-12) and (CCVIS 570-359803/2).

Method 8260B_LL: The laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) for analytical batch 570-359803 recovered outside control limits for the following analytes: Acetone. This analyte was biased high in the LCS and was not detected in the associated samples; therefore, the data have been reported.

Method 8260B_LL: The matrix spike / matrix spike duplicate (MS/MSD) recoveries and precision for analytical batch 570-359874 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample / laboratory sample control 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

Method 8270C_SIM_MS_ID: The surrogate recovery for the blank associated with preparation batch 570-359683 and analytical batch 570-360168 was outside the upper control limits. All associated sample surrogates fell within acceptance criteria; therefore, the data have been reported.

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.
Project/Site: Raytheon / 532.30

Job ID: 570-150445-1

Client Sample ID: TB-082523A

Lab Sample ID: 570-150445-1

No Detections.

Client Sample ID: MW-41_20230825

Lab Sample ID: 570-150445-2

No Detections.

Client Sample ID: MW-31_20230825

Lab Sample ID: 570-150445-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,1-Dichloroethane	0.56	F1	0.50		ug/L	1		8260B	Total/NA
1,1-Dichloroethene	60		0.50		ug/L	1		8260B	Total/NA
Trichloroethene	5.0		0.50		ug/L	1		8260B	Total/NA
1,4-Dioxane	4.0		0.38		ug/L	1		8270C SIM ID	Total/NA

Client Sample ID: MW-30A_20230825

Lab Sample ID: 570-150445-4

No Detections.

Client Sample ID: MW-30B_20230825

Lab Sample ID: 570-150445-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,1-Dichloroethene	19		0.50		ug/L	1		8260B	Total/NA
cis-1,2-Dichloroethene	4.0		0.50		ug/L	1		8260B	Total/NA
Trichloroethene	71		0.50		ug/L	1		8260B	Total/NA

Client Sample ID: MW-3000B_20230825

Lab Sample ID: 570-150445-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,1-Dichloroethene	19		0.50		ug/L	1		8260B	Total/NA
cis-1,2-Dichloroethene	4.0		0.50		ug/L	1		8260B	Total/NA
Trichloroethene	72		0.50		ug/L	1		8260B	Total/NA

Client Sample ID: MW-43_20230828

Lab Sample ID: 570-150445-7

No Detections.

Client Sample ID: MW-34B_20230828

Lab Sample ID: 570-150445-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,1-Dichloroethene	24	F1	0.50		ug/L	1		8260B	Total/NA
1,4-Dioxane	8.4		0.38		ug/L	1		8270C SIM ID	Total/NA

Client Sample ID: MW-32B_20230828

Lab Sample ID: 570-150445-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,1-Dichloroethane	1.0		0.50		ug/L	1		8260B	Total/NA
cis-1,2-Dichloroethene	3.7		0.50		ug/L	1		8260B	Total/NA
Trichloroethene	37		0.50		ug/L	1		8260B	Total/NA
1,1-Dichloroethene - DL	110		2.5		ug/L	5		8260B	Total/NA
1,4-Dioxane	5.6		0.38		ug/L	1		8270C SIM ID	Total/NA

Client Sample ID: MW-3200B_20230828

Lab Sample ID: 570-150445-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,1-Dichloroethane	1.1		0.50		ug/L	1		8260B	Total/NA
cis-1,2-Dichloroethene	4.0		0.50		ug/L	1		8260B	Total/NA
Trichloroethene	40		0.50		ug/L	1		8260B	Total/NA

This Detection Summary does not include radiochemical test results.

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Detection Summary

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

Job ID: 570-150445-1

Client Sample ID: MW-3200B_20230828 (Continued)

Lab Sample ID: 570-150445-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,1-Dichloroethene - DL	110		2.5		ug/L	5		8260B	Total/NA
1,4-Dioxane	5.3		0.38		ug/L	1		8270C SIM ID	Total/NA

Client Sample ID: MW-36_20230828

Lab Sample ID: 570-150445-11

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,1-Dichloroethane	0.61		0.50		ug/L	1		8260B	Total/NA
1,1-Dichloroethene	55		0.50		ug/L	1		8260B	Total/NA
1,4-Dioxane	7.0		0.39		ug/L	1		8270C SIM ID	Total/NA

Client Sample ID: MW-40_20230829

Lab Sample ID: 570-150445-12

No Detections.

Client Sample ID: MW-42_20230829

Lab Sample ID: 570-150445-13

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,1-Dichloroethane	0.50		0.50		ug/L	1		8260B	Total/NA
1,1-Dichloroethene	31		0.50		ug/L	1		8260B	Total/NA
1,4-Dioxane	1.7		0.38		ug/L	1		8270C SIM ID	Total/NA

Client Sample ID: MW-33_20230829

Lab Sample ID: 570-150445-14

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,1-Dichloroethene	3.1		0.50		ug/L	1		8260B	Total/NA
Trichloroethene	0.55		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 / 532.30

Job ID: 570-150445-1

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

Client Sample ID: TB-082523A
Date Collected: 08/25/23 08:00
Date Received: 08/29/23 17:22

Lab Sample ID: 570-150445-1
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		0.50		ug/L			08/31/23 09:01	1
1,1,1-Trichloroethane	ND		0.50		ug/L			08/31/23 09:01	1
1,1,2,2-Tetrachloroethane	ND		0.50		ug/L			08/31/23 09:01	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.50		ug/L			08/31/23 09:01	1
1,1,2-Trichloroethane	ND		0.50		ug/L			08/31/23 09:01	1
1,1-Dichloroethane	ND		0.50		ug/L			08/31/23 09:01	1
1,1-Dichloroethene	ND		0.50		ug/L			08/31/23 09:01	1
1,1-Dichloropropene	ND		0.50		ug/L			08/31/23 09:01	1
1,2,3-Trichlorobenzene	ND		0.50		ug/L			08/31/23 09:01	1
1,2,3-Trichloropropane	ND		0.50		ug/L			08/31/23 09:01	1
1,2,4-Trichlorobenzene	ND		0.50		ug/L			08/31/23 09:01	1
1,2,4-Trimethylbenzene	ND		0.50		ug/L			08/31/23 09:01	1
1,2-Dibromo-3-Chloropropane	ND		1.0		ug/L			08/31/23 09:01	1
1,2-Dibromoethane	ND		0.50		ug/L			08/31/23 09:01	1
1,2-Dichlorobenzene	ND		0.50		ug/L			08/31/23 09:01	1
1,2-Dichloroethane	ND		0.50		ug/L			08/31/23 09:01	1
1,2-Dichloropropane	ND		0.50		ug/L			08/31/23 09:01	1
1,3,5-Trimethylbenzene	ND		0.50		ug/L			08/31/23 09:01	1
1,3-Dichlorobenzene	ND		0.50		ug/L			08/31/23 09:01	1
1,3-Dichloropropane	ND		0.50		ug/L			08/31/23 09:01	1
1,4-Dichlorobenzene	ND		0.50		ug/L			08/31/23 09:01	1
2,2-Dichloropropane	ND		0.50		ug/L			08/31/23 09:01	1
2-Butanone	ND		5.0		ug/L			08/31/23 09:01	1
2-Chlorotoluene	ND		0.50		ug/L			08/31/23 09:01	1
2-Hexanone	ND		6.0		ug/L			08/31/23 09:01	1
4-Chlorotoluene	ND		0.50		ug/L			08/31/23 09:01	1
4-Methyl-2-pentanone	ND		5.0		ug/L			08/31/23 09:01	1
Acetone	ND		8.0		ug/L			08/31/23 09:01	1
Benzene	ND		0.50		ug/L			08/31/23 09:01	1
Bromobenzene	ND		0.50		ug/L			08/31/23 09:01	1
Bromochloromethane	ND		1.0		ug/L			08/31/23 09:01	1
Bromodichloromethane	ND		0.50		ug/L			08/31/23 09:01	1
Bromoform	ND		0.50		ug/L			08/31/23 09:01	1
Bromomethane	ND		2.0		ug/L			08/31/23 09:01	1
cis-1,2-Dichloroethene	ND		0.50		ug/L			08/31/23 09:01	1
cis-1,3-Dichloropropene	ND		0.50		ug/L			08/31/23 09:01	1
Carbon disulfide	ND		1.0		ug/L			08/31/23 09:01	1
Carbon tetrachloride	ND		0.50		ug/L			08/31/23 09:01	1
Chlorobenzene	ND		0.50		ug/L			08/31/23 09:01	1
Chloroethane	ND		0.50		ug/L			08/31/23 09:01	1
Chloroform	ND		0.50		ug/L			08/31/23 09:01	1
Chloromethane	ND		1.0		ug/L			08/31/23 09:01	1
Dibromochloromethane	ND		0.50		ug/L			08/31/23 09:01	1
Dibromomethane	ND		0.50		ug/L			08/31/23 09:01	1
Dichlorodifluoromethane	ND		1.0		ug/L			08/31/23 09:01	1
Ethylbenzene	ND		0.50		ug/L			08/31/23 09:01	1
Isopropylbenzene	ND		0.50		ug/L			08/31/23 09:01	1
Methylene Chloride	ND		1.0		ug/L			08/31/23 09:01	1
Methyl-t-Butyl Ether (MTBE)	ND		0.50		ug/L			08/31/23 09:01	1

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Client Sample Results

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

Job ID: 570-150445-1

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

Client Sample ID: TB-082523A
Date Collected: 08/25/23 08:00
Date Received: 08/29/23 17:22

Lab Sample ID: 570-150445-1
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	ND		1.0		ug/L			08/31/23 09:01	1
n-Butylbenzene	ND		0.50		ug/L			08/31/23 09:01	1
N-Propylbenzene	ND		0.50		ug/L			08/31/23 09:01	1
o-Xylene	ND		0.50		ug/L			08/31/23 09:01	1
m,p-Xylene	ND		1.0		ug/L			08/31/23 09:01	1
p-Isopropyltoluene	ND		0.50		ug/L			08/31/23 09:01	1
sec-Butylbenzene	ND		0.50		ug/L			08/31/23 09:01	1
Styrene	ND		0.50		ug/L			08/31/23 09:01	1
trans-1,2-Dichloroethene	ND		0.50		ug/L			08/31/23 09:01	1
trans-1,3-Dichloropropene	ND		0.50		ug/L			08/31/23 09:01	1
tert-Butylbenzene	ND		0.50		ug/L			08/31/23 09:01	1
Tetrachloroethene	ND		0.50		ug/L			08/31/23 09:01	1
Toluene	ND		0.50		ug/L			08/31/23 09:01	1
Trichloroethene	ND		0.50		ug/L			08/31/23 09:01	1
Trichlorofluoromethane	ND		0.50		ug/L			08/31/23 09:01	1
Vinyl acetate	ND		5.0		ug/L			08/31/23 09:01	1
Vinyl chloride	ND		0.50		ug/L			08/31/23 09:01	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	89		64 - 132		08/31/23 09:01	1
4-Bromofluorobenzene (Surr)	100		76 - 120		08/31/23 09:01	1
Dibromofluoromethane	93		80 - 120		08/31/23 09:01	1
Toluene-d8 (Surr)	97		80 - 120		08/31/23 09:01	1

Client Sample ID: MW-41_20230825
Date Collected: 08/25/23 09:55
Date Received: 08/29/23 17:22

Lab Sample ID: 570-150445-2
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		0.50		ug/L			08/31/23 10:43	1
1,1,1-Trichloroethane	ND		0.50		ug/L			08/31/23 10:43	1
1,1,2,2-Tetrachloroethane	ND		0.50		ug/L			08/31/23 10:43	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.50		ug/L			08/31/23 10:43	1
1,1,2-Trichloroethane	ND		0.50		ug/L			08/31/23 10:43	1
1,1-Dichloroethane	ND		0.50		ug/L			08/31/23 10:43	1
1,1-Dichloroethene	ND		0.50		ug/L			08/31/23 10:43	1
1,1-Dichloropropene	ND		0.50		ug/L			08/31/23 10:43	1
1,2,3-Trichlorobenzene	ND		0.50		ug/L			08/31/23 10:43	1
1,2,3-Trichloropropane	ND		0.50		ug/L			08/31/23 10:43	1
1,2,4-Trichlorobenzene	ND		0.50		ug/L			08/31/23 10:43	1
1,2,4-Trimethylbenzene	ND		0.50		ug/L			08/31/23 10:43	1
1,2-Dibromo-3-Chloropropane	ND		1.0		ug/L			08/31/23 10:43	1
1,2-Dibromoethane	ND		0.50		ug/L			08/31/23 10:43	1
1,2-Dichlorobenzene	ND		0.50		ug/L			08/31/23 10:43	1
1,2-Dichloroethane	ND		0.50		ug/L			08/31/23 10:43	1
1,2-Dichloropropane	ND		0.50		ug/L			08/31/23 10:43	1
1,3,5-Trimethylbenzene	ND		0.50		ug/L			08/31/23 10:43	1
1,3-Dichlorobenzene	ND		0.50		ug/L			08/31/23 10:43	1
1,3-Dichloropropane	ND		0.50		ug/L			08/31/23 10:43	1
1,4-Dichlorobenzene	ND		0.50		ug/L			08/31/23 10:43	1
2,2-Dichloropropane	ND		0.50		ug/L			08/31/23 10:43	1

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Client Sample Results

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

Job ID: 570-150445-1

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

Client Sample ID: MW-41_20230825

Date Collected: 08/25/23 09:55

Date Received: 08/29/23 17:22

Lab Sample ID: 570-150445-2

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Butanone	ND		5.0		ug/L			08/31/23 10:43	1
2-Chlorotoluene	ND		0.50		ug/L			08/31/23 10:43	1
2-Hexanone	ND		6.0		ug/L			08/31/23 10:43	1
4-Chlorotoluene	ND		0.50		ug/L			08/31/23 10:43	1
4-Methyl-2-pentanone	ND		5.0		ug/L			08/31/23 10:43	1
Acetone	ND		8.0		ug/L			08/31/23 10:43	1
Benzene	ND		0.50		ug/L			08/31/23 10:43	1
Bromobenzene	ND		0.50		ug/L			08/31/23 10:43	1
Bromochloromethane	ND		1.0		ug/L			08/31/23 10:43	1
Bromodichloromethane	ND		0.50		ug/L			08/31/23 10:43	1
Bromoform	ND		0.50		ug/L			08/31/23 10:43	1
Bromomethane	ND		2.0		ug/L			08/31/23 10:43	1
cis-1,2-Dichloroethene	ND		0.50		ug/L			08/31/23 10:43	1
cis-1,3-Dichloropropene	ND		0.50		ug/L			08/31/23 10:43	1
Carbon disulfide	ND		1.0		ug/L			08/31/23 10:43	1
Carbon tetrachloride	ND		0.50		ug/L			08/31/23 10:43	1
Chlorobenzene	ND		0.50		ug/L			08/31/23 10:43	1
Chloroethane	ND		0.50		ug/L			08/31/23 10:43	1
Chloroform	ND		0.50		ug/L			08/31/23 10:43	1
Chloromethane	ND		1.0		ug/L			08/31/23 10:43	1
Dibromochloromethane	ND		0.50		ug/L			08/31/23 10:43	1
Dibromomethane	ND		0.50		ug/L			08/31/23 10:43	1
Dichlorodifluoromethane	ND		1.0		ug/L			08/31/23 10:43	1
Ethylbenzene	ND		0.50		ug/L			08/31/23 10:43	1
Isopropylbenzene	ND		0.50		ug/L			08/31/23 10:43	1
Methylene Chloride	ND		1.0		ug/L			08/31/23 10:43	1
Methyl-t-Butyl Ether (MTBE)	ND		0.50		ug/L			08/31/23 10:43	1
Naphthalene	ND		1.0		ug/L			08/31/23 10:43	1
n-Butylbenzene	ND		0.50		ug/L			08/31/23 10:43	1
N-Propylbenzene	ND		0.50		ug/L			08/31/23 10:43	1
o-Xylene	ND		0.50		ug/L			08/31/23 10:43	1
m,p-Xylene	ND		1.0		ug/L			08/31/23 10:43	1
p-Isopropyltoluene	ND		0.50		ug/L			08/31/23 10:43	1
sec-Butylbenzene	ND		0.50		ug/L			08/31/23 10:43	1
Styrene	ND		0.50		ug/L			08/31/23 10:43	1
trans-1,2-Dichloroethene	ND		0.50		ug/L			08/31/23 10:43	1
trans-1,3-Dichloropropene	ND		0.50		ug/L			08/31/23 10:43	1
tert-Butylbenzene	ND		0.50		ug/L			08/31/23 10:43	1
Tetrachloroethene	ND		0.50		ug/L			08/31/23 10:43	1
Toluene	ND		0.50		ug/L			08/31/23 10:43	1
Trichloroethene	ND		0.50		ug/L			08/31/23 10:43	1
Trichlorofluoromethane	ND		0.50		ug/L			08/31/23 10:43	1
Vinyl acetate	ND		5.0		ug/L			08/31/23 10:43	1
Vinyl chloride	ND		0.50		ug/L			08/31/23 10:43	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	91		64 - 132		08/31/23 10:43	1
4-Bromofluorobenzene (Surr)	103		76 - 120		08/31/23 10:43	1
Dibromofluoromethane	91		80 - 120		08/31/23 10:43	1
Toluene-d8 (Surr)	100		80 - 120		08/31/23 10:43	1

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Client Sample Results

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

Job ID: 570-150445-1

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

Client Sample ID: MW-31_20230825

Date Collected: 08/25/23 11:40

Date Received: 08/29/23 17:22

Lab Sample ID: 570-150445-3

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		0.50		ug/L			08/31/23 14:56	1
1,1,1-Trichloroethane	ND	F1 F2	0.50		ug/L			08/31/23 14:56	1
1,1,2,2-Tetrachloroethane	ND		0.50		ug/L			08/31/23 14:56	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	F1 F2	0.50		ug/L			08/31/23 14:56	1
1,1,2-Trichloroethane	ND		0.50		ug/L			08/31/23 14:56	1
1,1-Dichloroethane	0.56	F1	0.50		ug/L			08/31/23 14:56	1
1,1-Dichloroethene	60		0.50		ug/L			08/31/23 14:56	1
1,1-Dichloropropene	ND	F1 F2	0.50		ug/L			08/31/23 14:56	1
1,2,3-Trichlorobenzene	ND		0.50		ug/L			08/31/23 14:56	1
1,2,3-Trichloropropane	ND		0.50		ug/L			08/31/23 14:56	1
1,2,4-Trichlorobenzene	ND		0.50		ug/L			08/31/23 14:56	1
1,2,4-Trimethylbenzene	ND		0.50		ug/L			08/31/23 14:56	1
1,2-Dibromo-3-Chloropropane	ND		1.0		ug/L			08/31/23 14:56	1
1,2-Dibromoethane	ND		0.50		ug/L			08/31/23 14:56	1
1,2-Dichlorobenzene	ND	F1	0.50		ug/L			08/31/23 14:56	1
1,2-Dichloroethane	ND		0.50		ug/L			08/31/23 14:56	1
1,2-Dichloropropane	ND	F1	0.50		ug/L			08/31/23 14:56	1
1,3,5-Trimethylbenzene	ND		0.50		ug/L			08/31/23 14:56	1
1,3-Dichlorobenzene	ND	F1	0.50		ug/L			08/31/23 14:56	1
1,3-Dichloropropane	ND		0.50		ug/L			08/31/23 14:56	1
1,4-Dichlorobenzene	ND	F1	0.50		ug/L			08/31/23 14:56	1
2,2-Dichloropropane	ND	F2	0.50		ug/L			08/31/23 14:56	1
2-Butanone	ND		5.0		ug/L			08/31/23 14:56	1
2-Chlorotoluene	ND	F1	0.50		ug/L			08/31/23 14:56	1
2-Hexanone	ND		6.0		ug/L			08/31/23 14:56	1
4-Chlorotoluene	ND	F1 F2	0.50		ug/L			08/31/23 14:56	1
4-Methyl-2-pentanone	ND		5.0		ug/L			08/31/23 14:56	1
Acetone	ND		8.0		ug/L			08/31/23 14:56	1
Benzene	ND	F1	0.50		ug/L			08/31/23 14:56	1
Bromobenzene	ND	F1	0.50		ug/L			08/31/23 14:56	1
Bromochloromethane	ND	F1	1.0		ug/L			08/31/23 14:56	1
Bromodichloromethane	ND		0.50		ug/L			08/31/23 14:56	1
Bromoform	ND		0.50		ug/L			08/31/23 14:56	1
Bromomethane	ND		2.0		ug/L			08/31/23 14:56	1
cis-1,2-Dichloroethene	ND	F1	0.50		ug/L			08/31/23 14:56	1
cis-1,3-Dichloropropene	ND		0.50		ug/L			08/31/23 14:56	1
Carbon disulfide	ND	F1	1.0		ug/L			08/31/23 14:56	1
Carbon tetrachloride	ND	F2	0.50		ug/L			08/31/23 14:56	1
Chlorobenzene	ND	F1	0.50		ug/L			08/31/23 14:56	1
Chloroethane	ND		0.50		ug/L			08/31/23 14:56	1
Chloroform	ND	F1	0.50		ug/L			08/31/23 14:56	1
Chloromethane	ND		1.0		ug/L			08/31/23 14:56	1
Dibromochloromethane	ND		0.50		ug/L			08/31/23 14:56	1
Dibromomethane	ND		0.50		ug/L			08/31/23 14:56	1
Dichlorodifluoromethane	ND		1.0		ug/L			08/31/23 14:56	1
Ethylbenzene	ND	F1	0.50		ug/L			08/31/23 14:56	1
Isopropylbenzene	ND	F1 F2	0.50		ug/L			08/31/23 14:56	1
Methylene Chloride	ND	F1	1.0		ug/L			08/31/23 14:56	1
Methyl-t-Butyl Ether (MTBE)	ND		0.50		ug/L			08/31/23 14:56	1

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Client Sample Results

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

Job ID: 570-150445-1

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

Client Sample ID: MW-31_20230825

Date Collected: 08/25/23 11:40

Date Received: 08/29/23 17:22

Lab Sample ID: 570-150445-3

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	ND		1.0		ug/L			08/31/23 14:56	1
n-Butylbenzene	ND	F1	0.50		ug/L			08/31/23 14:56	1
N-Propylbenzene	ND	F1	0.50		ug/L			08/31/23 14:56	1
o-Xylene	ND	F1	0.50		ug/L			08/31/23 14:56	1
m,p-Xylene	ND	F1	1.0		ug/L			08/31/23 14:56	1
p-Isopropyltoluene	ND	F1 F2	0.50		ug/L			08/31/23 14:56	1
sec-Butylbenzene	ND	F1 F2	0.50		ug/L			08/31/23 14:56	1
Styrene	ND		0.50		ug/L			08/31/23 14:56	1
trans-1,2-Dichloroethene	ND	F1	0.50		ug/L			08/31/23 14:56	1
trans-1,3-Dichloropropene	ND		0.50		ug/L			08/31/23 14:56	1
tert-Butylbenzene	ND	F1	0.50		ug/L			08/31/23 14:56	1
Tetrachloroethene	ND	F1 F2	0.50		ug/L			08/31/23 14:56	1
Toluene	ND	F1	0.50		ug/L			08/31/23 14:56	1
Trichloroethene	5.0		0.50		ug/L			08/31/23 14:56	1
Trichlorofluoromethane	ND	F1	0.50		ug/L			08/31/23 14:56	1
Vinyl acetate	ND		5.0		ug/L			08/31/23 14:56	1
Vinyl chloride	ND		0.50		ug/L			08/31/23 14:56	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	92		64 - 132		08/31/23 14:56	1
4-Bromofluorobenzene (Surr)	103		76 - 120		08/31/23 14:56	1
Dibromofluoromethane	94		80 - 120		08/31/23 14:56	1
Toluene-d8 (Surr)	96		80 - 120		08/31/23 14:56	1

Client Sample ID: MW-30A_20230825

Date Collected: 08/25/23 13:28

Date Received: 08/29/23 17:22

Lab Sample ID: 570-150445-4

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		0.50		ug/L			08/31/23 11:08	1
1,1,1-Trichloroethane	ND		0.50		ug/L			08/31/23 11:08	1
1,1,2,2-Tetrachloroethane	ND		0.50		ug/L			08/31/23 11:08	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.50		ug/L			08/31/23 11:08	1
1,1,2-Trichloroethane	ND		0.50		ug/L			08/31/23 11:08	1
1,1-Dichloroethane	ND		0.50		ug/L			08/31/23 11:08	1
1,1-Dichloroethene	ND		0.50		ug/L			08/31/23 11:08	1
1,1-Dichloropropene	ND		0.50		ug/L			08/31/23 11:08	1
1,2,3-Trichlorobenzene	ND		0.50		ug/L			08/31/23 11:08	1
1,2,3-Trichloropropane	ND		0.50		ug/L			08/31/23 11:08	1
1,2,4-Trichlorobenzene	ND		0.50		ug/L			08/31/23 11:08	1
1,2,4-Trimethylbenzene	ND		0.50		ug/L			08/31/23 11:08	1
1,2-Dibromo-3-Chloropropane	ND		1.0		ug/L			08/31/23 11:08	1
1,2-Dibromoethane	ND		0.50		ug/L			08/31/23 11:08	1
1,2-Dichlorobenzene	ND		0.50		ug/L			08/31/23 11:08	1
1,2-Dichloroethane	ND		0.50		ug/L			08/31/23 11:08	1
1,2-Dichloropropane	ND		0.50		ug/L			08/31/23 11:08	1
1,3,5-Trimethylbenzene	ND		0.50		ug/L			08/31/23 11:08	1
1,3-Dichlorobenzene	ND		0.50		ug/L			08/31/23 11:08	1
1,3-Dichloropropane	ND		0.50		ug/L			08/31/23 11:08	1
1,4-Dichlorobenzene	ND		0.50		ug/L			08/31/23 11:08	1
2,2-Dichloropropane	ND		0.50		ug/L			08/31/23 11:08	1

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Client Sample Results

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

Job ID: 570-150445-1

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

Client Sample ID: MW-30A_20230825

Date Collected: 08/25/23 13:28

Date Received: 08/29/23 17:22

Lab Sample ID: 570-150445-4

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Butanone	ND		5.0		ug/L			08/31/23 11:08	1
2-Chlorotoluene	ND		0.50		ug/L			08/31/23 11:08	1
2-Hexanone	ND		6.0		ug/L			08/31/23 11:08	1
4-Chlorotoluene	ND		0.50		ug/L			08/31/23 11:08	1
4-Methyl-2-pentanone	ND		5.0		ug/L			08/31/23 11:08	1
Acetone	ND		8.0		ug/L			08/31/23 11:08	1
Benzene	ND		0.50		ug/L			08/31/23 11:08	1
Bromobenzene	ND		0.50		ug/L			08/31/23 11:08	1
Bromochloromethane	ND		1.0		ug/L			08/31/23 11:08	1
Bromodichloromethane	ND		0.50		ug/L			08/31/23 11:08	1
Bromoform	ND		0.50		ug/L			08/31/23 11:08	1
Bromomethane	ND		2.0		ug/L			08/31/23 11:08	1
cis-1,2-Dichloroethene	ND		0.50		ug/L			08/31/23 11:08	1
cis-1,3-Dichloropropene	ND		0.50		ug/L			08/31/23 11:08	1
Carbon disulfide	ND		1.0		ug/L			08/31/23 11:08	1
Carbon tetrachloride	ND		0.50		ug/L			08/31/23 11:08	1
Chlorobenzene	ND		0.50		ug/L			08/31/23 11:08	1
Chloroethane	ND		0.50		ug/L			08/31/23 11:08	1
Chloroform	ND		0.50		ug/L			08/31/23 11:08	1
Chloromethane	ND		1.0		ug/L			08/31/23 11:08	1
Dibromochloromethane	ND		0.50		ug/L			08/31/23 11:08	1
Dibromomethane	ND		0.50		ug/L			08/31/23 11:08	1
Dichlorodifluoromethane	ND		1.0		ug/L			08/31/23 11:08	1
Ethylbenzene	ND		0.50		ug/L			08/31/23 11:08	1
Isopropylbenzene	ND		0.50		ug/L			08/31/23 11:08	1
Methylene Chloride	ND		1.0		ug/L			08/31/23 11:08	1
Methyl-t-Butyl Ether (MTBE)	ND		0.50		ug/L			08/31/23 11:08	1
Naphthalene	ND		1.0		ug/L			08/31/23 11:08	1
n-Butylbenzene	ND		0.50		ug/L			08/31/23 11:08	1
N-Propylbenzene	ND		0.50		ug/L			08/31/23 11:08	1
o-Xylene	ND		0.50		ug/L			08/31/23 11:08	1
m,p-Xylene	ND		1.0		ug/L			08/31/23 11:08	1
p-Isopropyltoluene	ND		0.50		ug/L			08/31/23 11:08	1
sec-Butylbenzene	ND		0.50		ug/L			08/31/23 11:08	1
Styrene	ND		0.50		ug/L			08/31/23 11:08	1
trans-1,2-Dichloroethene	ND		0.50		ug/L			08/31/23 11:08	1
trans-1,3-Dichloropropene	ND		0.50		ug/L			08/31/23 11:08	1
tert-Butylbenzene	ND		0.50		ug/L			08/31/23 11:08	1
Tetrachloroethene	ND		0.50		ug/L			08/31/23 11:08	1
Toluene	ND		0.50		ug/L			08/31/23 11:08	1
Trichloroethene	ND		0.50		ug/L			08/31/23 11:08	1
Trichlorofluoromethane	ND		0.50		ug/L			08/31/23 11:08	1
Vinyl acetate	ND		5.0		ug/L			08/31/23 11:08	1
Vinyl chloride	ND		0.50		ug/L			08/31/23 11:08	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	91		64 - 132		08/31/23 11:08	1
4-Bromofluorobenzene (Surr)	104		76 - 120		08/31/23 11:08	1
Dibromofluoromethane	93		80 - 120		08/31/23 11:08	1
Toluene-d8 (Surr)	96		80 - 120		08/31/23 11:08	1

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Client Sample Results

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

Job ID: 570-150445-1

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

Client Sample ID: MW-30B_20230825

Date Collected: 08/25/23 14:05

Date Received: 08/29/23 17:22

Lab Sample ID: 570-150445-5

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		0.50		ug/L			08/31/23 11:33	1
1,1,1-Trichloroethane	ND		0.50		ug/L			08/31/23 11:33	1
1,1,2,2-Tetrachloroethane	ND		0.50		ug/L			08/31/23 11:33	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.50		ug/L			08/31/23 11:33	1
1,1,2-Trichloroethane	ND		0.50		ug/L			08/31/23 11:33	1
1,1-Dichloroethane	ND		0.50		ug/L			08/31/23 11:33	1
1,1-Dichloroethene	19		0.50		ug/L			08/31/23 11:33	1
1,1-Dichloropropene	ND		0.50		ug/L			08/31/23 11:33	1
1,2,3-Trichlorobenzene	ND		0.50		ug/L			08/31/23 11:33	1
1,2,3-Trichloropropane	ND		0.50		ug/L			08/31/23 11:33	1
1,2,4-Trichlorobenzene	ND		0.50		ug/L			08/31/23 11:33	1
1,2,4-Trimethylbenzene	ND		0.50		ug/L			08/31/23 11:33	1
1,2-Dibromo-3-Chloropropane	ND		1.0		ug/L			08/31/23 11:33	1
1,2-Dibromoethane	ND		0.50		ug/L			08/31/23 11:33	1
1,2-Dichlorobenzene	ND		0.50		ug/L			08/31/23 11:33	1
1,2-Dichloroethane	ND		0.50		ug/L			08/31/23 11:33	1
1,2-Dichloropropane	ND		0.50		ug/L			08/31/23 11:33	1
1,3,5-Trimethylbenzene	ND		0.50		ug/L			08/31/23 11:33	1
1,3-Dichlorobenzene	ND		0.50		ug/L			08/31/23 11:33	1
1,3-Dichloropropane	ND		0.50		ug/L			08/31/23 11:33	1
1,4-Dichlorobenzene	ND		0.50		ug/L			08/31/23 11:33	1
2,2-Dichloropropane	ND		0.50		ug/L			08/31/23 11:33	1
2-Butanone	ND		5.0		ug/L			08/31/23 11:33	1
2-Chlorotoluene	ND		0.50		ug/L			08/31/23 11:33	1
2-Hexanone	ND		6.0		ug/L			08/31/23 11:33	1
4-Chlorotoluene	ND		0.50		ug/L			08/31/23 11:33	1
4-Methyl-2-pentanone	ND		5.0		ug/L			08/31/23 11:33	1
Acetone	ND		8.0		ug/L			08/31/23 11:33	1
Benzene	ND		0.50		ug/L			08/31/23 11:33	1
Bromobenzene	ND		0.50		ug/L			08/31/23 11:33	1
Bromochloromethane	ND		1.0		ug/L			08/31/23 11:33	1
Bromodichloromethane	ND		0.50		ug/L			08/31/23 11:33	1
Bromoform	ND		0.50		ug/L			08/31/23 11:33	1
Bromomethane	ND		2.0		ug/L			08/31/23 11:33	1
cis-1,2-Dichloroethene	4.0		0.50		ug/L			08/31/23 11:33	1
cis-1,3-Dichloropropene	ND		0.50		ug/L			08/31/23 11:33	1
Carbon disulfide	ND		1.0		ug/L			08/31/23 11:33	1
Carbon tetrachloride	ND		0.50		ug/L			08/31/23 11:33	1
Chlorobenzene	ND		0.50		ug/L			08/31/23 11:33	1
Chloroethane	ND		0.50		ug/L			08/31/23 11:33	1
Chloroform	ND		0.50		ug/L			08/31/23 11:33	1
Chloromethane	ND		1.0		ug/L			08/31/23 11:33	1
Dibromochloromethane	ND		0.50		ug/L			08/31/23 11:33	1
Dibromomethane	ND		0.50		ug/L			08/31/23 11:33	1
Dichlorodifluoromethane	ND		1.0		ug/L			08/31/23 11:33	1
Ethylbenzene	ND		0.50		ug/L			08/31/23 11:33	1
Isopropylbenzene	ND		0.50		ug/L			08/31/23 11:33	1
Methylene Chloride	ND		1.0		ug/L			08/31/23 11:33	1
Methyl-t-Butyl Ether (MTBE)	ND		0.50		ug/L			08/31/23 11:33	1

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Client Sample Results

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

Job ID: 570-150445-1

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

Client Sample ID: MW-30B_20230825

Date Collected: 08/25/23 14:05

Date Received: 08/29/23 17:22

Lab Sample ID: 570-150445-5

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	ND		1.0		ug/L			08/31/23 11:33	1
n-Butylbenzene	ND		0.50		ug/L			08/31/23 11:33	1
N-Propylbenzene	ND		0.50		ug/L			08/31/23 11:33	1
o-Xylene	ND		0.50		ug/L			08/31/23 11:33	1
m,p-Xylene	ND		1.0		ug/L			08/31/23 11:33	1
p-Isopropyltoluene	ND		0.50		ug/L			08/31/23 11:33	1
sec-Butylbenzene	ND		0.50		ug/L			08/31/23 11:33	1
Styrene	ND		0.50		ug/L			08/31/23 11:33	1
trans-1,2-Dichloroethene	ND		0.50		ug/L			08/31/23 11:33	1
trans-1,3-Dichloropropene	ND		0.50		ug/L			08/31/23 11:33	1
tert-Butylbenzene	ND		0.50		ug/L			08/31/23 11:33	1
Tetrachloroethene	ND		0.50		ug/L			08/31/23 11:33	1
Toluene	ND		0.50		ug/L			08/31/23 11:33	1
Trichloroethene	71		0.50		ug/L			08/31/23 11:33	1
Trichlorofluoromethane	ND		0.50		ug/L			08/31/23 11:33	1
Vinyl acetate	ND		5.0		ug/L			08/31/23 11:33	1
Vinyl chloride	ND		0.50		ug/L			08/31/23 11:33	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	91		64 - 132		08/31/23 11:33	1
4-Bromofluorobenzene (Surr)	103		76 - 120		08/31/23 11:33	1
Dibromofluoromethane	93		80 - 120		08/31/23 11:33	1
Toluene-d8 (Surr)	96		80 - 120		08/31/23 11:33	1

Client Sample ID: MW-3000B_20230825

Date Collected: 08/25/23 14:15

Date Received: 08/29/23 17:22

Lab Sample ID: 570-150445-6

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		0.50		ug/L			08/31/23 11:59	1
1,1,1-Trichloroethane	ND		0.50		ug/L			08/31/23 11:59	1
1,1,2,2-Tetrachloroethane	ND		0.50		ug/L			08/31/23 11:59	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.50		ug/L			08/31/23 11:59	1
1,1,2-Trichloroethane	ND		0.50		ug/L			08/31/23 11:59	1
1,1-Dichloroethane	ND		0.50		ug/L			08/31/23 11:59	1
1,1-Dichloroethene	19		0.50		ug/L			08/31/23 11:59	1
1,1-Dichloropropene	ND		0.50		ug/L			08/31/23 11:59	1
1,2,3-Trichlorobenzene	ND		0.50		ug/L			08/31/23 11:59	1
1,2,3-Trichloropropane	ND		0.50		ug/L			08/31/23 11:59	1
1,2,4-Trichlorobenzene	ND		0.50		ug/L			08/31/23 11:59	1
1,2,4-Trimethylbenzene	ND		0.50		ug/L			08/31/23 11:59	1
1,2-Dibromo-3-Chloropropane	ND		1.0		ug/L			08/31/23 11:59	1
1,2-Dibromoethane	ND		0.50		ug/L			08/31/23 11:59	1
1,2-Dichlorobenzene	ND		0.50		ug/L			08/31/23 11:59	1
1,2-Dichloroethane	ND		0.50		ug/L			08/31/23 11:59	1
1,2-Dichloropropane	ND		0.50		ug/L			08/31/23 11:59	1
1,3,5-Trimethylbenzene	ND		0.50		ug/L			08/31/23 11:59	1
1,3-Dichlorobenzene	ND		0.50		ug/L			08/31/23 11:59	1
1,3-Dichloropropane	ND		0.50		ug/L			08/31/23 11:59	1
1,4-Dichlorobenzene	ND		0.50		ug/L			08/31/23 11:59	1
2,2-Dichloropropane	ND		0.50		ug/L			08/31/23 11:59	1

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Client Sample Results

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

Job ID: 570-150445-1

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

Client Sample ID: MW-3000B_20230825

Date Collected: 08/25/23 14:15

Date Received: 08/29/23 17:22

Lab Sample ID: 570-150445-6

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Butanone	ND		5.0		ug/L			08/31/23 11:59	1
2-Chlorotoluene	ND		0.50		ug/L			08/31/23 11:59	1
2-Hexanone	ND		6.0		ug/L			08/31/23 11:59	1
4-Chlorotoluene	ND		0.50		ug/L			08/31/23 11:59	1
4-Methyl-2-pentanone	ND		5.0		ug/L			08/31/23 11:59	1
Acetone	ND		8.0		ug/L			08/31/23 11:59	1
Benzene	ND		0.50		ug/L			08/31/23 11:59	1
Bromobenzene	ND		0.50		ug/L			08/31/23 11:59	1
Bromochloromethane	ND		1.0		ug/L			08/31/23 11:59	1
Bromodichloromethane	ND		0.50		ug/L			08/31/23 11:59	1
Bromoform	ND		0.50		ug/L			08/31/23 11:59	1
Bromomethane	ND		2.0		ug/L			08/31/23 11:59	1
cis-1,2-Dichloroethene	4.0		0.50		ug/L			08/31/23 11:59	1
cis-1,3-Dichloropropene	ND		0.50		ug/L			08/31/23 11:59	1
Carbon disulfide	ND		1.0		ug/L			08/31/23 11:59	1
Carbon tetrachloride	ND		0.50		ug/L			08/31/23 11:59	1
Chlorobenzene	ND		0.50		ug/L			08/31/23 11:59	1
Chloroethane	ND		0.50		ug/L			08/31/23 11:59	1
Chloroform	ND		0.50		ug/L			08/31/23 11:59	1
Chloromethane	ND		1.0		ug/L			08/31/23 11:59	1
Dibromochloromethane	ND		0.50		ug/L			08/31/23 11:59	1
Dibromomethane	ND		0.50		ug/L			08/31/23 11:59	1
Dichlorodifluoromethane	ND		1.0		ug/L			08/31/23 11:59	1
Ethylbenzene	ND		0.50		ug/L			08/31/23 11:59	1
Isopropylbenzene	ND		0.50		ug/L			08/31/23 11:59	1
Methylene Chloride	ND		1.0		ug/L			08/31/23 11:59	1
Methyl-t-Butyl Ether (MTBE)	ND		0.50		ug/L			08/31/23 11:59	1
Naphthalene	ND		1.0		ug/L			08/31/23 11:59	1
n-Butylbenzene	ND		0.50		ug/L			08/31/23 11:59	1
N-Propylbenzene	ND		0.50		ug/L			08/31/23 11:59	1
o-Xylene	ND		0.50		ug/L			08/31/23 11:59	1
m,p-Xylene	ND		1.0		ug/L			08/31/23 11:59	1
p-Isopropyltoluene	ND		0.50		ug/L			08/31/23 11:59	1
sec-Butylbenzene	ND		0.50		ug/L			08/31/23 11:59	1
Styrene	ND		0.50		ug/L			08/31/23 11:59	1
trans-1,2-Dichloroethene	ND		0.50		ug/L			08/31/23 11:59	1
trans-1,3-Dichloropropene	ND		0.50		ug/L			08/31/23 11:59	1
tert-Butylbenzene	ND		0.50		ug/L			08/31/23 11:59	1
Tetrachloroethene	ND		0.50		ug/L			08/31/23 11:59	1
Toluene	ND		0.50		ug/L			08/31/23 11:59	1
Trichloroethene	72		0.50		ug/L			08/31/23 11:59	1
Trichlorofluoromethane	ND		0.50		ug/L			08/31/23 11:59	1
Vinyl acetate	ND		5.0		ug/L			08/31/23 11:59	1
Vinyl chloride	ND		0.50		ug/L			08/31/23 11:59	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	91		64 - 132		08/31/23 11:59	1
4-Bromofluorobenzene (Surr)	102		76 - 120		08/31/23 11:59	1
Dibromofluoromethane	92		80 - 120		08/31/23 11:59	1
Toluene-d8 (Surr)	99		80 - 120		08/31/23 11:59	1

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Client Sample Results

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

Job ID: 570-150445-1

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

Client Sample ID: MW-43_20230828

Date Collected: 08/28/23 09:33

Date Received: 08/29/23 17:22

Lab Sample ID: 570-150445-7

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		0.50		ug/L			08/31/23 12:24	1
1,1,1-Trichloroethane	ND		0.50		ug/L			08/31/23 12:24	1
1,1,2,2-Tetrachloroethane	ND		0.50		ug/L			08/31/23 12:24	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.50		ug/L			08/31/23 12:24	1
1,1,2-Trichloroethane	ND		0.50		ug/L			08/31/23 12:24	1
1,1-Dichloroethane	ND		0.50		ug/L			08/31/23 12:24	1
1,1-Dichloroethene	ND		0.50		ug/L			08/31/23 12:24	1
1,1-Dichloropropene	ND		0.50		ug/L			08/31/23 12:24	1
1,2,3-Trichlorobenzene	ND		0.50		ug/L			08/31/23 12:24	1
1,2,3-Trichloropropane	ND		0.50		ug/L			08/31/23 12:24	1
1,2,4-Trichlorobenzene	ND		0.50		ug/L			08/31/23 12:24	1
1,2,4-Trimethylbenzene	ND		0.50		ug/L			08/31/23 12:24	1
1,2-Dibromo-3-Chloropropane	ND		1.0		ug/L			08/31/23 12:24	1
1,2-Dibromoethane	ND		0.50		ug/L			08/31/23 12:24	1
1,2-Dichlorobenzene	ND		0.50		ug/L			08/31/23 12:24	1
1,2-Dichloroethane	ND		0.50		ug/L			08/31/23 12:24	1
1,2-Dichloropropane	ND		0.50		ug/L			08/31/23 12:24	1
1,3,5-Trimethylbenzene	ND		0.50		ug/L			08/31/23 12:24	1
1,3-Dichlorobenzene	ND		0.50		ug/L			08/31/23 12:24	1
1,3-Dichloropropane	ND		0.50		ug/L			08/31/23 12:24	1
1,4-Dichlorobenzene	ND		0.50		ug/L			08/31/23 12:24	1
2,2-Dichloropropane	ND		0.50		ug/L			08/31/23 12:24	1
2-Butanone	ND		5.0		ug/L			08/31/23 12:24	1
2-Chlorotoluene	ND		0.50		ug/L			08/31/23 12:24	1
2-Hexanone	ND		6.0		ug/L			08/31/23 12:24	1
4-Chlorotoluene	ND		0.50		ug/L			08/31/23 12:24	1
4-Methyl-2-pentanone	ND		5.0		ug/L			08/31/23 12:24	1
Acetone	ND		8.0		ug/L			08/31/23 12:24	1
Benzene	ND		0.50		ug/L			08/31/23 12:24	1
Bromobenzene	ND		0.50		ug/L			08/31/23 12:24	1
Bromochloromethane	ND		1.0		ug/L			08/31/23 12:24	1
Bromodichloromethane	ND		0.50		ug/L			08/31/23 12:24	1
Bromoform	ND		0.50		ug/L			08/31/23 12:24	1
Bromomethane	ND		2.0		ug/L			08/31/23 12:24	1
cis-1,2-Dichloroethene	ND		0.50		ug/L			08/31/23 12:24	1
cis-1,3-Dichloropropene	ND		0.50		ug/L			08/31/23 12:24	1
Carbon disulfide	ND		1.0		ug/L			08/31/23 12:24	1
Carbon tetrachloride	ND		0.50		ug/L			08/31/23 12:24	1
Chlorobenzene	ND		0.50		ug/L			08/31/23 12:24	1
Chloroethane	ND		0.50		ug/L			08/31/23 12:24	1
Chloroform	ND		0.50		ug/L			08/31/23 12:24	1
Chloromethane	ND		1.0		ug/L			08/31/23 12:24	1
Dibromochloromethane	ND		0.50		ug/L			08/31/23 12:24	1
Dibromomethane	ND		0.50		ug/L			08/31/23 12:24	1
Dichlorodifluoromethane	ND		1.0		ug/L			08/31/23 12:24	1
Ethylbenzene	ND		0.50		ug/L			08/31/23 12:24	1
Isopropylbenzene	ND		0.50		ug/L			08/31/23 12:24	1
Methylene Chloride	ND		1.0		ug/L			08/31/23 12:24	1
Methyl-t-Butyl Ether (MTBE)	ND		0.50		ug/L			08/31/23 12:24	1

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Client Sample Results

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

Job ID: 570-150445-1

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

Client Sample ID: MW-43_20230828

Date Collected: 08/28/23 09:33

Date Received: 08/29/23 17:22

Lab Sample ID: 570-150445-7

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	ND		1.0		ug/L			08/31/23 12:24	1
n-Butylbenzene	ND		0.50		ug/L			08/31/23 12:24	1
N-Propylbenzene	ND		0.50		ug/L			08/31/23 12:24	1
o-Xylene	ND		0.50		ug/L			08/31/23 12:24	1
m,p-Xylene	ND		1.0		ug/L			08/31/23 12:24	1
p-Isopropyltoluene	ND		0.50		ug/L			08/31/23 12:24	1
sec-Butylbenzene	ND		0.50		ug/L			08/31/23 12:24	1
Styrene	ND		0.50		ug/L			08/31/23 12:24	1
trans-1,2-Dichloroethene	ND		0.50		ug/L			08/31/23 12:24	1
trans-1,3-Dichloropropene	ND		0.50		ug/L			08/31/23 12:24	1
tert-Butylbenzene	ND		0.50		ug/L			08/31/23 12:24	1
Tetrachloroethene	ND		0.50		ug/L			08/31/23 12:24	1
Toluene	ND		0.50		ug/L			08/31/23 12:24	1
Trichloroethene	ND		0.50		ug/L			08/31/23 12:24	1
Trichlorofluoromethane	ND		0.50		ug/L			08/31/23 12:24	1
Vinyl acetate	ND		5.0		ug/L			08/31/23 12:24	1
Vinyl chloride	ND		0.50		ug/L			08/31/23 12:24	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	90		64 - 132		08/31/23 12:24	1
4-Bromofluorobenzene (Surr)	104		76 - 120		08/31/23 12:24	1
Dibromofluoromethane	94		80 - 120		08/31/23 12:24	1
Toluene-d8 (Surr)	97		80 - 120		08/31/23 12:24	1

Client Sample ID: MW-34B_20230828

Date Collected: 08/28/23 11:35

Date Received: 08/29/23 17:22

Lab Sample ID: 570-150445-8

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		0.50		ug/L			08/31/23 15:21	1
1,1,1-Trichloroethane	ND	F1	0.50		ug/L			08/31/23 15:21	1
1,1,2,2-Tetrachloroethane	ND		0.50		ug/L			08/31/23 15:21	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	F1	0.50		ug/L			08/31/23 15:21	1
1,1,2-Trichloroethane	ND		0.50		ug/L			08/31/23 15:21	1
1,1-Dichloroethane	ND	F1	0.50		ug/L			08/31/23 15:21	1
1,1-Dichloroethene	24	F1	0.50		ug/L			08/31/23 15:21	1
1,1-Dichloropropene	ND	F1	0.50		ug/L			08/31/23 15:21	1
1,2,3-Trichlorobenzene	ND		0.50		ug/L			08/31/23 15:21	1
1,2,3-Trichloropropane	ND		0.50		ug/L			08/31/23 15:21	1
1,2,4-Trichlorobenzene	ND		0.50		ug/L			08/31/23 15:21	1
1,2,4-Trimethylbenzene	ND		0.50		ug/L			08/31/23 15:21	1
1,2-Dibromo-3-Chloropropane	ND		1.0		ug/L			08/31/23 15:21	1
1,2-Dibromoethane	ND		0.50		ug/L			08/31/23 15:21	1
1,2-Dichlorobenzene	ND		0.50		ug/L			08/31/23 15:21	1
1,2-Dichloroethane	ND		0.50		ug/L			08/31/23 15:21	1
1,2-Dichloropropane	ND		0.50		ug/L			08/31/23 15:21	1
1,3,5-Trimethylbenzene	ND		0.50		ug/L			08/31/23 15:21	1
1,3-Dichlorobenzene	ND		0.50		ug/L			08/31/23 15:21	1
1,3-Dichloropropane	ND		0.50		ug/L			08/31/23 15:21	1
1,4-Dichlorobenzene	ND		0.50		ug/L			08/31/23 15:21	1
2,2-Dichloropropane	ND		0.50		ug/L			08/31/23 15:21	1

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Client Sample Results

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

Job ID: 570-150445-1

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

Client Sample ID: MW-34B_20230828

Date Collected: 08/28/23 11:35

Date Received: 08/29/23 17:22

Lab Sample ID: 570-150445-8

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Butanone	ND		5.0		ug/L			08/31/23 15:21	1
2-Chlorotoluene	ND		0.50		ug/L			08/31/23 15:21	1
2-Hexanone	ND		6.0		ug/L			08/31/23 15:21	1
4-Chlorotoluene	ND		0.50		ug/L			08/31/23 15:21	1
4-Methyl-2-pentanone	ND		5.0		ug/L			08/31/23 15:21	1
Acetone	ND	F2	8.0		ug/L			08/31/23 15:21	1
Benzene	ND		0.50		ug/L			08/31/23 15:21	1
Bromobenzene	ND		0.50		ug/L			08/31/23 15:21	1
Bromochloromethane	ND		1.0		ug/L			08/31/23 15:21	1
Bromodichloromethane	ND		0.50		ug/L			08/31/23 15:21	1
Bromoform	ND		0.50		ug/L			08/31/23 15:21	1
Bromomethane	ND		2.0		ug/L			08/31/23 15:21	1
cis-1,2-Dichloroethene	ND		0.50		ug/L			08/31/23 15:21	1
cis-1,3-Dichloropropene	ND		0.50		ug/L			08/31/23 15:21	1
Carbon disulfide	ND	F1	1.0		ug/L			08/31/23 15:21	1
Carbon tetrachloride	ND		0.50		ug/L			08/31/23 15:21	1
Chlorobenzene	ND		0.50		ug/L			08/31/23 15:21	1
Chloroethane	ND		0.50		ug/L			08/31/23 15:21	1
Chloroform	ND	F1	0.50		ug/L			08/31/23 15:21	1
Chloromethane	ND		1.0		ug/L			08/31/23 15:21	1
Dibromochloromethane	ND		0.50		ug/L			08/31/23 15:21	1
Dibromomethane	ND		0.50		ug/L			08/31/23 15:21	1
Dichlorodifluoromethane	ND	F2	1.0		ug/L			08/31/23 15:21	1
Ethylbenzene	ND		0.50		ug/L			08/31/23 15:21	1
Isopropylbenzene	ND		0.50		ug/L			08/31/23 15:21	1
Methylene Chloride	ND		1.0		ug/L			08/31/23 15:21	1
Methyl-t-Butyl Ether (MTBE)	ND		0.50		ug/L			08/31/23 15:21	1
Naphthalene	ND		1.0		ug/L			08/31/23 15:21	1
n-Butylbenzene	ND		0.50		ug/L			08/31/23 15:21	1
N-Propylbenzene	ND		0.50		ug/L			08/31/23 15:21	1
o-Xylene	ND		0.50		ug/L			08/31/23 15:21	1
m,p-Xylene	ND		1.0		ug/L			08/31/23 15:21	1
p-Isopropyltoluene	ND		0.50		ug/L			08/31/23 15:21	1
sec-Butylbenzene	ND		0.50		ug/L			08/31/23 15:21	1
Styrene	ND		0.50		ug/L			08/31/23 15:21	1
trans-1,2-Dichloroethene	ND		0.50		ug/L			08/31/23 15:21	1
trans-1,3-Dichloropropene	ND		0.50		ug/L			08/31/23 15:21	1
tert-Butylbenzene	ND		0.50		ug/L			08/31/23 15:21	1
Tetrachloroethene	ND		0.50		ug/L			08/31/23 15:21	1
Toluene	ND		0.50		ug/L			08/31/23 15:21	1
Trichloroethene	ND		0.50		ug/L			08/31/23 15:21	1
Trichlorofluoromethane	ND	F2 F1	0.50		ug/L			08/31/23 15:21	1
Vinyl acetate	ND		5.0		ug/L			08/31/23 15:21	1
Vinyl chloride	ND		0.50		ug/L			08/31/23 15:21	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	93		64 - 132		08/31/23 15:21	1
4-Bromofluorobenzene (Surr)	104		76 - 120		08/31/23 15:21	1
Dibromofluoromethane	98		80 - 120		08/31/23 15:21	1
Toluene-d8 (Surr)	96		80 - 120		08/31/23 15:21	1

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Client Sample Results

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

Job ID: 570-150445-1

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

Client Sample ID: MW-32B_20230828

Date Collected: 08/28/23 14:35

Date Received: 08/29/23 17:22

Lab Sample ID: 570-150445-9

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		0.50		ug/L			08/31/23 12:49	1
1,1,1-Trichloroethane	ND		0.50		ug/L			08/31/23 12:49	1
1,1,2,2-Tetrachloroethane	ND		0.50		ug/L			08/31/23 12:49	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.50		ug/L			08/31/23 12:49	1
1,1,2-Trichloroethane	ND		0.50		ug/L			08/31/23 12:49	1
1,1-Dichloroethane	1.0		0.50		ug/L			08/31/23 12:49	1
1,1-Dichloropropene	ND		0.50		ug/L			08/31/23 12:49	1
1,2,3-Trichlorobenzene	ND		0.50		ug/L			08/31/23 12:49	1
1,2,3-Trichloropropane	ND		0.50		ug/L			08/31/23 12:49	1
1,2,4-Trichlorobenzene	ND		0.50		ug/L			08/31/23 12:49	1
1,2,4-Trimethylbenzene	ND		0.50		ug/L			08/31/23 12:49	1
1,2-Dibromo-3-Chloropropane	ND		1.0		ug/L			08/31/23 12:49	1
1,2-Dibromoethane	ND		0.50		ug/L			08/31/23 12:49	1
1,2-Dichlorobenzene	ND		0.50		ug/L			08/31/23 12:49	1
1,2-Dichloroethane	ND		0.50		ug/L			08/31/23 12:49	1
1,2-Dichloropropane	ND		0.50		ug/L			08/31/23 12:49	1
1,3,5-Trimethylbenzene	ND		0.50		ug/L			08/31/23 12:49	1
1,3-Dichlorobenzene	ND		0.50		ug/L			08/31/23 12:49	1
1,3-Dichloropropane	ND		0.50		ug/L			08/31/23 12:49	1
1,4-Dichlorobenzene	ND		0.50		ug/L			08/31/23 12:49	1
2,2-Dichloropropane	ND		0.50		ug/L			08/31/23 12:49	1
2-Butanone	ND		5.0		ug/L			08/31/23 12:49	1
2-Chlorotoluene	ND		0.50		ug/L			08/31/23 12:49	1
2-Hexanone	ND		6.0		ug/L			08/31/23 12:49	1
4-Chlorotoluene	ND		0.50		ug/L			08/31/23 12:49	1
4-Methyl-2-pentanone	ND		5.0		ug/L			08/31/23 12:49	1
Acetone	ND		8.0		ug/L			08/31/23 12:49	1
Benzene	ND		0.50		ug/L			08/31/23 12:49	1
Bromobenzene	ND		0.50		ug/L			08/31/23 12:49	1
Bromochloromethane	ND		1.0		ug/L			08/31/23 12:49	1
Bromodichloromethane	ND		0.50		ug/L			08/31/23 12:49	1
Bromoform	ND		0.50		ug/L			08/31/23 12:49	1
Bromomethane	ND		2.0		ug/L			08/31/23 12:49	1
cis-1,2-Dichloroethene	3.7		0.50		ug/L			08/31/23 12:49	1
cis-1,3-Dichloropropene	ND		0.50		ug/L			08/31/23 12:49	1
Carbon disulfide	ND		1.0		ug/L			08/31/23 12:49	1
Carbon tetrachloride	ND		0.50		ug/L			08/31/23 12:49	1
Chlorobenzene	ND		0.50		ug/L			08/31/23 12:49	1
Chloroethane	ND		0.50		ug/L			08/31/23 12:49	1
Chloroform	ND		0.50		ug/L			08/31/23 12:49	1
Chloromethane	ND		1.0		ug/L			08/31/23 12:49	1
Dibromochloromethane	ND		0.50		ug/L			08/31/23 12:49	1
Dibromomethane	ND		0.50		ug/L			08/31/23 12:49	1
Dichlorodifluoromethane	ND		1.0		ug/L			08/31/23 12:49	1
Ethylbenzene	ND		0.50		ug/L			08/31/23 12:49	1
Isopropylbenzene	ND		0.50		ug/L			08/31/23 12:49	1
Methylene Chloride	ND		1.0		ug/L			08/31/23 12:49	1
Methyl-t-Butyl Ether (MTBE)	ND		0.50		ug/L			08/31/23 12:49	1
Naphthalene	ND		1.0		ug/L			08/31/23 12:49	1

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Client Sample Results

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

Job ID: 570-150445-1

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

Client Sample ID: MW-32B_20230828

Date Collected: 08/28/23 14:35

Date Received: 08/29/23 17:22

Lab Sample ID: 570-150445-9

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
n-Butylbenzene	ND		0.50		ug/L			08/31/23 12:49	1
N-Propylbenzene	ND		0.50		ug/L			08/31/23 12:49	1
o-Xylene	ND		0.50		ug/L			08/31/23 12:49	1
m,p-Xylene	ND		1.0		ug/L			08/31/23 12:49	1
p-Isopropyltoluene	ND		0.50		ug/L			08/31/23 12:49	1
sec-Butylbenzene	ND		0.50		ug/L			08/31/23 12:49	1
Styrene	ND		0.50		ug/L			08/31/23 12:49	1
trans-1,2-Dichloroethene	ND		0.50		ug/L			08/31/23 12:49	1
trans-1,3-Dichloropropene	ND		0.50		ug/L			08/31/23 12:49	1
tert-Butylbenzene	ND		0.50		ug/L			08/31/23 12:49	1
Tetrachloroethene	ND		0.50		ug/L			08/31/23 12:49	1
Toluene	ND		0.50		ug/L			08/31/23 12:49	1
Trichloroethene	37		0.50		ug/L			08/31/23 12:49	1
Trichlorofluoromethane	ND		0.50		ug/L			08/31/23 12:49	1
Vinyl acetate	ND		5.0		ug/L			08/31/23 12:49	1
Vinyl chloride	ND		0.50		ug/L			08/31/23 12:49	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	92		64 - 132		08/31/23 12:49	1
4-Bromofluorobenzene (Surr)	101		76 - 120		08/31/23 12:49	1
Dibromofluoromethane	92		80 - 120		08/31/23 12:49	1
Toluene-d8 (Surr)	97		80 - 120		08/31/23 12:49	1

Client Sample ID: MW-3200B_20230828

Date Collected: 08/28/23 14:40

Date Received: 08/29/23 17:22

Lab Sample ID: 570-150445-10

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		0.50		ug/L			08/31/23 13:15	1
1,1,1-Trichloroethane	ND		0.50		ug/L			08/31/23 13:15	1
1,1,2,2-Tetrachloroethane	ND		0.50		ug/L			08/31/23 13:15	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.50		ug/L			08/31/23 13:15	1
1,1,2-Trichloroethane	ND		0.50		ug/L			08/31/23 13:15	1
1,1-Dichloroethane	1.1		0.50		ug/L			08/31/23 13:15	1
1,1-Dichloropropene	ND		0.50		ug/L			08/31/23 13:15	1
1,2,3-Trichlorobenzene	ND		0.50		ug/L			08/31/23 13:15	1
1,2,3-Trichloropropane	ND		0.50		ug/L			08/31/23 13:15	1
1,2,4-Trichlorobenzene	ND		0.50		ug/L			08/31/23 13:15	1
1,2,4-Trimethylbenzene	ND		0.50		ug/L			08/31/23 13:15	1
1,2-Dibromo-3-Chloropropane	ND		1.0		ug/L			08/31/23 13:15	1
1,2-Dibromoethane	ND		0.50		ug/L			08/31/23 13:15	1
1,2-Dichlorobenzene	ND		0.50		ug/L			08/31/23 13:15	1
1,2-Dichloroethane	ND		0.50		ug/L			08/31/23 13:15	1
1,2-Dichloropropane	ND		0.50		ug/L			08/31/23 13:15	1
1,3,5-Trimethylbenzene	ND		0.50		ug/L			08/31/23 13:15	1
1,3-Dichlorobenzene	ND		0.50		ug/L			08/31/23 13:15	1
1,3-Dichloropropane	ND		0.50		ug/L			08/31/23 13:15	1
1,4-Dichlorobenzene	ND		0.50		ug/L			08/31/23 13:15	1
2,2-Dichloropropane	ND		0.50		ug/L			08/31/23 13:15	1
2-Butanone	ND		5.0		ug/L			08/31/23 13:15	1
2-Chlorotoluene	ND		0.50		ug/L			08/31/23 13:15	1

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Client Sample Results

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

Job ID: 570-150445-1

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

Client Sample ID: MW-3200B_20230828

Date Collected: 08/28/23 14:40

Date Received: 08/29/23 17:22

Lab Sample ID: 570-150445-10

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Hexanone	ND		6.0		ug/L			08/31/23 13:15	1
4-Chlorotoluene	ND		0.50		ug/L			08/31/23 13:15	1
4-Methyl-2-pentanone	ND		5.0		ug/L			08/31/23 13:15	1
Acetone	ND		8.0		ug/L			08/31/23 13:15	1
Benzene	ND		0.50		ug/L			08/31/23 13:15	1
Bromobenzene	ND		0.50		ug/L			08/31/23 13:15	1
Bromochloromethane	ND		1.0		ug/L			08/31/23 13:15	1
Bromodichloromethane	ND		0.50		ug/L			08/31/23 13:15	1
Bromoform	ND		0.50		ug/L			08/31/23 13:15	1
Bromomethane	ND		2.0		ug/L			08/31/23 13:15	1
cis-1,2-Dichloroethene	4.0		0.50		ug/L			08/31/23 13:15	1
cis-1,3-Dichloropropene	ND		0.50		ug/L			08/31/23 13:15	1
Carbon disulfide	ND		1.0		ug/L			08/31/23 13:15	1
Carbon tetrachloride	ND		0.50		ug/L			08/31/23 13:15	1
Chlorobenzene	ND		0.50		ug/L			08/31/23 13:15	1
Chloroethane	ND		0.50		ug/L			08/31/23 13:15	1
Chloroform	ND		0.50		ug/L			08/31/23 13:15	1
Chloromethane	ND		1.0		ug/L			08/31/23 13:15	1
Dibromochloromethane	ND		0.50		ug/L			08/31/23 13:15	1
Dibromomethane	ND		0.50		ug/L			08/31/23 13:15	1
Dichlorodifluoromethane	ND		1.0		ug/L			08/31/23 13:15	1
Ethylbenzene	ND		0.50		ug/L			08/31/23 13:15	1
Isopropylbenzene	ND		0.50		ug/L			08/31/23 13:15	1
Methylene Chloride	ND		1.0		ug/L			08/31/23 13:15	1
Methyl-t-Butyl Ether (MTBE)	ND		0.50		ug/L			08/31/23 13:15	1
Naphthalene	ND		1.0		ug/L			08/31/23 13:15	1
n-Butylbenzene	ND		0.50		ug/L			08/31/23 13:15	1
N-Propylbenzene	ND		0.50		ug/L			08/31/23 13:15	1
o-Xylene	ND		0.50		ug/L			08/31/23 13:15	1
m,p-Xylene	ND		1.0		ug/L			08/31/23 13:15	1
p-Isopropyltoluene	ND		0.50		ug/L			08/31/23 13:15	1
sec-Butylbenzene	ND		0.50		ug/L			08/31/23 13:15	1
Styrene	ND		0.50		ug/L			08/31/23 13:15	1
trans-1,2-Dichloroethene	ND		0.50		ug/L			08/31/23 13:15	1
trans-1,3-Dichloropropene	ND		0.50		ug/L			08/31/23 13:15	1
tert-Butylbenzene	ND		0.50		ug/L			08/31/23 13:15	1
Tetrachloroethene	ND		0.50		ug/L			08/31/23 13:15	1
Toluene	ND		0.50		ug/L			08/31/23 13:15	1
Trichloroethene	40		0.50		ug/L			08/31/23 13:15	1
Trichlorofluoromethane	ND		0.50		ug/L			08/31/23 13:15	1
Vinyl acetate	ND		5.0		ug/L			08/31/23 13:15	1
Vinyl chloride	ND		0.50		ug/L			08/31/23 13:15	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	92		64 - 132		08/31/23 13:15	1
4-Bromofluorobenzene (Surr)	101		76 - 120		08/31/23 13:15	1
Dibromofluoromethane	95		80 - 120		08/31/23 13:15	1
Toluene-d8 (Surr)	99		80 - 120		08/31/23 13:15	1

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Client Sample Results

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

Job ID: 570-150445-1

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

Client Sample ID: MW-36_20230828

Date Collected: 08/28/23 17:00

Date Received: 08/29/23 17:22

Lab Sample ID: 570-150445-11

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		0.50		ug/L			08/31/23 13:40	1
1,1,1-Trichloroethane	ND		0.50		ug/L			08/31/23 13:40	1
1,1,2,2-Tetrachloroethane	ND		0.50		ug/L			08/31/23 13:40	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.50		ug/L			08/31/23 13:40	1
1,1,2-Trichloroethane	ND		0.50		ug/L			08/31/23 13:40	1
1,1-Dichloroethane	0.61		0.50		ug/L			08/31/23 13:40	1
1,1-Dichloroethene	55		0.50		ug/L			08/31/23 13:40	1
1,1-Dichloropropene	ND		0.50		ug/L			08/31/23 13:40	1
1,2,3-Trichlorobenzene	ND		0.50		ug/L			08/31/23 13:40	1
1,2,3-Trichloropropane	ND		0.50		ug/L			08/31/23 13:40	1
1,2,4-Trichlorobenzene	ND		0.50		ug/L			08/31/23 13:40	1
1,2,4-Trimethylbenzene	ND		0.50		ug/L			08/31/23 13:40	1
1,2-Dibromo-3-Chloropropane	ND		1.0		ug/L			08/31/23 13:40	1
1,2-Dibromoethane	ND		0.50		ug/L			08/31/23 13:40	1
1,2-Dichlorobenzene	ND		0.50		ug/L			08/31/23 13:40	1
1,2-Dichloroethane	ND		0.50		ug/L			08/31/23 13:40	1
1,2-Dichloropropane	ND		0.50		ug/L			08/31/23 13:40	1
1,3,5-Trimethylbenzene	ND		0.50		ug/L			08/31/23 13:40	1
1,3-Dichlorobenzene	ND		0.50		ug/L			08/31/23 13:40	1
1,3-Dichloropropane	ND		0.50		ug/L			08/31/23 13:40	1
1,4-Dichlorobenzene	ND		0.50		ug/L			08/31/23 13:40	1
2,2-Dichloropropane	ND		0.50		ug/L			08/31/23 13:40	1
2-Butanone	ND		5.0		ug/L			08/31/23 13:40	1
2-Chlorotoluene	ND		0.50		ug/L			08/31/23 13:40	1
2-Hexanone	ND		6.0		ug/L			08/31/23 13:40	1
4-Chlorotoluene	ND		0.50		ug/L			08/31/23 13:40	1
4-Methyl-2-pentanone	ND		5.0		ug/L			08/31/23 13:40	1
Acetone	ND		8.0		ug/L			08/31/23 13:40	1
Benzene	ND		0.50		ug/L			08/31/23 13:40	1
Bromobenzene	ND		0.50		ug/L			08/31/23 13:40	1
Bromochloromethane	ND		1.0		ug/L			08/31/23 13:40	1
Bromodichloromethane	ND		0.50		ug/L			08/31/23 13:40	1
Bromoform	ND		0.50		ug/L			08/31/23 13:40	1
Bromomethane	ND		2.0		ug/L			08/31/23 13:40	1
cis-1,2-Dichloroethene	ND		0.50		ug/L			08/31/23 13:40	1
cis-1,3-Dichloropropene	ND		0.50		ug/L			08/31/23 13:40	1
Carbon disulfide	ND		1.0		ug/L			08/31/23 13:40	1
Carbon tetrachloride	ND		0.50		ug/L			08/31/23 13:40	1
Chlorobenzene	ND		0.50		ug/L			08/31/23 13:40	1
Chloroethane	ND		0.50		ug/L			08/31/23 13:40	1
Chloroform	ND		0.50		ug/L			08/31/23 13:40	1
Chloromethane	ND		1.0		ug/L			08/31/23 13:40	1
Dibromochloromethane	ND		0.50		ug/L			08/31/23 13:40	1
Dibromomethane	ND		0.50		ug/L			08/31/23 13:40	1
Dichlorodifluoromethane	ND		1.0		ug/L			08/31/23 13:40	1
Ethylbenzene	ND		0.50		ug/L			08/31/23 13:40	1
Isopropylbenzene	ND		0.50		ug/L			08/31/23 13:40	1
Methylene Chloride	ND		1.0		ug/L			08/31/23 13:40	1
Methyl-t-Butyl Ether (MTBE)	ND		0.50		ug/L			08/31/23 13:40	1

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Client Sample Results

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

Job ID: 570-150445-1

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

Client Sample ID: MW-36_20230828

Date Collected: 08/28/23 17:00

Date Received: 08/29/23 17:22

Lab Sample ID: 570-150445-11

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	ND		1.0		ug/L			08/31/23 13:40	1
n-Butylbenzene	ND		0.50		ug/L			08/31/23 13:40	1
N-Propylbenzene	ND		0.50		ug/L			08/31/23 13:40	1
o-Xylene	ND		0.50		ug/L			08/31/23 13:40	1
m,p-Xylene	ND		1.0		ug/L			08/31/23 13:40	1
p-Isopropyltoluene	ND		0.50		ug/L			08/31/23 13:40	1
sec-Butylbenzene	ND		0.50		ug/L			08/31/23 13:40	1
Styrene	ND		0.50		ug/L			08/31/23 13:40	1
trans-1,2-Dichloroethene	ND		0.50		ug/L			08/31/23 13:40	1
trans-1,3-Dichloropropene	ND		0.50		ug/L			08/31/23 13:40	1
tert-Butylbenzene	ND		0.50		ug/L			08/31/23 13:40	1
Tetrachloroethene	ND		0.50		ug/L			08/31/23 13:40	1
Toluene	ND		0.50		ug/L			08/31/23 13:40	1
Trichloroethene	ND		0.50		ug/L			08/31/23 13:40	1
Trichlorofluoromethane	ND		0.50		ug/L			08/31/23 13:40	1
Vinyl acetate	ND		5.0		ug/L			08/31/23 13:40	1
Vinyl chloride	ND		0.50		ug/L			08/31/23 13:40	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	93		64 - 132		08/31/23 13:40	1
4-Bromofluorobenzene (Surr)	104		76 - 120		08/31/23 13:40	1
Dibromofluoromethane	97		80 - 120		08/31/23 13:40	1
Toluene-d8 (Surr)	94		80 - 120		08/31/23 13:40	1

Client Sample ID: MW-40_20230829

Date Collected: 08/29/23 09:18

Date Received: 08/29/23 17:22

Lab Sample ID: 570-150445-12

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		0.50		ug/L			08/30/23 23:40	1
1,1,1-Trichloroethane	ND		0.50		ug/L			08/30/23 23:40	1
1,1,2,2-Tetrachloroethane	ND		0.50		ug/L			08/30/23 23:40	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.50		ug/L			08/30/23 23:40	1
1,1,2-Trichloroethane	ND		0.50		ug/L			08/30/23 23:40	1
1,1-Dichloroethane	ND		0.50		ug/L			08/30/23 23:40	1
1,1-Dichloroethene	ND		0.50		ug/L			08/30/23 23:40	1
1,1-Dichloropropene	ND		0.50		ug/L			08/30/23 23:40	1
1,2,3-Trichlorobenzene	ND		0.50		ug/L			08/30/23 23:40	1
1,2,3-Trichloropropane	ND		0.50		ug/L			08/30/23 23:40	1
1,2,4-Trichlorobenzene	ND		0.50		ug/L			08/30/23 23:40	1
1,2,4-Trimethylbenzene	ND		0.50		ug/L			08/30/23 23:40	1
1,2-Dibromo-3-Chloropropane	ND		1.0		ug/L			08/30/23 23:40	1
1,2-Dibromoethane	ND		0.50		ug/L			08/30/23 23:40	1
1,2-Dichlorobenzene	ND		0.50		ug/L			08/30/23 23:40	1
1,2-Dichloroethane	ND		0.50		ug/L			08/30/23 23:40	1
1,2-Dichloropropane	ND		0.50		ug/L			08/30/23 23:40	1
1,3,5-Trimethylbenzene	ND		0.50		ug/L			08/30/23 23:40	1
1,3-Dichlorobenzene	ND		0.50		ug/L			08/30/23 23:40	1
1,3-Dichloropropane	ND		0.50		ug/L			08/30/23 23:40	1
1,4-Dichlorobenzene	ND		0.50		ug/L			08/30/23 23:40	1
2,2-Dichloropropane	ND		0.50		ug/L			08/30/23 23:40	1

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Client Sample Results

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

Job ID: 570-150445-1

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

Client Sample ID: MW-40_20230829

Date Collected: 08/29/23 09:18

Date Received: 08/29/23 17:22

Lab Sample ID: 570-150445-12

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Butanone	ND		5.0		ug/L			08/30/23 23:40	1
2-Chlorotoluene	ND		0.50		ug/L			08/30/23 23:40	1
2-Hexanone	ND		6.0		ug/L			08/30/23 23:40	1
4-Chlorotoluene	ND		0.50		ug/L			08/30/23 23:40	1
4-Methyl-2-pentanone	ND		5.0		ug/L			08/30/23 23:40	1
Acetone	ND	+	8.0		ug/L			08/30/23 23:40	1
Benzene	ND		0.50		ug/L			08/30/23 23:40	1
Bromobenzene	ND		0.50		ug/L			08/30/23 23:40	1
Bromochloromethane	ND		1.0		ug/L			08/30/23 23:40	1
Bromodichloromethane	ND		0.50		ug/L			08/30/23 23:40	1
Bromoform	ND		0.50		ug/L			08/30/23 23:40	1
Bromomethane	ND		2.0		ug/L			08/30/23 23:40	1
cis-1,2-Dichloroethene	ND		0.50		ug/L			08/30/23 23:40	1
cis-1,3-Dichloropropene	ND		0.50		ug/L			08/30/23 23:40	1
Carbon disulfide	ND		1.0		ug/L			08/30/23 23:40	1
Carbon tetrachloride	ND		0.50		ug/L			08/30/23 23:40	1
Chlorobenzene	ND		0.50		ug/L			08/30/23 23:40	1
Chloroethane	ND		0.50		ug/L			08/30/23 23:40	1
Chloroform	ND		0.50		ug/L			08/30/23 23:40	1
Chloromethane	ND		1.0		ug/L			08/30/23 23:40	1
Dibromochloromethane	ND		0.50		ug/L			08/30/23 23:40	1
Dibromomethane	ND		0.50		ug/L			08/30/23 23:40	1
Dichlorodifluoromethane	ND		1.0		ug/L			08/30/23 23:40	1
Ethylbenzene	ND		0.50		ug/L			08/30/23 23:40	1
Isopropylbenzene	ND		0.50		ug/L			08/30/23 23:40	1
Methylene Chloride	ND		1.0		ug/L			08/30/23 23:40	1
Methyl-t-Butyl Ether (MTBE)	ND		0.50		ug/L			08/30/23 23:40	1
Naphthalene	ND		1.0		ug/L			08/30/23 23:40	1
n-Butylbenzene	ND		0.50		ug/L			08/30/23 23:40	1
N-Propylbenzene	ND		0.50		ug/L			08/30/23 23:40	1
o-Xylene	ND		0.50		ug/L			08/30/23 23:40	1
m,p-Xylene	ND		1.0		ug/L			08/30/23 23:40	1
p-Isopropyltoluene	ND		0.50		ug/L			08/30/23 23:40	1
sec-Butylbenzene	ND		0.50		ug/L			08/30/23 23:40	1
Styrene	ND		0.50		ug/L			08/30/23 23:40	1
trans-1,2-Dichloroethene	ND		0.50		ug/L			08/30/23 23:40	1
trans-1,3-Dichloropropene	ND		0.50		ug/L			08/30/23 23:40	1
tert-Butylbenzene	ND		0.50		ug/L			08/30/23 23:40	1
Tetrachloroethene	ND		0.50		ug/L			08/30/23 23:40	1
Toluene	ND		0.50		ug/L			08/30/23 23:40	1
Trichloroethene	ND		0.50		ug/L			08/30/23 23:40	1
Trichlorofluoromethane	ND		0.50		ug/L			08/30/23 23:40	1
Vinyl acetate	ND		5.0		ug/L			08/30/23 23:40	1
Vinyl chloride	ND		0.50		ug/L			08/30/23 23:40	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	101		64 - 132		08/30/23 23:40	1
4-Bromofluorobenzene (Surr)	89		76 - 120		08/30/23 23:40	1
Dibromofluoromethane	106		80 - 120		08/30/23 23:40	1
Toluene-d8 (Surr)	103		80 - 120		08/30/23 23:40	1

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Client Sample Results

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

Job ID: 570-150445-1

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

Client Sample ID: MW-42_20230829

Date Collected: 08/29/23 11:50

Date Received: 08/29/23 17:22

Lab Sample ID: 570-150445-13

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		0.50		ug/L			08/31/23 14:05	1
1,1,1-Trichloroethane	ND		0.50		ug/L			08/31/23 14:05	1
1,1,2,2-Tetrachloroethane	ND		0.50		ug/L			08/31/23 14:05	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.50		ug/L			08/31/23 14:05	1
1,1,2-Trichloroethane	ND		0.50		ug/L			08/31/23 14:05	1
1,1-Dichloroethane	0.50		0.50		ug/L			08/31/23 14:05	1
1,1-Dichloroethene	31		0.50		ug/L			08/31/23 14:05	1
1,1-Dichloropropene	ND		0.50		ug/L			08/31/23 14:05	1
1,2,3-Trichlorobenzene	ND		0.50		ug/L			08/31/23 14:05	1
1,2,3-Trichloropropane	ND		0.50		ug/L			08/31/23 14:05	1
1,2,4-Trichlorobenzene	ND		0.50		ug/L			08/31/23 14:05	1
1,2,4-Trimethylbenzene	ND		0.50		ug/L			08/31/23 14:05	1
1,2-Dibromo-3-Chloropropane	ND		1.0		ug/L			08/31/23 14:05	1
1,2-Dibromoethane	ND		0.50		ug/L			08/31/23 14:05	1
1,2-Dichlorobenzene	ND		0.50		ug/L			08/31/23 14:05	1
1,2-Dichloroethane	ND		0.50		ug/L			08/31/23 14:05	1
1,2-Dichloropropane	ND		0.50		ug/L			08/31/23 14:05	1
1,3,5-Trimethylbenzene	ND		0.50		ug/L			08/31/23 14:05	1
1,3-Dichlorobenzene	ND		0.50		ug/L			08/31/23 14:05	1
1,3-Dichloropropane	ND		0.50		ug/L			08/31/23 14:05	1
1,4-Dichlorobenzene	ND		0.50		ug/L			08/31/23 14:05	1
2,2-Dichloropropane	ND		0.50		ug/L			08/31/23 14:05	1
2-Butanone	ND		5.0		ug/L			08/31/23 14:05	1
2-Chlorotoluene	ND		0.50		ug/L			08/31/23 14:05	1
2-Hexanone	ND		6.0		ug/L			08/31/23 14:05	1
4-Chlorotoluene	ND		0.50		ug/L			08/31/23 14:05	1
4-Methyl-2-pentanone	ND		5.0		ug/L			08/31/23 14:05	1
Acetone	ND		8.0		ug/L			08/31/23 14:05	1
Benzene	ND		0.50		ug/L			08/31/23 14:05	1
Bromobenzene	ND		0.50		ug/L			08/31/23 14:05	1
Bromochloromethane	ND		1.0		ug/L			08/31/23 14:05	1
Bromodichloromethane	ND		0.50		ug/L			08/31/23 14:05	1
Bromoform	ND		0.50		ug/L			08/31/23 14:05	1
Bromomethane	ND		2.0		ug/L			08/31/23 14:05	1
cis-1,2-Dichloroethene	ND		0.50		ug/L			08/31/23 14:05	1
cis-1,3-Dichloropropene	ND		0.50		ug/L			08/31/23 14:05	1
Carbon disulfide	ND		1.0		ug/L			08/31/23 14:05	1
Carbon tetrachloride	ND		0.50		ug/L			08/31/23 14:05	1
Chlorobenzene	ND		0.50		ug/L			08/31/23 14:05	1
Chloroethane	ND		0.50		ug/L			08/31/23 14:05	1
Chloroform	ND		0.50		ug/L			08/31/23 14:05	1
Chloromethane	ND		1.0		ug/L			08/31/23 14:05	1
Dibromochloromethane	ND		0.50		ug/L			08/31/23 14:05	1
Dibromomethane	ND		0.50		ug/L			08/31/23 14:05	1
Dichlorodifluoromethane	ND		1.0		ug/L			08/31/23 14:05	1
Ethylbenzene	ND		0.50		ug/L			08/31/23 14:05	1
Isopropylbenzene	ND		0.50		ug/L			08/31/23 14:05	1
Methylene Chloride	ND		1.0		ug/L			08/31/23 14:05	1
Methyl-t-Butyl Ether (MTBE)	ND		0.50		ug/L			08/31/23 14:05	1

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Client Sample Results

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

Job ID: 570-150445-1

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

Client Sample ID: MW-42_20230829

Date Collected: 08/29/23 11:50

Date Received: 08/29/23 17:22

Lab Sample ID: 570-150445-13

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	ND		1.0		ug/L			08/31/23 14:05	1
n-Butylbenzene	ND		0.50		ug/L			08/31/23 14:05	1
N-Propylbenzene	ND		0.50		ug/L			08/31/23 14:05	1
o-Xylene	ND		0.50		ug/L			08/31/23 14:05	1
m,p-Xylene	ND		1.0		ug/L			08/31/23 14:05	1
p-Isopropyltoluene	ND		0.50		ug/L			08/31/23 14:05	1
sec-Butylbenzene	ND		0.50		ug/L			08/31/23 14:05	1
Styrene	ND		0.50		ug/L			08/31/23 14:05	1
trans-1,2-Dichloroethene	ND		0.50		ug/L			08/31/23 14:05	1
trans-1,3-Dichloropropene	ND		0.50		ug/L			08/31/23 14:05	1
tert-Butylbenzene	ND		0.50		ug/L			08/31/23 14:05	1
Tetrachloroethene	ND		0.50		ug/L			08/31/23 14:05	1
Toluene	ND		0.50		ug/L			08/31/23 14:05	1
Trichloroethene	ND		0.50		ug/L			08/31/23 14:05	1
Trichlorofluoromethane	ND		0.50		ug/L			08/31/23 14:05	1
Vinyl acetate	ND		5.0		ug/L			08/31/23 14:05	1
Vinyl chloride	ND		0.50		ug/L			08/31/23 14:05	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	95		64 - 132		08/31/23 14:05	1
4-Bromofluorobenzene (Surr)	101		76 - 120		08/31/23 14:05	1
Dibromofluoromethane	95		80 - 120		08/31/23 14:05	1
Toluene-d8 (Surr)	96		80 - 120		08/31/23 14:05	1

Client Sample ID: MW-33_20230829

Date Collected: 08/29/23 15:38

Date Received: 08/29/23 17:22

Lab Sample ID: 570-150445-14

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		0.50		ug/L			08/31/23 14:31	1
1,1,1-Trichloroethane	ND		0.50		ug/L			08/31/23 14:31	1
1,1,2,2-Tetrachloroethane	ND		0.50		ug/L			08/31/23 14:31	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.50		ug/L			08/31/23 14:31	1
1,1,2-Trichloroethane	ND		0.50		ug/L			08/31/23 14:31	1
1,1-Dichloroethane	ND		0.50		ug/L			08/31/23 14:31	1
1,1-Dichloroethene	3.1		0.50		ug/L			08/31/23 14:31	1
1,1-Dichloropropene	ND		0.50		ug/L			08/31/23 14:31	1
1,2,3-Trichlorobenzene	ND		0.50		ug/L			08/31/23 14:31	1
1,2,3-Trichloropropane	ND		0.50		ug/L			08/31/23 14:31	1
1,2,4-Trichlorobenzene	ND		0.50		ug/L			08/31/23 14:31	1
1,2,4-Trimethylbenzene	ND		0.50		ug/L			08/31/23 14:31	1
1,2-Dibromo-3-Chloropropane	ND		1.0		ug/L			08/31/23 14:31	1
1,2-Dibromoethane	ND		0.50		ug/L			08/31/23 14:31	1
1,2-Dichlorobenzene	ND		0.50		ug/L			08/31/23 14:31	1
1,2-Dichloroethane	ND		0.50		ug/L			08/31/23 14:31	1
1,2-Dichloropropane	ND		0.50		ug/L			08/31/23 14:31	1
1,3,5-Trimethylbenzene	ND		0.50		ug/L			08/31/23 14:31	1
1,3-Dichlorobenzene	ND		0.50		ug/L			08/31/23 14:31	1
1,3-Dichloropropane	ND		0.50		ug/L			08/31/23 14:31	1
1,4-Dichlorobenzene	ND		0.50		ug/L			08/31/23 14:31	1
2,2-Dichloropropane	ND		0.50		ug/L			08/31/23 14:31	1

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Client Sample Results

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

Job ID: 570-150445-1

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

Client Sample ID: MW-33_20230829

Date Collected: 08/29/23 15:38

Date Received: 08/29/23 17:22

Lab Sample ID: 570-150445-14

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Butanone	ND		5.0		ug/L			08/31/23 14:31	1
2-Chlorotoluene	ND		0.50		ug/L			08/31/23 14:31	1
2-Hexanone	ND		6.0		ug/L			08/31/23 14:31	1
4-Chlorotoluene	ND		0.50		ug/L			08/31/23 14:31	1
4-Methyl-2-pentanone	ND		5.0		ug/L			08/31/23 14:31	1
Acetone	ND		8.0		ug/L			08/31/23 14:31	1
Benzene	ND		0.50		ug/L			08/31/23 14:31	1
Bromobenzene	ND		0.50		ug/L			08/31/23 14:31	1
Bromochloromethane	ND		1.0		ug/L			08/31/23 14:31	1
Bromodichloromethane	ND		0.50		ug/L			08/31/23 14:31	1
Bromoform	ND		0.50		ug/L			08/31/23 14:31	1
Bromomethane	ND		2.0		ug/L			08/31/23 14:31	1
cis-1,2-Dichloroethene	ND		0.50		ug/L			08/31/23 14:31	1
cis-1,3-Dichloropropene	ND		0.50		ug/L			08/31/23 14:31	1
Carbon disulfide	ND		1.0		ug/L			08/31/23 14:31	1
Carbon tetrachloride	ND		0.50		ug/L			08/31/23 14:31	1
Chlorobenzene	ND		0.50		ug/L			08/31/23 14:31	1
Chloroethane	ND		0.50		ug/L			08/31/23 14:31	1
Chloroform	ND		0.50		ug/L			08/31/23 14:31	1
Chloromethane	ND		1.0		ug/L			08/31/23 14:31	1
Dibromochloromethane	ND		0.50		ug/L			08/31/23 14:31	1
Dibromomethane	ND		0.50		ug/L			08/31/23 14:31	1
Dichlorodifluoromethane	ND		1.0		ug/L			08/31/23 14:31	1
Ethylbenzene	ND		0.50		ug/L			08/31/23 14:31	1
Isopropylbenzene	ND		0.50		ug/L			08/31/23 14:31	1
Methylene Chloride	ND		1.0		ug/L			08/31/23 14:31	1
Methyl-t-Butyl Ether (MTBE)	ND		0.50		ug/L			08/31/23 14:31	1
Naphthalene	ND		1.0		ug/L			08/31/23 14:31	1
n-Butylbenzene	ND		0.50		ug/L			08/31/23 14:31	1
N-Propylbenzene	ND		0.50		ug/L			08/31/23 14:31	1
o-Xylene	ND		0.50		ug/L			08/31/23 14:31	1
m,p-Xylene	ND		1.0		ug/L			08/31/23 14:31	1
p-Isopropyltoluene	ND		0.50		ug/L			08/31/23 14:31	1
sec-Butylbenzene	ND		0.50		ug/L			08/31/23 14:31	1
Styrene	ND		0.50		ug/L			08/31/23 14:31	1
trans-1,2-Dichloroethene	ND		0.50		ug/L			08/31/23 14:31	1
trans-1,3-Dichloropropene	ND		0.50		ug/L			08/31/23 14:31	1
tert-Butylbenzene	ND		0.50		ug/L			08/31/23 14:31	1
Tetrachloroethene	ND		0.50		ug/L			08/31/23 14:31	1
Toluene	ND		0.50		ug/L			08/31/23 14:31	1
Trichloroethene	0.55		0.50		ug/L			08/31/23 14:31	1
Trichlorofluoromethane	ND		0.50		ug/L			08/31/23 14:31	1
Vinyl acetate	ND		5.0		ug/L			08/31/23 14:31	1
Vinyl chloride	ND		0.50		ug/L			08/31/23 14:31	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	92		64 - 132		08/31/23 14:31	1
4-Bromofluorobenzene (Surr)	105		76 - 120		08/31/23 14:31	1
Dibromofluoromethane	97		80 - 120		08/31/23 14:31	1
Toluene-d8 (Surr)	95		80 - 120		08/31/23 14:31	1

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Client Sample Results

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

Job ID: 570-150445-1

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

Client Sample ID: MW-32B_20230828

Date Collected: 08/28/23 14:35

Date Received: 08/29/23 17:22

Lab Sample ID: 570-150445-9

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	110		2.5		ug/L			09/01/23 14:02	5
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	108		64 - 132					09/01/23 14:02	5
4-Bromofluorobenzene (Surr)	96		76 - 120					09/01/23 14:02	5
Dibromofluoromethane	104		80 - 120					09/01/23 14:02	5
Toluene-d8 (Surr)	98		80 - 120					09/01/23 14:02	5

Client Sample ID: MW-3200B_20230828

Date Collected: 08/28/23 14:40

Date Received: 08/29/23 17:22

Lab Sample ID: 570-150445-10

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	110		2.5		ug/L			09/01/23 14:26	5
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	111		64 - 132					09/01/23 14:26	5
4-Bromofluorobenzene (Surr)	97		76 - 120					09/01/23 14:26	5
Dibromofluoromethane	104		80 - 120					09/01/23 14:26	5
Toluene-d8 (Surr)	98		80 - 120					09/01/23 14:26	5

Client Sample Results

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

Job ID: 570-150445-1

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

Client Sample ID: MW-41_20230825

Date Collected: 08/25/23 09:55

Date Received: 08/29/23 17:22

Lab Sample ID: 570-150445-2

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	ND		0.38		ug/L		08/30/23 14:20	09/01/23 00:09	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,4-Dioxane-d8	32		21 - 120				08/30/23 14:20	09/01/23 00:09	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Nitrobenzene-d5	114		58 - 135				08/30/23 14:20	09/01/23 00:09	1

Client Sample ID: MW-31_20230825

Date Collected: 08/25/23 11:40

Date Received: 08/29/23 17:22

Lab Sample ID: 570-150445-3

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	4.0		0.38		ug/L		08/30/23 14:20	09/01/23 00:24	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,4-Dioxane-d8	32		21 - 120				08/30/23 14:20	09/01/23 00:24	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Nitrobenzene-d5	108		58 - 135				08/30/23 14:20	09/01/23 00:24	1

Client Sample ID: MW-30A_20230825

Date Collected: 08/25/23 13:28

Date Received: 08/29/23 17:22

Lab Sample ID: 570-150445-4

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	ND		0.38		ug/L		08/30/23 14:20	09/01/23 00:40	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,4-Dioxane-d8	31		21 - 120				08/30/23 14:20	09/01/23 00:40	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Nitrobenzene-d5	94		58 - 135				08/30/23 14:20	09/01/23 00:40	1

Client Sample ID: MW-30B_20230825

Date Collected: 08/25/23 14:05

Date Received: 08/29/23 17:22

Lab Sample ID: 570-150445-5

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	ND		0.39		ug/L		08/30/23 14:20	09/01/23 00:55	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,4-Dioxane-d8	39		21 - 120				08/30/23 14:20	09/01/23 00:55	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Nitrobenzene-d5	97		58 - 135				08/30/23 14:20	09/01/23 00:55	1

Client Sample ID: MW-3000B_20230825

Date Collected: 08/25/23 14:15

Date Received: 08/29/23 17:22

Lab Sample ID: 570-150445-6

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	ND		0.38		ug/L		08/30/23 14:20	09/01/23 01:11	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,4-Dioxane-d8	36		21 - 120				08/30/23 14:20	09/01/23 01:11	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Nitrobenzene-d5	114		58 - 135				08/30/23 14:20	09/01/23 01:11	1

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Client Sample Results

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

Job ID: 570-150445-1

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

Client Sample ID: MW-43_20230828

Date Collected: 08/28/23 09:33

Date Received: 08/29/23 17:22

Lab Sample ID: 570-150445-7

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	ND		0.38		ug/L		08/30/23 14:20	09/01/23 01:26	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,4-Dioxane-d8	32		21 - 120				08/30/23 14:20	09/01/23 01:26	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Nitrobenzene-d5	116		58 - 135				08/30/23 14:20	09/01/23 01:26	1

Client Sample ID: MW-34B_20230828

Date Collected: 08/28/23 11:35

Date Received: 08/29/23 17:22

Lab Sample ID: 570-150445-8

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	8.4		0.38		ug/L		08/30/23 16:40	09/05/23 21:34	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,4-Dioxane-d8	40		21 - 120				08/30/23 16:40	09/05/23 21:34	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Nitrobenzene-d5	107		58 - 135				08/30/23 16:40	09/05/23 21:34	1

Client Sample ID: MW-32B_20230828

Date Collected: 08/28/23 14:35

Date Received: 08/29/23 17:22

Lab Sample ID: 570-150445-9

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	5.6		0.38		ug/L		08/30/23 14:20	09/01/23 01:42	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,4-Dioxane-d8	33		21 - 120				08/30/23 14:20	09/01/23 01:42	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Nitrobenzene-d5	116		58 - 135				08/30/23 14:20	09/01/23 01:42	1

Client Sample ID: MW-3200B_20230828

Date Collected: 08/28/23 14:40

Date Received: 08/29/23 17:22

Lab Sample ID: 570-150445-10

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	5.3		0.38		ug/L		08/30/23 14:20	09/01/23 01:57	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,4-Dioxane-d8	34		21 - 120				08/30/23 14:20	09/01/23 01:57	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Nitrobenzene-d5	122		58 - 135				08/30/23 14:20	09/01/23 01:57	1

Client Sample ID: MW-36_20230828

Date Collected: 08/28/23 17:00

Date Received: 08/29/23 17:22

Lab Sample ID: 570-150445-11

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	7.0		0.39		ug/L		08/30/23 16:40	09/05/23 21:49	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,4-Dioxane-d8	40		21 - 120				08/30/23 16:40	09/05/23 21:49	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Nitrobenzene-d5	104		58 - 135				08/30/23 16:40	09/05/23 21:49	1

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Client Sample Results

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

Job ID: 570-150445-1

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

Client Sample ID: MW-40_20230829

Date Collected: 08/29/23 09:18

Date Received: 08/29/23 17:22

Lab Sample ID: 570-150445-12

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	ND		0.37		ug/L		08/30/23 16:40	09/05/23 22:03	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,4-Dioxane-d8	39		21 - 120				08/30/23 16:40	09/05/23 22:03	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Nitrobenzene-d5	103		58 - 135				08/30/23 16:40	09/05/23 22:03	1

Client Sample ID: MW-42_20230829

Date Collected: 08/29/23 11:50

Date Received: 08/29/23 17:22

Lab Sample ID: 570-150445-13

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	1.7		0.38		ug/L		08/30/23 16:40	09/05/23 22:17	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,4-Dioxane-d8	38		21 - 120				08/30/23 16:40	09/05/23 22:17	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Nitrobenzene-d5	99		58 - 135				08/30/23 16:40	09/05/23 22:17	1

Client Sample ID: MW-33_20230829

Date Collected: 08/29/23 15:38

Date Received: 08/29/23 17:22

Lab Sample ID: 570-150445-14

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	ND		0.37		ug/L		08/30/23 16:40	09/05/23 22:32	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,4-Dioxane-d8	38		21 - 120				08/30/23 16:40	09/05/23 22:32	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Nitrobenzene-d5	113		58 - 135				08/30/23 16:40	09/05/23 22:32	1

Surrogate Summary

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

Job ID: 570-150445-1

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)
570-150425-A-6 MS	Matrix Spike	107	98	102	100
570-150425-A-6 MSD	Matrix Spike Duplicate	105	101	104	101
570-150445-1	TB-082523A	89	100	93	97
570-150445-2	MW-41_20230825	91	103	91	100
570-150445-3	MW-31_20230825	92	103	94	96
570-150445-3 MS	MW-31_20230825	93	100	92	102
570-150445-3 MSD	MW-31_20230825	92	98	93	100
570-150445-4	MW-30A_20230825	91	104	93	96
570-150445-5	MW-30B_20230825	91	103	93	96
570-150445-6	MW-3000B_20230825	91	102	92	99
570-150445-7	MW-43_20230828	90	104	94	97
570-150445-8	MW-34B_20230828	93	104	98	96
570-150445-8 MS	MW-34B_20230828	97	100	92	102
570-150445-8 MSD	MW-34B_20230828	99	97	94	99
570-150445-9	MW-32B_20230828	92	101	92	97
570-150445-9 - DL	MW-32B_20230828	108	96	104	98
570-150445-10	MW-3200B_20230828	92	101	95	99
570-150445-10 - DL	MW-3200B_20230828	111	97	104	98
570-150445-11	MW-36_20230828	93	104	97	94
570-150445-12	MW-40_20230829	101	89	106	103
570-150445-12 MS	MW-40_20230829	101	101	102	101
570-150445-12 MSD	MW-40_20230829	101	101	100	98
570-150445-13	MW-42_20230829	95	101	95	96
570-150445-14	MW-33_20230829	92	105	97	95
LCS 570-359803/3	Lab Control Sample	103	101	103	97
LCS 570-359874/4	Lab Control Sample	91	97	91	103
LCS 570-360280/4	Lab Control Sample	100	99	100	99
LCSD 570-359803/4	Lab Control Sample Dup	103	101	103	99
LCSD 570-359874/5	Lab Control Sample Dup	93	97	92	100
LCSD 570-360280/5	Lab Control Sample Dup	99	102	100	100
MB 570-359803/6	Method Blank	104	92	107	99
MB 570-359874/7	Method Blank	93	104	97	95
MB 570-360280/7	Method Blank	105	97	102	99

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

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)			
		NBZ (58-135)			
570-150445-2	MW-41_20230825	114			
570-150445-3	MW-31_20230825	108			
570-150445-3 MS	MW-31_20230825	121			
570-150445-3 MSD	MW-31_20230825	116			

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Surrogate Summary

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

Job ID: 570-150445-1

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)
570-150445-4	MW-30A_20230825	94
570-150445-5	MW-30B_20230825	97
570-150445-6	MW-3000B_20230825	114
570-150445-7	MW-43_20230828	116
570-150445-8	MW-34B_20230828	107
570-150445-8 MS	MW-34B_20230828	96
570-150445-8 MSD	MW-34B_20230828	98
570-150445-9	MW-32B_20230828	116
570-150445-10	MW-3200B_20230828	122
570-150445-11	MW-36_20230828	104
570-150445-12	MW-40_20230829	103
570-150445-12 MS	MW-40_20230829	100
570-150445-12 MSD	MW-40_20230829	93
570-150445-13	MW-42_20230829	99
570-150445-14	MW-33_20230829	113
LCS 570-359683/2-A	Lab Control Sample	118
LCS 570-359764/2-A	Lab Control Sample	94
LCSD 570-359683/3-A	Lab Control Sample Dup	131
LCSD 570-359764/3-A	Lab Control Sample Dup	93
MB 570-359683/1-A	Method Blank	177 S1+
MB 570-359764/1-A	Method Blank	92

Surrogate Legend

NBZ = Nitrobenzene-d5

Isotope Dilution Summary

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

Job ID: 570-150445-1

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)
570-150445-2	MW-41_20230825	32
570-150445-3	MW-31_20230825	32
570-150445-3 MS	MW-31_20230825	32
570-150445-3 MSD	MW-31_20230825	36
570-150445-4	MW-30A_20230825	31
570-150445-5	MW-30B_20230825	39
570-150445-6	MW-3000B_20230825	36
570-150445-7	MW-43_20230828	32
570-150445-8	MW-34B_20230828	40
570-150445-8 MS	MW-34B_20230828	39
570-150445-8 MSD	MW-34B_20230828	40
570-150445-9	MW-32B_20230828	33
570-150445-10	MW-3200B_20230828	34
570-150445-11	MW-36_20230828	40
570-150445-12	MW-40_20230829	39
570-150445-12 MS	MW-40_20230829	38
570-150445-12 MSD	MW-40_20230829	39
570-150445-13	MW-42_20230829	38
570-150445-14	MW-33_20230829	38
LCS 570-359683/2-A	Lab Control Sample	44
LCS 570-359764/2-A	Lab Control Sample	52
LCSD 570-359683/3-A	Lab Control Sample Dup	43
LCSD 570-359764/3-A	Lab Control Sample Dup	54
MB 570-359683/1-A	Method Blank	59
MB 570-359764/1-A	Method Blank	45

Surrogate Legend

DXE = 1,4-Dioxane-d8

QC Sample Results

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

Job ID: 570-150445-1

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

Lab Sample ID: MB 570-359803/6

Matrix: Water

Analysis Batch: 359803

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			08/30/23 22:45	1
1,1,1-Trichloroethane	ND		0.50		ug/L			08/30/23 22:45	1
1,1,2,2-Tetrachloroethane	ND		0.50		ug/L			08/30/23 22:45	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.50		ug/L			08/30/23 22:45	1
1,1,2-Trichloroethane	ND		0.50		ug/L			08/30/23 22:45	1
1,1-Dichloroethane	ND		0.50		ug/L			08/30/23 22:45	1
1,1-Dichloroethene	ND		0.50		ug/L			08/30/23 22:45	1
1,1-Dichloropropene	ND		0.50		ug/L			08/30/23 22:45	1
1,2,3-Trichlorobenzene	ND		0.50		ug/L			08/30/23 22:45	1
1,2,3-Trichloropropane	ND		0.50		ug/L			08/30/23 22:45	1
1,2,4-Trichlorobenzene	ND		0.50		ug/L			08/30/23 22:45	1
1,2,4-Trimethylbenzene	ND		0.50		ug/L			08/30/23 22:45	1
1,2-Dibromo-3-Chloropropane	ND		1.0		ug/L			08/30/23 22:45	1
1,2-Dibromoethane	ND		0.50		ug/L			08/30/23 22:45	1
1,2-Dichlorobenzene	ND		0.50		ug/L			08/30/23 22:45	1
1,2-Dichloroethane	ND		0.50		ug/L			08/30/23 22:45	1
1,2-Dichloropropane	ND		0.50		ug/L			08/30/23 22:45	1
1,3,5-Trimethylbenzene	ND		0.50		ug/L			08/30/23 22:45	1
1,3-Dichlorobenzene	ND		0.50		ug/L			08/30/23 22:45	1
1,3-Dichloropropane	ND		0.50		ug/L			08/30/23 22:45	1
1,4-Dichlorobenzene	ND		0.50		ug/L			08/30/23 22:45	1
2,2-Dichloropropane	ND		0.50		ug/L			08/30/23 22:45	1
2-Butanone	ND		5.0		ug/L			08/30/23 22:45	1
2-Chlorotoluene	ND		0.50		ug/L			08/30/23 22:45	1
2-Hexanone	ND		6.0		ug/L			08/30/23 22:45	1
4-Chlorotoluene	ND		0.50		ug/L			08/30/23 22:45	1
4-Methyl-2-pentanone	ND		5.0		ug/L			08/30/23 22:45	1
Acetone	ND		8.0		ug/L			08/30/23 22:45	1
Benzene	ND		0.50		ug/L			08/30/23 22:45	1
Bromobenzene	ND		0.50		ug/L			08/30/23 22:45	1
Bromochloromethane	ND		1.0		ug/L			08/30/23 22:45	1
Bromodichloromethane	ND		0.50		ug/L			08/30/23 22:45	1
Bromoform	ND		0.50		ug/L			08/30/23 22:45	1
Bromomethane	ND		2.0		ug/L			08/30/23 22:45	1
cis-1,2-Dichloroethene	ND		0.50		ug/L			08/30/23 22:45	1
cis-1,3-Dichloropropene	ND		0.50		ug/L			08/30/23 22:45	1
Carbon disulfide	ND		1.0		ug/L			08/30/23 22:45	1
Carbon tetrachloride	ND		0.50		ug/L			08/30/23 22:45	1
Chlorobenzene	ND		0.50		ug/L			08/30/23 22:45	1
Chloroethane	ND		0.50		ug/L			08/30/23 22:45	1
Chloroform	ND		0.50		ug/L			08/30/23 22:45	1
Chloromethane	ND		1.0		ug/L			08/30/23 22:45	1
Dibromochloromethane	ND		0.50		ug/L			08/30/23 22:45	1
Dibromomethane	ND		0.50		ug/L			08/30/23 22:45	1
Dichlorodifluoromethane	ND		1.0		ug/L			08/30/23 22:45	1
Ethylbenzene	ND		0.50		ug/L			08/30/23 22:45	1
Isopropylbenzene	ND		0.50		ug/L			08/30/23 22:45	1
Methylene Chloride	ND		1.0		ug/L			08/30/23 22:45	1

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QC Sample Results

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

Job ID: 570-150445-1

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

Lab Sample ID: MB 570-359803/6

Matrix: Water

Analysis Batch: 359803

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			08/30/23 22:45	1
Naphthalene	ND		1.0		ug/L			08/30/23 22:45	1
n-Butylbenzene	ND		0.50		ug/L			08/30/23 22:45	1
N-Propylbenzene	ND		0.50		ug/L			08/30/23 22:45	1
o-Xylene	ND		0.50		ug/L			08/30/23 22:45	1
m,p-Xylene	ND		1.0		ug/L			08/30/23 22:45	1
p-Isopropyltoluene	ND		0.50		ug/L			08/30/23 22:45	1
sec-Butylbenzene	ND		0.50		ug/L			08/30/23 22:45	1
Styrene	ND		0.50		ug/L			08/30/23 22:45	1
trans-1,2-Dichloroethene	ND		0.50		ug/L			08/30/23 22:45	1
trans-1,3-Dichloropropene	ND		0.50		ug/L			08/30/23 22:45	1
tert-Butylbenzene	ND		0.50		ug/L			08/30/23 22:45	1
Tetrachloroethene	ND		0.50		ug/L			08/30/23 22:45	1
Toluene	ND		0.50		ug/L			08/30/23 22:45	1
Trichloroethene	ND		0.50		ug/L			08/30/23 22:45	1
Trichlorofluoromethane	ND		0.50		ug/L			08/30/23 22:45	1
Vinyl acetate	ND		5.0		ug/L			08/30/23 22:45	1
Vinyl chloride	ND		0.50		ug/L			08/30/23 22:45	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	104		64 - 132		08/30/23 22:45	1
4-Bromofluorobenzene (Surr)	92		76 - 120		08/30/23 22:45	1
Dibromofluoromethane	107		80 - 120		08/30/23 22:45	1
Toluene-d8 (Surr)	99		80 - 120		08/30/23 22:45	1

Lab Sample ID: LCS 570-359803/3

Matrix: Water

Analysis Batch: 359803

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	10.43		ug/L		104	80 - 125
1,1,1-Trichloroethane	10.0	10.90		ug/L		109	75 - 121
1,1,2,2-Tetrachloroethane	10.0	10.40		ug/L		104	80 - 120
1,1,2-Trichloro-1,2,2-trifluoroethane	10.0	10.58		ug/L		106	56 - 132
1,1,2-Trichloroethane	10.0	10.86		ug/L		109	80 - 121
1,1-Dichloroethane	10.0	10.53		ug/L		105	80 - 120
1,1-Dichloroethene	10.0	10.79		ug/L		108	80 - 126
1,1-Dichloropropene	10.0	10.89		ug/L		109	72 - 122
1,2,3-Trichlorobenzene	10.0	10.53		ug/L		105	80 - 125
1,2,3-Trichloropropane	10.0	10.32		ug/L		103	75 - 127
1,2,4-Trichlorobenzene	10.0	10.29		ug/L		103	80 - 124
1,2,4-Trimethylbenzene	10.0	11.19		ug/L		112	80 - 128
1,2-Dibromo-3-Chloropropane	10.0	10.11		ug/L		101	63 - 123
1,2-Dibromoethane	10.0	10.76		ug/L		108	80 - 125
1,2-Dichlorobenzene	10.0	10.57		ug/L		106	80 - 120
1,2-Dichloroethane	10.0	10.74		ug/L		107	76 - 130
1,2-Dichloropropane	10.0	10.69		ug/L		107	74 - 124
1,3,5-Trimethylbenzene	10.0	10.59		ug/L		106	80 - 122

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QC Sample Results

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

Job ID: 570-150445-1

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

Lab Sample ID: LCS 570-359803/3

Matrix: Water

Analysis Batch: 359803

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	10.61		ug/L		106	80 - 120
1,3-Dichloropropane	10.0	10.32		ug/L		103	80 - 121
1,4-Dichlorobenzene	10.0	10.60		ug/L		106	80 - 120
2,2-Dichloropropane	10.0	10.79		ug/L		108	79 - 131
2-Butanone	10.0	12.88		ug/L		129	48 - 145
2-Chlorotoluene	10.0	10.48		ug/L		105	80 - 120
2-Hexanone	10.0	9.408		ug/L		94	50 - 149
4-Chlorotoluene	10.0	10.75		ug/L		107	80 - 120
4-Methyl-2-pentanone	10.0	9.851		ug/L		99	63 - 120
Acetone	10.0	18.78	*+	ug/L		188	45 - 139
Benzene	10.0	10.93		ug/L		109	80 - 120
Bromobenzene	10.0	10.34		ug/L		103	80 - 125
Bromochloromethane	10.0	10.87		ug/L		109	80 - 120
Bromodichloromethane	10.0	10.79		ug/L		108	73 - 131
Bromoform	10.0	10.41		ug/L		104	76 - 124
Bromomethane	10.0	8.916		ug/L		89	26 - 180
cis-1,2-Dichloroethene	10.0	10.79		ug/L		108	80 - 120
cis-1,3-Dichloropropene	10.0	11.37		ug/L		114	76 - 123
Carbon disulfide	10.0	10.50		ug/L		105	75 - 123
Carbon tetrachloride	10.0	10.68		ug/L		107	61 - 139
Chlorobenzene	10.0	10.42		ug/L		104	80 - 120
Chloroethane	10.0	9.812		ug/L		98	54 - 150
Chloroform	10.0	10.03		ug/L		100	80 - 120
Chloromethane	10.0	9.126		ug/L		91	28 - 151
Dibromochloromethane	10.0	10.29		ug/L		103	74 - 136
Dibromomethane	10.0	10.70		ug/L		107	80 - 122
Dichlorodifluoromethane	10.0	8.766		ug/L		88	27 - 154
Ethylbenzene	10.0	10.42		ug/L		104	80 - 126
Isopropylbenzene	10.0	9.782		ug/L		98	80 - 120
Methylene Chloride	10.0	10.92		ug/L		109	80 - 120
Methyl-t-Butyl Ether (MTBE)	10.0	11.11		ug/L		111	69 - 128
Naphthalene	10.0	9.919		ug/L		99	70 - 130
n-Butylbenzene	10.0	10.93		ug/L		109	78 - 127
N-Propylbenzene	10.0	10.38		ug/L		104	80 - 121
o-Xylene	10.0	10.60		ug/L		106	80 - 124
m,p-Xylene	20.0	21.82		ug/L		109	80 - 123
p-Isopropyltoluene	10.0	10.84		ug/L		108	80 - 128
sec-Butylbenzene	10.0	10.52		ug/L		105	80 - 125
Styrene	10.0	10.63		ug/L		106	80 - 121
trans-1,2-Dichloroethene	10.0	10.67		ug/L		107	79 - 120
trans-1,3-Dichloropropene	10.0	10.11		ug/L		101	80 - 126
tert-Butylbenzene	10.0	10.18		ug/L		102	80 - 121
Tetrachloroethene	10.0	10.31		ug/L		103	80 - 125
Toluene	10.0	10.59		ug/L		106	80 - 120
Trichloroethene	10.0	10.93		ug/L		109	77 - 124
Trichlorofluoromethane	10.0	10.47		ug/L		105	41 - 163
Vinyl acetate	10.0	9.582		ug/L		96	61 - 126
Vinyl chloride	10.0	10.04		ug/L		100	50 - 160

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QC Sample Results

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

Job ID: 570-150445-1

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

Lab Sample ID: LCS 570-359803/3

Matrix: Water

Analysis Batch: 359803

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

	LCS	LCS	
Surrogate	%Recovery	Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	103		64 - 132
4-Bromofluorobenzene (Surr)	101		76 - 120
Dibromofluoromethane	103		80 - 120
Toluene-d8 (Surr)	97		80 - 120

Lab Sample ID: LCSD 570-359803/4

Matrix: Water

Analysis Batch: 359803

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	10.52		ug/L		105	80 - 125	1	20
1,1,1-Trichloroethane	10.0	10.59		ug/L		106	75 - 121	3	20
1,1,2,2-Tetrachloroethane	10.0	10.74		ug/L		107	80 - 120	3	20
1,1,2-Trichloro-1,2,2-trifluoroethane	10.0	10.31		ug/L		103	56 - 132	3	22
1,1,2-Trichloroethane	10.0	10.75		ug/L		108	80 - 121	1	20
1,1-Dichloroethane	10.0	10.45		ug/L		104	80 - 120	1	20
1,1-Dichloroethene	10.0	10.53		ug/L		105	80 - 126	2	21
1,1-Dichloropropene	10.0	10.79		ug/L		108	72 - 122	1	20
1,2,3-Trichlorobenzene	10.0	10.38		ug/L		104	80 - 125	1	20
1,2,3-Trichloropropane	10.0	10.52		ug/L		105	75 - 127	2	20
1,2,4-Trichlorobenzene	10.0	10.00		ug/L		100	80 - 124	3	20
1,2,4-Trimethylbenzene	10.0	10.99		ug/L		110	80 - 128	2	20
1,2-Dibromo-3-Chloropropane	10.0	11.08		ug/L		111	63 - 123	9	20
1,2-Dibromoethane	10.0	10.66		ug/L		107	80 - 125	1	20
1,2-Dichlorobenzene	10.0	10.49		ug/L		105	80 - 120	1	20
1,2-Dichloroethane	10.0	10.69		ug/L		107	76 - 130	0	20
1,2-Dichloropropane	10.0	10.86		ug/L		109	74 - 124	2	20
1,3,5-Trimethylbenzene	10.0	10.46		ug/L		105	80 - 122	1	20
1,3-Dichlorobenzene	10.0	10.49		ug/L		105	80 - 120	1	20
1,3-Dichloropropane	10.0	10.66		ug/L		107	80 - 121	3	20
1,4-Dichlorobenzene	10.0	10.55		ug/L		105	80 - 120	0	20
2,2-Dichloropropane	10.0	10.47		ug/L		105	79 - 131	3	20
2-Butanone	10.0	11.38		ug/L		114	48 - 145	12	30
2-Chlorotoluene	10.0	10.51		ug/L		105	80 - 120	0	20
2-Hexanone	10.0	9.801		ug/L		98	50 - 149	4	29
4-Chlorotoluene	10.0	10.73		ug/L		107	80 - 120	0	20
4-Methyl-2-pentanone	10.0	9.436		ug/L		94	63 - 120	4	20
Acetone	10.0	16.63	++	ug/L		166	45 - 139	12	30
Benzene	10.0	10.85		ug/L		108	80 - 120	1	20
Bromobenzene	10.0	10.45		ug/L		105	80 - 125	1	20
Bromochloromethane	10.0	10.77		ug/L		108	80 - 120	1	20
Bromodichloromethane	10.0	10.60		ug/L		106	73 - 131	2	20
Bromoform	10.0	10.55		ug/L		106	76 - 124	1	20
Bromomethane	10.0	8.792		ug/L		88	26 - 180	1	20
cis-1,2-Dichloroethene	10.0	10.57		ug/L		106	80 - 120	2	20
cis-1,3-Dichloropropene	10.0	11.45		ug/L		115	76 - 123	1	20
Carbon disulfide	10.0	10.31		ug/L		103	75 - 123	2	20
Carbon tetrachloride	10.0	10.50		ug/L		105	61 - 139	2	20

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QC Sample Results

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

Job ID: 570-150445-1

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

Lab Sample ID: LCSD 570-359803/4

Matrix: Water

Analysis Batch: 359803

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	10.29		ug/L		103	80 - 120	1	20
Chloroethane	10.0	9.771		ug/L		98	54 - 150	0	25
Chloroform	10.0	9.904		ug/L		99	80 - 120	1	20
Chloromethane	10.0	9.074		ug/L		91	28 - 151	1	20
Dibromochloromethane	10.0	10.65		ug/L		106	74 - 136	3	20
Dibromomethane	10.0	10.63		ug/L		106	80 - 122	1	20
Dichlorodifluoromethane	10.0	8.479		ug/L		85	27 - 154	3	21
Ethylbenzene	10.0	10.40		ug/L		104	80 - 126	0	20
Isopropylbenzene	10.0	9.681		ug/L		97	80 - 120	1	20
Methylene Chloride	10.0	10.74		ug/L		107	80 - 120	2	20
Methyl-t-Butyl Ether (MTBE)	10.0	11.08		ug/L		111	69 - 128	0	20
Naphthalene	10.0	9.825		ug/L		98	70 - 130	1	20
n-Butylbenzene	10.0	10.64		ug/L		106	78 - 127	3	20
N-Propylbenzene	10.0	10.18		ug/L		102	80 - 121	2	20
o-Xylene	10.0	10.57		ug/L		106	80 - 124	0	20
m,p-Xylene	20.0	21.57		ug/L		108	80 - 123	1	20
p-Isopropyltoluene	10.0	10.56		ug/L		106	80 - 128	3	20
sec-Butylbenzene	10.0	10.39		ug/L		104	80 - 125	1	20
Styrene	10.0	10.55		ug/L		106	80 - 121	1	20
trans-1,2-Dichloroethene	10.0	10.77		ug/L		108	79 - 120	1	20
trans-1,3-Dichloropropene	10.0	10.20		ug/L		102	80 - 126	1	20
tert-Butylbenzene	10.0	10.06		ug/L		101	80 - 121	1	20
Tetrachloroethene	10.0	10.17		ug/L		102	80 - 125	1	20
Toluene	10.0	10.39		ug/L		104	80 - 120	2	20
Trichloroethene	10.0	10.64		ug/L		106	77 - 124	3	20
Trichlorofluoromethane	10.0	9.945		ug/L		99	41 - 163	5	21
Vinyl acetate	10.0	9.975		ug/L		100	61 - 126	4	24
Vinyl chloride	10.0	9.703		ug/L		97	50 - 160	3	20

Surrogate	LCSD %Recovery	LCSD Qualifier	LCSD Limits
1,2-Dichloroethane-d4 (Surr)	103		64 - 132
4-Bromofluorobenzene (Surr)	101		76 - 120
Dibromofluoromethane	103		80 - 120
Toluene-d8 (Surr)	99		80 - 120

Lab Sample ID: 570-150445-12 MS

Matrix: Water

Analysis Batch: 359803

Client Sample ID: MW-40_20230829

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	9.715		ug/L		97	61 - 142
1,1,1-Trichloroethane	ND		10.0	9.404		ug/L		94	68 - 138
1,1,2,2-Tetrachloroethane	ND		10.0	11.15		ug/L		111	71 - 133
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		10.0	7.619		ug/L		76	51 - 132
1,1,2-Trichloroethane	ND		10.0	10.49		ug/L		105	70 - 132
1,1-Dichloroethane	ND		10.0	9.166		ug/L		92	70 - 132
1,1-Dichloroethene	ND		10.0	8.659		ug/L		87	57 - 148
1,1-Dichloropropene	ND		10.0	9.385		ug/L		94	74 - 132

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QC Sample Results

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

Job ID: 570-150445-1

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

Lab Sample ID: 570-150445-12 MS

Matrix: Water

Analysis Batch: 359803

Client Sample ID: MW-40_20230829

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	10.15		ug/L		102	66 - 135
1,2,3-Trichloropropane	ND		10.0	9.992		ug/L		100	61 - 130
1,2,4-Trichlorobenzene	ND		10.0	9.347		ug/L		93	66 - 131
1,2,4-Trimethylbenzene	ND		10.0	9.982		ug/L		100	65 - 132
1,2-Dibromo-3-Chloropropane	ND		10.0	10.79		ug/L		108	48 - 132
1,2-Dibromoethane	ND		10.0	10.56		ug/L		106	74 - 128
1,2-Dichlorobenzene	ND		10.0	10.04		ug/L		100	74 - 126
1,2-Dichloroethane	ND		10.0	10.38		ug/L		104	65 - 140
1,2-Dichloropropane	ND		10.0	10.16		ug/L		102	75 - 127
1,3,5-Trimethylbenzene	ND		10.0	9.362		ug/L		94	64 - 144
1,3-Dichlorobenzene	ND		10.0	9.650		ug/L		96	73 - 125
1,3-Dichloropropane	ND		10.0	10.38		ug/L		104	71 - 131
1,4-Dichlorobenzene	ND		10.0	9.741		ug/L		97	73 - 125
2,2-Dichloropropane	ND		10.0	8.209		ug/L		82	39 - 138
2-Butanone	ND		10.0	11.24		ug/L		112	44 - 140
2-Chlorotoluene	ND		10.0	9.489		ug/L		95	71 - 130
2-Hexanone	ND		10.0	8.454		ug/L		85	52 - 136
4-Chlorotoluene	ND		10.0	9.730		ug/L		97	69 - 127
4-Methyl-2-pentanone	ND		10.0	9.542		ug/L		95	44 - 139
Acetone	ND	+	10.0	14.74		ug/L		147	20 - 174
Benzene	ND		10.0	9.890		ug/L		99	75 - 125
Bromobenzene	ND		10.0	9.754		ug/L		98	75 - 132
Bromochloromethane	ND		10.0	10.43		ug/L		104	75 - 125
Bromodichloromethane	ND		10.0	10.32		ug/L		103	70 - 137
Bromoform	ND		10.0	10.19		ug/L		102	51 - 142
Bromomethane	ND		10.0	6.117		ug/L		61	46 - 164
cis-1,2-Dichloroethene	ND		10.0	9.603		ug/L		96	62 - 138
cis-1,3-Dichloropropene	ND		10.0	10.62		ug/L		106	67 - 125
Carbon disulfide	ND		10.0	8.989		ug/L		90	70 - 132
Carbon tetrachloride	ND		10.0	9.048		ug/L		90	50 - 159
Chlorobenzene	ND		10.0	9.616		ug/L		96	75 - 128
Chloroethane	ND		10.0	12.44		ug/L		124	62 - 161
Chloroform	ND		10.0	8.934		ug/L		89	73 - 130
Chloromethane	ND		10.0	8.456		ug/L		85	45 - 157
Dibromochloromethane	ND		10.0	10.04		ug/L		100	63 - 145
Dibromomethane	ND		10.0	10.61		ug/L		106	75 - 127
Dichlorodifluoromethane	ND		10.0	6.681		ug/L		67	31 - 132
Ethylbenzene	ND		10.0	9.311		ug/L		93	73 - 135
Isopropylbenzene	ND		10.0	8.673		ug/L		87	69 - 141
Methylene Chloride	ND		10.0	9.448		ug/L		94	65 - 127
Methyl-t-Butyl Ether (MTBE)	ND		10.0	10.28		ug/L		103	59 - 131
Naphthalene	ND		10.0	9.615		ug/L		96	51 - 133
n-Butylbenzene	ND		10.0	9.350		ug/L		94	66 - 128
N-Propylbenzene	ND		10.0	8.948		ug/L		89	73 - 136
o-Xylene	ND		10.0	9.661		ug/L		97	69 - 138
m,p-Xylene	ND		20.0	19.27		ug/L		96	73 - 138
p-Isopropyltoluene	ND		10.0	9.280		ug/L		93	69 - 134
sec-Butylbenzene	ND		10.0	9.134		ug/L		91	70 - 130
Styrene	ND		10.0	9.782		ug/L		98	45 - 144

Eurofins Calscience

QC Sample Results

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

Job ID: 570-150445-1

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

Lab Sample ID: 570-150445-12 MS

Matrix: Water

Analysis Batch: 359803

Client Sample ID: MW-40_20230829

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	8.972		ug/L		90	61 - 138
trans-1,3-Dichloropropene	ND		10.0	9.493		ug/L		95	61 - 131
tert-Butylbenzene	ND		10.0	8.991		ug/L		90	71 - 131
Tetrachloroethene	ND		10.0	8.818		ug/L		88	64 - 150
Toluene	ND		10.0	9.669		ug/L		97	75 - 127
Trichloroethene	ND		10.0	9.500		ug/L		95	34 - 159
Trichlorofluoromethane	ND		10.0	9.249		ug/L		92	69 - 142
Vinyl acetate	ND		10.0	9.368		ug/L		94	35 - 132
Vinyl chloride	ND		10.0	9.598		ug/L		96	51 - 168

Surrogate	MS %Recovery	MS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	101		64 - 132
4-Bromofluorobenzene (Surr)	101		76 - 120
Dibromofluoromethane	102		80 - 120
Toluene-d8 (Surr)	101		80 - 120

Lab Sample ID: 570-150445-12 MSD

Matrix: Water

Analysis Batch: 359803

Client Sample ID: MW-40_20230829

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	10.09		ug/L		101	61 - 142	4	20
1,1,1-Trichloroethane	ND		10.0	10.41		ug/L		104	68 - 138	10	20
1,1,2,2-Tetrachloroethane	ND		10.0	10.88		ug/L		109	71 - 133	2	20
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		10.0	9.154		ug/L		92	51 - 132	18	21
1,1,2-Trichloroethane	ND		10.0	10.58		ug/L		106	70 - 132	1	20
1,1-Dichloroethane	ND		10.0	10.36		ug/L		104	70 - 132	12	20
1,1-Dichloroethene	ND		10.0	10.12		ug/L		101	57 - 148	16	20
1,1-Dichloropropene	ND		10.0	10.26		ug/L		103	74 - 132	9	20
1,2,3-Trichlorobenzene	ND		10.0	10.35		ug/L		104	66 - 135	2	22
1,2,3-Trichloropropane	ND		10.0	9.706		ug/L		97	61 - 130	3	20
1,2,4-Trichlorobenzene	ND		10.0	10.03		ug/L		100	66 - 131	7	24
1,2,4-Trimethylbenzene	ND		10.0	10.58		ug/L		106	65 - 132	6	22
1,2-Dibromo-3-Chloropropane	ND		10.0	10.68		ug/L		107	48 - 132	1	20
1,2-Dibromoethane	ND		10.0	10.38		ug/L		104	74 - 128	2	20
1,2-Dichlorobenzene	ND		10.0	10.17		ug/L		102	74 - 126	1	20
1,2-Dichloroethane	ND		10.0	10.35		ug/L		104	65 - 140	0	20
1,2-Dichloropropane	ND		10.0	10.71		ug/L		107	75 - 127	5	20
1,3,5-Trimethylbenzene	ND		10.0	9.887		ug/L		99	64 - 144	5	22
1,3-Dichlorobenzene	ND		10.0	10.10		ug/L		101	73 - 125	5	21
1,3-Dichloropropane	ND		10.0	10.12		ug/L		101	71 - 131	2	20
1,4-Dichlorobenzene	ND		10.0	10.04		ug/L		100	73 - 125	3	20
2,2-Dichloropropane	ND		10.0	8.922		ug/L		89	39 - 138	8	20
2-Butanone	ND		10.0	9.902		ug/L		99	44 - 140	13	34
2-Chlorotoluene	ND		10.0	9.897		ug/L		99	71 - 130	4	20
2-Hexanone	ND		10.0	8.700		ug/L		87	52 - 136	3	37
4-Chlorotoluene	ND		10.0	10.22		ug/L		102	69 - 127	5	20
4-Methyl-2-pentanone	ND		10.0	8.480		ug/L		85	44 - 139	12	21

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QC Sample Results

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

Job ID: 570-150445-1

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

Lab Sample ID: 570-150445-12 MSD

Matrix: Water

Analysis Batch: 359803

Client Sample ID: MW-40_20230829

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	11.73		ug/L		117	20 - 174	23	35
Benzene	ND		10.0	10.70		ug/L		107	75 - 125	8	20
Bromobenzene	ND		10.0	10.07		ug/L		101	75 - 132	3	20
Bromochloromethane	ND		10.0	10.29		ug/L		103	75 - 125	1	20
Bromodichloromethane	ND		10.0	10.48		ug/L		105	70 - 137	1	20
Bromoform	ND		10.0	10.01		ug/L		100	51 - 142	2	20
Bromomethane	ND		10.0	6.446		ug/L		64	46 - 164	5	25
cis-1,2-Dichloroethene	ND		10.0	10.19		ug/L		102	62 - 138	6	20
cis-1,3-Dichloropropene	ND		10.0	10.69		ug/L		107	67 - 125	1	20
Carbon disulfide	ND		10.0	10.15		ug/L		102	70 - 132	12	20
Carbon tetrachloride	ND		10.0	10.12		ug/L		101	50 - 159	11	20
Chlorobenzene	ND		10.0	10.11		ug/L		101	75 - 128	5	20
Chloroethane	ND		10.0	12.88		ug/L		129	62 - 161	4	20
Chloroform	ND		10.0	9.482		ug/L		95	73 - 130	6	20
Chloromethane	ND		10.0	9.021		ug/L		90	45 - 157	6	21
Dibromochloromethane	ND		10.0	10.03		ug/L		100	63 - 145	0	20
Dibromomethane	ND		10.0	10.41		ug/L		104	75 - 127	2	20
Dichlorodifluoromethane	ND		10.0	7.300		ug/L		73	31 - 132	9	21
Ethylbenzene	ND		10.0	9.995		ug/L		100	73 - 135	7	20
Isopropylbenzene	ND		10.0	9.362		ug/L		94	69 - 141	8	22
Methylene Chloride	ND		10.0	10.22		ug/L		102	65 - 127	8	20
Methyl-t-Butyl Ether (MTBE)	ND		10.0	10.87		ug/L		109	59 - 131	6	20
Naphthalene	ND		10.0	9.945		ug/L		99	51 - 133	3	25
n-Butylbenzene	ND		10.0	10.19		ug/L		102	66 - 128	9	24
N-Propylbenzene	ND		10.0	9.713		ug/L		97	73 - 136	8	22
o-Xylene	ND		10.0	10.29		ug/L		103	69 - 138	6	20
m,p-Xylene	ND		20.0	20.57		ug/L		103	73 - 138	7	21
p-Isopropyltoluene	ND		10.0	10.22		ug/L		102	69 - 134	10	23
sec-Butylbenzene	ND		10.0	9.995		ug/L		100	70 - 130	9	22
Styrene	ND		10.0	10.13		ug/L		101	45 - 144	3	32
trans-1,2-Dichloroethene	ND		10.0	10.30		ug/L		103	61 - 138	14	21
trans-1,3-Dichloropropene	ND		10.0	9.536		ug/L		95	61 - 131	0	20
tert-Butylbenzene	ND		10.0	9.714		ug/L		97	71 - 131	8	23
Tetrachloroethene	ND		10.0	9.805		ug/L		98	64 - 150	11	23
Toluene	ND		10.0	10.22		ug/L		102	75 - 127	6	20
Trichloroethene	ND		10.0	10.56		ug/L		106	34 - 159	11	23
Trichlorofluoromethane	ND		10.0	9.383		ug/L		94	69 - 142	1	20
Vinyl acetate	ND		10.0	9.032		ug/L		90	35 - 132	4	29
Vinyl chloride	ND		10.0	9.694		ug/L		97	51 - 168	1	20

Surrogate	MSD %Recovery	MSD Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	101		64 - 132
4-Bromofluorobenzene (Surr)	101		76 - 120
Dibromofluoromethane	100		80 - 120
Toluene-d8 (Surr)	98		80 - 120

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QC Sample Results

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

Job ID: 570-150445-1

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

Lab Sample ID: MB 570-359874/7

Matrix: Water

Analysis Batch: 359874

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			08/31/23 08:36	1
1,1,1-Trichloroethane	ND		0.50		ug/L			08/31/23 08:36	1
1,1,2,2-Tetrachloroethane	ND		0.50		ug/L			08/31/23 08:36	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.50		ug/L			08/31/23 08:36	1
1,1,2-Trichloroethane	ND		0.50		ug/L			08/31/23 08:36	1
1,1-Dichloroethane	ND		0.50		ug/L			08/31/23 08:36	1
1,1-Dichloroethene	ND		0.50		ug/L			08/31/23 08:36	1
1,1-Dichloropropene	ND		0.50		ug/L			08/31/23 08:36	1
1,2,3-Trichlorobenzene	ND		0.50		ug/L			08/31/23 08:36	1
1,2,3-Trichloropropane	ND		0.50		ug/L			08/31/23 08:36	1
1,2,4-Trichlorobenzene	ND		0.50		ug/L			08/31/23 08:36	1
1,2,4-Trimethylbenzene	ND		0.50		ug/L			08/31/23 08:36	1
1,2-Dibromo-3-Chloropropane	ND		1.0		ug/L			08/31/23 08:36	1
1,2-Dibromoethane	ND		0.50		ug/L			08/31/23 08:36	1
1,2-Dichlorobenzene	ND		0.50		ug/L			08/31/23 08:36	1
1,2-Dichloroethane	ND		0.50		ug/L			08/31/23 08:36	1
1,2-Dichloropropane	ND		0.50		ug/L			08/31/23 08:36	1
1,3,5-Trimethylbenzene	ND		0.50		ug/L			08/31/23 08:36	1
1,3-Dichlorobenzene	ND		0.50		ug/L			08/31/23 08:36	1
1,3-Dichloropropane	ND		0.50		ug/L			08/31/23 08:36	1
1,4-Dichlorobenzene	ND		0.50		ug/L			08/31/23 08:36	1
2,2-Dichloropropane	ND		0.50		ug/L			08/31/23 08:36	1
2-Butanone	ND		5.0		ug/L			08/31/23 08:36	1
2-Chlorotoluene	ND		0.50		ug/L			08/31/23 08:36	1
2-Hexanone	ND		6.0		ug/L			08/31/23 08:36	1
4-Chlorotoluene	ND		0.50		ug/L			08/31/23 08:36	1
4-Methyl-2-pentanone	ND		5.0		ug/L			08/31/23 08:36	1
Acetone	ND		8.0		ug/L			08/31/23 08:36	1
Benzene	ND		0.50		ug/L			08/31/23 08:36	1
Bromobenzene	ND		0.50		ug/L			08/31/23 08:36	1
Bromochloromethane	ND		1.0		ug/L			08/31/23 08:36	1
Bromodichloromethane	ND		0.50		ug/L			08/31/23 08:36	1
Bromoform	ND		0.50		ug/L			08/31/23 08:36	1
Bromomethane	ND		2.0		ug/L			08/31/23 08:36	1
cis-1,2-Dichloroethene	ND		0.50		ug/L			08/31/23 08:36	1
cis-1,3-Dichloropropene	ND		0.50		ug/L			08/31/23 08:36	1
Carbon disulfide	ND		1.0		ug/L			08/31/23 08:36	1
Carbon tetrachloride	ND		0.50		ug/L			08/31/23 08:36	1
Chlorobenzene	ND		0.50		ug/L			08/31/23 08:36	1
Chloroethane	ND		0.50		ug/L			08/31/23 08:36	1
Chloroform	ND		0.50		ug/L			08/31/23 08:36	1
Chloromethane	ND		1.0		ug/L			08/31/23 08:36	1
Dibromochloromethane	ND		0.50		ug/L			08/31/23 08:36	1
Dibromomethane	ND		0.50		ug/L			08/31/23 08:36	1
Dichlorodifluoromethane	ND		1.0		ug/L			08/31/23 08:36	1
Ethylbenzene	ND		0.50		ug/L			08/31/23 08:36	1
Isopropylbenzene	ND		0.50		ug/L			08/31/23 08:36	1
Methylene Chloride	ND		1.0		ug/L			08/31/23 08:36	1

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QC Sample Results

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

Job ID: 570-150445-1

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

Lab Sample ID: MB 570-359874/7

Matrix: Water

Analysis Batch: 359874

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			08/31/23 08:36	1
Naphthalene	ND		1.0		ug/L			08/31/23 08:36	1
n-Butylbenzene	ND		0.50		ug/L			08/31/23 08:36	1
N-Propylbenzene	ND		0.50		ug/L			08/31/23 08:36	1
o-Xylene	ND		0.50		ug/L			08/31/23 08:36	1
m,p-Xylene	ND		1.0		ug/L			08/31/23 08:36	1
p-Isopropyltoluene	ND		0.50		ug/L			08/31/23 08:36	1
sec-Butylbenzene	ND		0.50		ug/L			08/31/23 08:36	1
Styrene	ND		0.50		ug/L			08/31/23 08:36	1
trans-1,2-Dichloroethene	ND		0.50		ug/L			08/31/23 08:36	1
trans-1,3-Dichloropropene	ND		0.50		ug/L			08/31/23 08:36	1
tert-Butylbenzene	ND		0.50		ug/L			08/31/23 08:36	1
Tetrachloroethene	ND		0.50		ug/L			08/31/23 08:36	1
Toluene	ND		0.50		ug/L			08/31/23 08:36	1
Trichloroethene	ND		0.50		ug/L			08/31/23 08:36	1
Trichlorofluoromethane	ND		0.50		ug/L			08/31/23 08:36	1
Vinyl acetate	ND		5.0		ug/L			08/31/23 08:36	1
Vinyl chloride	ND		0.50		ug/L			08/31/23 08:36	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	93		64 - 132		08/31/23 08:36	1
4-Bromofluorobenzene (Surr)	104		76 - 120		08/31/23 08:36	1
Dibromofluoromethane	97		80 - 120		08/31/23 08:36	1
Toluene-d8 (Surr)	95		80 - 120		08/31/23 08:36	1

Lab Sample ID: LCS 570-359874/4

Matrix: Water

Analysis Batch: 359874

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	9.578		ug/L		96	80 - 125
1,1,1-Trichloroethane	10.0	9.239		ug/L		92	75 - 121
1,1,2,2-Tetrachloroethane	10.0	8.823		ug/L		88	80 - 120
1,1,2-Trichloro-1,2,2-trifluoroethane	10.0	9.290		ug/L		93	56 - 132
1,1,2-Trichloroethane	10.0	9.478		ug/L		95	80 - 121
1,1-Dichloroethane	10.0	8.513		ug/L		85	80 - 120
1,1-Dichloroethene	10.0	9.135		ug/L		91	80 - 126
1,1-Dichloropropene	10.0	9.532		ug/L		95	72 - 122
1,2,3-Trichlorobenzene	10.0	9.929		ug/L		99	80 - 125
1,2,3-Trichloropropane	10.0	9.684		ug/L		97	75 - 127
1,2,4-Trichlorobenzene	10.0	9.952		ug/L		100	80 - 124
1,2,4-Trimethylbenzene	10.0	10.36		ug/L		104	80 - 128
1,2-Dibromo-3-Chloropropane	10.0	9.564		ug/L		96	63 - 123
1,2-Dibromoethane	10.0	9.435		ug/L		94	80 - 125
1,2-Dichlorobenzene	10.0	9.456		ug/L		95	80 - 120
1,2-Dichloroethane	10.0	9.991		ug/L		100	76 - 130
1,2-Dichloropropane	10.0	9.968		ug/L		100	74 - 124
1,3,5-Trimethylbenzene	10.0	10.07		ug/L		101	80 - 122

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QC Sample Results

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

Job ID: 570-150445-1

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

Lab Sample ID: LCS 570-359874/4

Matrix: Water

Analysis Batch: 359874

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	9.711		ug/L		97	80 - 120
1,3-Dichloropropane	10.0	9.433		ug/L		94	80 - 121
1,4-Dichlorobenzene	10.0	9.396		ug/L		94	80 - 120
2,2-Dichloropropane	10.0	9.326		ug/L		93	79 - 131
2-Butanone	10.0	8.678		ug/L		87	48 - 145
2-Chlorotoluene	10.0	10.04		ug/L		100	80 - 120
2-Hexanone	10.0	8.817		ug/L		88	50 - 149
4-Chlorotoluene	10.0	9.300		ug/L		93	80 - 120
4-Methyl-2-pentanone	10.0	9.090		ug/L		91	63 - 120
Acetone	10.0	5.128	J	ug/L		51	45 - 139
Benzene	10.0	10.08		ug/L		101	80 - 120
Bromobenzene	10.0	9.667		ug/L		97	80 - 125
Bromochloromethane	10.0	8.853		ug/L		89	80 - 120
Bromodichloromethane	10.0	9.890		ug/L		99	73 - 131
Bromoform	10.0	9.196		ug/L		92	76 - 124
Bromomethane	10.0	9.251		ug/L		93	26 - 180
cis-1,2-Dichloroethene	10.0	8.941		ug/L		89	80 - 120
cis-1,3-Dichloropropene	10.0	10.95		ug/L		110	76 - 123
Carbon disulfide	10.0	8.907		ug/L		89	75 - 123
Carbon tetrachloride	10.0	9.402		ug/L		94	61 - 139
Chlorobenzene	10.0	9.811		ug/L		98	80 - 120
Chloroethane	10.0	8.387		ug/L		84	54 - 150
Chloroform	10.0	8.509		ug/L		85	80 - 120
Chloromethane	10.0	7.661		ug/L		77	28 - 151
Dibromochloromethane	10.0	9.320		ug/L		93	74 - 136
Dibromomethane	10.0	9.582		ug/L		96	80 - 122
Dichlorodifluoromethane	10.0	7.647		ug/L		76	27 - 154
Ethylbenzene	10.0	9.870		ug/L		99	80 - 126
Isopropylbenzene	10.0	9.316		ug/L		93	80 - 120
Methylene Chloride	10.0	8.862		ug/L		89	80 - 120
Methyl-t-Butyl Ether (MTBE)	10.0	8.614		ug/L		86	69 - 128
Naphthalene	10.0	9.436		ug/L		94	70 - 130
n-Butylbenzene	10.0	10.85		ug/L		109	78 - 127
N-Propylbenzene	10.0	10.01		ug/L		100	80 - 121
o-Xylene	10.0	9.742		ug/L		97	80 - 124
m,p-Xylene	20.0	19.93		ug/L		100	80 - 123
p-Isopropyltoluene	10.0	10.34		ug/L		103	80 - 128
sec-Butylbenzene	10.0	9.960		ug/L		100	80 - 125
Styrene	10.0	9.656		ug/L		97	80 - 121
trans-1,2-Dichloroethene	10.0	8.902		ug/L		89	79 - 120
trans-1,3-Dichloropropene	10.0	9.676		ug/L		97	80 - 126
tert-Butylbenzene	10.0	10.04		ug/L		100	80 - 121
Tetrachloroethene	10.0	10.33		ug/L		103	80 - 125
Toluene	10.0	10.44		ug/L		104	80 - 120
Trichloroethene	10.0	10.49		ug/L		105	77 - 124
Trichlorofluoromethane	10.0	8.193		ug/L		82	41 - 163
Vinyl acetate	10.0	9.411		ug/L		94	61 - 126
Vinyl chloride	10.0	7.863		ug/L		79	50 - 160

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QC Sample Results

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

Job ID: 570-150445-1

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

Lab Sample ID: LCS 570-359874/4

Matrix: Water

Analysis Batch: 359874

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

	LCS	LCS	
Surrogate	%Recovery	Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	91		64 - 132
4-Bromofluorobenzene (Surr)	97		76 - 120
Dibromofluoromethane	91		80 - 120
Toluene-d8 (Surr)	103		80 - 120

Lab Sample ID: LCSD 570-359874/5

Matrix: Water

Analysis Batch: 359874

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	9.651		ug/L		97	80 - 125	1	20
1,1,1-Trichloroethane	10.0	9.095		ug/L		91	75 - 121	2	20
1,1,2,2-Tetrachloroethane	10.0	9.195		ug/L		92	80 - 120	4	20
1,1,2-Trichloro-1,2,2-trifluoroethane	10.0	9.083		ug/L		91	56 - 132	2	22
1,1,2-Trichloroethane	10.0	9.529		ug/L		95	80 - 121	1	20
1,1-Dichloroethane	10.0	8.845		ug/L		88	80 - 120	4	20
1,1-Dichloroethene	10.0	9.073		ug/L		91	80 - 126	1	21
1,1-Dichloropropene	10.0	9.337		ug/L		93	72 - 122	2	20
1,2,3-Trichlorobenzene	10.0	10.61		ug/L		106	80 - 125	7	20
1,2,3-Trichloropropane	10.0	10.09		ug/L		101	75 - 127	4	20
1,2,4-Trichlorobenzene	10.0	10.97		ug/L		110	80 - 124	10	20
1,2,4-Trimethylbenzene	10.0	10.66		ug/L		107	80 - 128	3	20
1,2-Dibromo-3-Chloropropane	10.0	10.21		ug/L		102	63 - 123	6	20
1,2-Dibromoethane	10.0	9.537		ug/L		95	80 - 125	1	20
1,2-Dichlorobenzene	10.0	9.663		ug/L		97	80 - 120	2	20
1,2-Dichloroethane	10.0	9.969		ug/L		100	76 - 130	0	20
1,2-Dichloropropane	10.0	9.812		ug/L		98	74 - 124	2	20
1,3,5-Trimethylbenzene	10.0	10.42		ug/L		104	80 - 122	3	20
1,3-Dichlorobenzene	10.0	9.813		ug/L		98	80 - 120	1	20
1,3-Dichloropropane	10.0	9.595		ug/L		96	80 - 121	2	20
1,4-Dichlorobenzene	10.0	9.408		ug/L		94	80 - 120	0	20
2,2-Dichloropropane	10.0	9.146		ug/L		91	79 - 131	2	20
2-Butanone	10.0	8.759		ug/L		88	48 - 145	1	30
2-Chlorotoluene	10.0	10.13		ug/L		101	80 - 120	1	20
2-Hexanone	10.0	9.589		ug/L		96	50 - 149	8	29
4-Chlorotoluene	10.0	9.361		ug/L		94	80 - 120	1	20
4-Methyl-2-pentanone	10.0	9.220		ug/L		92	63 - 120	1	20
Acetone	10.0	5.993	J	ug/L		60	45 - 139	16	30
Benzene	10.0	9.824		ug/L		98	80 - 120	3	20
Bromobenzene	10.0	9.833		ug/L		98	80 - 125	2	20
Bromochloromethane	10.0	9.083		ug/L		91	80 - 120	3	20
Bromodichloromethane	10.0	9.732		ug/L		97	73 - 131	2	20
Bromoform	10.0	9.248		ug/L		92	76 - 124	1	20
Bromomethane	10.0	9.354		ug/L		94	26 - 180	1	20
cis-1,2-Dichloroethene	10.0	8.841		ug/L		88	80 - 120	1	20
cis-1,3-Dichloropropene	10.0	10.88		ug/L		109	76 - 123	1	20
Carbon disulfide	10.0	8.777		ug/L		88	75 - 123	1	20
Carbon tetrachloride	10.0	9.142		ug/L		91	61 - 139	3	20

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QC Sample Results

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

Job ID: 570-150445-1

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

Lab Sample ID: LCSD 570-359874/5

Matrix: Water

Analysis Batch: 359874

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chlorobenzene	10.0	9.661		ug/L		97	80 - 120	2	20
Chloroethane	10.0	8.412		ug/L		84	54 - 150	0	25
Chloroform	10.0	8.573		ug/L		86	80 - 120	1	20
Chloromethane	10.0	7.519		ug/L		75	28 - 151	2	20
Dibromochloromethane	10.0	9.519		ug/L		95	74 - 136	2	20
Dibromomethane	10.0	9.496		ug/L		95	80 - 122	1	20
Dichlorodifluoromethane	10.0	7.108		ug/L		71	27 - 154	7	21
Ethylbenzene	10.0	9.761		ug/L		98	80 - 126	1	20
Isopropylbenzene	10.0	9.240		ug/L		92	80 - 120	1	20
Methylene Chloride	10.0	8.994		ug/L		90	80 - 120	1	20
Methyl-t-Butyl Ether (MTBE)	10.0	9.104		ug/L		91	69 - 128	6	20
Naphthalene	10.0	9.858		ug/L		99	70 - 130	4	20
n-Butylbenzene	10.0	10.93		ug/L		109	78 - 127	1	20
N-Propylbenzene	10.0	10.05		ug/L		100	80 - 121	0	20
o-Xylene	10.0	9.859		ug/L		99	80 - 124	1	20
m,p-Xylene	20.0	19.63		ug/L		98	80 - 123	2	20
p-Isopropyltoluene	10.0	10.36		ug/L		104	80 - 128	0	20
sec-Butylbenzene	10.0	9.868		ug/L		99	80 - 125	1	20
Styrene	10.0	9.875		ug/L		99	80 - 121	2	20
trans-1,2-Dichloroethene	10.0	8.949		ug/L		89	79 - 120	1	20
trans-1,3-Dichloropropene	10.0	9.441		ug/L		94	80 - 126	2	20
tert-Butylbenzene	10.0	10.00		ug/L		100	80 - 121	0	20
Tetrachloroethene	10.0	10.06		ug/L		101	80 - 125	3	20
Toluene	10.0	10.17		ug/L		102	80 - 120	3	20
Trichloroethene	10.0	10.09		ug/L		101	77 - 124	4	20
Trichlorofluoromethane	10.0	8.026		ug/L		80	41 - 163	2	21
Vinyl acetate	10.0	9.490		ug/L		95	61 - 126	1	24
Vinyl chloride	10.0	7.725		ug/L		77	50 - 160	2	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	93		64 - 132
4-Bromofluorobenzene (Surr)	97		76 - 120
Dibromofluoromethane	92		80 - 120
Toluene-d8 (Surr)	100		80 - 120

Lab Sample ID: 570-150445-3 MS

Matrix: Water

Analysis Batch: 359874

Client Sample ID: MW-31_20230825

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	6.888		ug/L		69	61 - 142
1,1,1-Trichloroethane	ND	F1 F2	10.0	5.434	F1	ug/L		54	68 - 138
1,1,2,2-Tetrachloroethane	ND		10.0	8.432		ug/L		84	71 - 133
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	F1 F2	10.0	4.227	F1	ug/L		39	51 - 132
1,1,2-Trichloroethane	ND		10.0	7.910		ug/L		79	70 - 132
1,1-Dichloroethane	0.56	F1	10.0	6.532	F1	ug/L		60	70 - 132
1,1-Dichloroethene	60		10.0	66.25	4	ug/L		58	57 - 148
1,1-Dichloropropene	ND	F1 F2	10.0	5.574	F1	ug/L		56	74 - 132

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QC Sample Results

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

Job ID: 570-150445-1

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

Lab Sample ID: 570-150445-3 MS

Matrix: Water

Analysis Batch: 359874

Client Sample ID: MW-31_20230825

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	7.472		ug/L		75	66 - 135
1,2,3-Trichloropropane	ND		10.0	8.802		ug/L		88	61 - 130
1,2,4-Trichlorobenzene	ND		10.0	7.522		ug/L		75	66 - 131
1,2,4-Trimethylbenzene	ND		10.0	6.672		ug/L		67	65 - 132
1,2-Dibromo-3-Chloropropane	ND		10.0	8.673		ug/L		87	48 - 132
1,2-Dibromoethane	ND		10.0	7.683		ug/L		77	74 - 128
1,2-Dichlorobenzene	ND	F1	10.0	7.007	F1	ug/L		70	74 - 126
1,2-Dichloroethane	ND		10.0	7.734		ug/L		77	65 - 140
1,2-Dichloropropane	ND	F1	10.0	6.966	F1	ug/L		70	75 - 127
1,3,5-Trimethylbenzene	ND		10.0	6.828		ug/L		68	64 - 144
1,3-Dichlorobenzene	ND	F1	10.0	6.532	F1	ug/L		65	73 - 125
1,3-Dichloropropane	ND		10.0	7.801		ug/L		78	71 - 131
1,4-Dichlorobenzene	ND	F1	10.0	6.484	F1	ug/L		65	73 - 125
2,2-Dichloropropane	ND	F2	10.0	4.617		ug/L		46	39 - 138
2-Butanone	ND		10.0	8.603		ug/L		86	44 - 140
2-Chlorotoluene	ND	F1	10.0	6.826	F1	ug/L		68	71 - 130
2-Hexanone	ND		10.0	9.677		ug/L		97	52 - 136
4-Chlorotoluene	ND	F1 F2	10.0	5.997	F1	ug/L		60	69 - 127
4-Methyl-2-pentanone	ND		10.0	8.470		ug/L		85	44 - 139
Acetone	ND		10.0	ND		ug/L		49	20 - 174
Benzene	ND	F1	10.0	6.508	F1	ug/L		65	75 - 125
Bromobenzene	ND	F1	10.0	7.024	F1	ug/L		70	75 - 132
Bromochloromethane	ND	F1	10.0	7.094	F1	ug/L		71	75 - 125
Bromodichloromethane	ND		10.0	7.010		ug/L		70	70 - 137
Bromoform	ND		10.0	7.247		ug/L		72	51 - 142
Bromomethane	ND		10.0	7.521		ug/L		75	46 - 164
cis-1,2-Dichloroethene	ND	F1	10.0	6.314	F1	ug/L		60	62 - 138
cis-1,3-Dichloropropene	ND		10.0	7.027		ug/L		70	67 - 125
Carbon disulfide	ND	F1	10.0	5.420	F1	ug/L		54	70 - 132
Carbon tetrachloride	ND	F2	10.0	5.286		ug/L		53	50 - 159
Chlorobenzene	ND	F1	10.0	6.565	F1	ug/L		66	75 - 128
Chloroethane	ND		10.0	6.339		ug/L		63	62 - 161
Chloroform	ND	F1	10.0	5.984	F1	ug/L		60	73 - 130
Chloromethane	ND		10.0	6.126		ug/L		61	45 - 157
Dibromochloromethane	ND		10.0	7.275		ug/L		73	63 - 145
Dibromomethane	ND		10.0	7.811		ug/L		78	75 - 127
Dichlorodifluoromethane	ND		10.0	3.765		ug/L		38	31 - 132
Ethylbenzene	ND	F1	10.0	6.227	F1	ug/L		62	73 - 135
Isopropylbenzene	ND	F1 F2	10.0	6.272	F1	ug/L		63	69 - 141
Methylene Chloride	ND	F1	10.0	6.427	F1	ug/L		64	65 - 127
Methyl-t-Butyl Ether (MTBE)	ND		10.0	7.597		ug/L		76	59 - 131
Naphthalene	ND		10.0	7.722		ug/L		77	51 - 133
n-Butylbenzene	ND	F1	10.0	6.469	F1	ug/L		65	66 - 128
N-Propylbenzene	ND	F1	10.0	6.446	F1	ug/L		64	73 - 136
o-Xylene	ND	F1	10.0	6.536	F1	ug/L		65	69 - 138
m,p-Xylene	ND	F1	20.0	12.70	F1	ug/L		63	73 - 138
p-Isopropyltoluene	ND	F1 F2	10.0	6.262	F1	ug/L		63	69 - 134
sec-Butylbenzene	ND	F1 F2	10.0	6.104	F1	ug/L		61	70 - 130
Styrene	ND		10.0	6.235		ug/L		62	45 - 144

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QC Sample Results

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

Job ID: 570-150445-1

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

Lab Sample ID: 570-150445-3 MS

Matrix: Water

Analysis Batch: 359874

Client Sample ID: MW-31_20230825

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	F1	10.0	5.698	F1	ug/L		57	61 - 138
trans-1,3-Dichloropropene	ND		10.0	7.134		ug/L		71	61 - 131
tert-Butylbenzene	ND	F1	10.0	6.264	F1	ug/L		63	71 - 131
Tetrachloroethene	ND	F1 F2	10.0	6.050	F1	ug/L		60	64 - 150
Toluene	ND	F1	10.0	6.714	F1	ug/L		66	75 - 127
Trichloroethene	5.0		10.0	11.48		ug/L		65	34 - 159
Trichlorofluoromethane	ND	F1	10.0	5.271	F1	ug/L		53	69 - 142
Vinyl acetate	ND		10.0	5.962		ug/L		60	35 - 132
Vinyl chloride	ND		10.0	5.604		ug/L		56	51 - 168

Surrogate	MS %Recovery	MS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	93		64 - 132
4-Bromofluorobenzene (Surr)	100		76 - 120
Dibromofluoromethane	92		80 - 120
Toluene-d8 (Surr)	102		80 - 120

Lab Sample ID: 570-150445-3 MSD

Matrix: Water

Analysis Batch: 359874

Client Sample ID: MW-31_20230825

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	7.902		ug/L		79	61 - 142	14	20
1,1,1-Trichloroethane	ND	F1 F2	10.0	6.915	F2	ug/L		69	68 - 138	24	20
1,1,2,2-Tetrachloroethane	ND		10.0	8.792		ug/L		88	71 - 133	4	20
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	F1 F2	10.0	5.484	F2	ug/L		52	51 - 132	26	21
1,1,2-Trichloroethane	ND		10.0	8.472		ug/L		85	70 - 132	7	20
1,1-Dichloroethane	0.56	F1	10.0	7.676		ug/L		71	70 - 132	16	20
1,1-Dichloroethene	60		10.0	69.09	4	ug/L		87	57 - 148	4	20
1,1-Dichloropropene	ND	F1 F2	10.0	7.114	F1 F2	ug/L		71	74 - 132	24	20
1,2,3-Trichlorobenzene	ND		10.0	8.825		ug/L		88	66 - 135	17	22
1,2,3-Trichloropropane	ND		10.0	9.154		ug/L		92	61 - 130	4	20
1,2,4-Trichlorobenzene	ND		10.0	9.068		ug/L		91	66 - 131	19	24
1,2,4-Trimethylbenzene	ND		10.0	8.243		ug/L		82	65 - 132	21	22
1,2-Dibromo-3-Chloropropane	ND		10.0	9.004		ug/L		90	48 - 132	4	20
1,2-Dibromoethane	ND		10.0	8.247		ug/L		82	74 - 128	7	20
1,2-Dichlorobenzene	ND	F1	10.0	8.060		ug/L		81	74 - 126	14	20
1,2-Dichloroethane	ND		10.0	8.423		ug/L		84	65 - 140	9	20
1,2-Dichloropropane	ND	F1	10.0	7.918		ug/L		79	75 - 127	13	20
1,3,5-Trimethylbenzene	ND		10.0	8.327		ug/L		83	64 - 144	20	22
1,3-Dichlorobenzene	ND	F1	10.0	7.866		ug/L		79	73 - 125	19	21
1,3-Dichloropropane	ND		10.0	8.422		ug/L		84	71 - 131	8	20
1,4-Dichlorobenzene	ND	F1	10.0	7.688		ug/L		77	73 - 125	17	20
2,2-Dichloropropane	ND	F2	10.0	5.684	F2	ug/L		57	39 - 138	21	20
2-Butanone	ND		10.0	7.671		ug/L		77	44 - 140	11	34
2-Chlorotoluene	ND	F1	10.0	8.221		ug/L		82	71 - 130	19	20
2-Hexanone	ND		10.0	8.644		ug/L		86	52 - 136	11	37
4-Chlorotoluene	ND	F1 F2	10.0	7.375	F2	ug/L		74	69 - 127	21	20
4-Methyl-2-pentanone	ND		10.0	8.603		ug/L		86	44 - 139	2	21

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QC Sample Results

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

Job ID: 570-150445-1

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

Lab Sample ID: 570-150445-3 MSD

Matrix: Water

Analysis Batch: 359874

Client Sample ID: MW-31_20230825

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	ND		ug/L		67	20 - 174	31	35
Benzene	ND	F1	10.0	7.530		ug/L		75	75 - 125	15	20
Bromobenzene	ND	F1	10.0	8.058		ug/L		81	75 - 132	14	20
Bromochloromethane	ND	F1	10.0	7.823		ug/L		78	75 - 125	10	20
Bromodichloromethane	ND		10.0	7.872		ug/L		79	70 - 137	12	20
Bromoform	ND		10.0	7.884		ug/L		79	51 - 142	8	20
Bromomethane	ND		10.0	7.114		ug/L		71	46 - 164	6	25
cis-1,2-Dichloroethene	ND	F1	10.0	7.471		ug/L		72	62 - 138	17	20
cis-1,3-Dichloropropene	ND		10.0	7.908		ug/L		79	67 - 125	12	20
Carbon disulfide	ND	F1	10.0	6.609	F1	ug/L		66	70 - 132	20	20
Carbon tetrachloride	ND	F2	10.0	6.789	F2	ug/L		68	50 - 159	25	20
Chlorobenzene	ND	F1	10.0	7.701		ug/L		77	75 - 128	16	20
Chloroethane	ND		10.0	6.795		ug/L		68	62 - 161	7	20
Chloroform	ND	F1	10.0	6.846	F1	ug/L		68	73 - 130	13	20
Chloromethane	ND		10.0	6.571		ug/L		66	45 - 157	7	21
Dibromochloromethane	ND		10.0	7.902		ug/L		79	63 - 145	8	20
Dibromomethane	ND		10.0	8.442		ug/L		84	75 - 127	8	20
Dichlorodifluoromethane	ND		10.0	4.612		ug/L		46	31 - 132	20	21
Ethylbenzene	ND	F1	10.0	7.638		ug/L		76	73 - 135	20	20
Isopropylbenzene	ND	F1 F2	10.0	7.897	F2	ug/L		79	69 - 141	23	22
Methylene Chloride	ND	F1	10.0	7.218		ug/L		72	65 - 127	12	20
Methyl-t-Butyl Ether (MTBE)	ND		10.0	8.298		ug/L		83	59 - 131	9	20
Naphthalene	ND		10.0	8.752		ug/L		88	51 - 133	13	25
n-Butylbenzene	ND	F1	10.0	8.275		ug/L		83	66 - 128	24	24
N-Propylbenzene	ND	F1	10.0	8.061		ug/L		81	73 - 136	22	22
o-Xylene	ND	F1	10.0	7.795		ug/L		78	69 - 138	18	20
m,p-Xylene	ND	F1	20.0	15.60		ug/L		78	73 - 138	20	21
p-Isopropyltoluene	ND	F1 F2	10.0	8.048	F2	ug/L		80	69 - 134	25	23
sec-Butylbenzene	ND	F1 F2	10.0	7.819	F2	ug/L		78	70 - 130	25	22
Styrene	ND		10.0	7.165		ug/L		72	45 - 144	14	32
trans-1,2-Dichloroethene	ND	F1	10.0	6.888		ug/L		69	61 - 138	19	21
trans-1,3-Dichloropropene	ND		10.0	7.864		ug/L		79	61 - 131	10	20
tert-Butylbenzene	ND	F1	10.0	7.907		ug/L		79	71 - 131	23	23
Tetrachloroethene	ND	F1 F2	10.0	7.699	F2	ug/L		77	64 - 150	24	23
Toluene	ND	F1	10.0	7.982		ug/L		78	75 - 127	17	20
Trichloroethene	5.0		10.0	12.84		ug/L		78	34 - 159	11	23
Trichlorofluoromethane	ND	F1	10.0	6.078	F1	ug/L		61	69 - 142	14	20
Vinyl acetate	ND		10.0	6.859		ug/L		69	35 - 132	14	29
Vinyl chloride	ND		10.0	6.196		ug/L		62	51 - 168	10	20

Surrogate	MSD %Recovery	MSD Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	92		64 - 132
4-Bromofluorobenzene (Surr)	98		76 - 120
Dibromofluoromethane	93		80 - 120
Toluene-d8 (Surr)	100		80 - 120

QC Sample Results

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

Job ID: 570-150445-1

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

Lab Sample ID: 570-150445-8 MS

Matrix: Water

Analysis Batch: 359874

Client Sample ID: MW-34B_20230828

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	7.814		ug/L		78	61 - 142
1,1,1-Trichloroethane	ND	F1	10.0	6.623	F1	ug/L		66	68 - 138
1,1,2,2-Tetrachloroethane	ND		10.0	8.612		ug/L		86	71 - 133
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	F1	10.0	5.402		ug/L		54	51 - 132
1,1,2-Trichloroethane	ND		10.0	8.517		ug/L		85	70 - 132
1,1-Dichloroethane	ND	F1	10.0	7.240	F1	ug/L		69	70 - 132
1,1-Dichloroethene	24	F1	10.0	32.73		ug/L		85	57 - 148
1,1-Dichloropropene	ND	F1	10.0	6.866	F1	ug/L		69	74 - 132
1,2,3-Trichlorobenzene	ND		10.0	8.463		ug/L		85	66 - 135
1,2,3-Trichloropropane	ND		10.0	10.11		ug/L		101	61 - 130
1,2,4-Trichlorobenzene	ND		10.0	8.673		ug/L		87	66 - 131
1,2,4-Trimethylbenzene	ND		10.0	7.924		ug/L		79	65 - 132
1,2-Dibromo-3-Chloropropane	ND		10.0	8.460		ug/L		85	48 - 132
1,2-Dibromoethane	ND		10.0	8.490		ug/L		85	74 - 128
1,2-Dichlorobenzene	ND		10.0	7.812		ug/L		78	74 - 126
1,2-Dichloroethane	ND		10.0	8.354		ug/L		84	65 - 140
1,2-Dichloropropane	ND		10.0	8.041		ug/L		80	75 - 127
1,3,5-Trimethylbenzene	ND		10.0	8.219		ug/L		82	64 - 144
1,3-Dichlorobenzene	ND		10.0	7.633		ug/L		76	73 - 125
1,3-Dichloropropane	ND		10.0	8.307		ug/L		83	71 - 131
1,4-Dichlorobenzene	ND		10.0	7.400		ug/L		74	73 - 125
2,2-Dichloropropane	ND		10.0	5.388		ug/L		54	39 - 138
2-Butanone	ND		10.0	8.255		ug/L		83	44 - 140
2-Chlorotoluene	ND		10.0	8.071		ug/L		81	71 - 130
2-Hexanone	ND		10.0	9.250		ug/L		93	52 - 136
4-Chlorotoluene	ND		10.0	7.084		ug/L		71	69 - 127
4-Methyl-2-pentanone	ND		10.0	7.793		ug/L		78	44 - 139
Acetone	ND	F2	10.0	ND		ug/L		54	20 - 174
Benzene	ND		10.0	7.624		ug/L		76	75 - 125
Bromobenzene	ND		10.0	8.078		ug/L		81	75 - 132
Bromochloromethane	ND		10.0	7.468		ug/L		75	75 - 125
Bromodichloromethane	ND		10.0	7.994		ug/L		80	70 - 137
Bromoform	ND		10.0	7.505		ug/L		75	51 - 142
Bromomethane	ND		10.0	7.918		ug/L		79	46 - 164
cis-1,2-Dichloroethene	ND		10.0	7.027		ug/L		70	62 - 138
cis-1,3-Dichloropropene	ND		10.0	7.656		ug/L		77	67 - 125
Carbon disulfide	ND	F1	10.0	6.477	F1	ug/L		65	70 - 132
Carbon tetrachloride	ND		10.0	6.536		ug/L		65	50 - 159
Chlorobenzene	ND		10.0	7.740		ug/L		77	75 - 128
Chloroethane	ND		10.0	7.226		ug/L		72	62 - 161
Chloroform	ND	F1	10.0	6.592	F1	ug/L		66	73 - 130
Chloromethane	ND		10.0	7.283		ug/L		73	45 - 157
Dibromochloromethane	ND		10.0	7.820		ug/L		78	63 - 145
Dibromomethane	ND		10.0	8.196		ug/L		82	75 - 127
Dichlorodifluoromethane	ND	F2	10.0	5.553		ug/L		56	31 - 132
Ethylbenzene	ND		10.0	7.480		ug/L		75	73 - 135
Isopropylbenzene	ND		10.0	7.711		ug/L		77	69 - 141
Methylene Chloride	ND		10.0	7.074		ug/L		71	65 - 127

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QC Sample Results

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

Job ID: 570-150445-1

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

Lab Sample ID: 570-150445-8 MS

Matrix: Water

Analysis Batch: 359874

Client Sample ID: MW-34B_20230828

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Methyl-t-Butyl Ether (MTBE)	ND		10.0	8.090		ug/L		81	59 - 131
Naphthalene	ND		10.0	8.390		ug/L		84	51 - 133
n-Butylbenzene	ND		10.0	7.865		ug/L		79	66 - 128
N-Propylbenzene	ND		10.0	7.901		ug/L		79	73 - 136
o-Xylene	ND		10.0	7.704		ug/L		77	69 - 138
m,p-Xylene	ND		20.0	15.24		ug/L		76	73 - 138
p-Isopropyltoluene	ND		10.0	7.624		ug/L		76	69 - 134
sec-Butylbenzene	ND		10.0	7.502		ug/L		75	70 - 130
Styrene	ND		10.0	7.446		ug/L		74	45 - 144
trans-1,2-Dichloroethene	ND		10.0	6.677		ug/L		67	61 - 138
trans-1,3-Dichloropropene	ND		10.0	7.944		ug/L		79	61 - 131
tert-Butylbenzene	ND		10.0	7.577		ug/L		76	71 - 131
Tetrachloroethene	ND		10.0	7.427		ug/L		74	64 - 150
Toluene	ND		10.0	7.828		ug/L		78	75 - 127
Trichloroethene	ND		10.0	7.814		ug/L		77	34 - 159
Trichlorofluoromethane	ND	F2 F1	10.0	6.746	F1	ug/L		67	69 - 142
Vinyl acetate	ND		10.0	6.667		ug/L		67	35 - 132
Vinyl chloride	ND		10.0	6.883		ug/L		69	51 - 168

Surrogate	MS %Recovery	MS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	97		64 - 132
4-Bromofluorobenzene (Surr)	100		76 - 120
Dibromofluoromethane	92		80 - 120
Toluene-d8 (Surr)	102		80 - 120

Lab Sample ID: 570-150445-8 MSD

Matrix: Water

Analysis Batch: 359874

Client Sample ID: MW-34B_20230828

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	8.368		ug/L		84	61 - 142	7	20
1,1,1-Trichloroethane	ND	F1	10.0	6.952		ug/L		70	68 - 138	5	20
1,1,2,2-Tetrachloroethane	ND		10.0	9.919		ug/L		99	71 - 133	14	20
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	F1	10.0	4.796	F1	ug/L		48	51 - 132	12	21
1,1,2-Trichloroethane	ND		10.0	9.209		ug/L		92	70 - 132	8	20
1,1-Dichloroethane	ND	F1	10.0	7.779		ug/L		74	70 - 132	7	20
1,1-Dichloroethene	24	F1	10.0	28.91	F1	ug/L		47	57 - 148	12	20
1,1-Dichloropropene	ND	F1	10.0	7.137	F1	ug/L		71	74 - 132	4	20
1,2,3-Trichlorobenzene	ND		10.0	10.17		ug/L		102	66 - 135	18	22
1,2,3-Trichloropropane	ND		10.0	9.872		ug/L		99	61 - 130	2	20
1,2,4-Trichlorobenzene	ND		10.0	10.36		ug/L		104	66 - 131	18	24
1,2,4-Trimethylbenzene	ND		10.0	9.247		ug/L		92	65 - 132	15	22
1,2-Dibromo-3-Chloropropane	ND		10.0	9.930		ug/L		99	48 - 132	16	20
1,2-Dibromoethane	ND		10.0	9.280		ug/L		93	74 - 128	9	20
1,2-Dichlorobenzene	ND		10.0	9.126		ug/L		91	74 - 126	16	20
1,2-Dichloroethane	ND		10.0	9.132		ug/L		91	65 - 140	9	20
1,2-Dichloropropane	ND		10.0	8.521		ug/L		85	75 - 127	6	20
1,3,5-Trimethylbenzene	ND		10.0	8.936		ug/L		89	64 - 144	8	22

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QC Sample Results

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

Job ID: 570-150445-1

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

Lab Sample ID: 570-150445-8 MSD

Matrix: Water

Analysis Batch: 359874

Client Sample ID: MW-34B_20230828

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
1,3-Dichlorobenzene	ND		10.0	8.798		ug/L		88	73 - 125	14	21
1,3-Dichloropropane	ND		10.0	9.233		ug/L		92	71 - 131	11	20
1,4-Dichlorobenzene	ND		10.0	8.704		ug/L		87	73 - 125	16	20
2,2-Dichloropropane	ND		10.0	5.611		ug/L		56	39 - 138	4	20
2-Butanone	ND		10.0	6.481		ug/L		65	44 - 140	24	34
2-Chlorotoluene	ND		10.0	8.804		ug/L		88	71 - 130	9	20
2-Hexanone	ND		10.0	11.01		ug/L		110	52 - 136	17	37
4-Chlorotoluene	ND		10.0	8.176		ug/L		82	69 - 127	14	20
4-Methyl-2-pentanone	ND		10.0	9.552		ug/L		96	44 - 139	20	21
Acetone	ND	F2	10.0	9.056	F2	ug/L		91	20 - 174	51	35
Benzene	ND		10.0	7.965		ug/L		80	75 - 125	4	20
Bromobenzene	ND		10.0	8.754		ug/L		88	75 - 132	8	20
Bromochloromethane	ND		10.0	8.532		ug/L		85	75 - 125	13	20
Bromodichloromethane	ND		10.0	8.488		ug/L		85	70 - 137	6	20
Bromoform	ND		10.0	8.696		ug/L		87	51 - 142	15	20
Bromomethane	ND		10.0	7.414		ug/L		74	46 - 164	7	25
cis-1,2-Dichloroethene	ND		10.0	7.593		ug/L		76	62 - 138	8	20
cis-1,3-Dichloropropene	ND		10.0	8.289		ug/L		83	67 - 125	8	20
Carbon disulfide	ND	F1	10.0	6.748	F1	ug/L		67	70 - 132	4	20
Carbon tetrachloride	ND		10.0	6.853		ug/L		69	50 - 159	5	20
Chlorobenzene	ND		10.0	8.295		ug/L		83	75 - 128	7	20
Chloroethane	ND		10.0	6.477		ug/L		65	62 - 161	11	20
Chloroform	ND	F1	10.0	7.228	F1	ug/L		72	73 - 130	9	20
Chloromethane	ND		10.0	6.790		ug/L		68	45 - 157	7	21
Dibromochloromethane	ND		10.0	8.671		ug/L		87	63 - 145	10	20
Dibromomethane	ND		10.0	8.927		ug/L		89	75 - 127	9	20
Dichlorodifluoromethane	ND	F2	10.0	3.821	F2	ug/L		38	31 - 132	37	21
Ethylbenzene	ND		10.0	8.044		ug/L		80	73 - 135	7	20
Isopropylbenzene	ND		10.0	8.247		ug/L		82	69 - 141	7	22
Methylene Chloride	ND		10.0	7.900		ug/L		79	65 - 127	11	20
Methyl-t-Butyl Ether (MTBE)	ND		10.0	8.903		ug/L		89	59 - 131	10	20
Naphthalene	ND		10.0	9.917		ug/L		99	51 - 133	17	25
n-Butylbenzene	ND		10.0	9.214		ug/L		92	66 - 128	16	24
N-Propylbenzene	ND		10.0	8.519		ug/L		85	73 - 136	8	22
o-Xylene	ND		10.0	8.310		ug/L		83	69 - 138	8	20
m,p-Xylene	ND		20.0	16.60		ug/L		83	73 - 138	8	21
p-Isopropyltoluene	ND		10.0	8.843		ug/L		88	69 - 134	15	23
sec-Butylbenzene	ND		10.0	8.564		ug/L		86	70 - 130	13	22
Styrene	ND		10.0	8.382		ug/L		84	45 - 144	12	32
trans-1,2-Dichloroethene	ND		10.0	7.167		ug/L		72	61 - 138	7	21
trans-1,3-Dichloropropene	ND		10.0	8.324		ug/L		83	61 - 131	5	20
tert-Butylbenzene	ND		10.0	8.765		ug/L		88	71 - 131	15	23
Tetrachloroethene	ND		10.0	8.083		ug/L		81	64 - 150	8	23
Toluene	ND		10.0	8.114		ug/L		81	75 - 127	4	20
Trichloroethene	ND		10.0	7.927		ug/L		78	34 - 159	1	23
Trichlorofluoromethane	ND	F2 F1	10.0	5.310	F2 F1	ug/L		53	69 - 142	24	20
Vinyl acetate	ND		10.0	7.225		ug/L		72	35 - 132	8	29
Vinyl chloride	ND		10.0	5.836		ug/L		58	51 - 168	16	20

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QC Sample Results

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

Job ID: 570-150445-1

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

Lab Sample ID: 570-150445-8 MSD

Matrix: Water

Analysis Batch: 359874

Client Sample ID: MW-34B_20230828

Prep Type: Total/NA

Surrogate	MSD %Recovery	MSD Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	99		64 - 132
4-Bromofluorobenzene (Surr)	97		76 - 120
Dibromofluoromethane	94		80 - 120
Toluene-d8 (Surr)	99		80 - 120

Lab Sample ID: MB 570-360280/7

Matrix: Water

Analysis Batch: 360280

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			09/01/23 08:21	1
1,1,1-Trichloroethane	ND		0.50		ug/L			09/01/23 08:21	1
1,1,2,2-Tetrachloroethane	ND		0.50		ug/L			09/01/23 08:21	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.50		ug/L			09/01/23 08:21	1
1,1,2-Trichloroethane	ND		0.50		ug/L			09/01/23 08:21	1
1,1-Dichloroethane	ND		0.50		ug/L			09/01/23 08:21	1
1,1-Dichloroethene	ND		0.50		ug/L			09/01/23 08:21	1
1,1-Dichloropropene	ND		0.50		ug/L			09/01/23 08:21	1
1,2,3-Trichlorobenzene	ND		0.50		ug/L			09/01/23 08:21	1
1,2,3-Trichloropropane	ND		0.50		ug/L			09/01/23 08:21	1
1,2,4-Trichlorobenzene	ND		0.50		ug/L			09/01/23 08:21	1
1,2,4-Trimethylbenzene	ND		0.50		ug/L			09/01/23 08:21	1
1,2-Dibromo-3-Chloropropane	ND		1.0		ug/L			09/01/23 08:21	1
1,2-Dibromoethane	ND		0.50		ug/L			09/01/23 08:21	1
1,2-Dichlorobenzene	ND		0.50		ug/L			09/01/23 08:21	1
1,2-Dichloroethane	ND		0.50		ug/L			09/01/23 08:21	1
1,2-Dichloropropane	ND		0.50		ug/L			09/01/23 08:21	1
1,3,5-Trimethylbenzene	ND		0.50		ug/L			09/01/23 08:21	1
1,3-Dichlorobenzene	ND		0.50		ug/L			09/01/23 08:21	1
1,3-Dichloropropane	ND		0.50		ug/L			09/01/23 08:21	1
1,4-Dichlorobenzene	ND		0.50		ug/L			09/01/23 08:21	1
2,2-Dichloropropane	ND		0.50		ug/L			09/01/23 08:21	1
2-Butanone	ND		5.0		ug/L			09/01/23 08:21	1
2-Chlorotoluene	ND		0.50		ug/L			09/01/23 08:21	1
2-Hexanone	ND		6.0		ug/L			09/01/23 08:21	1
4-Chlorotoluene	ND		0.50		ug/L			09/01/23 08:21	1
4-Methyl-2-pentanone	ND		5.0		ug/L			09/01/23 08:21	1
Acetone	ND		8.0		ug/L			09/01/23 08:21	1
Benzene	ND		0.50		ug/L			09/01/23 08:21	1
Bromobenzene	ND		0.50		ug/L			09/01/23 08:21	1
Bromochloromethane	ND		1.0		ug/L			09/01/23 08:21	1
Bromodichloromethane	ND		0.50		ug/L			09/01/23 08:21	1
Bromoform	ND		0.50		ug/L			09/01/23 08:21	1
Bromomethane	ND		2.0		ug/L			09/01/23 08:21	1
cis-1,2-Dichloroethene	ND		0.50		ug/L			09/01/23 08:21	1
cis-1,3-Dichloropropene	ND		0.50		ug/L			09/01/23 08:21	1
Carbon disulfide	ND		1.0		ug/L			09/01/23 08:21	1
Carbon tetrachloride	ND		0.50		ug/L			09/01/23 08:21	1

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QC Sample Results

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

Job ID: 570-150445-1

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

Lab Sample ID: MB 570-360280/7

Matrix: Water

Analysis Batch: 360280

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chlorobenzene	ND		0.50		ug/L			09/01/23 08:21	1
Chloroethane	ND		0.50		ug/L			09/01/23 08:21	1
Chloroform	ND		0.50		ug/L			09/01/23 08:21	1
Chloromethane	ND		1.0		ug/L			09/01/23 08:21	1
Dibromochloromethane	ND		0.50		ug/L			09/01/23 08:21	1
Dibromomethane	ND		0.50		ug/L			09/01/23 08:21	1
Dichlorodifluoromethane	ND		1.0		ug/L			09/01/23 08:21	1
Ethylbenzene	ND		0.50		ug/L			09/01/23 08:21	1
Isopropylbenzene	ND		0.50		ug/L			09/01/23 08:21	1
Methylene Chloride	ND		1.0		ug/L			09/01/23 08:21	1
Methyl-t-Butyl Ether (MTBE)	ND		0.50		ug/L			09/01/23 08:21	1
Naphthalene	ND		1.0		ug/L			09/01/23 08:21	1
n-Butylbenzene	ND		0.50		ug/L			09/01/23 08:21	1
N-Propylbenzene	ND		0.50		ug/L			09/01/23 08:21	1
o-Xylene	ND		0.50		ug/L			09/01/23 08:21	1
m,p-Xylene	ND		1.0		ug/L			09/01/23 08:21	1
p-Isopropyltoluene	ND		0.50		ug/L			09/01/23 08:21	1
sec-Butylbenzene	ND		0.50		ug/L			09/01/23 08:21	1
Styrene	ND		0.50		ug/L			09/01/23 08:21	1
trans-1,2-Dichloroethene	ND		0.50		ug/L			09/01/23 08:21	1
trans-1,3-Dichloropropene	ND		0.50		ug/L			09/01/23 08:21	1
tert-Butylbenzene	ND		0.50		ug/L			09/01/23 08:21	1
Tetrachloroethene	ND		0.50		ug/L			09/01/23 08:21	1
Toluene	ND		0.50		ug/L			09/01/23 08:21	1
Trichloroethene	ND		0.50		ug/L			09/01/23 08:21	1
Trichlorofluoromethane	ND		0.50		ug/L			09/01/23 08:21	1
Vinyl acetate	ND		5.0		ug/L			09/01/23 08:21	1
Vinyl chloride	ND		0.50		ug/L			09/01/23 08:21	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	105		64 - 132		09/01/23 08:21	1
4-Bromofluorobenzene (Surr)	97		76 - 120		09/01/23 08:21	1
Dibromofluoromethane	102		80 - 120		09/01/23 08:21	1
Toluene-d8 (Surr)	99		80 - 120		09/01/23 08:21	1

Lab Sample ID: LCS 570-360280/4

Matrix: Water

Analysis Batch: 360280

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	9.856		ug/L		99	80 - 125
1,1,1-Trichloroethane	10.0	9.902		ug/L		99	75 - 121
1,1,2,2-Tetrachloroethane	10.0	9.671		ug/L		97	80 - 120
1,1,2-Trichloro-1,2,2-trifluoroethane	10.0	9.706		ug/L		97	56 - 132
1,1,2-Trichloroethane	10.0	9.709		ug/L		97	80 - 121
1,1-Dichloroethane	10.0	9.571		ug/L		96	80 - 120
1,1-Dichloroethene	10.0	9.144		ug/L		91	80 - 126
1,1-Dichloropropene	10.0	9.687		ug/L		97	72 - 122

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QC Sample Results

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

Job ID: 570-150445-1

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

Lab Sample ID: LCS 570-360280/4

Matrix: Water

Analysis Batch: 360280

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
1,2,3-Trichlorobenzene	10.0	10.30		ug/L		103	80 - 125
1,2,3-Trichloropropane	10.0	9.636		ug/L		96	75 - 127
1,2,4-Trichlorobenzene	10.0	10.14		ug/L		101	80 - 124
1,2,4-Trimethylbenzene	10.0	10.41		ug/L		104	80 - 128
1,2-Dibromo-3-Chloropropane	10.0	9.671		ug/L		97	63 - 123
1,2-Dibromoethane	10.0	9.934		ug/L		99	80 - 125
1,2-Dichlorobenzene	10.0	9.808		ug/L		98	80 - 120
1,2-Dichloroethane	10.0	10.05		ug/L		100	76 - 130
1,2-Dichloropropane	10.0	9.871		ug/L		99	74 - 124
1,3,5-Trimethylbenzene	10.0	10.08		ug/L		101	80 - 122
1,3-Dichlorobenzene	10.0	9.798		ug/L		98	80 - 120
1,3-Dichloropropane	10.0	9.692		ug/L		97	80 - 121
1,4-Dichlorobenzene	10.0	9.934		ug/L		99	80 - 120
2,2-Dichloropropane	10.0	10.66		ug/L		107	79 - 131
2-Butanone	10.0	8.935		ug/L		89	48 - 145
2-Chlorotoluene	10.0	9.644		ug/L		96	80 - 120
2-Hexanone	10.0	9.171		ug/L		92	50 - 149
4-Chlorotoluene	10.0	9.880		ug/L		99	80 - 120
4-Methyl-2-pentanone	10.0	8.992		ug/L		90	63 - 120
Acetone	10.0	8.498		ug/L		85	45 - 139
Benzene	10.0	9.883		ug/L		99	80 - 120
Bromobenzene	10.0	9.817		ug/L		98	80 - 125
Bromochloromethane	10.0	9.718		ug/L		97	80 - 120
Bromodichloromethane	10.0	10.05		ug/L		101	73 - 131
Bromoform	10.0	10.28		ug/L		103	76 - 124
Bromomethane	10.0	8.822		ug/L		88	26 - 180
cis-1,2-Dichloroethene	10.0	9.750		ug/L		97	80 - 120
cis-1,3-Dichloropropene	10.0	10.92		ug/L		109	76 - 123
Carbon disulfide	10.0	8.969		ug/L		90	75 - 123
Carbon tetrachloride	10.0	10.14		ug/L		101	61 - 139
Chlorobenzene	10.0	9.733		ug/L		97	80 - 120
Chloroethane	10.0	8.424		ug/L		84	54 - 150
Chloroform	10.0	9.423		ug/L		94	80 - 120
Chloromethane	10.0	7.306		ug/L		73	28 - 151
Dibromochloromethane	10.0	9.925		ug/L		99	74 - 136
Dibromomethane	10.0	9.962		ug/L		100	80 - 122
Dichlorodifluoromethane	10.0	7.357		ug/L		74	27 - 154
Ethylbenzene	10.0	9.875		ug/L		99	80 - 126
Isopropylbenzene	10.0	9.374		ug/L		94	80 - 120
Methylene Chloride	10.0	9.599		ug/L		96	80 - 120
Methyl-t-Butyl Ether (MTBE)	10.0	9.585		ug/L		96	69 - 128
Naphthalene	10.0	9.512		ug/L		95	70 - 130
n-Butylbenzene	10.0	10.22		ug/L		102	78 - 127
N-Propylbenzene	10.0	10.01		ug/L		100	80 - 121
o-Xylene	10.0	10.14		ug/L		101	80 - 124
m,p-Xylene	20.0	19.94		ug/L		100	80 - 123
p-Isopropyltoluene	10.0	10.01		ug/L		100	80 - 128
sec-Butylbenzene	10.0	9.748		ug/L		97	80 - 125
Styrene	10.0	9.863		ug/L		99	80 - 121

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QC Sample Results

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

Job ID: 570-150445-1

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

Lab Sample ID: LCS 570-360280/4

Matrix: Water

Analysis Batch: 360280

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
trans-1,2-Dichloroethene	10.0	9.543		ug/L		95	79 - 120
trans-1,3-Dichloropropene	10.0	9.916		ug/L		99	80 - 126
tert-Butylbenzene	10.0	9.906		ug/L		99	80 - 121
Tetrachloroethene	10.0	9.716		ug/L		97	80 - 125
Toluene	10.0	9.931		ug/L		99	80 - 120
Trichloroethene	10.0	9.847		ug/L		98	77 - 124
Trichlorofluoromethane	10.0	8.806		ug/L		88	41 - 163
Vinyl acetate	10.0	10.70		ug/L		107	61 - 126
Vinyl chloride	10.0	8.235		ug/L		82	50 - 160

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	100		64 - 132
4-Bromofluorobenzene (Surr)	99		76 - 120
Dibromofluoromethane	100		80 - 120
Toluene-d8 (Surr)	99		80 - 120

Lab Sample ID: LCSD 570-360280/5

Matrix: Water

Analysis Batch: 360280

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	9.625		ug/L		96	80 - 125	2	20
1,1,1-Trichloroethane	10.0	9.432		ug/L		94	75 - 121	5	20
1,1,2,2-Tetrachloroethane	10.0	9.564		ug/L		96	80 - 120	1	20
1,1,2-Trichloro-1,2,2-trifluoroethane	10.0	9.370		ug/L		94	56 - 132	4	22
1,1,2-Trichloroethane	10.0	9.922		ug/L		99	80 - 121	2	20
1,1-Dichloroethane	10.0	9.108		ug/L		91	80 - 120	5	20
1,1-Dichloroethene	10.0	8.790		ug/L		88	80 - 126	4	21
1,1-Dichloropropene	10.0	9.191		ug/L		92	72 - 122	5	20
1,2,3-Trichlorobenzene	10.0	10.18		ug/L		102	80 - 125	1	20
1,2,3-Trichloropropane	10.0	9.611		ug/L		96	75 - 127	0	20
1,2,4-Trichlorobenzene	10.0	9.866		ug/L		99	80 - 124	3	20
1,2,4-Trimethylbenzene	10.0	10.07		ug/L		101	80 - 128	3	20
1,2-Dibromo-3-Chloropropane	10.0	9.995		ug/L		100	63 - 123	3	20
1,2-Dibromoethane	10.0	9.867		ug/L		99	80 - 125	1	20
1,2-Dichlorobenzene	10.0	9.622		ug/L		96	80 - 120	2	20
1,2-Dichloroethane	10.0	9.934		ug/L		99	76 - 130	1	20
1,2-Dichloropropane	10.0	9.499		ug/L		95	74 - 124	4	20
1,3,5-Trimethylbenzene	10.0	9.632		ug/L		96	80 - 122	5	20
1,3-Dichlorobenzene	10.0	9.675		ug/L		97	80 - 120	1	20
1,3-Dichloropropane	10.0	9.582		ug/L		96	80 - 121	1	20
1,4-Dichlorobenzene	10.0	9.593		ug/L		96	80 - 120	3	20
2,2-Dichloropropane	10.0	10.05		ug/L		100	79 - 131	6	20
2-Butanone	10.0	8.986		ug/L		90	48 - 145	1	30
2-Chlorotoluene	10.0	9.313		ug/L		93	80 - 120	3	20
2-Hexanone	10.0	8.588		ug/L		86	50 - 149	7	29
4-Chlorotoluene	10.0	9.501		ug/L		95	80 - 120	4	20
4-Methyl-2-pentanone	10.0	9.060		ug/L		91	63 - 120	1	20

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QC Sample Results

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

Job ID: 570-150445-1

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

Lab Sample ID: LCSD 570-360280/5

Matrix: Water

Analysis Batch: 360280

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
Acetone	10.0	7.816	J	ug/L		78	45 - 139	8	30
Benzene	10.0	9.568		ug/L		96	80 - 120	3	20
Bromobenzene	10.0	9.762		ug/L		98	80 - 125	1	20
Bromochloromethane	10.0	9.403		ug/L		94	80 - 120	3	20
Bromodichloromethane	10.0	9.715		ug/L		97	73 - 131	3	20
Bromoform	10.0	10.11		ug/L		101	76 - 124	2	20
Bromomethane	10.0	8.265		ug/L		83	26 - 180	7	20
cis-1,2-Dichloroethene	10.0	9.320		ug/L		93	80 - 120	5	20
cis-1,3-Dichloropropene	10.0	10.47		ug/L		105	76 - 123	4	20
Carbon disulfide	10.0	8.616		ug/L		86	75 - 123	4	20
Carbon tetrachloride	10.0	9.752		ug/L		98	61 - 139	4	20
Chlorobenzene	10.0	9.388		ug/L		94	80 - 120	4	20
Chloroethane	10.0	8.090		ug/L		81	54 - 150	4	25
Chloroform	10.0	9.162		ug/L		92	80 - 120	3	20
Chloromethane	10.0	7.086		ug/L		71	28 - 151	3	20
Dibromochloromethane	10.0	9.587		ug/L		96	74 - 136	3	20
Dibromomethane	10.0	9.669		ug/L		97	80 - 122	3	20
Dichlorodifluoromethane	10.0	7.034		ug/L		70	27 - 154	4	21
Ethylbenzene	10.0	9.609		ug/L		96	80 - 126	3	20
Isopropylbenzene	10.0	9.171		ug/L		92	80 - 120	2	20
Methylene Chloride	10.0	9.297		ug/L		93	80 - 120	3	20
Methyl-t-Butyl Ether (MTBE)	10.0	9.584		ug/L		96	69 - 128	0	20
Naphthalene	10.0	9.427		ug/L		94	70 - 130	1	20
n-Butylbenzene	10.0	9.837		ug/L		98	78 - 127	4	20
N-Propylbenzene	10.0	9.716		ug/L		97	80 - 121	3	20
o-Xylene	10.0	9.717		ug/L		97	80 - 124	4	20
m,p-Xylene	20.0	19.26		ug/L		96	80 - 123	3	20
p-Isopropyltoluene	10.0	9.584		ug/L		96	80 - 128	4	20
sec-Butylbenzene	10.0	9.310		ug/L		93	80 - 125	5	20
Styrene	10.0	9.645		ug/L		96	80 - 121	2	20
trans-1,2-Dichloroethene	10.0	9.143		ug/L		91	79 - 120	4	20
trans-1,3-Dichloropropene	10.0	9.868		ug/L		99	80 - 126	0	20
tert-Butylbenzene	10.0	9.609		ug/L		96	80 - 121	3	20
Tetrachloroethene	10.0	9.222		ug/L		92	80 - 125	5	20
Toluene	10.0	9.500		ug/L		95	80 - 120	4	20
Trichloroethene	10.0	9.286		ug/L		93	77 - 124	6	20
Trichlorofluoromethane	10.0	8.535		ug/L		85	41 - 163	3	21
Vinyl acetate	10.0	9.629		ug/L		96	61 - 126	10	24
Vinyl chloride	10.0	7.772		ug/L		78	50 - 160	6	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	99		64 - 132
4-Bromofluorobenzene (Surr)	102		76 - 120
Dibromofluoromethane	100		80 - 120
Toluene-d8 (Surr)	100		80 - 120

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QC Sample Results

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

Job ID: 570-150445-1

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

Lab Sample ID: 570-150425-A-6 MS

Matrix: Water

Analysis Batch: 360280

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		20.0	19.60		ug/L		98	61 - 142
1,1,1-Trichloroethane	ND		20.0	20.18		ug/L		101	68 - 138
1,1,2,2-Tetrachloroethane	ND		20.0	19.51		ug/L		98	71 - 133
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		20.0	19.18		ug/L		96	51 - 132
1,1,2-Trichloroethane	ND		20.0	20.07		ug/L		100	70 - 132
1,1-Dichloroethane	ND		20.0	20.17		ug/L		98	70 - 132
1,1-Dichloroethene	ND		20.0	19.43		ug/L		94	57 - 148
1,1-Dichloropropene	ND		20.0	19.80		ug/L		99	74 - 132
1,2,3-Trichlorobenzene	ND		20.0	19.09		ug/L		95	66 - 135
1,2,3-Trichloropropane	ND		20.0	19.44		ug/L		97	61 - 130
1,2,4-Trichlorobenzene	ND		20.0	18.82		ug/L		94	66 - 131
1,2,4-Trimethylbenzene	ND		20.0	20.06		ug/L		100	65 - 132
1,2-Dibromo-3-Chloropropane	ND		20.0	19.41		ug/L		97	48 - 132
1,2-Dibromoethane	ND		20.0	19.92		ug/L		100	74 - 128
1,2-Dichlorobenzene	ND		20.0	19.49		ug/L		97	74 - 126
1,2-Dichloroethane	ND		20.0	21.30		ug/L		103	65 - 140
1,2-Dichloropropane	ND		20.0	19.82		ug/L		99	75 - 127
1,3,5-Trimethylbenzene	ND		20.0	19.28		ug/L		96	64 - 144
1,3-Dichlorobenzene	ND		20.0	19.36		ug/L		97	73 - 125
1,3-Dichloropropane	ND		20.0	20.07		ug/L		100	71 - 131
1,4-Dichlorobenzene	ND		20.0	18.94		ug/L		95	73 - 125
2,2-Dichloropropane	ND		20.0	17.89		ug/L		89	39 - 138
2-Butanone	ND		20.0	20.03		ug/L		100	44 - 140
2-Chlorotoluene	ND		20.0	19.21		ug/L		96	71 - 130
2-Hexanone	ND		20.0	17.33		ug/L		87	52 - 136
4-Chlorotoluene	ND		20.0	19.24		ug/L		96	69 - 127
4-Methyl-2-pentanone	ND		20.0	17.76		ug/L		89	44 - 139
Acetone	ND		20.0	19.48		ug/L		97	20 - 174
Benzene	ND		20.0	19.99		ug/L		100	75 - 125
Bromobenzene	ND		20.0	19.74		ug/L		99	75 - 132
Bromochloromethane	ND		20.0	21.25		ug/L		106	75 - 125
Bromodichloromethane	ND		20.0	19.99		ug/L		100	70 - 137
Bromoform	ND		20.0	19.88		ug/L		99	51 - 142
Bromomethane	ND		20.0	16.98		ug/L		85	46 - 164
cis-1,2-Dichloroethene	8.0		20.0	28.13		ug/L		101	62 - 138
cis-1,3-Dichloropropene	ND		20.0	20.54		ug/L		103	67 - 125
Carbon disulfide	ND		20.0	18.66		ug/L		93	70 - 132
Carbon tetrachloride	ND		20.0	20.45		ug/L		102	50 - 159
Chlorobenzene	ND		20.0	19.43		ug/L		97	75 - 128
Chloroethane	ND		20.0	17.63		ug/L		88	62 - 161
Chloroform	ND		20.0	19.82		ug/L		99	73 - 130
Chloromethane	ND		20.0	15.76		ug/L		79	45 - 157
Dibromochloromethane	ND		20.0	19.49		ug/L		97	63 - 145
Dibromomethane	ND		20.0	19.62		ug/L		98	75 - 127
Dichlorodifluoromethane	ND		20.0	13.49		ug/L		67	31 - 132
Ethylbenzene	ND		20.0	19.63		ug/L		98	73 - 135
Isopropylbenzene	ND		20.0	18.57		ug/L		93	69 - 141
Methylene Chloride	ND		20.0	19.66		ug/L		98	65 - 127

Eurofins Calscience

QC Sample Results

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

Job ID: 570-150445-1

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

Lab Sample ID: 570-150425-A-6 MS

Matrix: Water

Analysis Batch: 360280

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
Methyl-t-Butyl Ether (MTBE)	ND		20.0	19.95		ug/L		100	59 - 131
Naphthalene	ND		20.0	17.49		ug/L		87	51 - 133
n-Butylbenzene	ND		20.0	19.31		ug/L		97	66 - 128
N-Propylbenzene	ND		20.0	19.68		ug/L		98	73 - 136
o-Xylene	ND		20.0	20.05		ug/L		100	69 - 138
m,p-Xylene	ND		40.0	39.57		ug/L		99	73 - 138
p-Isopropyltoluene	ND		20.0	19.20		ug/L		96	69 - 134
sec-Butylbenzene	ND		20.0	18.92		ug/L		95	70 - 130
Styrene	ND		20.0	19.23		ug/L		96	45 - 144
trans-1,2-Dichloroethene	ND		20.0	19.87		ug/L		99	61 - 138
trans-1,3-Dichloropropene	ND		20.0	18.69		ug/L		93	61 - 131
tert-Butylbenzene	ND		20.0	19.59		ug/L		98	71 - 131
Tetrachloroethene	ND		20.0	18.70		ug/L		94	64 - 150
Toluene	ND		20.0	19.81		ug/L		99	75 - 127
Trichloroethene	61		20.0	74.87		ug/L		69	34 - 159
Trichlorofluoromethane	ND		20.0	17.22		ug/L		86	69 - 142
Vinyl acetate	ND		20.0	21.11		ug/L		106	35 - 132
Vinyl chloride	ND		20.0	16.92		ug/L		81	51 - 168

Surrogate	MS %Recovery	MS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	107		64 - 132
4-Bromofluorobenzene (Surr)	98		76 - 120
Dibromofluoromethane	102		80 - 120
Toluene-d8 (Surr)	100		80 - 120

Lab Sample ID: 570-150425-A-6 MSD

Matrix: Water

Analysis Batch: 360280

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		20.0	19.90		ug/L		100	61 - 142	2	20
1,1,1-Trichloroethane	ND		20.0	20.73		ug/L		104	68 - 138	3	20
1,1,2,2-Tetrachloroethane	ND		20.0	20.31		ug/L		102	71 - 133	4	20
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		20.0	19.47		ug/L		97	51 - 132	1	21
1,1,2-Trichloroethane	ND		20.0	20.70		ug/L		104	70 - 132	3	20
1,1-Dichloroethane	ND		20.0	20.27		ug/L		99	70 - 132	0	20
1,1-Dichloroethene	ND		20.0	20.18		ug/L		98	57 - 148	4	20
1,1-Dichloropropene	ND		20.0	20.34		ug/L		102	74 - 132	3	20
1,2,3-Trichlorobenzene	ND		20.0	20.07		ug/L		100	66 - 135	5	22
1,2,3-Trichloropropane	ND		20.0	19.46		ug/L		97	61 - 130	0	20
1,2,4-Trichlorobenzene	ND		20.0	19.27		ug/L		96	66 - 131	2	24
1,2,4-Trimethylbenzene	ND		20.0	20.37		ug/L		102	65 - 132	2	22
1,2-Dibromo-3-Chloropropane	ND		20.0	20.71		ug/L		104	48 - 132	7	20
1,2-Dibromoethane	ND		20.0	20.21		ug/L		101	74 - 128	1	20
1,2-Dichlorobenzene	ND		20.0	19.70		ug/L		98	74 - 126	1	20
1,2-Dichloroethane	ND		20.0	21.35		ug/L		103	65 - 140	0	20
1,2-Dichloropropane	ND		20.0	20.20		ug/L		101	75 - 127	2	20
1,3,5-Trimethylbenzene	ND		20.0	19.81		ug/L		99	64 - 144	3	22

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QC Sample Results

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

Job ID: 570-150445-1

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

Lab Sample ID: 570-150425-A-6 MSD

Matrix: Water

Analysis Batch: 360280

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
1,3-Dichlorobenzene	ND		20.0	19.38		ug/L		97	73 - 125	0	21
1,3-Dichloropropane	ND		20.0	20.06		ug/L		100	71 - 131	0	20
1,4-Dichlorobenzene	ND		20.0	19.26		ug/L		96	73 - 125	2	20
2,2-Dichloropropane	ND		20.0	18.29		ug/L		91	39 - 138	2	20
2-Butanone	ND		20.0	19.87		ug/L		99	44 - 140	1	34
2-Chlorotoluene	ND		20.0	19.41		ug/L		97	71 - 130	1	20
2-Hexanone	ND		20.0	18.03		ug/L		90	52 - 136	4	37
4-Chlorotoluene	ND		20.0	19.60		ug/L		98	69 - 127	2	20
4-Methyl-2-pentanone	ND		20.0	18.88		ug/L		94	44 - 139	6	21
Acetone	ND		20.0	18.95		ug/L		95	20 - 174	3	35
Benzene	ND		20.0	20.41		ug/L		102	75 - 125	2	20
Bromobenzene	ND		20.0	19.91		ug/L		100	75 - 132	1	20
Bromochloromethane	ND		20.0	21.59		ug/L		108	75 - 125	2	20
Bromodichloromethane	ND		20.0	20.36		ug/L		102	70 - 137	2	20
Bromoform	ND		20.0	19.99		ug/L		100	51 - 142	1	20
Bromomethane	ND		20.0	18.23		ug/L		91	46 - 164	7	25
cis-1,2-Dichloroethene	8.0		20.0	28.48		ug/L		102	62 - 138	1	20
cis-1,3-Dichloropropene	ND		20.0	21.39		ug/L		107	67 - 125	4	20
Carbon disulfide	ND		20.0	19.23		ug/L		96	70 - 132	3	20
Carbon tetrachloride	ND		20.0	21.53		ug/L		108	50 - 159	5	20
Chlorobenzene	ND		20.0	19.75		ug/L		99	75 - 128	2	20
Chloroethane	ND		20.0	18.04		ug/L		90	62 - 161	2	20
Chloroform	ND		20.0	19.76		ug/L		99	73 - 130	0	20
Chloromethane	ND		20.0	15.95		ug/L		80	45 - 157	1	21
Dibromochloromethane	ND		20.0	20.23		ug/L		101	63 - 145	4	20
Dibromomethane	ND		20.0	20.13		ug/L		101	75 - 127	3	20
Dichlorodifluoromethane	ND		20.0	13.38		ug/L		67	31 - 132	1	21
Ethylbenzene	ND		20.0	19.87		ug/L		99	73 - 135	1	20
Isopropylbenzene	ND		20.0	18.88		ug/L		94	69 - 141	2	22
Methylene Chloride	ND		20.0	19.58		ug/L		98	65 - 127	0	20
Methyl-t-Butyl Ether (MTBE)	ND		20.0	20.24		ug/L		101	59 - 131	1	20
Naphthalene	ND		20.0	18.65		ug/L		93	51 - 133	6	25
n-Butylbenzene	ND		20.0	19.88		ug/L		99	66 - 128	3	24
N-Propylbenzene	ND		20.0	20.09		ug/L		100	73 - 136	2	22
o-Xylene	ND		20.0	20.37		ug/L		102	69 - 138	2	20
m,p-Xylene	ND		40.0	40.34		ug/L		101	73 - 138	2	21
p-Isopropyltoluene	ND		20.0	19.29		ug/L		96	69 - 134	0	23
sec-Butylbenzene	ND		20.0	19.47		ug/L		97	70 - 130	3	22
Styrene	ND		20.0	19.70		ug/L		98	45 - 144	2	32
trans-1,2-Dichloroethene	ND		20.0	20.28		ug/L		101	61 - 138	2	21
trans-1,3-Dichloropropene	ND		20.0	19.53		ug/L		98	61 - 131	4	20
tert-Butylbenzene	ND		20.0	19.92		ug/L		100	71 - 131	2	23
Tetrachloroethene	ND		20.0	19.09		ug/L		95	64 - 150	2	23
Toluene	ND		20.0	20.40		ug/L		102	75 - 127	3	20
Trichloroethene	61		20.0	79.09		ug/L		90	34 - 159	5	23
Trichlorofluoromethane	ND		20.0	17.66		ug/L		88	69 - 142	3	20
Vinyl acetate	ND		20.0	21.97		ug/L		110	35 - 132	4	29
Vinyl chloride	ND		20.0	17.25		ug/L		83	51 - 168	2	20

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QC Sample Results

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

Job ID: 570-150445-1

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

Lab Sample ID: 570-150425-A-6 MSD

Matrix: Water

Analysis Batch: 360280

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

	MSD	MSD	
Surrogate	%Recovery	Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	105		64 - 132
4-Bromofluorobenzene (Surr)	101		76 - 120
Dibromofluoromethane	104		80 - 120
Toluene-d8 (Surr)	101		80 - 120

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

Lab Sample ID: MB 570-359683/1-A

Matrix: Water

Analysis Batch: 360168

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 359683

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	Result	Qualifier	0.50		ug/L		08/30/23 14:20	08/31/23 17:58	1
	ND								
Isotope Dilution	MB	MB	Limits				Prepared	Analyzed	Dil Fac
1,4-Dioxane-d8	%Recovery	Qualifier	21 - 120				08/30/23 14:20	08/31/23 17:58	1
	59								
Surrogate	MB	MB	Limits				Prepared	Analyzed	Dil Fac
Nitrobenzene-d5	%Recovery	Qualifier	58 - 135				08/30/23 14:20	08/31/23 17:58	1
	177	S1+							

Lab Sample ID: LCS 570-359683/2-A

Matrix: Water

Analysis Batch: 360168

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 359683

Analyte	Spike	LCS	LCS	Unit	D	%Rec	%Rec
1,4-Dioxane	Added	Result	Qualifier	ug/L		80	Limits
	20.0	16.09					63 - 144
Isotope Dilution	LCS	LCS	Limits				
1,4-Dioxane-d8	%Recovery	Qualifier	21 - 120				
	44						
Surrogate	LCS	LCS	Limits				
Nitrobenzene-d5	%Recovery	Qualifier	58 - 135				
	118						

Lab Sample ID: LCSD 570-359683/3-A

Matrix: Water

Analysis Batch: 360168

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 359683

Analyte	Spike	LCSD	LCSD	Unit	D	%Rec	%Rec	RPD	RPD
1,4-Dioxane	Added	Result	Qualifier	ug/L		90	Limits	RPD	Limit
	20.0	18.07					63 - 144	12	20
Isotope Dilution	LCSD	LCSD	Limits						
1,4-Dioxane-d8	%Recovery	Qualifier	21 - 120						
	43								
Surrogate	LCSD	LCSD	Limits						
Nitrobenzene-d5	%Recovery	Qualifier	58 - 135						
	131								

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QC Sample Results

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

Job ID: 570-150445-1

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

Lab Sample ID: 570-150445-3 MS

Matrix: Water

Analysis Batch: 360168

Client Sample ID: MW-31_20230825

Prep Type: Total/NA

Prep Batch: 359683

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
1,4-Dioxane	4.0		15.2	16.74		ug/L		84	48 - 164
	MS	MS							
Isotope Dilution	%Recovery	Qualifier	Limits						
1,4-Dioxane-d8	32		21 - 120						
	MS	MS							
Surrogate	%Recovery	Qualifier	Limits						
Nitrobenzene-d5	121		58 - 135						

Lab Sample ID: 570-150445-3 MSD

Matrix: Water

Analysis Batch: 360168

Client Sample ID: MW-31_20230825

Prep Type: Total/NA

Prep Batch: 359683

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
1,4-Dioxane	4.0		15.2	16.18		ug/L		80	48 - 164	3	20
	MSD	MSD									
Isotope Dilution	%Recovery	Qualifier	Limits								
1,4-Dioxane-d8	36		21 - 120								
	MSD	MSD									
Surrogate	%Recovery	Qualifier	Limits								
Nitrobenzene-d5	116		58 - 135								

Lab Sample ID: MB 570-359764/1-A

Matrix: Water

Analysis Batch: 360763

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 359764

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	ND		0.50		ug/L		08/30/23 16:40	09/05/23 16:34	1
	MB	MB							
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,4-Dioxane-d8	45		21 - 120				08/30/23 16:40	09/05/23 16:34	1
	MB	MB							
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Nitrobenzene-d5	92		58 - 135				08/30/23 16:40	09/05/23 16:34	1

Lab Sample ID: LCS 570-359764/2-A

Matrix: Water

Analysis Batch: 360763

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 359764

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
1,4-Dioxane	20.0	16.80		ug/L		84	63 - 144
	LCS	LCS					
Isotope Dilution	%Recovery	Qualifier	Limits				
1,4-Dioxane-d8	52		21 - 120				
	LCS	LCS					
Surrogate	%Recovery	Qualifier	Limits				
Nitrobenzene-d5	94		58 - 135				

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QC Sample Results

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

Job ID: 570-150445-1

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

Lab Sample ID: LCSD 570-359764/3-A

Matrix: Water

Analysis Batch: 360763

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 359764

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
1,4-Dioxane			20.0	16.27		ug/L	-	81	63 - 144	3	20
	</										

Lab Sample ID: 570-150445-8 MS

Matrix: Water

Analysis Batch: 360763

Client Sample ID: MW-34B_20230828

Prep Type: Total/NA

Prep Batch: 359764

Sample Data: 000701											Rep Data: 000701										
Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits												
1,4-Dioxane	8.4		15.1	20.03		ug/L		77	48 - 164												
	MS	MS																			
Isotope Dilution	%Recovery	Qualifier	Limits																		
1,4-Dioxane-d8	39		21 - 120																		
	MS	MS																			
Surrogate	%Recovery	Qualifier	Limits																		
Nitrobenzene-d5	96		58 - 135																		

Lab Sample ID: 570-150445-8 MSD

Matrix: Water

Analysis Batch: 360763

Client Sample ID: MW-34B_20230828

Prep Type: Total/NA

Prep Batch: 359764

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
1,4-Dioxane	8.4		14.9	18.58		ug/L	-	68	48 - 164	7	20
	MSD	MSD									
Isotope Dilution	%Recovery	Qualifier	Limits								
1,4-Dioxane-d8	40		21 - 120								
	MSD	MSD									
Surrogate	%Recovery	Qualifier	Limits								
Nitrobenzene-d5	98		58 - 135								

Lab Sample ID: 570-150445-12 MS

Matrix: Water

Analysis Batch: 360763

Client Sample ID: MW-40_20230829

Prep Type: Total/NA

Prep Batch: 359764

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
1,4-Dioxane	ND		15.2	12.53		ug/L	-	83	48 - 164		
	MS	MS									
Isotope Dilution	%Recovery	Qualifier	Limits								
1,4-Dioxane-d8	38		21 - 120								
	MS	MS									
Surrogate	%Recovery	Qualifier	Limits								
Nitrobenzene-d5	100		58 - 135								

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QC Sample Results

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

Job ID: 570-150445-1

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

Lab Sample ID: 570-150445-12 MSD

Matrix: Water

Analysis Batch: 360763

Client Sample ID: MW-40_20230829

Prep Type: Total/NA

Prep Batch: 359764

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	15.10		ug/L		99	48 - 164	19	20
	MSD	MSD									
Isotope Dilution	%Recovery	Qualifier	Limits								
1,4-Dioxane-d8	39		21 - 120								
	MSD	MSD									
Surrogate	%Recovery	Qualifier	Limits								
Nitrobenzene-d5	93		58 - 135								

Marginal Exceedance (ME) Summary

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

Job ID: 570-150445-1

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

Lab Sample ID: LCS 570-359803/3

Matrix: Water

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	%Rec	%Rec. Limits	ME %Rec. Limits	Marginal Exceedance Status
1,1,1,2-Tetrachloroethane	10.0	10.43		ug/L	104	80 - 125	73 - 133	
1,1,1-Trichloroethane	10.0	10.90		ug/L	109	75 - 121	67 - 129	
1,1,2,2-Tetrachloroethane	10.0	10.40		ug/L	104	80 - 120	73 - 127	
1,1,2-Trichloro-1,2,2-trifluoroethane	10.0	10.58		ug/L	106	56 - 132	43 - 145	
1,1,2-Trichloroethane	10.0	10.86		ug/L	109	80 - 121	73 - 128	
1,1-Dichloroethane	10.0	10.53		ug/L	105	80 - 120	73 - 127	
1,1-Dichloroethene	10.0	10.79		ug/L	108	80 - 126	72 - 134	
1,1-Dichloropropene	10.0	10.89		ug/L	109	72 - 122	64 - 130	
1,2,3-Trichlorobenzene	10.0	10.53		ug/L	105	80 - 125	73 - 133	
1,2,3-Trichloropropane	10.0	10.32		ug/L	103	75 - 127	66 - 136	
1,2,4-Trichlorobenzene	10.0	10.29		ug/L	103	80 - 124	73 - 131	
1,2,4-Trimethylbenzene	10.0	11.19		ug/L	112	80 - 128	72 - 136	
1,2-Dibromo-3-Chloropropane	10.0	10.11		ug/L	101	63 - 123	53 - 133	
1,2-Dibromoethane	10.0	10.76		ug/L	108	80 - 125	73 - 133	
1,2-Dichlorobenzene	10.0	10.57		ug/L	106	80 - 120	73 - 127	
1,2-Dichloroethane	10.0	10.74		ug/L	107	76 - 130	67 - 139	
1,2-Dichloropropane	10.0	10.69		ug/L	107	74 - 124	66 - 132	
1,3,5-Trimethylbenzene	10.0	10.59		ug/L	106	80 - 122	73 - 129	
1,3-Dichlorobenzene	10.0	10.61		ug/L	106	80 - 120	73 - 127	
1,3-Dichloropropane	10.0	10.32		ug/L	103	80 - 121	73 - 128	
1,4-Dichlorobenzene	10.0	10.60		ug/L	106	80 - 120	73 - 127	
2,2-Dichloropropane	10.0	10.79		ug/L	108	79 - 131	70 - 140	
2-Butanone	10.0	12.88		ug/L	129	48 - 145	32 - 161	
2-Chlorotoluene	10.0	10.48		ug/L	105	80 - 120	73 - 127	
2-Hexanone	10.0	9.408		ug/L	94	50 - 149	34 - 166	
4-Chlorotoluene	10.0	10.75		ug/L	107	80 - 120	73 - 127	
4-Methyl-2-pentanone	10.0	9.851		ug/L	99	63 - 120	54 - 130	
Acetone	10.0	18.78	*+	ug/L	188	45 - 139	29 - 155	X
Benzene	10.0	10.93		ug/L	109	80 - 120	73 - 127	
Bromobenzene	10.0	10.34		ug/L	103	80 - 125	73 - 133	
Bromochloromethane	10.0	10.87		ug/L	109	80 - 120	73 - 127	
Bromodichloromethane	10.0	10.79		ug/L	108	73 - 131	63 - 141	
Bromoform	10.0	10.41		ug/L	104	76 - 124	68 - 132	
Bromomethane	10.0	8.916		ug/L	89	26 - 180	1 - 206	
cis-1,2-Dichloroethene	10.0	10.79		ug/L	108	80 - 120	73 - 127	
cis-1,3-Dichloropropene	10.0	11.37		ug/L	114	76 - 123	68 - 131	
Carbon disulfide	10.0	10.50		ug/L	105	75 - 123	67 - 131	
Carbon tetrachloride	10.0	10.68		ug/L	107	61 - 139	48 - 152	
Chlorobenzene	10.0	10.42		ug/L	104	80 - 120	73 - 127	
Chloroethane	10.0	9.812		ug/L	98	54 - 150	38 - 166	
Chloroform	10.0	10.03		ug/L	100	80 - 120	73 - 127	
Chloromethane	10.0	9.126		ug/L	91	28 - 151	8 - 172	
Dibromochloromethane	10.0	10.29		ug/L	103	74 - 136	64 - 146	
Dibromomethane	10.0	10.70		ug/L	107	80 - 122	73 - 129	
Dichlorodifluoromethane	10.0	8.766		ug/L	88	27 - 154	6 - 175	
Ethylbenzene	10.0	10.42		ug/L	104	80 - 126	72 - 134	
Isopropylbenzene	10.0	9.782		ug/L	98	80 - 120	73 - 127	
Methylene Chloride	10.0	10.92		ug/L	109	80 - 120	73 - 127	
Methyl-t-Butyl Ether (MTBE)	10.0	11.11		ug/L	111	69 - 128	59 - 138	

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Marginal Exceedance (ME) Summary

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

Job ID: 570-150445-1

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

Lab Sample ID: LCS 570-359803/3

Matrix: Water

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	%Rec	%Rec. Limits	ME %Rec. Limits	Marginal Exceedance Status
Naphthalene	10.0	9.919		ug/L	99	70 - 130	60 - 140	
n-Butylbenzene	10.0	10.93		ug/L	109	78 - 127	70 - 135	
N-Propylbenzene	10.0	10.38		ug/L	104	80 - 121	73 - 128	
o-Xylene	10.0	10.60		ug/L	106	80 - 124	73 - 131	
m,p-Xylene	20.0	21.82		ug/L	109	80 - 123	73 - 130	
p-Isopropyltoluene	10.0	10.84		ug/L	108	80 - 128	72 - 136	
sec-Butylbenzene	10.0	10.52		ug/L	105	80 - 125	73 - 133	
Styrene	10.0	10.63		ug/L	106	80 - 121	73 - 128	
trans-1,2-Dichloroethene	10.0	10.67		ug/L	107	79 - 120	72 - 127	
trans-1,3-Dichloropropene	10.0	10.11		ug/L	101	80 - 126	72 - 134	
tert-Butylbenzene	10.0	10.18		ug/L	102	80 - 121	73 - 128	
Tetrachloroethene	10.0	10.31		ug/L	103	80 - 125	73 - 133	
Toluene	10.0	10.59		ug/L	106	80 - 120	73 - 127	
Trichloroethene	10.0	10.93		ug/L	109	77 - 124	69 - 132	
Trichlorofluoromethane	10.0	10.47		ug/L	105	41 - 163	21 - 183	
Vinyl acetate	10.0	9.582		ug/L	96	61 - 126	50 - 137	
Vinyl chloride	10.0	10.04		ug/L	100	50 - 160	32 - 178	

Summary

Number of Analytes Reported	Number of Marginal Exceedances Allowed	Number of Marginal Exceedances Found
66	3	0

X = % Recovery is greater than widest possible limit

Lab Sample ID: LCSD 570-359803/4

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	10.52		ug/L	105	80 - 125	73 - 133	
1,1,1-Trichloroethane	10.0	10.59		ug/L	106	75 - 121	67 - 129	
1,1,2,2-Tetrachloroethane	10.0	10.74		ug/L	107	80 - 120	73 - 127	
1,1,2-Trichloro-1,2,2-trifluoroethane	10.0	10.31		ug/L	103	56 - 132	43 - 145	
1,1,2-Trichloroethane	10.0	10.75		ug/L	108	80 - 121	73 - 128	
1,1-Dichloroethane	10.0	10.45		ug/L	104	80 - 120	73 - 127	
1,1-Dichloroethene	10.0	10.53		ug/L	105	80 - 126	72 - 134	
1,1-Dichloropropene	10.0	10.79		ug/L	108	72 - 122	64 - 130	
1,2,3-Trichlorobenzene	10.0	10.38		ug/L	104	80 - 125	73 - 133	
1,2,3-Trichloropropane	10.0	10.52		ug/L	105	75 - 127	66 - 136	
1,2,4-Trichlorobenzene	10.0	10.00		ug/L	100	80 - 124	73 - 131	
1,2,4-Trimethylbenzene	10.0	10.99		ug/L	110	80 - 128	72 - 136	
1,2-Dibromo-3-Chloropropane	10.0	11.08		ug/L	111	63 - 123	53 - 133	
1,2-Dibromoethane	10.0	10.66		ug/L	107	80 - 125	73 - 133	
1,2-Dichlorobenzene	10.0	10.49		ug/L	105	80 - 120	73 - 127	
1,2-Dichloroethane	10.0	10.69		ug/L	107	76 - 130	67 - 139	
1,2-Dichloropropane	10.0	10.86		ug/L	109	74 - 124	66 - 132	
1,3,5-Trimethylbenzene	10.0	10.46		ug/L	105	80 - 122	73 - 129	
1,3-Dichlorobenzene	10.0	10.49		ug/L	105	80 - 120	73 - 127	
1,3-Dichloropropane	10.0	10.66		ug/L	107	80 - 121	73 - 128	
1,4-Dichlorobenzene	10.0	10.55		ug/L	105	80 - 120	73 - 127	

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Marginal Exceedance (ME) Summary

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

Job ID: 570-150445-1

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

Lab Sample ID: LCSD 570-359803/4
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
2,2-Dichloropropane	10.0	10.47		ug/L	105	79 - 131	70 - 140	
2-Butanone	10.0	11.38		ug/L	114	48 - 145	32 - 161	
2-Chlorotoluene	10.0	10.51		ug/L	105	80 - 120	73 - 127	
2-Hexanone	10.0	9.801		ug/L	98	50 - 149	34 - 166	
4-Chlorotoluene	10.0	10.73		ug/L	107	80 - 120	73 - 127	
4-Methyl-2-pentanone	10.0	9.436		ug/L	94	63 - 120	54 - 130	
Acetone	10.0	16.63	*+	ug/L	166	45 - 139	29 - 155	X
Benzene	10.0	10.85		ug/L	108	80 - 120	73 - 127	
Bromobenzene	10.0	10.45		ug/L	105	80 - 125	73 - 133	
Bromochloromethane	10.0	10.77		ug/L	108	80 - 120	73 - 127	
Bromodichloromethane	10.0	10.60		ug/L	106	73 - 131	63 - 141	
Bromoform	10.0	10.55		ug/L	106	76 - 124	68 - 132	
Bromomethane	10.0	8.792		ug/L	88	26 - 180	1 - 206	
cis-1,2-Dichloroethene	10.0	10.57		ug/L	106	80 - 120	73 - 127	
cis-1,3-Dichloropropene	10.0	11.45		ug/L	115	76 - 123	68 - 131	
Carbon disulfide	10.0	10.31		ug/L	103	75 - 123	67 - 131	
Carbon tetrachloride	10.0	10.50		ug/L	105	61 - 139	48 - 152	
Chlorobenzene	10.0	10.29		ug/L	103	80 - 120	73 - 127	
Chloroethane	10.0	9.771		ug/L	98	54 - 150	38 - 166	
Chloroform	10.0	9.904		ug/L	99	80 - 120	73 - 127	
Chloromethane	10.0	9.074		ug/L	91	28 - 151	8 - 172	
Dibromochloromethane	10.0	10.65		ug/L	106	74 - 136	64 - 146	
Dibromomethane	10.0	10.63		ug/L	106	80 - 122	73 - 129	
Dichlorodifluoromethane	10.0	8.479		ug/L	85	27 - 154	6 - 175	
Ethylbenzene	10.0	10.40		ug/L	104	80 - 126	72 - 134	
Isopropylbenzene	10.0	9.681		ug/L	97	80 - 120	73 - 127	
Methylene Chloride	10.0	10.74		ug/L	107	80 - 120	73 - 127	
Methyl-t-Butyl Ether (MTBE)	10.0	11.08		ug/L	111	69 - 128	59 - 138	
Naphthalene	10.0	9.825		ug/L	98	70 - 130	60 - 140	
n-Butylbenzene	10.0	10.64		ug/L	106	78 - 127	70 - 135	
N-Propylbenzene	10.0	10.18		ug/L	102	80 - 121	73 - 128	
o-Xylene	10.0	10.57		ug/L	106	80 - 124	73 - 131	
m,p-Xylene	20.0	21.57		ug/L	108	80 - 123	73 - 130	
p-Isopropyltoluene	10.0	10.56		ug/L	106	80 - 128	72 - 136	
sec-Butylbenzene	10.0	10.39		ug/L	104	80 - 125	73 - 133	
Styrene	10.0	10.55		ug/L	106	80 - 121	73 - 128	
trans-1,2-Dichloroethene	10.0	10.77		ug/L	108	79 - 120	72 - 127	
trans-1,3-Dichloropropene	10.0	10.20		ug/L	102	80 - 126	72 - 134	
tert-Butylbenzene	10.0	10.06		ug/L	101	80 - 121	73 - 128	
Tetrachloroethene	10.0	10.17		ug/L	102	80 - 125	73 - 133	
Toluene	10.0	10.39		ug/L	104	80 - 120	73 - 127	
Trichloroethene	10.0	10.64		ug/L	106	77 - 124	69 - 132	
Trichlorofluoromethane	10.0	9.945		ug/L	99	41 - 163	21 - 183	
Vinyl acetate	10.0	9.975		ug/L	100	61 - 126	50 - 137	
Vinyl chloride	10.0	9.703		ug/L	97	50 - 160	32 - 178	

Summary

Number of Analytes Reported	Number of Marginal Exceedances Allowed	Number of Marginal Exceedances Found
66	3	0

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Marginal Exceedance (ME) Summary

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

Job ID: 570-150445-1

X = % Recovery is greater than widest possible limit

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QC Association Summary

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

Job ID: 570-150445-1

GC/MS VOA

Analysis Batch: 359803

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-150445-12	MW-40_20230829	Total/NA	Water	8260B	
MB 570-359803/6	Method Blank	Total/NA	Water	8260B	
LCS 570-359803/3	Lab Control Sample	Total/NA	Water	8260B	
LCSD 570-359803/4	Lab Control Sample Dup	Total/NA	Water	8260B	
570-150445-12 MS	MW-40_20230829	Total/NA	Water	8260B	
570-150445-12 MSD	MW-40_20230829	Total/NA	Water	8260B	

Analysis Batch: 359874

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-150445-1	TB-082523A	Total/NA	Water	8260B	
570-150445-2	MW-41_20230825	Total/NA	Water	8260B	
570-150445-3	MW-31_20230825	Total/NA	Water	8260B	
570-150445-4	MW-30A_20230825	Total/NA	Water	8260B	
570-150445-5	MW-30B_20230825	Total/NA	Water	8260B	
570-150445-6	MW-3000B_20230825	Total/NA	Water	8260B	
570-150445-7	MW-43_20230828	Total/NA	Water	8260B	
570-150445-8	MW-34B_20230828	Total/NA	Water	8260B	
570-150445-9	MW-32B_20230828	Total/NA	Water	8260B	
570-150445-10	MW-3200B_20230828	Total/NA	Water	8260B	
570-150445-11	MW-36_20230828	Total/NA	Water	8260B	
570-150445-13	MW-42_20230829	Total/NA	Water	8260B	
570-150445-14	MW-33_20230829	Total/NA	Water	8260B	
MB 570-359874/7	Method Blank	Total/NA	Water	8260B	
LCS 570-359874/4	Lab Control Sample	Total/NA	Water	8260B	
LCSD 570-359874/5	Lab Control Sample Dup	Total/NA	Water	8260B	
570-150445-3 MS	MW-31_20230825	Total/NA	Water	8260B	
570-150445-3 MSD	MW-31_20230825	Total/NA	Water	8260B	
570-150445-8 MS	MW-34B_20230828	Total/NA	Water	8260B	
570-150445-8 MSD	MW-34B_20230828	Total/NA	Water	8260B	

Analysis Batch: 360280

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-150445-9 - DL	MW-32B_20230828	Total/NA	Water	8260B	
570-150445-10 - DL	MW-3200B_20230828	Total/NA	Water	8260B	
MB 570-360280/7	Method Blank	Total/NA	Water	8260B	
LCS 570-360280/4	Lab Control Sample	Total/NA	Water	8260B	
LCSD 570-360280/5	Lab Control Sample Dup	Total/NA	Water	8260B	
570-150425-A-6 MS	Matrix Spike	Total/NA	Water	8260B	
570-150425-A-6 MSD	Matrix Spike Duplicate	Total/NA	Water	8260B	

GC/MS Semi VOA

Prep Batch: 359683

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-150445-2	MW-41_20230825	Total/NA	Water	3510C	
570-150445-3	MW-31_20230825	Total/NA	Water	3510C	
570-150445-4	MW-30A_20230825	Total/NA	Water	3510C	
570-150445-5	MW-30B_20230825	Total/NA	Water	3510C	
570-150445-6	MW-3000B_20230825	Total/NA	Water	3510C	
570-150445-7	MW-43_20230828	Total/NA	Water	3510C	
570-150445-9	MW-32B_20230828	Total/NA	Water	3510C	

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QC Association Summary

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

Job ID: 570-150445-1

GC/MS Semi VOA (Continued)

Prep Batch: 359683 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-150445-10	MW-3200B_20230828	Total/NA	Water	3510C	
MB 570-359683/1-A	Method Blank	Total/NA	Water	3510C	
LCS 570-359683/2-A	Lab Control Sample	Total/NA	Water	3510C	
LCSD 570-359683/3-A	Lab Control Sample Dup	Total/NA	Water	3510C	
570-150445-3 MS	MW-31_20230825	Total/NA	Water	3510C	
570-150445-3 MSD	MW-31_20230825	Total/NA	Water	3510C	

Prep Batch: 359764

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-150445-8	MW-34B_20230828	Total/NA	Water	3510C	
570-150445-11	MW-36_20230828	Total/NA	Water	3510C	
570-150445-12	MW-40_20230829	Total/NA	Water	3510C	
570-150445-13	MW-42_20230829	Total/NA	Water	3510C	
570-150445-14	MW-33_20230829	Total/NA	Water	3510C	
MB 570-359764/1-A	Method Blank	Total/NA	Water	3510C	
LCS 570-359764/2-A	Lab Control Sample	Total/NA	Water	3510C	
LCSD 570-359764/3-A	Lab Control Sample Dup	Total/NA	Water	3510C	
570-150445-8 MS	MW-34B_20230828	Total/NA	Water	3510C	
570-150445-8 MSD	MW-34B_20230828	Total/NA	Water	3510C	
570-150445-12 MS	MW-40_20230829	Total/NA	Water	3510C	
570-150445-12 MSD	MW-40_20230829	Total/NA	Water	3510C	

Analysis Batch: 360168

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-150445-2	MW-41_20230825	Total/NA	Water	8270C SIM ID	359683
570-150445-3	MW-31_20230825	Total/NA	Water	8270C SIM ID	359683
570-150445-4	MW-30A_20230825	Total/NA	Water	8270C SIM ID	359683
570-150445-5	MW-30B_20230825	Total/NA	Water	8270C SIM ID	359683
570-150445-6	MW-3000B_20230825	Total/NA	Water	8270C SIM ID	359683
570-150445-7	MW-43_20230828	Total/NA	Water	8270C SIM ID	359683
570-150445-9	MW-32B_20230828	Total/NA	Water	8270C SIM ID	359683
570-150445-10	MW-3200B_20230828	Total/NA	Water	8270C SIM ID	359683
MB 570-359683/1-A	Method Blank	Total/NA	Water	8270C SIM ID	359683
LCS 570-359683/2-A	Lab Control Sample	Total/NA	Water	8270C SIM ID	359683
LCSD 570-359683/3-A	Lab Control Sample Dup	Total/NA	Water	8270C SIM ID	359683
570-150445-3 MS	MW-31_20230825	Total/NA	Water	8270C SIM ID	359683
570-150445-3 MSD	MW-31_20230825	Total/NA	Water	8270C SIM ID	359683

Analysis Batch: 360763

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-150445-8	MW-34B_20230828	Total/NA	Water	8270C SIM ID	359764
570-150445-11	MW-36_20230828	Total/NA	Water	8270C SIM ID	359764
570-150445-12	MW-40_20230829	Total/NA	Water	8270C SIM ID	359764
570-150445-13	MW-42_20230829	Total/NA	Water	8270C SIM ID	359764
570-150445-14	MW-33_20230829	Total/NA	Water	8270C SIM ID	359764
MB 570-359764/1-A	Method Blank	Total/NA	Water	8270C SIM ID	359764
LCS 570-359764/2-A	Lab Control Sample	Total/NA	Water	8270C SIM ID	359764
LCSD 570-359764/3-A	Lab Control Sample Dup	Total/NA	Water	8270C SIM ID	359764
570-150445-8 MS	MW-34B_20230828	Total/NA	Water	8270C SIM ID	359764
570-150445-8 MSD	MW-34B_20230828	Total/NA	Water	8270C SIM ID	359764
570-150445-12 MS	MW-40_20230829	Total/NA	Water	8270C SIM ID	359764

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QC Association Summary

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

Job ID: 570-150445-1

GC/MS Semi VOA (Continued)

Analysis Batch: 360763 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-150445-12 MSD	MW-40_20230829	Total/NA	Water	8270C SIM ID	359764

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Lab Chronicle

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

Job ID: 570-150445-1

Client Sample ID: TB-082523A

Lab Sample ID: 570-150445-1

Date Collected: 08/25/23 08:00

Matrix: Water

Date Received: 08/29/23 17:22

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	359874	08/31/23 09:01	N5PD	EET CAL 4
Instrument ID: GCMSWW										

Client Sample ID: MW-41_20230825

Lab Sample ID: 570-150445-2

Date Collected: 08/25/23 09:55

Matrix: Water

Date Received: 08/29/23 17:22

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	359874	08/31/23 10:43	N5PD	EET CAL 4
Instrument ID: GCMSWW										
Total/NA	Prep	3510C			130.9 mL	10 mL	359683	08/30/23 14:20	TR8L	EET CAL 4
Total/NA	Analysis	8270C SIM ID		1	1 mL	1 mL	360168	09/01/23 00:09	ULLI	EET CAL 4
Instrument ID: GCMS99										

Client Sample ID: MW-31_20230825

Lab Sample ID: 570-150445-3

Date Collected: 08/25/23 11:40

Matrix: Water

Date Received: 08/29/23 17:22

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	359874	08/31/23 14:56	N5PD	EET CAL 4
Instrument ID: GCMSWW										
Total/NA	Prep	3510C			132.1 mL	10 mL	359683	08/30/23 14:20	TR8L	EET CAL 4
Total/NA	Analysis	8270C SIM ID		1	1 mL	1 mL	360168	09/01/23 00:24	ULLI	EET CAL 4
Instrument ID: GCMS99										

Client Sample ID: MW-30A_20230825

Lab Sample ID: 570-150445-4

Date Collected: 08/25/23 13:28

Matrix: Water

Date Received: 08/29/23 17:22

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	359874	08/31/23 11:08	N5PD	EET CAL 4
Instrument ID: GCMSWW										
Total/NA	Prep	3510C			130.8 mL	10 mL	359683	08/30/23 14:20	TR8L	EET CAL 4
Total/NA	Analysis	8270C SIM ID		1	1 mL	1 mL	360168	09/01/23 00:40	ULLI	EET CAL 4
Instrument ID: GCMS99										

Client Sample ID: MW-30B_20230825

Lab Sample ID: 570-150445-5

Date Collected: 08/25/23 14:05

Matrix: Water

Date Received: 08/29/23 17:22

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	359874	08/31/23 11:33	N5PD	EET CAL 4
Instrument ID: GCMSWW										
Total/NA	Prep	3510C			128.4 mL	10 mL	359683	08/30/23 14:20	TR8L	EET CAL 4
Total/NA	Analysis	8270C SIM ID		1	1 mL	1 mL	360168	09/01/23 00:55	ULLI	EET CAL 4
Instrument ID: GCMS99										

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Lab Chronicle

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

Job ID: 570-150445-1

Client Sample ID: MW-3000B_20230825

Lab Sample ID: 570-150445-6

Date Collected: 08/25/23 14:15

Matrix: Water

Date Received: 08/29/23 17:22

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	359874	08/31/23 11:59	N5PD	EET CAL 4
Instrument ID: GCMSWW										
Total/NA	Prep	3510C			133.1 mL	10 mL	359683	08/30/23 14:20	TR8L	EET CAL 4
Total/NA	Analysis	8270C SIM ID		1	1 mL	1 mL	360168	09/01/23 01:11	ULLI	EET CAL 4
Instrument ID: GCMS99										

Client Sample ID: MW-43_20230828

Lab Sample ID: 570-150445-7

Date Collected: 08/28/23 09:33

Matrix: Water

Date Received: 08/29/23 17:22

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	359874	08/31/23 12:24	N5PD	EET CAL 4
Instrument ID: GCMSWW										
Total/NA	Prep	3510C			133.3 mL	10 mL	359683	08/30/23 14:20	TR8L	EET CAL 4
Total/NA	Analysis	8270C SIM ID		1	1 mL	1 mL	360168	09/01/23 01:26	ULLI	EET CAL 4
Instrument ID: GCMS99										

Client Sample ID: MW-34B_20230828

Lab Sample ID: 570-150445-8

Date Collected: 08/28/23 11:35

Matrix: Water

Date Received: 08/29/23 17:22

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	359874	08/31/23 15:21	N5PD	EET CAL 4
Instrument ID: GCMSWW										
Total/NA	Prep	3510C			132.5 mL	10 mL	359764	08/30/23 16:40	TR8L	EET CAL 4
Total/NA	Analysis	8270C SIM ID		1	1 mL	1 mL	360763	09/05/23 21:34	ULLI	EET CAL 4
Instrument ID: GCMSDDD										

Client Sample ID: MW-32B_20230828

Lab Sample ID: 570-150445-9

Date Collected: 08/28/23 14:35

Matrix: Water

Date Received: 08/29/23 17:22

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B	DL	5	20 mL	20 mL	360280	09/01/23 14:02	N5PD	EET CAL 4
Instrument ID: GCMSUU										
Total/NA	Analysis	8260B		1	20 mL	20 mL	359874	08/31/23 12:49	N5PD	EET CAL 4
Instrument ID: GCMSWW										
Total/NA	Prep	3510C			129.9 mL	10 mL	359683	08/30/23 14:20	TR8L	EET CAL 4
Total/NA	Analysis	8270C SIM ID		1	1 mL	1 mL	360168	09/01/23 01:42	ULLI	EET CAL 4
Instrument ID: GCMS99										

Lab Chronicle

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

Job ID: 570-150445-1

Client Sample ID: MW-3200B_20230828

Lab Sample ID: 570-150445-10

Date Collected: 08/28/23 14:40

Matrix: Water

Date Received: 08/29/23 17:22

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B	DL	5	20 mL	20 mL	360280	09/01/23 14:26	N5PD	EET CAL 4
		Instrument ID: GCMSUU								
Total/NA	Analysis	8260B		1	20 mL	20 mL	359874	08/31/23 13:15	N5PD	EET CAL 4
		Instrument ID: GCMSWW								
Total/NA	Prep	3510C			130.6 mL	10 mL	359683	08/30/23 14:20	TR8L	EET CAL 4
Total/NA	Analysis	8270C SIM ID		1	1 mL	1 mL	360168	09/01/23 01:57	ULLI	EET CAL 4
		Instrument ID: GCMS99								

Client Sample ID: MW-36_20230828

Lab Sample ID: 570-150445-11

Date Collected: 08/28/23 17:00

Matrix: Water

Date Received: 08/29/23 17:22

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	359874	08/31/23 13:40	N5PD	EET CAL 4
		Instrument ID: GCMSWW								
Total/NA	Prep	3510C			129.2 mL	10 mL	359764	08/30/23 16:40	TR8L	EET CAL 4
Total/NA	Analysis	8270C SIM ID		1	1 mL	1 mL	360763	09/05/23 21:49	ULLI	EET CAL 4
		Instrument ID: GCMSDDD								

Client Sample ID: MW-40_20230829

Lab Sample ID: 570-150445-12

Date Collected: 08/29/23 09:18

Matrix: Water

Date Received: 08/29/23 17:22

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	359803	08/30/23 23:40	Y2DF	EET CAL 4
		Instrument ID: GCMSVV								
Total/NA	Prep	3510C			133.6 mL	10 mL	359764	08/30/23 16:40	TR8L	EET CAL 4
Total/NA	Analysis	8270C SIM ID		1	1 mL	1 mL	360763	09/05/23 22:03	ULLI	EET CAL 4
		Instrument ID: GCMSDDD								

Client Sample ID: MW-42_20230829

Lab Sample ID: 570-150445-13

Date Collected: 08/29/23 11:50

Matrix: Water

Date Received: 08/29/23 17:22

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	359874	08/31/23 14:05	N5PD	EET CAL 4
		Instrument ID: GCMSWW								
Total/NA	Prep	3510C			131.6 mL	10 mL	359764	08/30/23 16:40	TR8L	EET CAL 4
Total/NA	Analysis	8270C SIM ID		1	1 mL	1 mL	360763	09/05/23 22:17	ULLI	EET CAL 4
		Instrument ID: GCMSDDD								

Lab Chronicle

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

Job ID: 570-150445-1

Client Sample ID: MW-33_20230829

Lab Sample ID: 570-150445-14

Date Collected: 08/29/23 15:38

Matrix: Water

Date Received: 08/29/23 17:22

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	359874	08/31/23 14:31	N5PD	EET CAL 4
		Instrument ID: GCMSWW								
Total/NA	Prep	3510C			133.8 mL	10 mL	359764	08/30/23 16:40	TR8L	EET CAL 4
Total/NA	Analysis	8270C SIM ID		1	1 mL	1 mL	360763	09/05/23 22:32	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 / 532.30

Job ID: 570-150445-1

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 / 532.30

Job ID: 570-150445-1

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 / 532.30

Job ID: 570-150445-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
570-150445-1	TB-082523A	Water	08/25/23 08:00	08/29/23 17:22
570-150445-2	MW-41_20230825	Water	08/25/23 09:55	08/29/23 17:22
570-150445-3	MW-31_20230825	Water	08/25/23 11:40	08/29/23 17:22
570-150445-4	MW-30A_20230825	Water	08/25/23 13:28	08/29/23 17:22
570-150445-5	MW-30B_20230825	Water	08/25/23 14:05	08/29/23 17:22
570-150445-6	MW-3000B_20230825	Water	08/25/23 14:15	08/29/23 17:22
570-150445-7	MW-43_20230828	Water	08/28/23 09:33	08/29/23 17:22
570-150445-8	MW-34B_20230828	Water	08/28/23 11:35	08/29/23 17:22
570-150445-9	MW-32B_20230828	Water	08/28/23 14:35	08/29/23 17:22
570-150445-10	MW-3200B_20230828	Water	08/28/23 14:40	08/29/23 17:22
570-150445-11	MW-36_20230828	Water	08/28/23 17:00	08/29/23 17:22
570-150445-12	MW-40_20230829	Water	08/29/23 09:18	08/29/23 17:22
570-150445-13	MW-42_20230829	Water	08/29/23 11:50	08/29/23 17:22
570-150445-14	MW-33_20230829	Water	08/29/23 15:38	08/29/23 17:22

PROJECT: Raytheon Main

TASK NO.: 532.30

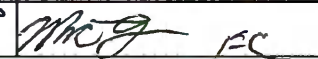
Project Manager Steve Netto

QA Manager Amber Warden-Plum

Phone 858.455.6500

Fax 858.455.6533

Date: 8/29/23
Page 2 of 2

Sampled By:				SAMPLE COLLECTION		MATRIX		PRESERVATION		CONTAINERS		ANALYSIS REQUESTED		Expected Concentration Range (ppb) for VOA's				SPECIAL HANDLING				Laboratory			
A. Warden-Plum						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
10	MW-3200B-20230828	8/28/23	1440	X	X					X	3			X				X							Report J Flags
	↓	↓	↓	X						X		1		X				X							No EDF requested
11	MW-36-20230828	↓	1700	X	X					X	3			X			X								
	↓	↓	↓	X						X		1		X				X							
12	MW-40-20230829	8/29/23	0918	X	X					X	9			X			X						X		
	↓	↓	↓	X						X		3		X			X						X		
13	MW-42-20230829	↓	1150	X	X					X	3			X			X						X		
	↓	↓	↓	X						X		1		X			X						X		
14	MW-33-20230829	↓	1538	X	X					X	3			X			X						X		
	↓	↓	↓	X						X		1		X			X						X		
Total number of containers per analysis:														Total No. of Containers:											
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													
 / H+TA				8/29/23 1636						8/29/23 1636															
Relinquished By: / Company:				Date / Time		Received By: / Company				Date / Time															
				8/29/23 1722						8/29/23 1722															

Instructions

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

Temperature on receipt

Send Results to:

Steve Netto

3131 Camino del Rio N

Suite 355

San Diego, CA 92108

Ph: 858.455.5400

snetto@hargis.com

Login Sample Receipt Checklist

Client: Hargis + Associates, Inc.

Job Number: 570-150445-1

Login Number: 150445

List Number: 1

Creator: Patel, Jayesh

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	